

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

OFFICE ENGINEER

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November 28, 2011

04-Nap-12-0.0/3.2

04-264134

Project ID 0400002022

ACSTP-P012(106)E

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN NAPA COUNTY NEAR NAPA FROM ROUTE 29 TO 0.1 MILE WEST OF SOLANO COUNTY LINE.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on Tuesday, December 6, 2011.

This addendum is being issued to revise the Project Plans, the Notice to Bidders and Special Provisions, the Bid book, the Federal Minimum Wages with Modification Number 34 dated November 18, 2011, and provide a copy of the Information Handout.

Project Plan Sheets 60, 61, 62, 129, 162, 235, 236, 243, 251, 252, 275, 276 are revised. Copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 98A, 98B, 98C, 98D, 98E, 98F, 159A, 371A are added. Copies of the added sheets are attached for addition to the project plans.

In the Special Provisions, Section 4, "BEGINNING OF WORK, TIME OF COMPLETION, AND LIQUIDATED DAMAGES," is revised as attached.

In the Special Provisions, Section 5-1.11, "SUPPLEMENTAL PROJECT INFORMATION," is revised as attached.

In the Special Provisions, Section 5-1.12, "SPECIES PROTECTION," is revised as attached.

In the Special Provisions, Section 5-1.16, "NON-HIGHWAY FACILITIES (INCLUDING UTILITIES)," is revised as attached.

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In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the following paragraph is added after the first paragraph:

"The first order of work shall be to perform the initial clearing work in conformance with "Clearing and Grubbing" of these special provisions. Clear vegetation by February 15 from areas where work is planned to occur from February 15 to August 15. You may begin the initial clearing work before receiving the notice of contract approval as provided in Section 8-1.03, "Beginning of Work," of the Standard Specifications. Attention is directed to "Water Pollution Control" of these special provisions regarding the Conceptual Storm Water Pollution Prevention Plan (CSWPPP) for the initial clearing work."

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the second paragraph is revised as follows:

"Work in the vicinity of creeks or water crossings shall be scheduled to occur between June 15 and October 15 or as identified in the PLACs. Vegetation removal in stream zones is permitted outside these dates as long as soil disturbance does not occur."

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the fourth paragraph is deleted.

In the Special Provisions, Section 10-1.02, "WATER POLLUTION CONTROL," subsection "GENERAL," subsection "Summary," the following paragraph is added after the first paragraph:

"The Department has prepared a Conceptual Storm Water Pollution Prevention Plan (CSWPPP) for the initial clearing work described in "Order of Work" of these special provisions and will submit this CSWPPP to the Regional Water Quality Control Board (RWQCB) prior to contract award. A copy of the CSWPPP is available as described in "Supplemental Project Information" of these special provisions. You must implement and comply with this CSWPPP for the initial clearing work. After initial clearing work as described in CSWPPP is completed, the CSWPPP will no longer apply and you must comply with your approved SWPPP."

In the Special Provisions, Section 10-1.02, "WATER POLLUTION CONTROL," subsection "GENERAL," subsection "Summary," the second paragraph is revised as follows:

"Do not start work, except for clearing work described in "Order of Work" of these special provisions, until:

1. SWPPP is approved.
2. WDID is issued.
3. SWPPP review requirements have been fulfilled. If the RWQCB requires time for SWPPP review, allow 30 days for the RWQCB to review the SWPPP as specified under "Submittals" of these special provisions."

In the Special Provisions, Section 10-1.02, "WATER POLLUTION CONTROL," subsection, "Quality Control and Assurance," subsection, "Training," the following paragraph is added after the twelfth paragraph.

"Permit Compliance Meetings

The Contractor must hold on-site water quality permit compliance meetings to discuss permit compliance, including instructions on how to avoid violations and procedures for reporting violations. The meetings must be held at least every other week, before forecasted storm events, and when a new contractor or subcontractor arrives to begin work at site. The Contractor, subcontractors and their employees, as well as any inspectors or monitors assigned to the project, must be present at the meetings. The Contractor must maintain dated sign-in sheets for attendees at these meetings and make them available to the Engineer upon request."

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In the Special Provisions, Section 10-1.03, "CONSTRUCTION SITE MANAGEMENT," subsection "GENERAL," subsection "Submittals," the first paragraph is revised as follows:

"At least 45 days before you start dewatering, submit a dewatering and discharge work plan under Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications and "Water Pollution Control" of these special provisions. The Engineer will submit your dewatering and discharge work plan to the Regional Water Quality Control Board 30 days prior to starting dewatering activities. The dewatering and discharge work plan must include:

1. Title sheet and table of contents
2. Description of dewatering and discharge activities detailing locations, quantity of water, equipment, and discharge point
3. Estimated schedule for dewatering and discharge start and end dates of intermittent and continuous activities
4. Discharge alternatives, such as dust control or percolation
5. Visual monitoring procedures with inspection log
6. Copy of written approval to discharge into a sanitary sewer system at least 5 business days before starting discharge activities"

In the Special Provisions, Section 10-1.03, "CONSTRUCTION SITE MANAGEMENT," subsection "DEWATERING," the following paragraph is added after the first paragraph:

"For dewatering of groundwater, use a method of water disposal other than disposal to surface waters. Do not discharge groundwater to surface waters unless you apply for coverage under the Low Threat Discharge Permit and receive notification of coverage to discharge to surface waters."

In the Special Provisions, Section 10-1.03, "CONSTRUCTION SITE MANAGEMENT," subsection "DEWATERING," the following paragraphs are added after the third paragraph:

"Pumping Systems

If pumping systems are used, pumps must be equipped with secondary containment, intake screens meeting regulatory requirements and Permits, Licenses, Agreements, and Certifications (PLACs), and free of fuel or oil leaks. Screening criteria includes the following:

1. Perforated plate: screen opening must not exceed 0.1 inches, measured in diameter
2. Woven wire: screen openings must not exceed 0.1 inches, measured diagonally
3. Screen material must provide a minimum of 27% open area
4. Approach velocity must not exceed 0.328 feet per second

Material must comply with Section 6, "Control of Materials," and Section 7-1.16, "Contractor's Responsibility for the Work and Materials," of the Standard Specifications."

In the Special Provisions, Section 10-1.15, "TEMPORARY CREEK DIVERSION SYSTEM," is revised as attached.

In the Special Provisions, Section 10-1.155, "WATER QUALITY MONITORING," is added as attached.

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In the Special Provisions, Section 10-1.34, "CLEARING AND GRUBBING," is revised as attached.

In the Special Provisions, Section 10-1.71, "PILING, subsection "GENERAL" the following paragraph is added after the first paragraph:

"Concrete for cast-in-place concrete piling shall be prequalified in conformance with the provisions in Section 90-9, "Compressive Strength," of the Standard Specifications."

In the Special Provisions, Section 10-1.91, "GABIONS," is revised as attached.

In the Special Provisions, Section 10-1.975, "WILDLIFE FENCE (TYPE E-FENCE)," is added as attached.

