

**COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS**

BOOK 2 OF 2

**SPECIAL PROVISIONS
AND NOTICE TO BIDDERS**

FOR CONSTRUCTION OF

**UPPER EAST ZAYANTE ROAD PM 1.68
& 2.51 STORM DAMAGE REPAIR
PROJECTS,
FEDERAL PROJECT No. ER-32L0(262) &
ER-15J7(150)**

**FOR USE IN CONNECTION WITH STATE OF CALIFORNIA,
DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS
DATED 2024 AND STANDARD PLANS DATED 2024**

BIDS OPEN: June 5, 2025

THIS IS A PREVAILING WAGE PROJECT

SPECIAL NOTICES

See Section 7-1.02K(3) for the requirements for electronic submittal of certified payroll records using LCPtracker Pro.

See Information Handout for Permits and Environmental Commitment Record.

See Section 8-1.04B for Submittals Required for Approval Prior to Start of Work.

PROJECT DIRECTORY/SIGNATURE PAGE

PROJECT: UPPER EAST ZAYANTE ROAD PM 1.68 & 2.51 STORM DAMAGE REPAIR PROJECTS, FEDERAL PROJECT NO. 32-L0(262)

OWNER: COUNTY OF SANTA CRUZ, DEPARTMENT OF PUBLIC WORKS
701 OCEAN STREET, ROOM 410
SANTA CRUZ, CA 95060

CONTACT PERSON: TYLER DECKER AT (831)454-2842

CIVIL ENGINEERING STAFF IN RESPONSIBLE CHARGE: JOEL LACAGNINA

DocuSigned by:

496E0B68000C4BD...
Registered Civil Engineer
Tyler Decker

4/14/2025
Date

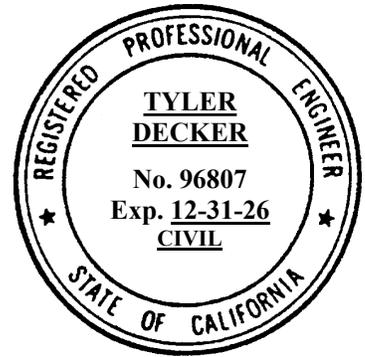


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STANDARD PLANS LIST

The standard plan sheets applicable to this Contract include those listed below. When applicable, revised standard plans (RSPs) listed below are included in the project plans.

ABBREVIATIONS, LINES, SYMBOLS, AND LEGEND

A3A	Abbreviations (Sheet 1 of 3)
A3B	Abbreviations (Sheet 2 of 3)
A3C	Abbreviations (Sheet 3 of 3)
A10A	Legend - Lines and Symbols (Sheet 1 of 5)
A10B	Legend - Lines and Symbols (Sheet 2 of 5)
A10C	Legend - Lines and Symbols (Sheet 3 of 5)
A10D	Legend - Lines and Symbols (Sheet 4 of 5)
A10E	Legend - Lines and Symbols (Sheet 5 of 5)
	PAVEMENT MARKERS, TRAFFIC LINES, AND PAVEMENT MARKINGS
A20A	Pavement Markers and Traffic Lines - Typical Details
A24G	Pavement Markings - Yield Lines, Limit Lines, and Wrong Way Details
	EXCAVATION AND BACKFILL
A62A	Excavation and Backfill - Miscellaneous Details
	OBJECT MARKERS, DELINEATORS, CHANNELIZERS, AND BARRICADES
A73A	Object Markers
A73B	Markers
A73C	Delineators, Channelizers and Barricades
	MIDWEST GUARDRAIL SYSTEM - STANDARD RAILING SECTIONS AND TRANSITION TO METAL BEAM GUARDRAIL
A77L1	Midwest Guardrail System - Standard Railing Section (Wood Post with Wood Block)
A77L4	Midwest Guardrail System - Transition to Metal Beam Guardrail
A77M1	Midwest Guardrail System - Standard Hardware
A77N1	Midwest Guardrail System - Wood Post and Wood Block Details
A77N3	Midwest Guardrail System - Typical Line Post Embedment and Hinge Point Offset Details
A77N4	Midwest Guardrail System - Typical Railing Delineation and Dike Positioning Details
A77N6	Minor Concrete Vegetation Control - Guardrail System - For Terminal System End Treatments
	FENCES
A86	Barbed Wire and Wire Mesh Fences
A86D	Barbed Wire and Wire Mesh Fence - Miscellaneous Details
	CURBS, DRIVEWAYS, DIKES, CURB RAMPS AND ACCESSIBLE PARKING
A87B	Hot Mix Asphalt Dikes
	PAVEMENTS
P75	Pavement Edge Treatments - Overlays
P76	Pavement Edge Treatments - New Construction
	DRAINAGE INLETS, PIPE INLETS AND GRATES
D75B	Concrete Pipe Inlets
D77B	Grate Details No. 2
	PIPE COUPLING AND JOINT DETAILS
D97A	Corrugated Metal Pipe Coupling Details No. 1 - Annular Coupling Band Bar and Strap and Angle Connections
D97C	Corrugated Metal Pipe Coupling Details No. 3 - Helical and Universal Couplers
D97D	Corrugated Metal Pipe Coupling Details No. 4 - Huger Coupling Bands
D97E	Corrugated Metal Pipe Coupling Details No. 5 - Standard Joint
D97G	Corrugated Metal Pipe Coupling Details No. 7 - Downdrain
	GABIONS AND UNDERDRAINS

D100A	Gabion Basket Details No. 1
D100B	Gabion Basket Details No. 2
	LANDSCAPE AND EROSION CONTROL
H51	Erosion Control Details - Fiber Roll and Compost Sock
	TEMPORARY CRASH CUSHIONS, RAILING AND TRAFFIC SCREEN
T3A	Temporary Railing (Type K)
T3B	Temporary Railing (Type K)
T3C	Temporary Barrier System (Cross Bolt)
T3D	Temporary Barrier System (Cross Bolt)
T3E	Temporary Barrier System (Cross Bolt)
RSP T3F	Temporary Barrier System (Cal F-23)
RSP T3F2	Temporary Barrier System (Cal F-23)
RSP T3G	Temporary Barrier System (Staking or Anchoring)
RSP T3G2	Temporary Barrier System (Staking or Anchoring)
	TEMPORARY TRAFFIC CONTROL SYSTEMS
T9	Traffic Control System Tables for Lane and Ramp Closures
T13B	Traffic Control System Two Lane Conventional Highways

COUNTY OF SANTA CRUZ DEPARTMENT OF PUBLIC WORKS

NOTICE TO BIDDERS

The County of Santa Cruz Department of Public Works is accepting electronic Proposal submissions for the

UPPER EAST ZAYANTE ROAD PM 1.68 & 2.51

STORM DAMAGE REPAIR PROJECTS

FEDERAL PROJECT NO. ER-32L0(262) & ER-15J7(150)

Bid opening will occur on June 5, 2025, no later than 2:00 p.m. and soon thereafter, will be publicly opened and read.

GENERAL WORK DESCRIPTION:

The project location in the County of Santa Cruz is as follows:

In the unincorporated area of the County of Santa Cruz, along Upper East Zayante Road at Post Mile (P.M.) 1.68 & 2.51.

Work includes construction of storm damage repair. Major work includes, but is not limited to:

- Grade Beam supported on Micropiles
- Soldier pile retaining wall with timber lagging
- Midwest guardrails,
- Asphalt pavement,
- Erosion control and re-vegetation
- Traffic control

The work to be performed under the Contract Documents requires that the Contractor possess a Class "A" license at the time that this contract is awarded. The bidder must be licensed under the provisions of Chapter 9, Division 3, of the Business and Professions Code of the State of California to do the type of work contemplated in the "contract documents" and must be skilled and regularly engaged in the general class or type of work called for under this contract. Contractor and all listed subcontractors must be registered with the Department of Industrial Relations pursuant to Section 1725.5 of the Labor Code.

THIS PROJECT HAS A GOAL OF 16% FOR DISADVANTAGED BUSINESS ENTERPRISE.

For the Federal training program, the number of trainees or apprentices is 0.

Federal-aid project No.: ER-32L0(262) & ER-15J7(150),

Complete the work within 60 working days.

Do not include plant establishment working days in your bid.

The estimated cost of the project is \$844,000

Examine the job site and contract documents. Notify the Department of apparent errors and patent ambiguities in the plans, specifications, and bid item list by submitting an electronic inquiry for clarification via the online procurement portal, OpenGov, a minimum of 5 days before bid opening. Failure to do so may result in rejection of a bid or rescission of an award. The correction of the bid documents during the bidding period will be made by issuing an addendum. Any other interpretation or explanation will not be considered binding.

Prevailing wages are required on this Contract. The Director of the California Department of Industrial Relations determines the general prevailing wage rates. Obtain the wage rates at the DIR Web site, <http://www.dir.ca.gov>, or from the Department's Labor Compliance Office of the district in which the work is located.

The federal minimum wage rates for this Contract as determined by the United States Secretary of Labor are available at the following website, issued on March 21, 2025; <https://sam.gov/wage-determination/CA20250018/6>.

If the minimum wage rates as determined by the United States Secretary of Labor differs from 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 must not pay less than the higher wage rate. The County does 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 must not pay less than the federal minimum wage rate that most closely approximates the duties of the employees in question.

The Department of Public Works hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids and will not be discriminated against on the grounds of race, color, religion, gender, or national origin in consideration for an award.

Award shall be on the basis of the total base bid. Award made to the lowest responsive and responsible bidder. The County of Santa Cruz and its Board of Supervisors reserve the right to waive minor irregularities and/ or reject any or all bids received as the public good may require.

Bid protests must be filed in writing with the Director of Public Works of the County of Santa Cruz, 701 Ocean Street, Rm. 410, Santa Cruz, California, 95060, by certified or registered mail, or by hand delivery during normal working hours not later than three (3) days after the bid opening or, if the protest is based on the selection of the apparent lowest responsible bidder, not later than three (3) days after selection of the apparent

lowest responsible bidder. The protest shall specify the reasons and facts upon which the protest is based.

CONTRACT DOCUMENTS:

A digital copy of the Contract documents is available free of charge and can be downloaded via the online procurement portal, OpenGov, <https://procurement.opengov.com/portal/santacruzcounty>

PROPOSAL INSTRUCTIONS:

Bidders shall create a free of charge account via the online procurement portal, ProcureNow by signing up at <https://procurement.opengov.com/signup>.

For additional information on account registration, see <https://opengov.my.site.com/support/s/>

Once account registration is completed, browse back to this page, <https://procurement.opengov.com/portal/santacruzcounty>, click on the "Project Name", "Submit Response", and follow the instructions to submit the electronic bid.

Only electronic Proposals will be accepted.

Proposal forms for this work must be uploaded via the online procurement portal, OpenGov. Copies are included in a separate book entitled:

BOOK 1 of 2
BID BOOK
FOR CONSTRUCTION OF
UPPER EAST ZAYANTE ROAD PM 1.68 & 2.51
STORM DAMAGE REPAIR PROJECTS
FEDERAL PROJECT NO. ER-32L0(262) & ER-15J7(150)

Cashier's check or certified check, payable to the order of the County of Santa Cruz, of not less ten percent (10%) of the bid submitted, payable to the County of Santa Cruz and signed by the bidder as well as a corporate surety, shall accompany the bid. Bidder's bonds shall be issued by a corporate surety duly admitted and authorized to issue bonds and undertakings by the State of California. Scan and upload a copy of your bid bond/cashier's check via the online procurement portal, OpenGov.

After bid opening, please mail the original Proposal forms and bid bond/cashier's or certified check within 4 business days to the Contract Analyst, Rosa Ortiz-Rocha;

Attn: Rosa Ortiz-Rocha

County of Santa Cruz Department of Public Works

Bid Proposal for (insert Project Name)

701 Ocean Street, Room 410

Santa Cruz, CA 95060

Any questions concerning the bid process, required submittals, evaluation criteria, bid schedule, and selection process should be sent through OpenGov.

BID OPENING:

The County of Santa Cruz Department of Public Works will conduct bid openings through the videoconferencing platform, Zoom, in lieu of in person attendance.

Bid results will be posted to OpenGov after the bid opening.

To view the live bid opening please go to:

Topic: UPPER EAST ZAYANTE ROAD PM 1.68 & 2.51 (25-1525)
BID OPENING

Date and Time: June 5, 2025 at 2:00 p.m. Pacific Time

Meeting Link:

<https://us02web.zoom.us/j/8049265398?pwd=nv0W5lqKgOXMGNDkfqqfMk4iDsVHel.1&omn=83185046321>

Meeting ID: 804 926 5398

Passcode: 1234

Find you local number: <https://us02web.zoom.us/j/kbpxHFErYQ>

DEPARTMENT OF PUBLIC WORKS
COUNTY OF SANTA CRUZ

Date: 4/14/2025

DocuSigned by:

Matt Machado

30EBAC64454C48C...

