ADDENDUM NO. 5
DECEMBER 10, 2013

PROJECT: LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA

CONSTRUCTION CONTRACT NO: 1101

BID OPENING DATE:

The bid due date is hereby extended to December 16, 2013, prior to 3:30:00 PM. Bids will be opened and tabulated immediately after 3:30:00 PM on said date.

BOOK 2 OF 2

SPECIAL PROVISIONS

Numerous questions were submitted regarding Line Item No. 27 (SETTLING BASIN), Line Item No. 60 (CLEAN CHANNEL AND VEGETATE) and Line Item No. 75 (REVEGETATION TREATMENT TYPES – UPL). This is the final clarification offered for these line items:

1. Bid Item No. 27, Settling Basin. This line item includes the following work, per Page 107 of 145:

   "The contract unit price per each Settling Basin shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in constructing and installing the settling basin, including excavation, disposal of excess material, compaction, furnishing and placing of articulated rock, rock riprap, and Revegetation Type UPL, and no additional payment shall be allowed."

   Clarification – Bid Item No. 27 shall include contractor's costs for constructing a settling basin. Items used in the construction of the settling basin such as rock, excavation and Revegetation Type UPL that may be used elsewhere in the project, are included in the costs for the settling basin. The bid price for Line Item No. 27 should include costs for these materials. Rock, excavation and Revegetation Type UPL used in the construction of the settling basin will not be measured for payment in the otherwise applicable bid items.

This final clarification corrects the response statement in Question #6 (Page 5 of 9) of Addendum 2; yes, additional Revegetation Type UPL outside of Bid Item 75 is indeed included in Line Item No. 27.

2. Bid Item No. 60, Clean Channel and Vegetate. This line item includes the following work, as amended in Item 13 (Page 4 of 6) of Addendum No. 1:

   Clarification - Additional Revegetation Type UPL outside of Bid Item 75 is included in Bid Item No. 60. Revegetation Type UPL placement conducted during the Clean Channel and Vegetate bid item work will not be measured for payment in the otherwise applicable bid item.

3. Bid Item No. 75, Revegetation Treatment Types – UPL. This line item includes placement of upland area revegetation per Section 10-2.04, Pages 132 through 133 of 145. This line item estimate amount (24,860 SF) does not include the required Revegetation Type UPL in Bid Item No. 27 or Bid Item No. 60.

QUESTIONS SUBMITTED VIA PUBLIC PURCHASE:

1. **Question:** In Item 27, Settling Basin, it looks like you are calling for type 2 rock, but the basin item description says that the rock is included in the basin item. Same with the reveg, type UPL, and excavation. Seems like the only work item in the basin not covered by other items is the articulated block. Can you confirm that those items are, in fact paid for in the Basin item, and will not be measured for payment in the otherwise applicable bid items?

   Response: Please refer to the final clarification for Line Item No. 27 above.

2. **Questions about the Boardwalk item:**

   a. Does the redwood materials need to be full dimension 10x10, 3x12, 2x4 etc. or the standard net sizes usually used? Plans call for "rough split" on the 3x12 redwood treads and the 2x4 edge boards. What is rough split? Resawn? What surface do they want on the 10x10 and 4x8, same rough split, S4S, resawn?

      Response: Sizing refers to the nominal sizes. The American Lumber Standards rough and dressed sizes will be accepted. See Section 57-2 of the Standard Specifications:

      “The lumber shall be graded in conformance with the current standard specification for structural grades of California redwood approved by the

Board of Review, American Lumber Standards Committee and published by the Redwood Inspection Service." – Section 57-2.02.

Redwood shall be Architectural Heart B or Garden Construction Heart/Decking Heart, appropriate for decks.

b. Does the hardware all need to be hot dipped, or just plated galvanized?

Response: Please conform to Section 57-1.03 Galvanizing, per the Standard Specifications.

c. What nailing pattern are they wanting on the 3x12 to 4x8, and 2x4 to 3x12 with the 40 d nails?