In the Bid book, in the "Bid Item List," Items 129, 148, 154, 164, 168, are revised, Items 230, 231, 232, 233, 234 are added and Item 229 is deleted as attached.

To Bid book holders:

Replace pages 9, 10, 11 and 14 of the "Bid Item List" in the Bid book with the attached revised pages 9, 10, 11 and 14 of the Bid Item List. The revised Bid Item List is to be used in the bid.

Attached is a copy of the additional Information Handout.

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the Notice to Bidders section of the Notice to Bidders and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the Bid book.

Submit bids in the Bid book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This addendum, attachments and the modified wage rates are available for the Contractors' download on the Web site:

http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/04/04-264134

If you are not a Bid book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

FOR 

REBECCA D. HARNAGEL
Chief, Office of Plans, Specifications & Estimates
Office Engineer
Division of Engineering Services

Attachments

SECTION 4. BEGINNING OF WORK, TIME OF COMPLETION, AND LIQUIDATED DAMAGES

Begin initial clearing work immediately after contract approval as described under "Order of Work" of these special provisions.

The 1st working day is the earlier of (1) the 55th day after contract approval or (2) the day you start work other than the initial clearing work, or the measurement of controlling field dimensions, or the location of utilities.

Do not start work, except the initial clearing work, at the job site until the Engineer approves your submittal for:

1. Baseline Progress Schedule (Critical Path Method)
2. Storm Water Pollution Prevention Plan (SWPPP)
3. Notification of Dispute Resolution Advisor (DRA) or Dispute Review Board (DRB) nominee and disclosure statement as specified in Section 5-1.15, "Dispute Resolution," of the Standard Specifications
4. Soil Nail Wall Earthwork Working Drawings
5. Soil Nail Assembly Working Drawings

You may enter the job site only to perform the initial clearing work, and to measure controlling field dimensions and locating utilities. Do not start other work activities until all the submittals from the above list are approved and the following information is submitted:

1. Notice of Materials To Be Used.
2. Contingency plan for reopening closures to public traffic.
3. Written statement from the vendor that the order for electrical material has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.
4. Written statement from the vendor that the order for soil nail assembly has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.

You may start work, other than the initial clearing work, at the job site before the 55th day after contract approval if:

1. You obtain required approval for each submittal before the 55th day
2. The Engineer authorizes it in writing

The Department grants a time extension if a delay is beyond your control and prevents you from starting work at the job site on the 1st working day.

Complete the work, except plant establishment work, within 220 working days.

Complete the work, including plant establishment work, within 470 working days.

5-1.11 SUPPLEMENTAL PROJECT INFORMATION

The Department makes the following supplemental project information available:

Supplemental Project Information	
Means	Description
Included in the Information Handout	A. U.S. Army Corps of Engineers Section 404 Permit B. State of California Department of Fish and Game 1602 Streambed Alteration Agreement C. State of California Department of Fish and Game Amendment of 1602 Streambed Alteration Agreement D. California Regional Water Quality Control Board 401 Water Quality Certification E. Foundation Report F. Geotechnical Design and Materials Report G. Site Investigation Report H. Limited Site Investigation Report I. United States Fish and Wildlife Service Biological Opinion J. Storm Water Information Handout K. Conceptual Storm Water Pollution Prevention Plan (CSWPPP) for clearing work L. Revised United States Fish and Wildlife Service Biological Opinion, dated June 14, 2011
Available for inspection at the District Office	A. Hydromodification Report B. Amendment to the Hydromodification Report C. Information on the description and applicability of environmental screening levels for reuse of asphalt concrete in shoulder backing
Available as specified in the Standard Specifications	Bridge as-built drawings
Available at: http://www.dot.ca.gov/hq/esc/oe/weekly_ads/index.php	Cross sections

5-1.12 SPECIES PROTECTION

GENERAL

Summary

This work includes protecting regulated species or their habitat.
This project is within or near habitat for regulated species:

California Red-legged Frog

CONSTRUCTION

Protective Radius

Upon discovery of a regulated species, stop construction activities within a 50-foot radius of the discovery. Immediately notify the Engineer. Do not resume activities until receiving written notification from the Engineer.

Biological Resource Information

Implement the following Biological Resource Information requirements:

1. Prior to performing any work, all Contractor and State field personnel shall complete a 2 hour maximum U.S. Fish and Wildlife Service Biological Opinion Permit training that communicates details of the permit requirements and the project area wildlife species information. The initial training and any subsequent training, if required, will be provided by the Department's biologist at the Engineer's field office. The Contractor shall notify the Engineer 30 calendar days prior to beginning of work to coordinate the pre-construction training. No work shall begin until the construction personnel have been trained. Training shall be provided to all new personnel prior to the new personnel entering the job site.
2. All Contractor personnel shall be provided with written guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.

Protection Measures

Within the project limits, implement the following protection measures:

1. Plastic mono-filament erosion control matting shall not be used.
2. Only the Service-approved biological monitor has the authority to handle California red-legged frogs encountered within the action area.
3. All food related trash items such as wrappers, cans, bottles and food scraps must be disposed of in closed containers and removed at least once every day from the entire project site.
4. Prevent entrapment of California red-legged frogs in excavated, steep-walled holes or trenches more than 1 foot deep by:
 - 4.1 At the end of each working day, cover excavations with plywood or similar materials with the edges secured by a minimum 6 inch thick mound of dirt, or
 - 4.2 Provide escape ramps constructed of earth fill or wooden planks with a maximum slope of 2:1 (H:V) that are spaced maximum 500 feet apart along the excavation with at least 1 ramp per each excavation.

MEASUREMENT AND PAYMENT

Full compensation for Species Protection is included in the various contract items of work and no additional compensation will be allowed.

5-1.16 NONHIGHWAY FACILITIES (INCLUDING UTILITIES)

Relocation of the following utilities, as shown on the plans to be relocated by others, either have been or will be completed before contract award:

Utility Relocations Completed Before Contract Award	
Utility	Location
PG&E/AT&T Overhead Joint 12KV Electric/Telephone Poles and Guy Poles	JC 116+50 Lt to 124+50 Lt JC 126+50 Rt JC 128+65 Rt JC 131+90 Rt JC 136+70 Rt JCR1 242+60 Rt
AT&T Overhead Telephone Poles	JC 162+05 Lt to JC 164+60 Lt JC 185+40 Lt to JCR1 246+80 Lt JCR1 246+80 Rt to JCR1 250+00 Rt
PG&E Overhead 12KV Electric Poles	JC 131+90 Rt JC 136+70 Rt
Private Water Pump	JC 215+00 Lt
PG&E 2" Gas Line	JC 197+60 Lt to 197+82 Lt
PG&E 10" Gas Line	JCR1 240+40 Rt to 243+15 Rt
DWR 36" Water	JC 194+55 Lt to 194+90 Rt
DWR Electric Pole, Valves, and Appurtenances	194+65 Lt

Installation of the utilities shown in the following table requires coordination with your activities. Make the necessary arrangements with the utility company through the Engineer and submit a schedule:

1. Verified by a representative of the utility company
2. Allowing at least the time shown for the utility owner to complete its work

Utility Relocation and Contractor-Arranged Time for the Relocation			
Utility	Utility Address	Location	Days
COV Water Meter	202 Fleming Hill Road Vallejo, CA 94589	228+10 Lt	20
COV 2" Water Service	202 Fleming Hill Road Vallejo, CA 94589	JCR1 244+63 Lt to 244+63 Rt JC 228+12 Lt	20

10-1.15 TEMPORARY CREEK DIVERSION SYSTEM

GENERAL

Summary

This work shall consist of constructing, maintaining, and later removing temporary creek diversion systems as shown on the plans and as specified in these special provisions.