Matthew Machado

Deputy CAO/Director of Public Works

Investigations of subsurface conditions are made for the purpose of design, and the County assumes no responsibility whatsoever with respect to the sufficiency or accuracy of borings, the log of test borings, or other preliminary investigations, or of the interpretation, and there is no guaranty, either expressed or implied, that the conditions indicated are representative of those existing throughout the work, or any part of it, or that unanticipated conditions may not occur. When a log of test borings is made available to you or included in the Contract Documents, it is expressly understood and agreed that the log of test borings does not constitute a part of the Contract and is made available or included in the Contract Documents only for the convenience of the bidders. Making such information available to bidders is not to be construed in any way as a waiver of the provisions of section 2-1.07, and bidders must satisfy themselves, through their own investigations, as to conditions to be encountered.

Replace the first paragraph of section 2-1.07 with:

Examine the job site and bid documents. Notify the Department of apparent errors and patent ambiguities in the plans, specifications, and Bid Item List by submitting a written request for clarification a minimum of 5 days before bid opening. Failure to do so may result in rejection of a bid or rescission of an award. The correction of the bid documents during the bidding period will be made by issuing an addendum. Any other interpretation or explanation will not be considered binding.

Replace section 2-1.11 with:

2-1.11 IN-USE OFF-ROAD DIESEL-FUELED VEHICLE LIST

Section 2-1.11 applies to non-informal-bid contracts.

Complete and submit the In-Use Off-Road Diesel-Fueled Vehicle List form under section 2-1.33.

On the In-Use Off-Road Diesel-Fueled Vehicle List form, list each fleet used by you or your subcontractor to perform work and is subject to 13 CCR § 2449 et seq. Submit a copy of a valid Certificate of Reported Compliance (13 CCR § 2449, subdivision (n)) for each fleet listed on the form within 10 days of bid opening. Failure to list a fleet used by you or your subcontractor to perform work on the In-Use Off-Road Diesel-Fueled Vehicle List form may result in a nonresponsive bid. Failure to submit the Certificate of Reported Compliance for a fleet listed on the In-Use Off-Road Diesel-Fueled Vehicle List form may result in a nonresponsive bid.

Replace section 2-1.12 with:

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 DBE goal 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 that each DBE firm is certified as a DBE by the California Unified Certification Program (CUCP) and possesses the most specific available North American Industry Classification System (NAICS) Codes and California Work Codes applicable to the type of work the firm will perform on the Contract. You are responsible for documenting each DBE firm's certification by printing out the California Unified Certification Program (CUCP) profile data for each DBE firm. The CUCP database of certified DBE firms is located on the following website:

<https://caltrans.dbesystem.com/>

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.

DBE participation will count toward the 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 from 49 CFR 26.55(d) 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.

2-1.12B(2) DBE Commitment Submittal

Submit the DBE Commitment form and the following supporting DBE information no later than 4 p.m. on the 5th day after bid opening:

- Quote from each DBE shown on the DBE Commitment form that describes the type and dollar amount of work

- 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.
- If the last day for submitting the DBE information 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 5th day.

Failure to submit a completed DBE Confirmation form and a copy of the quote from each DBE may result in disallowance of the DBE's participation.

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

You can meet the DBE requirements by either documenting commitments to DBEs to meet the DBE goal or by documenting adequate good faith efforts to meet the DBE 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 your DBE Commitment form shows that you have not met the DBE goal, complete and submit the DBE Good Faith Efforts Documentation form no later than 4 p.m. on the 5th day after bid opening showing that you made adequate good faith efforts to meet the goal. If the last day for submitting the DBE Good Faith Efforts Documentation form 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 5th day.

Only good faith efforts directed toward obtaining participation by DBEs are considered.

Even if your DBE Commitment form shows that you have met the DBE goal, submit the DBE Good Faith Efforts Documentation form 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 appendix 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.

2-1.12B(4) Bidder's List Submittal

Submit the Bidder's List form no later than 4 p.m. on the 5th day after bid opening. List yourself and each subcontractor (regardless of DBE status) that provided a quote or bid on this contract in accordance with 49 CFR 26.11.

Replace the first paragraph of section 2-1.33A with:

Complete the forms in the *Bid* book. Submit forms at time of bid unless section 2-1.33D specifies a different deadline.

Replace section 2-1.33B with:

2-1.33B Bid Form Submittal Schedules

2-1.33B(1) General

The Bid book includes forms specific to the Contract. The deadlines for the submittal of the forms vary depending on the requirements of each Contract. Determine the requirements of the Contract and submit the forms based on the applicable schedule specified in section 2-1.33B.

Bid forms and information on the form that are due after the time of bid may be submitted at the time of bid.

2-1.33B(2) Federal-Aid Contracts

2-1.33B(2)(a) General

Section 2-1.33B(2) applies to a federal-aid contract.

2-1.33B(2)(b) Contracts with a DBE Goal

2-1.33B(2)(b)(i) General

Section 2-1.33B(2)(b) applies if a DBE goal is shown on the Notice to Bidders.

2-1.33B(2)(b)(ii) Bid Form Submittal

Submit the bid forms according to the schedule shown in the following table:

Bid Form Submittal Schedule for a Federal-Aid Contract with a DBE Goal

Form	Submittal deadline
Bid	Time of bid except for the public works contractor registration number
Bidder Bond	Time of bid
Bid Form	Time of bid
Designation of Subcontractors	Time of bid except for the public works contractor registration number
Equal Opportunity Certification	Time of bid
Public Contract Code	Time of bid
Non-collusion Affidavit	Time of bid
Debarment and Suspension Certification	Time of bid
Nonlobbying Certification for Federal-Aid Contracts	Time of bid
Disclosure of Lobbying Activities	Time of bid
Statement of Compliance	Time of bid
Opt Out of Payment Adjustments for Price Index Fluctuations ^a	Time of bid
DBE Confirmation (LAPM 9-I)	No later than 4 p.m. on the 5th day after bid opening ^b
Bidders List (Exhibit 12-B)	No later than 4 p.m. on the 5th day after bid opening ^b
DBE Commitment (Exhibit 15-G)	No later than 4 p.m. on the 5th day after bid opening ^b
DBE Good Faith Efforts Documentation (Exhibit 15-H)	No later than 4 p.m. on the 5th day after bid opening ^b
In-Use Off-Road Diesel-Fueled Vehicle List	10 days after bid opening

3 CONTRACT AWARD AND EXECUTION

Replace section 3-1.04.

Submit any bid protest to the Office Engineer before contract award.

If the Department awards the contract, the award is made to the lowest responsible and responsive bidder within the number of days shown in the following table:

Contract Award Period Days after bid opening	Project estimated cost shown on the <i>Notice to Bidders</i>
30	< \$200 million
60	≥ \$200 million

The Contractor shall begin work within 15 calendar days after the issuance of the Notice to Proceed.

This work shall be diligently prosecuted to completion before the expiration of working days beginning on the fifteenth calendar day after the date shown on the Notice to Proceed.

Replace section 3-1.05 with:

3-1.05 CONTRACT BONDS (PUB CONT CODE §§ 10221 AND 10222)

Within eight days, excluding Saturdays, Sundays and holidays, after your receipt of the contract, furnish 2 bonds:

1. Payment bond to secure the claim payments of laborers, workers, mechanics, or materialmen providing goods, labor, or services under the Contract. This bond must be equal to at least 100 percent of the total bid. The bond must be in accordance with the provisions of Sections 8150-8154 and 9550-9566, inclusive, of the Civil Code of the State of California, and Section 13020 of the Unemployment Insurance Code of the State of California. Said bond must also contain a provision that the surety thereon waives the provisions of Sections 2819 and 2845 of the Civil Code of the State of California.
2. Performance bond to guarantee the faithful performance of the Contract. This bond must be equal to at least 100 percent of the total bid. The bond must contain a provision that the surety thereon waives the provisions of Sections 2819 and 2845 of the Civil Code of the State of California.

The Department furnishes the successful bidder with bond forms.

The bonds must be issued by a surety insurer who is licensed in California.

The surety companies must familiarize themselves with all provisions and conditions of the Contract. It is understood and agreed that the surety or sureties waive the right of special notification of any modifications or alterations, omissions or reductions, extra or additional work, extensions of time, or any other act or acts by the County or its authorized agents under the terms of the Contract; and failure to so notify the surety companies of such changes will in no way relieve the surety or sureties of their obligations under this Contract.

Replace section 3-1.06 with:

3-1.06 CONTRACTOR LICENSE

For a federal-aid contract, the Contractor must be properly licensed as a contractor from contract award through Contract acceptance (Pub Contract Code § 10164).

Replace the first paragraph of section 3-1.07 with:

Within 8 business days of receiving the Notice of Award the successful bidder must submit:

Engineer in writing. When the work in the Contract Documents differs from governing codes, Contract Sum is based upon the more costly or expensive standard.

Replace section 4-1.06 with:

4-1.06 CHANGED CONDITIONS (23 CFR 635.109)

4-1.06A DIFFERING SITE CONDITIONS

1. During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.
2. Upon written notification, the engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The engineer will notify the contractor of the determination whether or not an adjustment of the contract is warranted.
3. No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.
4. No contract adjustment will be allowed under this clause for any effects caused on unchanged work.

4-1.06B SUSPENSIONS OF WORK ORDERED BY THE ENGINEER

1. If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.
2. Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The contractor will be notified of the engineer's determination whether or not an adjustment of the contract is warranted.
3. No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.
4. No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

4-1.06C SIGNIFICANT CHANGES IN THE CHARACTER OF WORK

1. The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.
2. If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.
3. If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

way within a four hour written notice by the Engineer or by the end of the work day, you shall forfeit \$100 to the County plus the cost of any County expenditures to clean the travel way per occurrence. Forfeited amounts and County expenditures will be deducted from the next progress payment.

Provide the Engineer with two working days prior written notice of any work to be done on a Saturday, with the location and type of work to be done specified; and any work done without such notice and without the supervision of an inspector may be ordered removed and replaced at your expense.

Replace the second paragraph of section 5-1.12 with:

Do not assign the right to receive Contract payments to a third party. The Department does not accept the assignment. This does not pertain to escrow accounts established for the sole purpose of depositing retained earnings in accordance with Section 10263 of the Public Contract Code.

Add to section 5-1.13A:

For federal-aid contracts insert form FHWA-1273 in all subcontractor contracts and all lower tier subcontracts.

Replace section 5-1.13B with:

5-1.13B Disadvantaged Business Enterprises

5-1.13B(1) General

Section 5-1.13B applies to a federal-aid contract.

Use each DBE as listed on the DBE Commitment form unless you receive Department prior authorization for termination under section 5-1.13B(2)(c). Ensure that all subcontracts and agreements with DBEs to supply labor or materials are performed under 49 CFR 26.

Maintain records of subcontracts made with DBE subcontractors and records of materials purchased from DBE suppliers. Include in the records:

1. Name and business address of each DBE subcontractor, DBE vendor, and DBE trucking company, regardless of tier
2. Date of payment and total amount paid to each DBE business

If you are a DBE contractor, include the date of work performed by your own forces and the corresponding value of the work.

Before the 15th day of each month for the previous month's work, submit the Monthly DBE Trucking Verification form (LAPM Exhibit 16-Z1)

If a DBE is decertified before completing its work, the business must notify you in writing of the decertification date within 15 days of decertification. Notify the Engineer and submit the DBE's decertification notice within 2 business days of your receipt. Upon work completion, complete a Disadvantage Business Enterprises (DBE) Certification Status Change form, Exhibit 17-O, and submit within 10 days of Contract acceptance.

Upon work completion, complete a Final Report – Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors form (LAPM Exhibit 17-F) and submit within 10 days of Contract acceptance. The Department withholds the greater of 10 percent of the DBE commitment or \$10,000 until the form is submitted. The Department releases the withhold upon submission of the completed form. If additional payments are made to a DBE after submittal of the completed form, submit an updated form to reflect such payments.

Failure to carry out requirements of 49 CFR 26 is a material breach of the Contract, which may result in the termination of the Contract or other remedy as the Department deems appropriate, such as:

1. Withholding monthly progress payments
2. Assessing sanctions
3. Applying liquidated damages

4. Disqualification from future bidding as nonresponsive

5-1.13B(2) Disadvantaged Business Enterprises

5-1.13B(2)(a) General

Section 5-1.13B(2) applies if a DBE goal is shown on the *Notice to Bidders*.

Certification as a DBE identifies if the business has the means to perform its work under assigned North American Industry Classification System codes and work codes applicable to the type of work the DBE will perform on the Contract. Certification does not ensure the DBE will perform a commercially useful function on the Contract.

You are responsible for ensuring each DBE listed on the DBE Commitment form performs:

1. The description and value of the subcontracted work or material supplied as committed
2. A commercially useful function under 49 CFR 26.55 for committed work or materials

For DBE committed work, the Department only pays for work performed or supplied by the listed DBE and if a commercially useful function was performed by the listed DBE.

You are responsible to remediate noncompliant DBE work to meet your DBE commitment. Submit a DBE commitment remediation plan within 5 business days of the Engineer's request.

Pay your DBEs in conformance with section 5-1.13E.

Failure to promptly pay DBEs may result in a withholds corresponding to the value of the DBE's committed work from future progress payments. In addition, unpaid DBE amounts will not count towards your DBE commitment, which may result in equivalent withholds or deductions and a 2 percent penalty on the unpaid amount for every month payment is not made.

5-1.13B(2)(b) Commercially Useful Function

DBEs must perform a commercially useful function under 49 CFR 26.55 when performing work or supplying materials listed on the DBE Commitment form. The DBEs value of work will only count toward the DBE commitment if the DBE performs a commercially useful function under 49 CFR 26.55.

Provide written notification to the Engineer at least 15 days in advance of each DBE's initial performance of work or supplying materials for the Contract. Include the DBE's name, contract work to be performed, and the location, date, and time of where their work will take place.

Within 10 days of a DBE initially performing work or supplying materials on the Contract, submit your initial evaluation and validation of their performance of a commercially useful function using DBE Commercially Useful Function Evaluation form (LAPM Exhibit 9-J). Include the following supporting information with your submittal:

1. Subcontract agreement with the DBE
2. Purchase orders
3. Bills of lading
4. Invoices
5. Proof of payment

Monitor your DBEs' performance of commercially useful function with quarterly evaluations and validations throughout their duration of work on the Contract using DBE Commercially Useful Function Evaluation form. Submit your quarterly evaluation and validation DBE Commercially Useful Function Evaluation forms by the 5th of the month for the previous three month's work. Include any additional supplemental supporting information with your submittal. If your DBE's work-start and -end dates for the Contract exceed a three-month period, regardless of time not on the Contract, quarterly evaluations and validations are required.

Notify the Engineer immediately if you believe the DBE may not be performing a commercially useful function.

The Department will verify your DBEs performance of commercially useful functions by reviewing your initial and quarterly DBE Commercially Useful Function Evaluation forms, your submitted supporting information, field observations, and through select Department evaluations. The Department may evaluate DBEs and their commercially useful function performance at any time during the Contract. In such instances, the Department will provide written notice to you and your DBE at least 2 business days prior to the evaluation. You and your DBE must participate in the evaluation. Upon completing the evaluation, the Department will share the evaluation results with you and your DBE. The evaluation results may include items that must be remedied upon your receipt. If the Department determines the DBE is not performing a commercially function you must suspend performance of the noncompliant work.

You and your DBEs must submit any additional commercially useful function related records and documents within 5 business days of Department request such as:

1. Proof of ownership or lease and rental agreements for equipment
2. Tax records
3. Employee rosters
4. Certified payroll records
5. Inventory rosters

Failure to submit required DBE Commercially Useful Function Evaluation forms or requested records and documents will result in withhold of payment for the value of work completed by the DBE.

If you and or the Department determine a listed DBE is not performing a commercially useful function in performance of their DBE committed work, suspend performance of the noncompliant portion of the work. Submit a corrective action plan within 5 days of the noncompliant commercially useful function determination. The plan must identify how you will remediate when feasible or demonstrate commercially useful function compliance for the remaining portion of the DBE's work. Allow 5 days for plan review. The corrective actions must be implemented within 5 days of Engineer's authorization of your plan and prior to resumption of the noncompliant portion of the DBE's committed work.

If corrective actions cannot be accomplished to assure the DBE will perform a commercially useful function on the Contract, you may have good cause to request termination of the DBE under section 5-1.13B(2)(c).

5-1.13B(2)(c) Termination

Termination of a DBE may be allowable for good cause reasons under 49 CFR 26.53(f)(3) with prior written authorization from the Department.

You must provide documentation supporting good cause reasoning with your termination request. If the termination request is authorized by the Department, you must then either replace the DBE with another DBE or demonstrate good faith efforts to do so under 5-1.13B(2)(d).

Use the following procedure to request the termination of a DBE or portion of their work:

1. Provide written notice to the DBE of your intent to use other forces or material sources and include one or more of the good cause reasons under 49 CFR 26.53(f)(3). Simultaneously send a copy of this written notice to the Engineer. Your written notice to the DBE must request they provide any response to both you and the Engineer.
2. Provide the DBE with 5 business days to respond to your written notice by either acknowledging their agreement or documenting their reasoning as to why the use of other forces or sources of materials should not occur. If the DBE does not respond within 5 business days, you may move forward with the request process as if the DBE had agreed to your written notice.
3. Submit your DBE termination request by written letter to the Engineer and include:
 - 3.1. One or more good cause reasons identified under 49 CFR 26.53(f)(3) along with supporting documentation.
 - 3.2. Your written notice to the DBE regarding the request, including proof of transmission and tracking documentation of your written notice.
 - 3.3. The DBE's response to your written notice, if received. If a written response was not provided, provide a statement to that effect.

The Department will respond to your complete DBE termination request as follows:

1. Where the DBE has agreed in writing or fails to timely respond to your written notice, the Department will respond within 2 business days from receipt of your request.
2. Where the DBE has disagreed in writing with your written notice, the Department will meet with you and the DBE within 5 business days from receipt of your request. The Department will respond to your request within 5 business days from this meeting.
3. If you fail to provide a complete request for DBE termination the Department will identify deficiencies within 5 business days from receipt of your request.

If the Department authorizes your DBE termination request it will do so in writing.

Work performed by a firm other than the committed DBE or authorized replacement DBE without first obtaining Department authorization for termination will be a violation of these specifications and DBE federal regulations. Such violations will result in payment deductions for the value of the work associated with the noncompliant DBE commitment. In addition, if the committed DBE is also a listed subcontractor, the Department applies an additional penalty up to 10 percent of the value of the subject work as a permanent deduction.

5-1.13B(2)(d) Replacement

After receiving Department written authorization of your DBE termination request, you must obtain separate Department authorization of your replacement plan.

Your replacement plan must identify DBE replacement firms to perform the work or demonstrate that you have made a good faith effort to use DBE replacement firms. DBE replacement firms must:

1. Perform at least the same dollar amount of work as the terminated DBE to the extent needed to meet the DBE commitment
2. Possess certifications for the most specific available North American Industry Classification System codes and work codes applicable to the work the firm will perform on the Contract
3. Perform a commercially useful function under 49 CFR 26.55

Use the following procedure to request authorization of your replacement plan:

1. Submit a request to replace a DBE with other forces or material sources by written letter to the Department which must include:
 - 1.1. Description of remaining uncommitted item work made available for replacement DBE solicitation and participation.
 - 1.2. The proposed DBE replacement firm's business information, the work they have agreed to perform, and the following:
 - 1.2.1. Quote for bid item work and description of work to be performed
 - 1.2.2. Proposed subcontract agreement and written confirmation of agreement to perform on the Contract
 - 1.2.3. Revised Subcontracting Request form
2. If you have not identified a DBE replacement firm, submit documentation of your good faith efforts to use DBE replacement firms within 7 days of Department's authorization to terminate the DBE. You may request the Department's approval to extend this submittal period to a total of 14 days. The Department considers your documented actions taken to identify a DBE replacement firm in determining whether a good faith effort was made under 49 CFR 26 app A. Submit documentation of actions taken to find a DBE replacement firm, such as:
 - 2.1. Search results of certified DBEs available to perform the original DBE work identified and or other work you had intended to self-perform, to the extent needed to meet your DBE commitment
 - 2.2. Solicitations of DBEs for performance of work identified in 2.1
 - 2.3. Correspondence with interested DBEs that may have included contract details and requirements
 - 2.4. Negotiation efforts with DBEs that reflect why an agreement was not reached

- 2.5. If a DBE's quote was rejected, provide your reasoning for the rejection, such as why the DBE was unqualified for the work, or why the price quote was unreasonable or excessive
- 2.6. Copies of each DBE's and non-DBE's price quotes for work identified in 2.1, as the Department may contact the firms to verify solicitation efforts and determine if the DBE quotes are substantially higher
- 2.7. Additional documentation that you believe supports your good faith effort

The Department will respond to your complete replacement plan as follows:

1. If a DBE replacement firm has been identified and required documentation has been provided, the Department will respond within 2 business days from receipt of your plan
2. If a DBE replacement firm has not been identified, but good faith effort documents have been provided, the Department will respond within 5 business days from receipt of your plan
3. If you fail to provide a complete replacement plan, the Department will return your request and identify deficiencies within 5 business days from receipt of your plan

If the Department authorizes your replacement plan it will do so in writing.

Submit a revised Subcontracting Request form if your replacement plan is authorized.

DBE committed work performed by a nonauthorized firm, will be a violation of these specifications and DBE federal regulations. Such violations will result in payment deductions for the value of the work associated with the DBE commitment. The Department will take a permanent deduction for the value of the DBE work that was not performed by the authorized DBE. In addition, if the associated work was also to be performed by a listed subcontractor, the Department applies an additional penalty up to 10 percent of the value of the subject work as a permanent deduction.

5-1.13B(3) Use of Joint Checks

You may use a joint check between the Contractor or lower-tier subcontractor and a DBE subcontractor purchasing materials from a material supplier if you obtain prior approval from the Department for your proposed use of joint checks upon submittal of a DLA Disadvantaged Business Enterprises (DBE) Joint Check Agreement Request form (LAPM Exhibit 9-K).

To use a joint check, the following conditions must be met:

1. All parties, including the Contractor, must agree in writing to the use of a joint check
2. Entity issuing the joint check acts solely to guarantee payment
3. DBE must release the check to the material supplier
4. Department must authorize the request before implementation
5. Any party to the agreement must provide requested documentation within 10 days of the Department's request for the documentation
6. Agreement to use a joint check must be short-term, not to exceed 1 year, allowing sufficient time needed to establish or increase a credit line with the material supplier

A request for a joint check agreement may be initiated by any party.

If a joint check is used, the DBE remains responsible for all elements of 49 CFR 26.55(c)(1).

Failure to comply with section 5-1.13B(3) disqualifies DBE participation and results in no credit and no payment to the Contractor for DBE participation.

A joint check may not be used between the Contractor or subcontractor and a DBE regular dealer, bulk material supplier, manufacturer, wholesaler, broker, trucker, packager, manufacturer's representative, or other persons who arrange or expedite transactions.

Replace section 5-1.13E with:

5-1.13E Prompt Payment

Section 5-1.13E applies to a federal-aid contract.

Pay your subcontractors within 7 days of receipt of each progress payment, unless otherwise agreed to in writing in accordance with Business and Professionals Code section 7108.5

Before the 15th day of each month for the previous month's work, submit the Prompt Payment Certification form (LAPM Exhibit 9-P) regardless of whether you made any payments.

The Department may request additional documentation to verify the information provided on the Prompt Payment Certification form is complete.

If there is a good faith dispute over any portion of the amount due on a progress payment to a subcontractor or other entity, you may withhold no more than 150 percent of the disputed amount. Provide a written withhold notification to the subcontractor or other entity and the Engineer no later than 7 days after receipt of the corresponding progress payment that includes the following:

1. Value of the disputed work
2. Amount of the withhold being taken
3. Bid item numbers or change order numbers associated with the disputed work
4. Explanation of the deficiencies of the disputed work and how the corresponding value was calculated
5. Corrective actions to be taken for release of withheld amount

The Department may request additional documentation from you to evaluate whether you applied the withhold in good faith.

If the Department determines your withhold was not applied in good faith, the Department may withhold the same amount from your future progress pay estimate. The Department may also apply a 2 percent penalty on the withhold amount for every month payment is not made.

Add to section 5-1.16:

Your representative must be available to respond to the job site within 1-2 hours at all times, including non-work hours, weekends and holidays.

Add to section 5-1.23A:

Each submittal must be dated and appropriately titled with the bid item number and project name.

Add to section 5-1.31:

Construct and maintain the necessary sanitary conveniences for the use of the workers on the project, properly obscured from public observance.

If you fail or refuse to fulfill these obligations to the County's satisfaction, County may, at its option, undertake these obligations, and withhold the cost of performing these obligations, plus an additional fee of twenty-five percent (25%) for administrative costs, from payments to you.

Add to the first paragraph in section 5-1.42:

You are responsible for all RFI's submitted. If it is determined that the information requested is clearly stated in the contract documents you will be charged for the Engineer's time and expenses associated with reviewing and responding to the RFI. If there is a disagreement regarding the cost, the Engineer decides.

For projects with a contract price under \$5 million add to section 5-1.43A:

Claims of \$375,000.00 or less that arises between you and the County will be resolved per the provisions of Article 1.5 entitled "Resolution of Construction Claims" of the Public Contract Code. Contractors bidding on this project must be familiar with the provisions of this article. Article 1.5 outlines the process to be used depending on whether the amount of the claim in controversy exceeds \$50,000.00 or not.

The plan must be sealed and signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State.

If the plan requires revisions, the Engineer provides comments. Submit a revised plan within 7 days of receiving comments. Allow 7 days for the review.

6-1.03B(3) Analytical Test Results

At least 15 days before placing local material, submit analytical test results for each local material obtained from a noncommercial source or a source not regulated under CA jurisdiction. The analytical test results must include:

1. Certification signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

The analytical testing described in the local material plan has been performed. I performed a statistical analysis of the test results using the US EPA's ProUCL software with the applicable 95 percent upper confidence limit. I certify that the material from the local material source is suitable for unrestricted use at the job site, it has a pH above 5.0, does not contain soluble lead in concentrations equal to or greater than 5mg/l as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II, does not contain lead in concentrations above 80 mg/kg total lead, is free from all other contaminants identified in the local material plan, and will comply with the job site's basin plan and water quality objectives of the RWQCB.