Comply with "Water Pollution Control," "Construction Site Management," and "Water Quality Monitoring" of these special provisions.

Temporary creek diversion system shall be constructed, maintained, and removed in accordance with PLACs, including time periods when work within the creek is restricted.

Temporary creek diversion system shall be constructed when necessary to divert creek flow from work area. If temporary creek diversion system is not required due to lack of creek flow, temporary creek diversion system shall be eliminated as provided in Section 9-1.05D, "Eliminated Items," of the Standard Specifications.

Submittals

Upon request, submit a Certificate of Compliance under Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for:

1. Plastic Pipe Culvert
2. Permeable Material
3. Impermeable Plastic Sheet
4. Gravel-filled Bags

The Contractor may use an alternative temporary creek diversion system if approved by the Engineer in writing. The alternative temporary creek diversion system must be within impact areas identified under the RWQCB 401 Water Quality Certification. The alternative temporary creek diversion system will be subject to the same submittal, review, and approval timeframes of these special provisions. Any increase in cost for the alternative temporary creek diversion system must be borne by the Contractor. The alternative temporary creek diversion system must be installed and maintained in conformance with these special provisions.

Temporary Creek Diversion System Plan

Before beginning diversion work, submit a Temporary Creek Diversion System Plan (TCDSP) describing:

1. Installation and removal process, including equipment, platforms for equipment, and access locations
2. Hydrologic design criteria and design details of the temporary creek diversion system
3. Plans showing location(s) of diversion, including layouts, cross-sections, and elevations
4. Materials proposed for use, including Material Safety Data Sheets (MSDS)
5. Restoration plans showing before and after conditions, including photos of existing conditions for areas disturbed during the installation, operation, and removal of the temporary creek diversion system
6. Monitoring and reporting plan to ensure applicable water quality objectives are met
7. Schedule of work, including BMP implementation

Submit TCDSP approval 55 days prior to installation of diversion work as follows:

1. Submit 3 copies of the TCDSP and allow 5 days for the Engineer's review. If revisions are required, the Engineer provides comments within the review time.
2. Change and resubmit the TCDSP within 5 days of receipt of the Engineer's comments. The Engineer's review resumes when the complete TCDSP is resubmitted. Allow 5 days for the Engineer's second review.
3. If additional comments are provided by the Engineer, the TCDSP must be revised and resubmitted within 5 days of the Engineer's second review.
4. When the Engineer approves the TCDSP, submit an electronic and 4 printed copies of the approved TCDSP.

The Engineer will submit one copy of the approved TCDSF to the RWQCB and one copy to the Department of Fish and Game (DFG) for their review and comment at least 30 days prior to installation. If the Engineer requests changes to the TCDSF based on the agencies comments, Contractor must amend the TCDSF within 5 days. Submit 4 copies of the final TCDSF upon notification of final approval.

MATERIALS

Plastic Pipe Culvert

Plastic pipe culvert shall conform to the requirements in Section 64, "Plastic Pipe," of the Standard Specifications. The size of culverts shall be adjusted as directed by the Engineer if seasonal fluctuations in creek flow require a different pipe size other than the size shown on the plans. No additional compensation will be made for adjustment to the size of the plastic pipe culvert.

At the option of the Contractor, an alternative pipe culvert may be used. Alternative pipe culverts must meet the requirements in Section 62, "Alternative Culverts," of the Standard Specifications. The alternative pipe culvert must be capable of sustaining the intended load and of discharging a quantity of water equivalent to the type and size of plastic pipe shown on the plans. Adequacy as to equivalent strength and capacity must be subject to approval, in writing, by the Engineer.

Permeable Material

Permeable material (river run gravel) must consist of river run gravel obtained from a river or creek bed and be between 1.5 inches and 4 inches in diameter. The material must be clean, hard, sound, durable, uniform in quality, and free of any detrimental quantity of soft, thin, elongated or laminated pieces, disintegrated material, organic matter, or other deleterious substances. Gravel must be composed entirely of particles that have no more than one fractured face. Gravel must have a cleanliness value of at least 85, using the Cleanliness Value Test Method for California Test No. 227.

Impermeable Plastic Sheet

Impermeable plastic sheet must be commercial quality new non-photodegradable polyethylene with a thickness of not less than 0.01 inch. The material shall be suitable for use as a protective liner. All plastic sheeting shall be free of cracks or other defects adversely affecting the protective characteristic of the material.

Gravel-filled Bags

Gravel-filled bag fabric shall be nonwoven polypropylene geotextile (or comparable polymer) and shall conform to the following requirements:

Specification	Requirements
Weight per unit area, ounces per square yard, minimum ASTM Designation: D 5261	8.0
Grab tensile strength (one inch grip), pounds, minimum ASTM Designation: D 4632*	200
Ultraviolet stability, percent tensile strength retained after 500 hours minimum ASTM Designation: D 4355, xenon arc lamp method	70

* or appropriate test method for specific polymer

Gravel-filled bags shall be between 24 inches and 32 inches in length, and between 16 inches and 20 inches in width and filled with permeable material (river run gravel).

Yarn used for binding gravel bags shall be as recommended by the manufacturer or bag supplier and shall be of a contrasting color.

Gravel shall be between 3/8 inch and 3/4 inch in diameter, and shall be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags shall be secured to prevent gravel from escaping. Gravel-filled bags shall be between 30 pounds and 50 pounds in weight.

Temporary Pipe Supports

Temporary supports shall consist of gravel-filled bags, anchors, ropes, cables or whatever means may be necessary to adequately secure the plastic pipe culvert in place and to prevent pipe displacement.

INSTALLATION

Do not start temporary creek diversion system work until Temporary Creek Diversion System Plan is approved.

Installation shall not be initiated if the 72-hour weather forecasts predict a 50 percent or greater chance of rain in the project area. The temporary creek diversion system shall not extend beyond impact areas identified under the RWQCB 401 Water Quality Certification.

No motorized equipment shall be used within the creek for the construction of the temporary creek diversion system.

Use of the temporary creek diversion system is restricted to the time periods defined in PLACs. If the work requires more than one restricted period, the temporary creek diversion system shall be removed by the conclusion of the restricted period and repositioned during the following restricted period at the Contractor's expense.