2. Chain of custody of samples
3. Analytical results no older than 1 year
4. Statistical analysis of the data using US EPA's ProUCL software with a 95 percent upper confidence limit
5. Comparison of sample results to hazardous waste concentration thresholds and the RWQCB's basin plan requirements and water quality objectives for the job site location

6-1.03B(4) Sample and Analysis

Sample and analyze local material from a (1) noncommercial source or (2) a source not regulated under CA jurisdiction:

1. Before bringing the local material to the job site
2. As described in the local material plan
3. Under US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)

The sample collection must be designed to generate a data set representative of the entire volume of proposed local material.

Before excavating at the (1) noncommercial material source or (2) a source not regulated under CA jurisdiction, collect the minimum number of samples and perform the minimum number of analytical tests for the corresponding maximum volume of local material as shown in the following table:

Minimum Number of Samples and Analytical Tests for Local Material

Maximum volume of imported borrow (cu yd)	Minimum number of samples and analytical tests
< 5,000	8
5,000–10,000	12 for the first 5,000 cu yd plus 1 for each additional 1,000 cu yd or portion thereof
10,000–20,000	17 for the first 10,000 cu yd plus 1 for each additional 2,500 cu yd or portion thereof
20,000-40,000	21 for the first 20,000 cu yd plus 1 for each additional 5,000 cu yd or portion thereof
40,000–80,000	25 for the first 40,000 cu yd plus 1 for each additional 10,000 cu yd or portion thereof
> 80,000	29 for the first 80,000 cu yd plus 1 for each additional 20,000 cu yd or portion thereof

Do not collect composite samples or mix individual samples to form a composite sample.

Analyze the samples using the US EPA's ProUCL software with a 95 percent upper confidence limit. All chemical analysis must be performed by a laboratory certified by the SWRCB's Environmental Laboratory Accreditation Program (ELAP).

The analytical test results must demonstrate that the local material:

1. Is not a hazardous waste
2. Has a pH above 5.0
3. Has an average total lead concentration, based upon the 95 percent upper confidence limit, at or below 80 mg/kg
4. Is free of possible contaminants identified in the local material plan
5. Complies with the RWQCB's basin plan for the job site location
6. Complies with the RWQCB's water quality objectives for the job site location

6-1.03B(4) Sample and Analysis

Sample and analyze local material from a (1) noncommercial source or (2) a source not regulated under CA jurisdiction:

1. Before bringing the local material to the job site
2. As described in the local material plan
3. Under US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)

The sample collection must be designed to generate a data set representative of the entire volume of proposed local material.

Before excavating at (1) a noncommercial material source or (2) a source not regulated under CA jurisdiction, collect the minimum number of samples, and perform the minimum number of analytical tests for the corresponding maximum volume of local material as shown in the following table:

Minimum Number of Samples and Analytical Tests for Local Material

Maximum volume of imported borrow (cu yd)	Minimum number of samples and analytical tests
< 5,000	8
5,000–10,000	12 for the first 5,000 cu yd plus 1 for each additional 1,000 cu yd or portion thereof
10,000–20,000	17 for the first 10,000 cu yd plus 1 for each additional 2,500 cu yd or portion thereof
20,000-40,000	21 for the first 20,000 cu yd plus 1 for each additional 5,000 cu yd or portion thereof
40,000–80,000	25 for the first 40,000 cu yd plus 1 for each additional 10,000 cu yd or portion thereof
> 80,000	29 for the first 80,000 cu yd plus 1 for each additional 20,000 cu yd or portion thereof

Do not collect composite samples or mix individual samples to form a composite sample.

Statistically analyze the samples' laboratory results using the US EPA's ProUCL software to define 95 percent upper confidence limit for the various contaminants of concern. All chemical analysis must be performed by a laboratory certified by the SWRCB's Environmental Laboratory Accreditation Program (ELAP).

The analytical test results must demonstrate that the local material:

1. Is not a hazardous waste
2. Has a pH above 5.0
3. Has an average total lead concentration, based upon the 95 percent upper confidence limit, at or below 80 mg/kg
4. Is not contaminated with local material plan-identified constituents of concern at average concentrations (95 percent upper confidence limits) in excess of their respective commercial/industrial San Francisco Bay RWQCB environmental screening levels ESLs, except for arsenic.
5. Does not contain any of the following compounds, chemicals, or elements at an estimated average concentration (95 percent upper confidence limit) above the maximum allowed concentration defined in the following table:

Compound/Chemical	Maximum allowed concentration (mg/kg)
Arsenic	11
Barium	1500
Benzene	1
Beryllium	10
Cadmium	10
Chromium (total)	1000
Cobalt	100
Diesel	150
Ethylbenzene	10
Gasoline	500
Mercury	10
Motor oil	500
Nickel	150
Selenium	10
Toluene	10
Trichloroethene	1
Vanadium	200
Xylenes	10
Zinc	600

6-1.03C Local Material Management

Do not place local material until authorized.

If the Engineer determines the appearance, odor, or texture of any delivered local material suggests possible contamination, sample and analyze the material. The sampling and analysis is change order work unless (1) hazardous waste is discovered or (2) the analytical test results indicate the material does not comply with section 6-1.03B(3).

Dispose of noncompliant local material at an appropriately permitted CA Class I, CA Class II or CA Class III facility. You are the generator of noncompliant local materials.

Replace the paragraphs of section 6-1.04C with:

Buy America Requirements apply to steel and iron, manufactured products, and construction materials permanently incorporated into the project.

6-1.04C(1) Steel and Iron Materials

All steel and iron materials must be melted and manufactured in the United States except:

1. Foreign pig iron and processed, pelletized, and reduced iron ore may be used in the domestic production of the steel and iron materials [60 Fed Reg 15478 (03/24/1995)];
2. If the total combined cost of the materials produced outside the United States does not exceed the greater of 0.1 percent of the total contract amount or \$2,500, materials produced outside the United States may be used if authorized.

Furnish steel and iron materials to be incorporated into the work with certificates of compliance and certified mill test reports. Mill test reports must indicate where the steel and iron were melted and manufactured. All melting and manufacturing processes for these materials, including an application of a coating, must occur in the United States. Coating includes all processes that protect or enhance the value of the material to which the coating is applied.

Certificates of compliance and mill test reports must be provided to the Engineer for approval on all furnished steel and iron materials delivered to the job site. A clear chain of custody record must be provided to the Engineer for approval showing where the steel and iron were melted and manufactured to demonstrate compliance. Corresponding mill tags must be secured and intact upon delivered product and verified by the Engineer upon delivery before use or installation can occur.

Certified mill test reports must indicate. All melting and manufacturing processes for these materials, including an application of a coating, must occur in the United States. Coating includes all processes that protect or enhance the value of the material to which the coating is applied.

6-1.04C(2) Manufactured Products

Iron and steel used in precast concrete manufactured products must meet the requirements of the above section (Steel and Iron Materials) regardless of the amount used. Iron and steel used in other manufactured products must meet the requirements of the above section (Steel and Iron Materials) if the weight of steel and iron components constitute 90 percent or more of the total weight of the manufactured product.

6-1.04C(3) Construction Materials

Buy America requirements apply to the following construction materials that are or consist primarily of:

1. Non-ferrous metals
2. Plastic and polymer-based products such as:
 - 2.1 Polyvinylchloride
 - 2.2 Composite Building Materials
3. Glass

4. Fiber optic cable (including drop cable)
5. Optical fiber
6. Lumber
7. Engineered wood
8. Drywall

All manufacturing processes for these materials as defined in 2 CFR 184.6 must occur in the United States.

Where one or more of these construction materials have been combined by a manufacturer with other materials through a manufacturing process, Buy America requirements do not apply unless otherwise specified.

Furnish construction materials to be incorporated into the work with certificates of compliance with each project delivery. Manufacturer's certificate of compliance must identify where the construction material was manufactured and attest specifically to Buy America compliance.

All manufacturing processes for these materials must occur in the United States.

Buy America requirements do not apply to the following:

1. Tools and construction equipment used in performing the work
2. Temporary work that is not incorporated into the finished project

Replace 5th paragraph section 6-2.01A:

The Department uses a Quality Assurance Program (QAP) to ensure a material is produced to comply with the Contract. The Local Agency may examine the records and reports of tests the prime contractor performs if they are available at the job site. Schedule work to allow time for QAP. For a copy of the manual, contact the Department.

Add to section 6-2.03A:

The Department may use multiple acceptance methods for a material.

Specifications in sections titled "Department Acceptance" do not include all requirements on which the Department makes its acceptance.

The Department may inspect, sample, and test materials for compliance with the Contract at any time.

Allow the Department to record, including photograph and video, to ensure a material is produced to comply with the Contract.

You may examine the records and reports of tests the Department performs if they are available at the job site.

Schedule work to allow time for the Department's QAP (inspection, sampling, testing, etc.)

The Department deducts testing costs for work that does not comply with the Contract.

The Department may retest material previously tested and authorized for use. If the Department notifies you of a retest, furnish resources for retesting.

Remove from the site all rejected materials brought to, or incorporated in, the work. Do not propose to use the rejected materials again. All work that has been rejected must be remedied, or removed and replaced, in an acceptable manner at your expense. If you fail to comply within 48 hours or to make satisfactory progress in so doing, the County may remove rejected materials, or rejected work and deduct and retain the costs from any payments due or to become due.

The Federal Minimum Wage Rates General Decision: CA20250018 03/21/2024 is hereby incorporated into the Contract found in Book 1 of 2 Bid Book.

Add to section 7-1.02K(3):

Submit electronic certified payroll records required under California Labor Code Section 1776 to the Labor Commissioner pursuant to California Code of Regulations Chapter 8, Section 16404.

Replace the fifth paragraph in section 7-1.02K(3) with:

You must submit certified payroll records electronically to the Resident Engineer by email.

Replace the 12th paragraph in section 7-1.03 with:

The Engineer may order or consent to your request to open a completed or partially completed portion of work for public use. You will not be compensated for any delay to your construction activities caused by the public. This does not relieve you from any other contractual responsibility. Opening the work to traffic does not automatically deem it complete and acceptable per the contract documents.

Add to section 7-1.03:

Normal working hours are 7:30 AM to 5:00 PM Monday through Friday. All work involving heavy equipment or traffic control must be done between 8:30 AM and 4:30 PM unless otherwise specified.

Delete the 24th paragraph of section 7-1.04.

Replace 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 County as follows:

1. Keep all insurance in full force and effect from the start of the work through Contract acceptance.
2. Maintain completed operations coverage with a carrier acceptable to the County through the expiration of the patent deficiency in construction statute of repose set forth in Civ Pro Code § 337.1.
3. 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 VII or better.

If you utilize one or more subcontractors in the performance of this Contract, obtain and maintain Independent Contractor's Insurance for each subcontractor or provide evidence of insurance coverage for each subcontractor equivalent to that required.

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 your submittal of this certification.

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

coverage shall contain a waiver of subrogation in favor of the County, including its officers, directors, agents, and employees.

If there is an exposure of injury to your employees under the US 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

Evidence General Liability and Umbrella or Excess Liability Insurance covering all operations by or on behalf of you providing insurance for bodily injury liability, property damage liability, and personal and advertising injury for the limits outlined in 7-1.06D(2). Coverage must extend to premises, operations and mobile equipment, personal and advertising injury, products and completed operations, and contractual liability. Coverage shall not contain a cross-suits exclusion barring coverage for a suit brought by or between County and another Insured in the policy. Coverage shall also not contain an exclusion for explosion, collapse and underground hazards. Such policies must contain an annual reinstatement of limits during construction operations.

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

The County of Santa Cruz requires Contractors to provide a copy of their insurance certificate with the information and limits outlined below:

1. Include Contractor/vendor name and current address.
2. General Liability (Comprehensive or Commercial Liability) Coverage
 - 2.1 \$2,000,000 combined single limit required
 - 2.2 \$2,000,000 Products – Comp./Op. Agg. required
 - 2.3 Damage to Rented Premises – required coverage
 - 2.4 Medical Expenses (bodily injury) – required coverage
 - 2.5 Personal & Adv. Injury – required coverage
 - 2.6 General Aggregate – required coverage
 - 2.7 The box for 'Occur' should be checked
3. Automobile Liability Coverage
 - 3.1 Required unless the Contractor does not drive a vehicle in conjunction with any part of the performance of the contract and certifies to this fact
 - 3.2 \$1,000,000 combined single limit (minimum requirement)
 - 3.3 'Any Auto' selection preferred
4. Workers Compensation (see section 7-1.06C)
5. Additional Insurances
 - 5.1 Professional Liability (required for professional services; recommended coverage for other services) \$1,000,000 combined single limit (minimum requirement when required)
 - 5.2 Cyber Liability \$1,000,000 per occurrence and \$2,000,000 aggregate
6. Umbrella Liability
7. All policies of Comprehensive or Commercial General Liability shall be endorsed to contain the following clause:

“*County, its officials, employees, agents and volunteers as additional insureds with respect to liability arising out of the work or operations and activities performed by or on behalf of ‘CONTRACTOR’, including materials, parts or equipment furnished in connection with such work or operations.”

Endorsements shall be at least as broad as ISO Form CG 20 10 11 85, or both CG 20 10 10 01 and CG 20 37 10 01, covering both ongoing operations and products and completed operations.

8. All required insurance policies shall be endorsed to contain the following clause:

“This insurance shall not be canceled until after thirty (30) days’ prior written notice (10 days for nonpayment of premium) has been given to *County.”

9. County must be named as certificate holder. Correct address must also be entered, along with room number.

The limits of liability must be at least the values shown in the following table:

Total bid	For Each Occurrence ^a	Aggregate for products/completed operation	General aggregate ^b	Umbrella or excess liability ^c
< \$1,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$5,000,000
> \$1,000,000 <\$10,000,000	\$2,000,000	\$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

^a combined single limit for bodily injury and property damage. This limit must apply separately to your work under this Contract.

^b This limit must apply separately to your work under this Contract.

^c The 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. The required umbrella liability limits are separate from and in addition to the required general liability limits. The umbrella or excess policies shall not contain exclusions barring follow-form coverage for required coverages in this specification.

7-1.06D(3) Contractor's Insurance -Waiver of Subrogation

The policy must stipulate that coverage contains a waiver of subrogation in favor of the State, including its officers, directors, agents (excluding agents who are design professionals), and employees.

7-1.06D(4) Contractor's Insurance - Separation of Insureds

The policy must stipulate that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

7-1.06E Automobile Liability Insurance

Coverage shall be provided per section 7-1.06D(2).

7-1.06F Policy Forms, Endorsements, and Certificates

Coverage shall be provided per section 7-1.06D(2).

7-1.06G Deductibles

Pay all deductibles and self-insured retentions (SIR) within 5 working days.

7-1.06H Enforcement

The Department may assure your compliance with your insurance obligations. Ten days before an insurance policy lapses, expires, or is canceled during the Contract period you must submit to the Department evidence of renewal through a binder or specimen copies of such policies or complete 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.

Any failure to comply with the reporting provisions of your policy shall not affect coverage provided to the County, including its officers, directors, agents (excluding agents who are design professionals), and employees.

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

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

7-1.06I Self-Insurance

Self-insurance programs and self-insured retentions in insurance policies are subject to separate annual review and approval by the County.

If you use a self-insurance program or self-insured retention, you must provide the County with the same protection from liability and defense of suits as would be afforded by first-dollar insurance. Execution of the Contract is your acknowledgment that you will be bound by all laws as if you were an insurer as defined under Ins Code § 23 and that the self-insurance program or self-insured retention shall operate as insurance as defined under Ins Code § 22.

Replace section 7-1.11B with:

FORM FHWA-1273 REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONTRACTS

Form FHWA-1273 is hereby incorporated into the Contract found in Book 1 of 2 Bid Book without modification, excluding ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS.

Replace section 7-1.11C with:

To comply with Section II, "Nondiscrimination," of "Required Contract Provisions Federal-Aid Construction Contracts," the following are for 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 (Standard Metropolitan Statistical Area) Counties: CA Lassen; CA Modoc; CA Plumas; CA Shasta; CA Siskiyou; CA Tehama	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 CA Monterey	28.9
	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	14.9
	7500 Santa Rosa CA Sonoma	9.1
	8720 Vallejo-Fairfield-Napa, CA CA Napa; CA Solano	17.1
	Non-SMSA Counties: CA Lake; CA Mendocino; CA San Benito	23.2
177	Sacramento, CA: SMSA Counties: 6920 Sacramento, CA CA Placer; CA Sacramento; CA Yolo	16.1
	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 Tuolumne	19.8
179	Fresno-Bakersfield, CA SMSA Counties: 0680 Bakersfield, CA CA Kern	19.1
	2840 Fresno, CA	26.1

	CA Fresno Non-SMSA Counties: CA Kings; CA Madera; CA Tulare	23.6
180	Los Angeles, CA: SMSA Counties: 0360 Anaheim-Santa Ana-Garden Grove, CA CA Orange 4480 Los Angeles-Long Beach, CA CA Los Angeles 6000 Oxnard-Simi Valley-Ventura, CA CA Ventura 6780 Riverside-San Bernardino-Ontario, CA CA Riverside; CA San Bernardino 7480 Santa Barbara-Santa Maria-Lompoc, CA CA Santa Barbara Non-SMSA Counties CA Inyo; CA Mono; CA San Luis Obispo	11.9 28.3 21.5 19.0 19.7 24.6
181	San Diego, CA: SMSA Counties 7320 San Diego, CA CA San Diego Non-SMSA Counties CA Imperial	16.9 18.2

For the last full week 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.

Replace section 7-1.11D with:

7-1.11D FEDERAL TRAINEE PROGRAM

For the Federal training program, the number of trainees or apprentices is 0.

This section applies if a number of trainees or apprentices is shown on the Notice of Bidders.

As part of the prime contractor’s equal opportunity affirmative action program, provide on-the-job training to develop full journeymen in the types of trades or job classifications involved.

The prime contractor has primary responsibility for meeting this training requirement.

If the prime contractor subcontracts a contract part, they shall determine how many trainees or apprentices are to be trained by the subcontractor. Include these training requirements in each 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 the prime contractor’s needs and the availability of journeymen in the various classifications within a reasonable recruitment area.

Before starting work, the prime contractor shall submit to the County:

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

The prime contractor shall obtain the County of approval for this submitted information before the prime contractor starts work. The County of credits the prime contractor for each apprentice or trainee the prime contractor employs on the job 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 journeyman status. The prime contractor shall 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 and show that they have made the efforts. In making these efforts, the prime contractor shall not discriminate against any applicant for training.

The prime contractor shall 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

The prime contractor shall ask the employee if the employee has successfully completed a training course leading to journeyman status or has been employed as a journeyman. The prime contractor's records must show the employee's answers to the questions.

In the training program, the prime contractor shall establish the minimum length and training type for each classification. The County of and FHWA approves a program if one of the following is met:

1. It is calculated to:
 - Meet the equal employment opportunity responsibilities
 - 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

The prime contractor shall obtain the State's approval for their training program before they start work involving the classification covered by the program.

The prime contractor shall 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 County of reimburses the prime contractor 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 prime contractor does at least one of the following:
 - a) Contribute to the cost of the training
 - b) Provide the instruction to the apprentice or trainee
 - c) Pay the apprentice's or trainee's wages during the off-site training period
3. If the prime contractor complies 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 a:

1. Copy of the training plan approved by the U.S, Department of Labor or a training plan for trainees approved by both Caltrans and FHWA
2. Certification showing the type and length of training satisfactorily completed

Maintain records and submit reports documenting contractor's performance under this section.

Add Section 7-1.011E

TITLE VI ASSURANCES:

The U.S. Department of Transportation Order No.1050.2A requires all federal-aid Department of Transportation contracts between an agency and a contractor to contain Appendix A and E.

APPENDIX A

During the performance of this Agreement, the contractor, for itself, its assignees and successors in interest (hereinafter collectively referred to as CONTRACTOR) agrees as follows:

- a) Compliance with Regulations: CONTRACTOR shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the REGULATIONS), which are herein incorporated by reference and made a part of this agreement.
- b) Nondiscrimination: CONTRACTOR, with regard to the work performed by it during the AGREEMENT, shall not discriminate on the grounds of race, color, sex, national origin, religion, age, or disability in the selection and retention of sub-applicants, including procurements of materials and leases of equipment. CONTRACTOR shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the agreement covers a program set forth in Appendix B of the Regulations.
- c) Solicitations for Sub-agreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by CONTRACTOR for work to be performed under a Sub- agreement, including procurements of materials or leases of equipment, each potential sub-applicant or supplier shall be notified by CONTRACTOR of the CONTRACTOR'S obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- d) Information and Reports: CONTRACTOR shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the recipient or FHWA to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of CONTRACTOR is in the exclusive possession of another who fails or refuses to furnish this information, CONTRACTOR shall so certify to the recipient or FHWA as appropriate, and shall set forth what efforts CONTRACTOR has made to obtain the information.
- e) Sanctions for Noncompliance: In the event of CONTRACTOR's noncompliance with the nondiscrimination provisions of this agreement, the recipient shall impose such agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
 - i. withholding of payments to CONTRACTOR under the Agreement within a reasonable period of time, not to exceed 90 days; and/or
 - ii. cancellation, termination or suspension of the Agreement, in whole or in part.

- f) Incorporation of Provisions: CONTRACTOR shall include the provisions of paragraphs (1) through (6) in every sub-agreement, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

CONTRACTOR shall take such action with respect to any sub-agreement or procurement as the recipient or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance, provided, however, that, in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a sub-applicant or supplier as a result of such direction, CONTRACTOR may request the recipient enter into such litigation to protect the interests of the State, and, in addition, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities, including, but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), prohibits discrimination on the basis of sex;
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 U.S.C. § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

Add section 7-1.12:

7-1.12 PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE EQUIPMENT AND SERVICES

Add to section 8-1.04B:

Submittals Required for Approval Prior to Start of Work
Level 1 Critical Path Method Schedule
Construction Staging Area Notification Form
Traffic Control Plan
Temporary Water Pollution Control Plan (CT submits 7 days after contract approval, see 13-2.01C)

Add to section 8-1.06:

During unfavorable weather and other unfavorable conditions, the Contractor shall pursue only such portions of the work as will not be damaged thereby. No portions of the work the satisfactory quality or efficiency of which will be affected by any unfavorable conditions shall be constructed while these conditions remain, unless, by special means or precautions approved by the Engineer, the Contractor shall be able to overcome these conditions.

Replace section 8-1.10 with:

The Contractor shall begin work within 15 calendar days after the issuance of the Notice to Proceed.

This work shall be diligently prosecuted to completion before the expiration of working days beginning on the fifteenth calendar day after the date shown on the Notice to Proceed.

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 Contractor shall pay to the County liquidated damages in the sum of \$3,6000 per day, for each and every calendar days' delay in finishing the work in excess of the number of working days prescribed above.

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

If all work except plant establishment or permanent erosion control establishment is complete and the total number of working days have expired, liquidated damages are \$950 per day.

Replace the 4th paragraph of section 8-1.13 with:

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 will take control of the work or require your surety to complete it.

If the Contractor should be adjudged bankrupt, or make an assignment for the benefit of Contractor's creditors, or if a receiver should be appointed on account of Contractor's insolvency, the County may declare the Contractor's control over the work terminated, and so notify the Contractor and Contractor's sureties.

Upon such termination, the County may take possession, and use all or any part, of the Contractor's materials, tools, equipment, and appliances upon the premises to complete the work; the County assuming responsibility for the final relinquishment of such equipment at the conclusion of the work, or sooner, at its option, in as good condition as when it was taken over, reasonable wear and tear excepted;

Notify the Engineer 2 weeks in advance of work on Eureka Canyon Road for the County to issue a press release. Fabricate and install public notification signs two weeks in advance of construction to notify public of construction activities.

If any traffic control changes are proposed, notify the Engineer in writing before 5:00 P.M. of the Thursday before the following week's work is scheduled.

Replace the table in the definition of *designated holidays* in section 12-4.02A(2) with:

Designated Holidays

Holiday	Date observed
New Year's Day	January 1st
Martin Luther King Jr. Day	3rd Monday in January
Lincoln's Birthday	2nd Monday in February
George Washington's Birthday	3rd Monday in February
Cezar Chavez Day	March 31st
Memorial Day	Last Monday in May
Independence Day	July 4th
Labor Day	1st Monday in September
Indigenous People's Day	2nd Monday in October
Veterans Day	November 11th
Thanksgiving	4th Thursday and Friday in November
Christmas Day	December 25th

This project includes the sensitive habitats shown in the following table:

Sensitive Habitats	
Redwood forest	
Redwood riparian corridor	

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

1. Stop all work within a 100-foot radius of the discovery except as shown in the following table:

Regulated species	Protective radius (feet)
Nesting raptor	300

Add to section 14-6.03A:

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

Species Protection Areas	
Identification name	Location
SPA 1	Entire project area

Within SPA 1, implement the following protection measures:

1. Every individual working on the project must attend a biological awareness training session delivered by a qualified biologist. This training program shall include information regarding special-status species (including pertinent fish, amphibians and reptile species) and the importance of avoiding impacts to wildlife species individuals and associated habitat. The training shall include species identification characteristics, BMPs to be implemented, project-specific avoidance measures that must be followed, and the steps necessary if the species is encountered at any time personnel would attend biological awareness training prior to working within the Project area. The biological awareness training would include a description of special-status species and sensitive habitats and identify mitigation measures that must be complied with.
2. Pre-construction biological clearance surveys would be performed to minimize impacts on special-status plants. Should any special-status plant species be observed within or immediately adjacent to the Project area, ESA fencing (orange construction barrier fencing) will be installed around special-status plant populations, where feasible. A written report of the pre-construction survey results will be submitted to Caltrans within 30 days of completion of the survey.
3. 24-hours prior to construction activities, the Project area should be surveyed for California giant salamander, Santa Cruz black salamander and any other special-status species that has been determined to have the potential of occurring within the BSA. A survey of the Project area should be repeated if a lapse in construction activity of two weeks or greater has occurred. If a special-status salamander is found within the BSA the occurrence will be documented by the Project biologist, and the appropriate regulatory agencies would be contacted to determine any if further measures or avoidance is required.
4. The Resident Engineer will immediately contact the agency approved Project biologist(s) in the event that a special-status wildlife species is observed within a construction zone and will suspend construction activities within a 50-foot radius of the animal until it leaves the site voluntarily or an agency-approved protocol for removal has been established.
5. The contractor must not apply rodenticide or herbicide within the Project area during construction.
6. Construction activities that would disturb soil shall occur between June 15 and October 15, when special-status amphibian species (California giant salamander and Santa Cruz black salamander) are unlikely to be active and there is lower potential for an individual to enter the work area. Should construction activities occur outside of the June 15 and October 15 window, a qualified biologist shall conduct daily monitoring of the Project site to ensure that no impacts to special-status amphibian species occur.
7. Construction personnel must not feed or attract wildlife to the Project area.
8. If any wildlife species is encountered during the course of construction, said wildlife must be allowed to leave the construction area unharmed.