If during the progress of the work it becomes necessary to reposition or relocate portions of the temporary creek diversion system, the work shall be done at the Contractor's expense.

The Contractor shall be responsible for preventing, at the Contractor's expense, any leakage in the temporary creek diversion system that may interfere with the work.

All joints between the edges of impermeable plastic sheeting shall be lapped and joined with commercial quality waterproof tape with minimum 4-inch lapping at the edges. All joints between the plastic sheet and the plastic pipe culvert shall be sealed with commercial quality waterproof tape.

The Contractor may use an alternative temporary creek diversion system if approved by the Engineer in writing. Any increase in cost for the alternative temporary creek diversion system shall be borne by the Contractor. The alternative temporary creek diversion system shall be installed and maintained in conformance with these special provisions.

Maintenance

Temporary creek diversion system shall be maintained to provide adequate holding capacity with a minimum freeboard of 12 inches between the upstream water surface and the top of the cofferdam. Holes, rips, and voids in the impermeable plastic sheet shall be patched and repaired by taping or the impermeable plastic sheet shall be replaced. Impermeable plastic sheet shall be replaced when patches or repairs compromise the impermeability of the material as determined by the Engineer. Temporary creek diversion system shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary creek diversion system resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense. Repair leaks in accordance with the dewatering sections of "Construction Site Management" of these special provisions.

Removal

When no longer required as determined by the Engineer, all components of the temporary creek diversion system must be removed by hand and be disposed of outside the highway right of way in accordance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications. Permeable material may be spread throughout the creek bed uniformly.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary creek diversion system shall be backfilled with permeable material (river run gravel) and repaired with permeable material that conforms to these special provisions.

PAYMENT

The contract lump sum price paid per location for temporary creek diversion system includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing and maintaining the temporary creek diversion system, complete in place, including removal when no longer required, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for monitoring and reporting plan shall be considered as included in the prices paid for the various items of work in "Water Quality Monitoring," and no additional compensation will be allowed therefor.

10-1.155 WATER QUALITY MONITORING

GENERAL

Summary

This work includes monitoring of water quality during in-water work including temporary creek diversion system as required by conditions in the Section 401 Water Quality Certification. Water quality monitoring includes:

1. Water Quality Sampling and Analysis Day: Water Quality Sampling and Analysis includes preparation, collection, analysis, and reporting of water quality samples.
2. Water Quality Monitoring Report: Preparing and submitting the monitoring report includes visual monitoring, Water Quality Objective (WQO) Exceedance report, monitoring and inspection results, obtaining monitoring report acceptance, and reports required by RWQCB.

This job lies within the boundaries of the San Francisco Bay Region (2) Regional Water Quality Control Board (RWQCB).

The receiving water for this job is Fagen Creek, within the Napa River Hydrological Area, Undefined Hydrological Sub Area (HSA #206.50).

Definitions and Abbreviations

WQM: Water Quality Monitor. The WQM collects water quality sampling data and provides reports to the Engineer.

QSD: Qualified SWPPP Developer

QSP: Qualified SWPPP Practitioner.

qualified rain event: Qualified rain event must produce runoff resulting in a direct discharge to receiving waters. A qualified rain event is a storm that produces at least 0.5 inch of precipitation with a 48-hour or greater period between storms.

SAP: Sampling and Analysis Plan.

storm event: A storm that is forecasted or produces at least 0.10 inch of precipitation within a 24-hour period.

SWPPP: Storm Water Pollution Prevention Plan.

WPC Manager: Water Pollution Control Manager. The WPC Manager implements water pollution control work described in the SWPPP and oversees revisions and amendments to the SWPPP.

WQO: Water Quality Objective.

Submittals

Within 7 days after contract approval, submit WQM qualifications including training and experience in collecting and analyzing water quality samples.

Quality Control and Assurance

Training

Training for personnel to collect water quality samples must include:

1. SAP review
2. Health and safety review
3. Sampling simulations

Water Quality Monitor (WQM)

The WQM must have the same qualifications as the WPC Manager including the requirements for QSP described in the Permit (Order No. 2009-009-DWQ, NPDES No. CAS000002) by having at least one of the following qualifications:

1. Department approved storm water management training described in the Department's "Construction Storm Water and Water Pollution Control" web site.
2. The WQM must have at least one of the following qualifications:
 - 2.1. Qualifications described in the Permit for a QSD
 - 2.2. Certified Erosion, Sediment and Storm Water Inspector (CESSWI)TM registered through Enviro Cert International, Inc.
 - 2.3. Certified Inspector of Sediment and Erosion Control (CISEC) registered through CISEC, Inc.

The WQM must have training and experience in collecting and analyzing water quality samples.
The WQM may be the same person as the WPC Manager.

IMPLEMENTATION REQUIREMENTS

Visual Monitoring

The WQM must perform visual inspections for storm events.
Perform non-stormwater discharge visual inspections as follows:

1. Observe receiving waters:
 - 1.1. 24 hours before beginning in-water work including the installation of clear water diversions
 - 1.2. At least four times daily during in-water work activities including the installation, operation, and removal of clear water diversions
2. Observe receiving waters for the presence of floating and suspended materials, sheen on the surface, discoloration, turbidity, odors, and sources of observed pollutants
3. Observe the job site for the presence of authorized and unauthorized non-stormwater discharges and their sources. Unauthorized discharges to surface waters include:
 - 3.1. Soil, silt, and sand
 - 3.2. Bark, sawdust, and slash
 - 3.3. Rubbish and debris
 - 3.4. Cement, concrete, and concrete washings
 - 3.5. Oil and petroleum products
 - 3.6. Welding slag
 - 3.7. Other organic or earthen materials

The WQM must prepare visual inspection reports that include the following:

1. Name of personnel performing the inspection, inspection date and date inspection report completed.
2. Storm and weather conditions
3. Locations and observations
4. Corrective actions taken

Retain visual inspections reports at the job site.

Water Quality Sampling

Perform water quality sampling whenever a project activity, conducted within waters of the State, has the potential to mobilize sediment or alter background conditions within waters of the State. Perform surface water quality sampling when:

1. Conducting in-water work
2. Work activities result in materials reaching receiving waters
3. Work activities result in the creation of a visible plume in receiving waters

This project is subject to WQOs:

Parameter	Test Method	Detection Limit (Min)	Unit	Water Quality Objective
Turbidity (during activities for in-water work)	Field test with calibrated portable instrument (Measured at downstream sampling location)	1	NTU	Must not exceed 20 percent above natural background
pH	Field test with calibrated portable instrument (Measured at downstream sampling location)	0.2	pH units	Lower WQO = 6.5 Upper WQO = 8.5 And any change greater than 0.5 units above natural background
Temperature	Field test with calibrated portable instrument	0.1	Fahrenheit	Must not be increased 5 degree above natural background
Dissolved Oxygen	Field test with calibrated portable instrument	1	mg/L	Must not be reduced less than 7 mg/L

At least 24 hours before beginning in-water work:

1. Establish locations for water quality sampling:
 - 1.1. Upstream of the effluent discharge point or location of in-water work by no more than 50 feet
 - 1.2. Effluent discharge point including location of in-water work
 - 1.3. Downstream of the effluent discharge point or location of in-water work by more than 100 feet
2. Conduct water quality sampling to document background conditions for upstream, effluent, and downstream locations. Sample for each WQO described above
3. Estimate water flow

Whenever conducting in-water work including the installation of clear water diversions, conduct water quality sampling:

1. At least four times daily for each water quality objective
2. At upstream, effluent, and downstream locations

If sample results exceed a WQO, immediately notify the Engineer within 30 minutes and do the following:

1. Conduct water quality sampling every hour until measurements comply with WQOs
2. Measure the distance from the effluent location to the downstream extent of the exceedance
3. Obtain photos of the tributary upstream, downstream, and at the location of in-water work
4. If BMPs are installed, repaired, or modified to control the source of the exceedance, monitor the activity and document with samples, photos, and a brief summary

You are not required to physically collect samples under the following conditions:

1. During dangerous weather conditions such as flooding or electrical storms
2. Outside of normal working hours

If downstream samples show increased levels, assess WPC practices, site conditions, and surrounding influences to determine the probable cause for the increase.

Whenever assigned field personnel take samples, comply with the equipment manufacturer's recommendation for collection, analysis methods, and equipment calibration.

Retain calibration logs at the job site.

Retain water quality sampling documentation and analytical results with the at the job site.

REPORTING REQUIREMENTS

If there is an unauthorized discharge, the WQM must immediately notify the Engineer within 6 hours.

Monitoring Report

The WQM must prepare a monthly monitoring report. Submit the monthly monitoring report by the 7th of the month for monitoring work conducted during the previous month. The report must include:

1. Visual monitoring inspection reports
2. If in-water work was done, include the following field sampling results and inspections:
 - 2.1. Analytical methods, reporting units, and detection limits
 - 2.2. Date, location, time of sampling, visual observation, photos, and measurements
 - 2.3. Estimate of water flow
 - 2.4. Calibration logs for field monitoring equipment
3. If storm events generate visible runoff, include visual monitoring results and inspections:
 - 3.1. Date, location, and time of visual observation
 - 3.2. Photos of areas disturbed by project activities including excess materials disposal areas
 - 3.3. Photos showing disturbed soil areas and documenting compliance for erosion control and revegetation measures including soil stabilization and sediment control BMPs
4. Summary of exceedance
5. Summary of corrective actions

The WQM must prepare other RWQCB reports when:

1. Conducting in-water work
2. Work activities cause a discharge of materials reaching receiving waters
3. Work activities cause a discharge resulting in the creation of a visible plume in receiving waters

Follow the monthly monitoring report requirements for other RWQCB reports. The other RWQCB reports must be submitted within 3 days of beginning in-water work or discovery of a discharge and continue every 2 weeks. Suspend the other RWQCB reports 2 weeks after concluding in-water work or correction of the discharge.

WQO Exceedance Report

If a WQO is exceeded, the WQM must 1) notify the Engineer by phone or electronic media within 30 minutes of WQO is exceeded and 2) submit a WQO Exceedance Report within 6 hours of WQO is exceeded. The report must:

1. Include the following field sampling results and inspections:
 - 1.1. Analytical methods, reporting units, and detection limits
 - 1.2. Date, location, time of sampling, visual observation, photos, and measurements
 - 1.3. Estimate of water flow
2. Description of BMPs and corrective actions taken to manage WQO exceedance

PAYMENT

The contract unit price paid for water quality monitoring report includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparing and submitting the monitoring report including visual monitoring, WQO Exceedance report, monitoring and inspection results, and obtaining monitoring report acceptance, and reports required by RWQCB. Failure to submit any monitoring report is considered a performance failure.

The Department does not adjust payment for an increase or decrease in the quantity of monthly monitoring reports submitted. Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications does not apply.

The contract unit price paid for water quality sampling and analysis day includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparation, collection, analysis, and reporting of water quality samples, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The Department does not adjust payment for an increase or decrease in the quantity of water quality sampling and analysis day. Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications does not apply.

You may request or the Engineer may order laboratory analysis of water quality samples. Laboratory analysis of Water Quality samples is change order work

10-1.34 CLEARING AND GRUBBING

Clearing and grubbing shall conform to the provisions in Section 16, "Clearing and Grubbing," of the Standard Specifications and these special provisions.

The initial clearing work specified under "Beginning of Work, Time of Completion, and Liquidated Damages" and "Order of Work" of these special provisions consists of clearing vegetation above the natural ground surface to prevent nesting or attempted nesting by migratory and non game birds. Initial clearing work includes topping and limbing trees and removing brush where birds could make nests, and removing the cleared vegetation from the project site.

The initial clearing work does not include grubbing work. Do not perform grubbing work until the requirements for Storm Water Pollution Prevention Plan (SWPPP) under "Water Pollution Control" of these special provisions are met. After the initial clearing work and SWPPP approval, perform the remaining clearing and grubbing work in conformance with Section 16, "Clearing and Grubbing," of the Standard Specifications.

Full compensation for the initial clearing work is included in the contract lump sum price paid for clearing and grubbing, and no additional compensation will be allowed therefor.

10-1.91 GABIONS

Gabions shall be constructed as shown on the plans and in conformance with these special provisions.

Gabions shall consist of wire mesh, cubical-celled or mattress-styled baskets that are filled on the project site with hard, durable rock.

Where shown on the plans, place concrete backfill with the rock in the top 6 inches of the gabions.

Standard gabion sizes and the overall plan and profile dimensions of the gabion structures shall be as shown on the plans. Each standard gabion size shall be divided into 36-inch long cells by diaphragm panels. The width, height or length of the standard gabions shall not vary more than 5 percent from the dimensions specified in these special provisions or as shown on the plans.

Empty gabion baskets shall be assembled individually and joined successively. Individual gabion mesh panels (base, front, ends, back, diaphragms, and lid) and successive gabions shall be assembled so that the strength and flexibility along the joints is comparable to a single panel.

MATERIALS

All materials for the gabions and gabion assembly shall conform to the provisions in these special provisions. Each shipment of gabion baskets to the project site shall be accompanied by a Certificate of Compliance conforming to the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications.

Mesh

At the Contractor's option, either twisted mesh or welded mesh shall be used, in conformance with Table 1 and Table 2 herein. For each standard gabion size, the same mesh style shall be used for the base, front, ends, back, diaphragms, and lid panels. Individual wires of either the twisted-mesh style or the welded-mesh style shall conform to the definitions and requirements in ASTM Designation: A 641/A 641M.

Mattress-style gabion baskets that are 12 inches and 18 inches high shall be manufactured from either 11-gage welded mesh or twisted mesh. Cubical-celled gabion baskets that are 36 inches high by 36 inches wide shall be fabricated from 11-gage twisted mesh or welded mesh gages between 11-gage and 9-gage, inclusive.