9. Vegetation removal or earthwork should be minimized during the nesting season (February 1– August 31). If vegetation removal is required during the nesting season, a pre-construction nesting bird survey must be conducted within seven days prior to vegetation removal. All vegetation cleared by the biologist must be removed within two weeks of the nesting bird survey.

Replace the 2nd paragraph of section 14-6.03B with:

The Department anticipates nesting or attempted nesting by migratory and nongame birds from between February 15 and August 31.

Replace item 1 in the list in the 6th paragraph of section 14-6.03B with:

1. Stop all work within a 100-foot radius of the discovery except as shown in the following table:

Species	Protective radius (feet)
Raptors	300

Add to the list in the 2nd paragraph of section 14-6.03D(1) with:

6. Conduct preconstruction surveys
7. Provide biological awareness training
8. Periodically inspect the ESA to ensure sensitive locations remain undisturbed
9. Monitor construction within the vicinity of riparian habitats, riverine habitats and sensitive habitats of concern areas to ensure that vegetation removal, BMPs, ESAs, and all avoidance and minimization measures are properly constructed and followed
10. Be USFWS approved for tasks requiring a USFWS approved biologist

Add to section 14-6.03D(1):

All communication from the contractor-supplied biologist must go directly to the Engineer. At no time will the Engineer is to be excluded from conversations between the contractor-supplied biologist and the contractor.

Any deficiencies not corrected by the contractor in a timely manner must be reported to the Engineer.

Survey the job site for regulated species and submit a preconstruction survey report within 14 days before starting work. Conduct pre-construction surveys again within 24 hour before starting work and at any time between February 15 and August 31 for nesting birds. If construction stops for more than 1 week, a nesting bird survey must be repeated.

The preconstruction survey report must include one of the following:

1. Detailed observations and locations where regulated species were observed
2. Statement that no regulated species were observed

Submit an initial monitoring report as an informational submittal within 12 hours after starting ground-disturbing activities.

Submit a biological resource incident report within 24 hours of an incident.

The incident report must include:

1. Description of any take of regulated species or any violation of a biological resource PLAC
2. Species name and number taken
3. Details of required notifications with contact information
4. Corrective actions proposed or taken
5. Disposition of taken species

Submit a final monitoring report no later than 20 days after completion of the project. If the report requires revisions, the Department provides comments. Submit a revised report within 7 days of receiving comments. The final monitoring report must be a cumulative report including:

1. Start and end dates of construction
2. Project impacts on the regulated species
3. Species protection measures and implementation details
4. Incidental take details, including species name, number taken, people contacted, contact information, and disposition of taken species
5. Assessment of the effectiveness of the species protection measures in mitigating project impacts
6. Recommendations for improving species protection measures

Replace *Reserved* in section 14-6.03D(3) with:

Prepare and present a biological resource information program to familiarize personnel with regulated species and habitats, related laws and regulations, and species protection measures and protocols.

The biological resource information program must include:

1. Identification of the job site, ESAs, and species protection areas
2. Description of the regulated species and its general ecology
3. Description of habitats used by the regulated species and their locations
4. Requirements for protecting regulated species
5. Definition and consequences of take of regulated species
6. Response plan for encounters with the regulated species or a species that looks like one
7. Permit requirements for touching or moving a regulated species
8. Requirements for species protection
9. Description of avoidance and minimization measures
10. Handout materials about the regulated species, its habitats, and species protection measures

A Contractor-supplied biologist must develop the program and present the biological resource training.

Submit an outline of your program within 7 days after Contract approval. If the submittal is rejected, submit a revised outline within 7 days of receiving the rejection.

Allow 15 days for the Department's review of your outline of the program.

Notify the Engineer at least 7 days before the 1st training session. Submit an attendance list with the printed and signed name of each attendee within 2 business days after each session. Submit a separate attendance list for each subsequent training session for new personnel.

Personnel who must complete biological resource training include laborers, tradesmen, material suppliers, equipment maintenance staff, supervisors, foremen, office staff, food vendors, and other workers who stay at the job site longer than 30 minutes.

Provide a handout that describes the regulated species, their habitats, and protection measures as listed in species protection or in PLACs.

Distribute the handout to each attendee. Display and maintain the handout at all construction field offices and on all information boards.

Replace *RESERVED* in section 14-6.05 with:

14-6.05 INVASIVE SPECIES CONTROL

Section 14-6.05 includes specifications for preventing the introduction and spread of invasive species to and from the job site.

Comply with section 13-4.03E(3).

At least 2 business days before using vehicles and equipment on the job site, submit a signed statement that the vehicles and equipment have been cleaned of soil, seeds, vegetative matter, and other such debris that may introduce or spread invasive species. The statement must include:

1. List of the vehicles and equipment with identifying numbers
2. Date of cleaning for each vehicle and piece of equipment
3. Description of the cleaning process
4. Measures to be taken to ensure the vehicles and equipment remain clean until operation at the job site
5. Verification that the equipment has not been operated in waters known to be infested by aquatic invasive species

Update the list of vehicles and equipment as needed.

Clean the following vehicles and equipment before operation at the job site:

1. Excavators
2. Loaders
3. Graders
4. Haul trucks
5. Water trucks
6. Cranes
7. Tractors
8. Trailers
9. Dump trucks
10. Waders

This project includes the sensitive areas shown in the following table:

Sensitive Habitat
Redwood forest
Redwood riparian corridor

Do not clean vehicles, equipment, or tools at locations near sensitive habitat or waterways at the job site. Clean vehicles and equipment every time before it enters or leaves a sensitive habitat. Within project limits, implement the following protection measures:

1. Before entering or exiting, pressure wash your vehicles and equipment:
 - 1.1. At a temperature of 140 degrees F
 - 1.2. With a minimum nozzle pressure of 2,500 psi
 - 1.3. With a minimum fan tip angle of 45 degrees
2. Thoroughly scrub personal work equipment and tools, such as boots, waders, hand tools, and any other equipment used in water at the job site, using a stiff-bristled brush to remove any organisms. Decontaminate the equipment by one of the following methods:
 - 2.1. Immerse the equipment in water at a temperature of 140 degrees F for at least 5 minutes. If necessary, weigh down the equipment to keep it immersed in the water.
 - 2.2 Freeze the equipment to a temperature of 32 degrees F or colder for at least 8 hours.
 - 2.3 Thoroughly dry the equipment in a weed-free area for at least 48 hours.
3. Clean personal work equipment, and tools over drip pans or containment mats at the job site. Collect and contain the wastewater. Dispose of the wastewater at a waste management facility.

Replace the 2nd paragraph of section 14-8.02 with:

Do not operate construction equipment or run equipment engines from 7:00 p.m. to 7:00 a.m. or on Saturdays or Sundays at the job site except to:

1. Service traffic-control facilities
2. Service construction equipment

Add to section 14-8.02:

Noise level requirement apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that you may or may not be own. Avoid the use of loud sound signals in favor of light warnings except those required by safety laws for the protection of personnel.

Replace item 1 in the list in the 1st paragraph of section 14-11.02 with:

1. You reasonably believe the substance is asbestos as defined in Labor Code § 6501.7 or a hazardous substance as defined in Health & Safety Code § 25117, § 25316 and § 25317.

Add to the end of section 19-3.01A:

Structure backfill includes constructing the geocomposite drain system. The systems must comply with section 68-7.

Add to section 19-7.02A:

Obtaining imported borrow must comply with Section 19-1.0 and include the following:

1. Clearing and grubbing the material site.
2. Selecting material within the source.
3. Screening and wasting from 30 to 60 percent of the finer material.
4. Washing materials so that the imported borrow complies with the sand equivalent requirements.

Add to section 19-7.02C:

Imported borrow placed within 4 feet of the finished grade must have an R-value of at least 20.

Strip materials that adversely affect the imported borrow properties.

Imported borrow must comply with 19-1.02.

Replace Reserved in section 19-11 with:

19-11 REMOVE DEBRIS/CLEAN DITCH

19-11.01A GENERAL

Section 19-11 includes specifications for removing debris and cleaning the ditch.

Remove debris as shown, clean out the ditch and grade to drain as shown.

19-11.01B MATERIALS

Not Used

19-11.01C CONSTRUCTION

Do not reuse the material on site unless it is free of organic material, free of weed seed and meets the specifications.

Unusable material must be transported off the site.

19-11.01D PAYMENT

Not Used

Replace Reserved in section 19-12 with:

19-12 REMOVE LOOSE ROCK

19-12.01A GENERAL

Section 19-12 includes specifications for removing loose rock.

Remove overhanging, unstable and loose rock from the slope above the road.

19-12.01B MATERIALS

Not Used

19-12.01C CONSTRUCTION

Rock removal must be performed in a controlled manner. Do not allow debris to tumble below the road.

Remove rock as directed by the Engineer.

Replace *Reserved* in section 49-4.01C(1) with:

Submit as an informational submittal the proposed drilling equipment operational capacities or descriptions for:

1. Downward force in pounds
2. Torque in foot-pounds
3. Rotational speed in revolutions/minute
4. Rate of penetration in feet/hour
5. Number and type of drilling cutters or drilling teeth on drilling tool

Replace *Reserved* in section 49-4.03A with:

Drilling equipment must be equipped with instrumentation to measure accurately the actual downward force in pounds. Instrumentation must be visible for reading.

Add to section 49-3.02C(1):

Construct piles in stages. At no time should an open pile excavation be made adjacent to a recently poured pile that has not cured sufficiently to be stable. This can be accomplished by drilling, setting reinforcement, and pouring every other pile along the wall line. The remaining pile locations can be drilled after the initial set of piles have cured for 6 hours.

Add to section 49-4.03B:

Due to the presence of bedrock, anticipate some difficult drilling conditions to occur during drilling operations. The selection of equipment and procedures for constructing soldier piles is the Contractor's responsibility and should include factors such as the shaft diameter and soil conditions.

If you substitute piles with a larger diagonal dimension for the piles shown, ream or enlarge the drilled hole to provide a hole diameter at least 4 inches larger than the diagonal dimension of the pile.

Replace section 49-5 with:

49-5 MICROPILING

49-5.01 GENERAL

49-5.01A Summary

Section 49-5 includes specifications for constructing micropiles.

HS threaded bars must comply with the specifications for HS steel prestressing bars in section 50.

49-5.01B Definitions

micropile: Small-diameter, bored, CIP composite pile, in which the applied load is resisted by steel reinforcing elements, grout, and frictional ground-grout bond.

steel reinforcing element: Steel element used to strengthen or stiffen a micropile, such as bar reinforcing steel, HS threaded bar, pipe, hollow structural section (HSS), or casing.

49-5.01C Submittals

49-5.01C(1) General

Do not order materials nor install micropiles until the experience qualifications, shop drawings and calculations, and installation plan are authorized.

49-5.01C(2) Experience Qualifications

Submit the following experience qualification information:

1. Summary of the micropile subcontractor's experience that demonstrates compliance with section 49-5.01D(2).
2. Construction details, structural details, and load test results from at least 3 completed micropile installations performed by the micropile subcontractor in the last 5 years. The installations must be from 3 separate projects of similar scope to this Contract. Include a project description and the owner's name and current phone number.
3. List of on-site foremen and drill rig operators who will perform the micropile work and a summary of each individual's experience that demonstrates compliance with section 49-5.01D(2).

Allow 10 days for review.

49-5.01C(3) Shop Drawings and Calculations

Submit micropile shop drawings and calculations electronically to the Engineer.

Allow 30 days for review.

The shop drawings and calculations must be sealed and signed by an engineer who is registered as a civil engineer in the State.

The shop drawings and calculations must include:

1. Name, address, and phone number of the micropile subcontractor
2. Plan view, including:
 - 2.1. Station and offset at the beginning and end of the micropile structure and at any change in the structure's horizontal alignment
 - 2.2. Identification and location of each exploratory borehole
 - 2.3. Location of any existing utilities, adjacent existing structures, and other potential interferences
 - 2.4. Micropile layout and spacing
 - 2.5. Unique identification number for each micropile
3. Typical sections, including:
 - 3.1. Micropile inclination
 - 3.2. Drilled hole diameter
 - 3.3. Micropile tip elevation
 - 3.4. Micropile cutoff elevation
 - 3.5. Steel reinforcing element details, including sizes, and lengths
 - 3.6. Centralizers and any spacers
 - 3.7. Micropile anchorage details
4. Material properties
5. General notes for constructing the micropiles, including overall construction sequencing
6. Calculations for the micropile length

If you propose an alternative to the API N80 casing shown, include with the shop drawings and calculations:

1. Calculations demonstrating that the structural capacity of the alternative pipe, HSS, or casing is greater than the structural capacity of the API N80 casing shown
2. Details and calculations for any anchorage changes needed to accommodate the alternative pipe, HSS, or casing

49-5.01C(4) Installation Plan

Submit a micropile installation plan, including:

1. Detailed construction procedures, including personnel, materials, testing, and equipment.
2. Layout drawing showing the micropile installation sequence.
3. Information on headroom and space requirements for installation equipment that verifies that the equipment can perform at the job site.

5. Drilling or coring methods and equipment, including methods to:
 - 5.1. Provide drilled hole support
 - 5.2. Drill a straight hole
 - 5.3. Advance through boulders and other obstructions
 - 5.4. Prevent detrimental ground movements
8. Methods for placing, positioning, and supporting steel reinforcing elements.
9. Grouting plan, including:
 - 9.1. Grout mix design. Include test results from an authorized laboratory for the compressive strength of the mix at 3, 7, 14, and 28 days and the density of the mix.
 - 9.2. Procedures for monitoring grout quality.
 - 9.3. Placement procedures and equipment, including details for post-grouting, if used.
 - 9.4. Methods and equipment for monitoring and recording grout depth, volume, and pressure as the grout is placed.
 - 9.5. Grouting rate calculations, upon request. Base the calculations on the initial pump pressures or static head on the grout and losses throughout the placing system, including anticipated head of drilling fluid to be displaced, if applicable.
 - 9.6. Minimum cure time and strength requirements for performing load testing.
10. Plan for the control and disposal of surface and groundwater, drill flush, and waste grout.
11. Load testing plan, including drawings and calculations that describe:
 - 11.1. Testing procedures.
 - 11.2. Reaction load system capacity and equipment setup.
 - 11.3. Types and accuracy of the primary and secondary instrumentation equipment to be used for applying and measuring the test loads and top of micropile movements.
 - 11.4. Installation details for the instrumentation to be used for applying and measuring the test loads and measuring the top of micropile movements.
 - 11.5. Provisions for isolating verification test micropiles as specified under section 49-5.03B.
12. Calibration reports and data for each test jack, pressure gauge, load cell, and electronic displacement transducer to be used. The load cell calibration chart must show applied load versus millivolts per volt.

The installation plan must be sealed and signed by an engineer who is registered as a civil engineer in the State.

Allow 20 days for review.

49-5.01C(5) Mill Test Reports

Submit certified mill test reports for each heat number of each type of steel reinforcing element at least 7 days before using the materials in the work. The certified mill test reports must include ultimate strength, yield strength, elongation, and chemical composition.

49-5.01C(6) Installation Logs

Submit each installation log as an informational submittal within 1 business day of the micropile installation. The installation log must include:

1. Micropile identification number and location
2. Names of superintendent, drill rig operator, grout plant operator, and any other personnel involved in the micropile installation
3. Date, time, and duration of drilling, steel reinforcing element installation, and grout placement
4. Drilling or coring method and speed
5. Details of any hole stabilization method used
6. Description of soil or rock encountered
7. Quantity of groundwater encountered
8. Description of any unusual installation behaviors or conditions
9. Drilled hole diameter
10. Micropile tip elevation
11. Log of grout quantities and pressures, including the time and micropile depth
12. Lengths of steel reinforcing elements

49-5.01C(7) Grout Test Results

Submit grout test results for density, efflux time, and compressive strength within 1 business day of testing.

49-5.01C(8) Load Test Data

Submit load test data within 1 business day of the completion of a verification or proof load test. Load test data must include:

1. Micropile identification number and location
2. Installation date
3. Load test date
4. Testing personnel
5. Load testing equipment
6. Raw data from the electronic data acquisition system
7. Readings from the secondary load and displacement measurement systems recorded at each load increment
8. Specified curves plotted using data from the electronic data acquisition system
9. Comparison of the load test results and the acceptance criteria

Load test data must be sealed and signed by an engineer who is registered as a civil engineer in the State.

Allow 10 days for review.

49-5.01D Quality Assurance

49-5.01D(1) General

Not Used

49-5.01D(2) Experience Qualifications

The micropile subcontractor must:

1. Be experienced in micropile construction and load testing
2. Have successfully constructed at least 5 projects in the last 5 years involving a combined total of at least 100 micropiles
3. Have previous micropile drilling and grouting experience in soil or rock similar to the soil or rock for this Contract

Each on-site foreman and drill rig operator must have experience installing micropiles on at least 3 projects completed in the last 5 years.

49-5.01D(3) Preconstruction Meeting

Schedule and hold a micropile preconstruction meeting at least 5 business days after submitting the micropile shop drawings, calculations, and installation plan and at least 10 days before starting micropile construction. You must provide a meeting facility.

The meeting must include the Engineer, your representatives, representatives from the micropile subcontractor, and representatives from any other subcontractor to be involved in the micropile construction.

The Engineer conducts the meeting. Be prepared to discuss:

1. Contractual relationships and delineation of responsibilities among you and the subcontractors
2. Contacts and communication protocol between you and your representatives, the subcontractors, and the Engineer
3. Coordination of the construction schedule and activities
4. Anticipated subsurface conditions
5. Structural, geotechnical, and construction requirements
6. Materials testing
7. Load testing

49-5.01D(4) Quality Control

49-5.01D(4)(a) General

Not Used

49-5.01D(4)(b) Grout Testing

Before placing grout into each micropile:

1. Test the grout density under API RP 13B-1 using the Baroid mud balance. Take the grout test samples directly from the grout plant.
2. Test the grout efflux time under California Test 541. Take the grout test samples at the point of placement.

Test the grout compressive strength under ASTM C109/C109M at an authorized laboratory. Test at least 1 set of three 2-inch grout cubes from each grout plant each day of operation or for every 10 micropiles installed, whichever occurs more frequently. Take the grout test samples directly from the grout plant.

49-5.01D(4)(c) Load Testing

49-5.01D(4)(c)(i) General

Section 49-1.01D does not apply to micropile load testing.

The grout for each load test micropile must attain the compressive strength shown before you perform the load test.

Notify the Engineer at least 10 days before you perform each load test.

Perform each load test in the Engineer's presence.

Perform verification and proof load testing in tension under ASTM D3689, except do not use the loading apparatus described as "Tensile Load Applied by Hydraulic Jack(s) Acting Upward at One End of Test Beam(s)."

For tension load testing:

1. FTL in the load test schedule must be equal to 36 kips
2. SL in the load test schedule must be equal to 28 kips

Apply the test loads for tension load testing to the center bar only.

Do not use an existing structure as part of the reaction system unless authorized.

Use a load cell as the primary load measurement system. The load cell must:

1. Be of the bonded electrical resistance strain gauge type.
2. Have a full scale range no greater than 150 percent of the maximum test load.
3. Be moisture resistant.
4. Be temperature compensated. The maximum temperature sensitivity at zero load must be ± 0.05 percent of full scale per degree F.
5. Have a resolution within ± 0.025 percent of full scale.
6. Have an accuracy within ± 0.25 percent of full scale.

Use electronic displacement transducers as the primary movement measurement system. Displacement transducers must be capable of measuring to 0.001 inch and have enough travel to allow the load test to be performed without resetting.

Apply the test loads using a hydraulic jack. Use the gauge in the jack and pressure gauge assembly as the secondary load measurement system. Jack ram travel must be sufficient to allow the load test to be performed without resetting the equipment. The pressure gauge must be graduated in 100 psi increments or less.

The load cell, the electronic displacement transducers, and the jack and gauge assembly must be calibrated by an authorized laboratory accredited for calibration services using equipment traceable to NIST. The jack and gauge assembly must be calibrated as a unit.

Use an electronic data acquisition system to simultaneously monitor and record readings from the primary load and displacement measurement systems. The electronic data acquisition system must continuously take readings at regular intervals from the load cell and electronic displacement transducers.

The Department may verify the test loads using Department-furnished load cells. Upon request, furnish the resources necessary to install and support the Department's testing equipment at the load testing location and to remove the equipment after the testing is complete.

49-5.01D(4)(c)(ii) Verification Load Testing

Perform verification load testing on each verification test micropile installed.

Perform verification load testing as follows:

1. Incrementally load and unload the micropile as shown in the following table:

Verification Load Test Schedule

Load increment	Hold time (minutes)
AL	Until stable
0.25SL	1-2
AL	Until stable
0.25SL	1-2
0.50SL	1-2
AL	Until stable
0.25SL	1-2
0.50SL	1-2
0.75SL	1-2
AL	Until stable
0.25SL	1-2
0.50SL	1-2
0.75SL	1-2
1.00SL	10 or 60
AL	Until stable
0.25SL	1-2
0.50SL	1-2
0.75SL	1-2
1.00SL	1-2
0.80SL + 0.20FTL	1-2
0.60SL + 0.40FTL	1-2
0.40SL + 0.60FTL	1-2
0.20SL + 0.80FTL	1-2
1.00FTL ^a	5
0.75FTL	1-2
0.50FTL	1-2
0.25FTL	1-2
AL	Until stable

NOTES:

AL = alignment load, 0.10SL

SL = service load

FTL = factored test load

^aMaximum test load

2. At each load increment:
 - 2.1. Apply the load in less than 1 minute.
 - 2.2. Maintain a constant load for the hold time shown in the load test schedule. Start the hold time as soon as the load increment is fully applied.
 - 2.3. Measure and record the top of micropile movement at the end of the hold time.
3. At the 1st application of 1.00SL, perform the creep test as follows:
 - 3.1. Hold the load for 10 minutes.
 - 3.2. Measure and record the top of micropile movement at 1, 2, 3, 4, 5, 6, and 10 minutes.
 - 3.3. If the movement measured from 1 to 10 minutes is greater than 0.04 inch, continue the creep test as follows:
 - 3.3.1. Hold the load for an additional 50 minutes.
 - 3.3.2. Measure and record the top of micropile movement at 15, 20, 25, 30, 45, and 60 minutes.
 - 3.3.3. Plot the top of micropile movement as a function of the logarithm of time from 6 to 60 minutes.
4. Plot the applied test load versus the top of micropile movement at each load increment.

49-5.01D(4)(c)(iii) Proof Load Testing

Perform proof load tests on 2 micropiles A and 1 micropile B . The Engineer selects each micropile to be proof load tested. The Engineer does not notify you of which micropile is to be proof load tested until after the micropile has been installed.

The 1st micropile proof load test in a wall zone must be performed after at least 25 percent of the micropiles in the wall zone have been installed.

Perform proof load testing as follows:

1. Incrementally load and unload the micropile as shown in the following table:

Proof Load Test Schedule

Load increment	Hold time (minutes)
AL	Until stable
0.25SL	1-2
0.50SL	1-2
0.75SL	1-2
1.00SL	10 or 60
0.80SL + 0.20(0.80FTL)	1-2
0.60SL + 0.40(0.80FTL)	1-2
0.40SL + 0.60(0.80FTL)	1-2
0.20SL + 0.80(0.80FTL)	1-2
0.80FTL ^a	5
AL	Until stable

NOTES:

AL = alignment load, 0.10SL

SL = service load

FTL = factored test load

^aMaximum test load

2. At each load increment:
 - 2.1. Apply the load in less than 1 minute.
 - 2.2. Maintain a constant load for the hold time shown in the load test schedule. Start the hold time as soon as the load increment is fully applied.
 - 2.3. Measure and record the top of micropile movement at the end of the hold time.
3. At the 1st application of 1.00SL, perform the creep test as follows:
 - 3.1. Hold the load for 10 minutes.

- 3.2. Measure and record the top of micropile movement at 1, 2, 3, 4, 5, 6, and 10 minutes.
- 3.3. If the movement measured from 1 to 10 minutes is greater than 0.04 inch, continue the creep test as follows:
 - 3.3.1. Hold the load for an additional 50 minutes.
 - 3.3.2. Measure and record the top of micropile movement at 15, 20, 25, 30, 45, and 60 minutes.
 - 3.3.3. Plot the top of micropile movement as a function of the logarithm of time from 6 to 60 minutes.
4. Plot the applied test load versus the top of micropile movement at each load increment.

49-5.01D(5) Department Acceptance

49-5.01D(5)(a) General

Not Used

49-5.01D(5)(b) Verification Load Test

Each verification load test must comply with the following acceptance criteria:

1. Axial movement at the top of the micropile measured from the initial alignment load to the 1st application of 1.00SL must not exceed 0.1 inch at the end of the 1.00SL hold time.
3. Slope of the applied test load versus the top of micropile movement must not exceed 0.025 inch per kip at the maximum test load.
4. Creep test movement must comply with one of the following:
 - 4.1. For a 10-minute load hold, the movement measured from 1 to 10 minutes must be less than 0.04 inch.
 - 4.2. For a 60-minute load hold, the movement measured from 6 to 60 minutes must be less than 0.08 inch and the rate of movement must be linear or decreasing in time logarithmic scale from the 6- to the 60-minute reading.