Table 1

CUBICAL-CELLED FACILITIES	
USA WIRE GAGE	MESH STYLE
11	Twisted Mesh
11 Min to 9 Max	Welded Mesh

Table 2

MATTRESS-STYLE FACILITIES	
USA WIRE GAGE	MESH STYLE
11	Twisted Mesh
11	Welded Mesh

GABION MESH MATERIAL PROPERTIES

Characteristic	Test Designation	Requirement
Minimum tensile strength	ASTM A 370	60 ksi
Wire Size	USA Steel Wire Gage	11
Wire Diameter	ASTM A 641/A 641M	0.120 in.
(Minimum)	ASTM A 641/A 641M	0.116 in.
Galvanizing, Zinc	ASTM A 641/A 641M, Class 3 and ASTM A 90/A 90M	0.80 oz/ft ²
Wire Size	USA Steel Wire Gage	9
Wire Diameter	ASTM A 641/A 641M	0.148 in.
(Minimum)	ASTM A 641/A 641M	0.144 in.
Galvanizing, Zinc	ASTM A 641/A 641M, Class 3 and ASTM A 90/A 90M	0.85 oz/ft ²

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Twisted-mesh wires shall form a uniform hexagonal pattern and shall be formed with a nonraveling twist. The area of the hexagonal opening shall not exceed the dimensions shown on the plans. Twisted-mesh gabion panels shall be manufactured from 11 gage wires with 9 gage selvage wires.

Welded-mesh wires shall form a grid pattern as shown on the plans. Welds shall be made by resistance welding. Welds and panels shall conform to the requirements in ASTM Designation: A 185, except weld shears shall be 600 pounds minimum for 11 gage wires and 800 pounds minimum for 9 gage wires. Resistance welding after coating the wire with zinc will be acceptable if there are no large splashes, flakes or flashes of zinc at the weld.

Joins

Standard tie wire and standard spiral binder shall conform to the definitions and requirements in ASTM Designation: A 641/A 641M and shall conform to the following provisions:

Characteristic	Test Designation	Requirement
Minimum Tensile Strength	ASTM A 370	60 ksi
Tie Wire		
Wire Size (Minimum)	USA Steel Wire Gage	13.5
Wire Diameter (Minimum)	ASTM A 641/A 641M	0.086 in.
Zinc Coating	ASTM A 641/A 641M, Class 3 and ASTM A 90/A 90M	0.082 in. 0.70 oz/ft ²
Spirals		
Wire Size (Maximum)	USA Steel Wire Gage	9
Wire Diameter (Minimum)	ASTM A 641/A 641M	0.148 in.
Zinc Coating	ASTM A 641/A 641M, Class 3 and ASTM A 90/A 90M	0.144 in. 0.85 oz/ft ²

Spiral binders shall have a 3-inch separation between continuous, successive loops.

Alternative fasteners shall have the configurations, wire diameters, and other dimensions shown on the plans. Alternative fasteners shall conform to the definitions and requirements in ASTM Designation: A 764 for "Metallic Coated Carbon Steel Wire, Coated at Size and Drawn to Size for Mechanical Springs." Interlocking fasteners shall conform to Tensile Requirement Class I, Finish 2 and shall have a Class 3 zinc coating. Overlapping fasteners shall conform to Tensile Requirement Class II, Finish 1 and shall have a Class 3 zinc coating.

Internal Connecting Wire

Internal connecting wires shall be 13.5-gage minimum. Each wire shall conform to the minimum requirements for standard tie wire in these special provisions and shall be installed in conformance with the provisions in these special provisions and as shown on the plans. Alternatively, at the Contractor's option, preformed stiffeners may be substituted for internal connecting wires. Preformed stiffener wire shall meet the requirements specified for standard tie wire and shall be installed in conformance with these special provisions and the manufacturer's recommendations.

Rock Slope Protection Fabric

Rock slope protection fabric for use with gabions shall conform to the provisions for Class 8 fabric in Section 88-1.06, "Channel and Shore Protection," of the Standard Specifications and these special provisions.

Rock

Rock for filling gabions, which are greater than or equal to 18 inches in height, shall vary in size and shall conform to the following:

Screen Size (inches)	Percentage Passing
12	100
4	0-5

Rock for filling the top of gabions, where concrete backfill is placed, shall vary in size and shall conform to the following:

Screen Size (inches)	Percentage Passing
6	100
4	0-5

Rock for filling gabions, which are equal to 12 inches in height, shall vary in size and shall conform to the following:

Screen Size (inches)	Percentage Passing
8	100
4	0-5

Rock shall conform to the material provisions for rock slope protection in Section 72-2.02, "Materials," of the Standard Specifications.

The minimum unit weight of a rock-filled gabion shall be 110 pounds per cubic foot, excluding the weight of concrete backfill. Verification of the 110 pounds per cubic foot shall be performed when ordered by the Engineer. Verification shall be performed on the smallest standard gabion size to be used on the project. The rock supplied for the project shall be used for verification. Filling shall be done using the same method intended for actual construction. The weight of a rock-filled gabion shall be determined using available certified scales. The volume for calculating the unit weight shall be determined on the theoretical volume of the standard gabion which is rock-filled and weighed.

Concrete Backfill

Concrete backfill shall be slurry cement backfill conforming to the provisions in Section 19-3.062, "Slurry Cement Backfill," of the Standard Specifications, except the concrete backfill shall contain not less than 282 pounds of cement per cubic yard.

GRADING, EXCAVATION AND BACKFILL

Areas where gabions are to be placed shall be constructed to the lines and grades shown on the plans and as determined by the Engineer. Excavation or backfill for achieving the required grades shall conform to the provisions for structure excavation and backfill in Section 19, "Earthwork," of the Standard Specifications.

ROCK SLOPE PROTECTION FABRIC PLACEMENT

Rock slope protection fabric shall be placed in conformance with the provisions in Section 72-2.025, "Rock Slope Protection Fabric," of the Standard Specifications. Rock slope protection fabric shall be placed on the subgrade, backslope, and sides of excavations. If earth fill is to be placed over the gabions, rock slope protection fabric shall be placed on top of the gabions, before placing the earth fill.

Where concrete backfill is to be placed in the upper portion of the gabions, place rock slope protection fabric between the rock and the concrete backfill, before placing the concrete backfill. The rock slope protection fabric shall extend up the interior sides of the gabions to prevent the concrete backfill from escaping.

CONSTRUCTION

Gabions shall be assembled individually as empty units. Each gabion shall be manufactured with the necessary panels, properly spaced and secured, so that the panels can be rotated into position at the construction site with no additional tying of the rotation joint. The panels and diaphragms shall be rotated into position and joined along the vertical edges.

For twisted mesh, the joint shall be constructed using alternating double and single half hitches (locked loops) of 13.5-gage standard tie wire at 4-inch nominal spacing. Joints shall not be constructed with simple spiraling (looping without locking) of the standard tie wires.