If a verification load test fails to comply with the acceptance criteria, the verification test micropile is rejected. Revise the micropile length, installation methods, or both, and submit revised shop drawings, calculations, and installation plan.

After the revised submittals are authorized, install and test a new verification test micropile that incorporates the changes at an authorized location near the rejected verification test micropile. If post-grouting the micropile is the only change, you may post-grout and retest the rejected verification test micropile instead of installing a new verification test micropile.

If the new or retested verification test micropile fails to comply with the acceptance criteria, repeat the process specified above until a verification test micropile complies with the acceptance criteria.

49-5.01D(5)(c) Proof Load Test

Each proof load test must comply with the following acceptance criteria:

1. the axial movement at the top of the micropile measured from the initial alignment load to the 1st application of 1.00SL must not exceed 0.1 inch at the end of the 1.00SL hold time.
3. Slope of the applied test load versus the top of micropile movement must not exceed 0.025 inch per kip at the maximum test load.
4. Creep test movement must comply with one of the following:
 - 4.1. For a 10-minute load hold, the movement measured from 1 to 10 minutes must be less than 0.04 inch.
 - 4.2. For a 60-minute load hold, the movement measured from 6 to 60 minutes must be less than 0.08 inch and the rate of movement must be linear or decreasing in time logarithmic scale from the 6- to the 60-minute reading.

If a proof load test fails to comply with the acceptance criteria, the micropile is rejected. Suspend micropile construction and comply with one of the following procedures:

1. Post-grout and retest the rejected micropile. If the post-grouted micropile complies with the acceptance criteria when retested, post-grout all of the micropiles in the wall zone using identical methods. Any proof load test performed on a micropile before the post-grouting does not count toward the total proof load tests required for the wall zone.
2. Proof load test all the micropiles in the footing that have been constructed unless otherwise authorized. Submit a plan for replacing rejected micropiles or for installing additional micropiles, including details for any micropile or wall zone changes required to provide the total micropiling support capacity shown. Suspend micropile construction until the plan is authorized.

49-5.02 MATERIALS

49-5.02A General

Use identical materials and element sizes for a verification test micropile as to be used for the production micropiles it represents.

Welding must comply with AWS D1.1.

49-5.02B Steel Reinforcing Elements

49-5.02B(1) General

Mill secondary steel reinforcing elements must not be used.

Steel reinforcing elements must not contain splices or joints.

49-5.02B(2) Pipe, Hollow Structural Sections, and Casing

Casing must comply with API N80.

You may use alternative pipe, round HSS, or casing instead of the API N80 casing shown if:

1. Structural capacity of the alternative pipe, HSS, or casing is greater than or equal to the structural capacity of the API N80 casing shown
2. Alternative pipe, HSS, or casing complies with the requirements for casing specified in section 49-5
3. Drilled hole diameter does not exceed 12 inches
4. Grout cover on the alternative pipe, HSS, or casing is greater than or equal to the grout cover on the API N80 casing shown

Alternative pipe, HSS, or casing must comply with one of the following specifications or another authorized specification:

1. ASTM A1085/A1085M
2. API N80
3. API P110
4. API 5L, minimum PSL1

Casing to be welded for structural purposes must have a carbon equivalency as defined in AWS D1.1, Annex H5.1, not exceeding 0.47 percent and a sulfur content not exceeding 0.05 percent.

Welded seams and splices must be CJP welds.

Circumferential welds must comply with section 49-2.02B(1)(b).

49-5.02B(3) Bar Reinforcing Steel

Bar reinforcing steel splices must be service splices.

For anchorages that require threading nuts and plates onto bar reinforcing, you may cut threads into the bar reinforcing steel if you provide the next larger bar number designation from that shown.

49-5.02C Anchorage Components

Steel plates for the micropile anchorage must comply with ASTM A709/A709M, Grade 36, or ASTM A36/A36M.

Nuts and washers for the micropile anchorage must be capable of holding the bar at a load producing a tensile stress of at least the specified minimum ultimate tensile strength of the bar.

49-5.02D Grout

Grout must be a stable, neat grout consisting of cement and water. Cement must comply with section 90-1.02B(2). Water must comply with section 90-1.02D.

If authorized, you may use an admixture in the grout. The admixture must comply with sections 90-1.01C(4) and 90-1.02E, except the admixture must not contain chloride ions in excess of 0.25 percent by weight nor be an accelerating admixture.

If authorized, you may add fine aggregate to the grout. Fine aggregate must comply with section 90-1.02C(3). Grout with fine aggregate must:

1. Have a slump of at least 7 inches when measured under ASTM C143/C143M
2. Have an air content of no more than 2 percent when measured under California Test 504
3. Not contain air-entraining admixtures

Mix the grout as follows:

1. Add the water to the mixer followed by the cement and any admixtures or fine aggregate.
2. Mix the grout with mechanical mixing equipment that produces a uniform and thoroughly mixed grout.
3. Agitate the grout continuously until the grout is pumped.
4. Do not add water after the initial mixing.

Grout must comply with the following requirements:

1. Density must be greater than or equal to the density submitted with the authorized mix design.
2. Efflux time must be at least 11 seconds.
3. Compressive strength must be at least that shown at 28 days.

49-5.02E Centralizers and Spacers

Centralizers and spacers must be fabricated from plastic, steel, or other material that is not detrimental to the steel reinforcing elements. Do not use wood centralizers or spacers.

Centralizers and spacers must be strong enough to support the steel reinforcing elements during construction activities.

49-5.02F Corrosion Protection

Not Used. **49-5.03 CONSTRUCTION**

49-5.03A General

Determine the micropile length and installation methods necessary to comply with the micropile load test acceptance criteria.

You may perform additional geotechnical investigation for the purpose of determining the micropile length and installation methods.

Do not construct any production micropiles until the test results are authorized for the verification test micropile that represents the production micropiles.

Do not drill, pressure grout, or post-grout a micropile that is within a center-to-center spacing of 5 feet from an open micropile hole or a micropile in which the initial grout has set for less than 12 hours.

49-5.03B Verification Test Micropiles

Install a verification test micropile as shown. Notify the Engineer at least 7 days before installing a verification test micropile.

Construct each verification test micropile in the Engineer's presence. Use identical drilling and grouting methods, inclination, tip elevation, and dimensions as to be used for the production micropiles it represents.

After the verification load test results are authorized, remove the verification test micropile and any anchor piles as specified for removing portions of bridges in section 60-2.02.

49-5.03C Proof Test Micropiles

49-5.03D Drilling

Select drilling equipment and methods that are suitable for drilling through the conditions to be encountered without causing damage to any overlying or adjacent structure or service and without causing detrimental ground movements.

Use temporary casing or another authorized drilled hole support method in caving or unstable ground.

Do not use vibratory pile-driving hammers to advance casing.

Each drilled hole must comply with the following tolerances:

1. Centerline of the drilled hole must not deviate from the micropile location shown by more than 3 inches.
2. Center-to-center spacing of the drilled holes must not deviate from the micropile spacing shown by more than 3 inches.
3. Axis of the drilled hole must not deviate from the alignment shown by more than 1-1/2 inches per 10 feet of length.

Remove any material dislodged or drawn into the hole during micropile construction. The drilled hole must be open along its full length to the hole diameter shown before placing grout or any steel reinforcing elements not used to case the drilled hole.

Dispose of drill cuttings under section 19-2.03B.

49-5.03E Placing and Splicing Steel Reinforcing Elements

Place the steel reinforcing elements before withdrawing any temporary casing.

Use spacers to separate steel reinforcing elements. Place the spacers at 10-foot maximum intervals.

For steel reinforcing elements not used to case the drilled hole, use centralizers to support the element in the center of the hole and to provide at least the specified grout cover. Place the centralizers at 10-foot maximum intervals, with the uppermost centralizer a maximum of 5 feet from the top of the micropile and the lowermost centralizer from 2 to 5 feet from the bottom of the micropile.

Attach centralizers and spacers to the steel reinforcing elements such that the centralizers and spacers (1) are secure enough to withstand installation stresses and (2) allow the free flow of grout without misalignment of the steel reinforcing elements.

Before you insert each steel reinforcing element into a drilled hole, clean the surface of the element of deleterious substances, such as soil, mud, grease, and oil.

If you cannot insert a steel reinforcing element into the drilled hole to the required depth without difficulty, remove the reinforcing element, clean any grout from the surface of the reinforcing element, clean or redrill the hole, and reinsert the reinforcing element. Do not force or drive a reinforcing element into a drilled hole. Micropiles with partially inserted steel reinforcing elements are rejected.

49-5.03F Grouting

Grout each micropile the same day the hole is drilled.

You may place the grout before or after placing the steel reinforcing elements.

Place the grout within 1 hour of mixing.

Inject the grout at the lowest point of the drilled hole. Continue the injection until uncontaminated grout flows from the top of the micropile.

83 RAILINGS AND BARRIERS

Add to section 83-2.02A(1):

Prior to ordering the midwest guardrail systems, ensure the post layout does not conflict with micropile A locations. During MGS installation provide adequate clearances to micropiles.

Replace 2nd paragraph in section 83-2.02C(1)(a) with:

Construct midwest guardrail systems using:

1. Steel line posts.
2. Plastic blocks.

Replace section 83-2.04B with:

83-2.04B Alternative In-line Terminal Systems

83-2.04B(1) General

83-2.04B(1)(a) Summary

Section 83-2.04B includes specifications for constructing alternative in-line terminal systems.

83-2.04B(1)(b) Definitions

Not Used

83-2.04B(1)(c) Submittals

Submit a certificate of compliance for alternative in-line terminal systems.

83-2.04B(1)(d) Quality Assurance

For each model of alternative in-line terminal system being installed, obtain the manufacturer's check list for the assembly and installation of the alternative in-line terminal systems from the manufacturer's representative or distributor. Notify the Engineer of the alternative in-line terminal systems to be installed at each location before starting installation activities. Complete, sign, and date the check list for each installed in-line terminal system and submit a copy of the completed and signed check list for each installed location, and include the following:

1. Contract number
2. Name of installation Contractor
3. Flare offset used in layout
4. Date of installation
5. Location on the project by post mile, and by station if stationing shown on plans
6. Name and signature of individual completing the checklist.

The Engineer signs and dates the completed check lists, verifying the in-line terminal system at each location was assembled and installed under the manufacturer's instructions and as described.

Use personnel trained by the manufacturer to install in-line terminal systems. A record of training provided by the manufacturer may be requested by the Engineer at any time.

83-2.04B(2) Materials

Alternative in-line terminal systems must be the following or a Department-authorized equal:

1. Type MAX-Tension TL-2 Tangent Guardrail End Treatment by Lindsay Transportation Systems is a tangent, re-directive gating guardrail terminal. The MAX-Tension has a length of 30'-1/2", and can be flared for an offset of 0 to 2 feet at the head. The MAX-Tension TL-2 terminal can be obtained from the distributor:

Address	Telephone no.
STATEWIDE SAFETY AND SIGNS INC 130 GROBRIC COURT FAIRFIELD CA 94533	(800) 770-2644

2. Type SoftStop terminal systems must be SoftStop End Terminal System TL-2 manufactured by Trinity Highway Products, LLC, and must include the connection components. Type SoftStop terminal system - Type SoftStop terminal system must be a SoftStop terminal with a System length of 38'-3 1/2" for test level 2, and can be flared for an offset of 0 to 1 feet at the head. The SoftStop terminal can be obtained from the manufacturer:

Address	Telephone no.
TRINITY HIGHWAY PRODUCTS LLC PO BOX 99 CENTERVILLE UT 84012	(800) 772-7976

3. Type MSKT - Type MSKT terminal system must be a 31" MSKT Guard Rail End Terminal with a system length of 25'-0", and can be flared for an offset of 0 to 1 feet at the head. It is manufactured by Road Systems, Inc., located in Big Spring, Texas, and must include items detailed for Type MSKT terminal system shown on the plans. The MSKT Guard Rail End Terminal can be obtained from the distributor:

Address	Telephone no.
UNIVERSAL INDUSTRIAL SALES PO BOX 699 PLEASANT GROVE UT 84062	(801) 785-0505
GREGORY INDUSTRIES INC 4100 13TH ST SW CANTON OH 44708	(330) 477-4800

83-2.04B(3) Construction

Identify each terminal system by painting the type of terminal system in 2-inch-high, neat, black letters and figures on the backside of the rail element between system posts number 4 and 5. Paint must be metallic acrylic resin type spray paint. Before applying terminal system identification, the surface to receive terminal system identification must be free of all dirt, grease, oil, salt, or other contaminants by washing the surface with detergent or other suitable cleaner. Rinse thoroughly with fresh water and allow to fully dry.

Install Type SoftStop terminal system under the manufacturer's installation instructions. For Type SoftStop terminal system, use W6 x 8.5 steel yielding terminal posts for Posts 1 and 2 and standard W6 x 8.5 steel posts for the other posts. Drive all posts or place them in drilled holes. Backfill the space around the posts with selected earth that is free of rock. Moisten and thoroughly compact each layer. For the terminal with a system length of 50'-9 1/2" or system length of 38'-3 1/2", all blocks must be wood or plastic and must be 8 or 12 inches deep.