When standard tie wire is used as a joint connector for welded mesh, the joint shall be constructed using alternating double and single half hitches (locked loops) in every mesh opening along the joint. When 9 gage spiral binders are used, the spiral shall be placed so that the spiral binder passes through each mesh opening along the joint. Both ends of all 9 gage spiral binders shall be crimped to secure the spiral in place.

Temporary fasteners may be used to hold panels wherever gabion-to-gabion joints will be constructed. Temporary fasteners may remain in place.

At the Contractor's option, interlocking fasteners or overlapping fasteners may be used for assembly of either the twisted-mesh or welded-mesh gabions. A fastener shall be placed in each mesh opening along the joint (a minimum of 10 fasteners per 40 inches).

ASSEMBLY OF SUCCESSIVE GABION BASKETS (GABION-TO-GABION JOINTS)

Gabion baskets shall be set in place. Individually constructed gabion baskets shall then be joined successively to the next gabion baskets with 13.5-gage tie wire or 9 gage standard spiral binder before filling the basket with rock. The 13.5-gage standard tie wire or 9 gage standard spiral binder shall secure, in one pass, all selvage or end wires of the panels of all adjacent baskets along the joint.

When forming successive gabion-to-gabion joints with alternative fasteners, there shall be one alternative fastener in each mesh opening. The alternative fastener shall contain and secure all the wires along the joint.

Gabion baskets shall be joined along the front, back, and ends, including the tops and bottoms of the adjacent gabions.

ASSEMBLY OF MULTIPLE LAYERED GABIONS

Multi-layered gabion configurations shall be stepped and staggered as shown on the plans or as designated by the Engineer.

When constructing multi-layered gabion configurations, each layer of gabions shall be joined to the underlying layer along the front, back, and ends.

ASSEMBLY OF SHEAR KEY GABIONS

Shear key gabions, or counterforts, shall be spaced as shown on the plans. Shear key gabions shall be tied to adjacent gabions in the manner specified for "Assembly of Successive Gabion Baskets (Gabion-to-Gabion Joints)" of these special provisions.

ASSEMBLY OF TRANSITIONAL GABIONS

To match the geometry of the planned gabion configuration, or to meet specific conditions, panels shall be folded, cut and fastened as shown on the plans or as directed by the Engineer.

FILLING WITH ROCK AND CONCRETE BACKFILL

Before filling each gabion basket with rock, all kinks and folds in the wire fabric shall be straightened and all successive gabions shall be properly aligned.

Rock shall be placed in the baskets to provide proper alignment, avoid bulges in the wire mesh, and provide a minimum of voids. All exposed rock surfaces shall have a smooth and neat appearance. Sharp rock edges shall not project through the wire mesh.

Internal connecting wires or preformed stiffeners shall be used to produce a flat, smooth external surface, when constructing with 18-inch or 36-inch high gabions. If the Engineer determines that there is excessive bulging or dimpling of the outside panels, the unit shall be reconstructed at the Contractor's expense.

When filling 36-inch high gabions, rock shall be placed in 3 nominal 12-inch layers to allow placement of the 13.5-gage internal connecting wires. The wires shall be fastened as shown on the plans. Alternatively, preformed stiffeners may be installed at the one-third points in conformance with the recommendations of the manufacturer, to produce a smooth external surface.

When filling 18-inch high gabions, 2 nominal 9-inch layers of rock shall be placed to allow placement of a set of internal connecting wires or preformed stiffeners. The configuration of wires shall be similar to those used on the 36-inch high gabions, except there shall be only one set of internal connecting wires instead of the 2 sets of internal connecting wires or preformed stiffeners.

The last layer of rock shall slightly overfill the gabion baskets so that the lid will rest on rock when the lid is closed.

Where concrete backfill is to be placed in the upper portion of the gabions, use the following procedure:

1. Fill gabions with rock except for the top 6 inches.
2. Place rock slope protection fabric on top of the rock and up the sides of the gabions.
3. Place last layer of rock.
4. Place concrete backfill in the last layer of rock to fill the voids between rocks, and slightly overfill the basket with concrete backfill so that the lid will rest on the concrete backfill. The gabions must be in their final position prior to placing the concrete backfill.
5. Close the lids of the gabions while the concrete backfill is still workable. Press the lid into the concrete backfill so there are no air gaps between the mesh wire, rocks, or concrete backfill. After closing the lid, place additional concrete backfill as necessary to fill any gaps that may exist. The finished surface of the top of the gabions shall have no gaps where the legs of animals could become trapped in the rocks, concrete backfill, or wire mesh.

CLOSURE OF LIDS

Lids shall be tied along the front, ends, and diaphragms in conformance with the provisions in "Assembly of Successive Gabion Baskets (Gabion-to-Gabion Joints)" of these special provisions.

MEASUREMENT

Gabions will be measured by the cubic yard as determined from the dimensions shown on the plans or the dimensions directed by the Engineer and gabions placed in excess of these dimensions will not be paid for.

PAYMENT

The contract price paid per cubic yard for gabion shall include full compensation for furnishing all labor, materials (including gabion baskets, rock and rock slope protection fabric, and concrete backfill), tools, equipment, and incidentals, and for doing all the work involved in constructing gabions, complete, in place, including excavation and backfill, and concrete backfill, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.975 WILDLIFE FENCE (TYPE E-FENCE)

GENERAL

Summary

This work includes constructing wildlife fence (Type E-FENCE).
Comply with Section 80, "Fences," of the Standard Specifications.

Submittals

Submit a Certificate of Compliance under Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for the type E-Fence and for the metal posts.

At least 5 days before installation, submit a copy of the manufacturer's product data sheet and installation instructions.

MATERIALS

Wildlife fence (Type E-FENCE) must be black 48 inch wide E-Fence with climber barrier, configuration EFB48L, as manufactured by ERTEC Environmental Systems, and must include all the items as specified by the manufacturer's specifications, as shown on the plans, and as specified in these special provisions.

The E-Fence includes the following:

1. E-Fence 48 inch wide Fabric
2. E-Fence Climber Barrier Brackets
3. E-Fence Guide Wire
4. E-Fence Tie

You must furnish metal posts. Metal posts must:

1. Be steel
2. Have a tee cross-sectional shape
3. Have an anchor plate
4. Weigh at least 0.85-pound per foot, and be at least 5 feet in length
5. Be painted a green color

The successful bidder can obtain the E-Fence from the manufacturer, ERTEC Environmental Systems, 1150 Ballena Boulevard, Suite 250, Alameda, CA 94501, telephone (510) 521-0724.

The price quoted by the manufacturer for E-Fence is as follows, not including shipping and handling and sales tax:

ERTEC E-FENCE

Product	Product Code	Unit Price
E-Fence, 48 inch width	EF48	\$2.60 per foot
E-Fence Climber Barrier Brackets	EFCBB	\$0.30 each
E-Fence Guide Wire, 10 lb Spool 585 feet length	EFGW	\$40.95 each
E-Fence Tie	EFT	\$0.10 each

The above prices will be firm for orders placed on or before December 31, 2012.

CONSTRUCTION

Install wildlife fence (Type E-FENCE) according to the fence manufacturer's written instructions.

MEASUREMENT AND PAYMENT

Wildlife fence (Type E-FENCE) is measured and paid for by the linear foot in the same manner specified for barbed wire and wire mesh fence in Section 80, "Fences," of the Standard Specifications.

BID ITEM LIST
04-264134

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
121	566011	ROADSIDE SIGN - ONE POST	EA	21		
122	568001	INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)	EA	1		
123	597601	PREPARE AND STAIN CONCRETE	SQFT	157,646		
124	620101	18" ALTERNATIVE PIPE CULVERT (TYPE A)	LF	8,050		
125	620102	18" ALTERNATIVE PIPE CULVERT (TYPE B)	LF	1,230		
126	620141	24" ALTERNATIVE PIPE CULVERT (TYPE A)	LF	2,180		
127	620142	24" ALTERNATIVE PIPE CULVERT (TYPE B)	LF	640		
128	620181	30" ALTERNATIVE PIPE CULVERT (TYPE A)	LF	520		
129	620221	36" ALTERNATIVE PIPE CULVERT (TYPE A)	LF	510		
130	620262	42" ALTERNATIVE PIPE CULVERT (TYPE B)	LF	150		
131	020013	48" ALTERNATIVE PIPE CULVERT (TYPE B)	LF	440		
132	020014	1" PLASTIC PIPE	LF	20		
133	020015	2" PLASTIC PIPE	LF	60		
134	680207	3" PLASTIC PIPE	LF	120		
135	020016	4" PLASTIC PIPE	LF	20		
136	667019	35" X 24" CORRUGATED STEEL PIPE ARCH (.109" THICK)	LF	92		
137	667041	71" X 47" CORRUGATED STEEL PIPE ARCH (.109" THICK)	LF	3		
138	020017	35" X 24" STEEL SPIRAL RIB PIPE ARCH (.109" THICK)	LF	260		
139	680905	8" PERFORATED PLASTIC PIPE UNDERDRAIN	LF	9,960		
140	020018	8" NON-PERFORATED PLASTIC PIPE UNDERDRAIN	LF	250		

BID ITEM LIST
04-264134

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
141	700617	DRAINAGE INLET MARKER	EA	120		
142	703239	36" CORRUGATED STEEL PIPE RISER (.109" THICK)	LF	24		
143	703530	12" WELDED STEEL PIPE (.105" THICK)	LF	140		
144	705307	12" ALTERNATIVE FLARED END SECTION	EA	1		
145	705311	18" ALTERNATIVE FLARED END SECTION	EA	27		
146	705315	24" ALTERNATIVE FLARED END SECTION	EA	17		
147	705319	30" ALTERNATIVE FLARED END SECTION	EA	3		
148	705321	36" ALTERNATIVE FLARED END SECTION	EA	5		
149	705325	48" ALTERNATIVE FLARED END SECTION	EA	1		
150	020019	2" PVC WATER PIPE (WATER SYSTEM)	LF	330		
151	020020	6" PVC WATER PIPE (WATER SYSTEM)	LF	290		
152	020021	8" PVC WATER PIPE (WATER SYSTEM)	LF	3,000		
153	020022	1" GALVANIZED STEEL WATER PIPE (WATER SYSTEM)	LF	450		
154	020023	4" WELDED STEEL PIPE CONDUIT (.500" THICK) (WATER SYSTEM)	LF	210		
155	020024	30" JACKED WELDED STEEL PIPE CONDUIT (.312" THICK) (WATER SYSTEM)	LF	100		
156	020025	6" BUTTERFLY VALVE (WATER SYSTEM)	EA	2		
157	020026	8" BUTTERFLY VALVE (WATER SYSTEM)	EA	6		
158	020027	1" AIR RELEASE VALVE (WATER SYSTEM)	EA	6		
159	020028	2" BLOW OFF ASSEMBLY (WATER SYSTEM)	EA	6		
160	020029	RELOCATE WATER FILTRATION SYSTEM	LS	LUMP SUM	LUMP SUM	

BID ITEM LIST
04-264134

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
161 (F)	020030	MINOR CONCRETE (PIPE PROTECTION)	CY	7		
162	720106	ROCK SLOPE PROTECTION (1/2 TON, METHOD A)	CY	240		
163	020031	ROCK SLOPE PROTECTION (1/4 TON, METHOD A)	CY	260		
164	721008	ROCK SLOPE PROTECTION (LIGHT, METHOD B)	CY	600		
165	020032	ROCK SLOPE PROTECTION (BACKING NO. 3, METHOD A)	CY	17		
166	722020	GABION	CY	800		
167	727901	MINOR CONCRETE (DITCH LINING)	CY	270		
168	729010	ROCK SLOPE PROTECTION FABRIC	SQYD	2,260		
169	731502	MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)	CY	4		
170	731507	MINOR CONCRETE (GUTTER DEPRESSION)	CY	46		
171 (F)	731517	MINOR CONCRETE (GUTTER)	LF	1,220		
172 (F)	750001	MISCELLANEOUS IRON AND STEEL	LB	30,993		
173	020033	WATER QUALITY WEIR	EA	3		
174	800016	FENCE (TYPE BW, 6 STRAND, METAL POST)	LF	100		
175	020034	FENCE (TYPE WM)	LF	1,230		
176	800060	FENCE (TYPE WM AND BW)	LF	12,400		
177	020035	FENCE (TYPE WM AND BW, MODIFIED)	LF	3,350		
178	020036	VINYL FENCE	LF	370		
179	801230	16' WIRE MESH GATE	EA	2		
180	020037	DOUBLE 12' METAL GATE	EA	2		

BID ITEM LIST
04-264134

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
221	860520	HIGHWAY ADVISORY RADIO SYSTEM	EA	1		
222	861203	HIGH SPEED WEIGH-IN-MOTION SYSTEM	LS	LUMP SUM	LUMP SUM	
223	020042	HIGH SPEED WEIGH-IN-MOTION SYSTEM (STAGE CONSTRUCTION)	LS	LUMP SUM	LUMP SUM	
224	020043	INTEGRATED CAMERA UNIT	EA	3		
225	020044	CAMERA CONTROL UNIT	EA	3		
226	020045	VIDEO ENCODER UNIT	EA	3		
227	020046	EXTINGUISHABLE MESSAGE SIGN PANEL	EA	4		
228	020047	GENERAL PACKET RADIO SYSTEM WIRELESS MODEM ASSEMBLY	EA	7		
229	BLANK					
230	022168	WILDLIFE FENCE (TYPE E-FENCE)	LF	1,700		
231	022169	18" WELDED STEEL PIPE (0.500" THICK) (WATER SYSTEM)	LF	50		
232	022170	WATER QUALITY MONITORING REPORT	EA	12		
233	022171	WATER QUALITY SAMPLING AND ANALYSIS DAY	EA	80		
234	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	

TOTAL BID:

\$ _____