Response: Three nails should be placed in each side of the 3"X 12"X 4' to the 4"X 8" stringer. The 2"X 4" should be nailed a minimum every 6 inches.

d. Does the 5/8" rebar actually want to be drilled through the 3x12 treads and exposed on top as detailed?

Response: No. The rebar should be placed below the treads, beginning with the stringers.

e. What method are they envisioning on concrete encasing the 5/8" rebar 24" in the ground? Access?

Response: The intent of the concrete encasing is to limit the corrosion to the rebar. It is recommend digging the hole and placing fence post concrete in the hole. The area around the hole may be wetted after the rebar is driven.

f. What method are they envisioning on installing the anchor bolts/allthread w/ nuts and washers, and what diameter are the anchor bolts?

Response: Anchor bolts will be 3/4" diameter threaded galvanized rods, 5"x 5" - 3/8" A-36 Galvanized Steel plate washer with a STD HVY Galvanized Hex Nut. The anchor, steel washer and nut will need to be placed below the geocell, the geocell will need to be filled and the 10" x 10" mud sill will need to be drilled and placed on top of the geocell.

3. **Question**: Does the Equal Employment Opportunity Certification Form need to be completed by each listed subcontractor and submitted with the bid?

Response: Any Equal Employment Opportunity Certifications omitted from the bidder's bid response at time of bid opening must be received by Placer County

Procurement Services at 2964 Richardson Drive, Auburn, CA 95603 within 24 hours after the County's written or emailed request. The County shall not be responsible for Equal Employment Opportunity Certifications delivered to addresses other than specified above.

4. **Question:** Are the bidders required to obtain copies of the Equal Employment Opportunity Certification (Bid Page 12) for all their subcontractors for submission with their bid, or can these forms be submitted for subcontractors after the bid?

   Response: See response to Question #3 above.

With the exception of the above noted items, all other requirements, terms, and conditions of the Bid Documents and previous addenda remain in full force and effect.

WARNING: It is the bidder's responsibility to monitor the County's website for possible addenda to this bid to inform the bidder of the most current specifications, terms, and conditions; and to submit a bid in accordance with the original bid requirements and all addenda. All related addenda can be found at http://www.placer.ca.gov/admin/procurement/openbids. Failure of the bidder to obtain this information shall not relieve the bidder of the requirements contained therein. Additionally, failure of the bidder to respond to any addenda, when required, may be cause for rejection of the bidder's bid.

IMPORTANT: All addenda must either be signed and returned with the bidder's proposal or acknowledged in the Bid Document in order for the bid to be considered responsive.

I HAVE READ AND UNDERSTAND THIS ADDENDUM

_____ _____

Signature Firm Name

ADDENDUM NO. 4
December 6, 2013

PROJECT: LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA

CONSTRUCTION CONTRACT NO: 1101

BID OPENING: IMMEDIATELY AFTER 3:30:00 P.M., DECEMBER 13, 2013

The bid due date is hereby extended to December 13, 2013, prior to 3:30:00 PM. Bids will be opened and tabulated immediately after 3:30:00 PM on said date.

Addendum No. 5 will be released at a later time and date.

With the exception of the above noted item, all other requirements, terms, and conditions of the Bid Documents and previous addenda remain in full force and effect.

WARNING: It is the bidder's responsibility to monitor the County's website for possible addenda to this bid to inform the bidder of the most current specifications, terms, and conditions; and to submit a bid in accordance with the original bid requirements and all addenda. All related addenda can be found at http://www.placer.ca.gov/admin/procurement/openbids. Failure of the bidder to obtain this information shall not relieve the bidder of the requirements contained therein. Additionally, failure of the bidder to respond to any addenda, when required, may be cause for rejection of the bidder's bid.

IMPORTANT: All addenda must either be signed and returned with the bidder's proposal or acknowledged in the Bid Document in order for the bid to be considered responsive.

I HAVE READ AND UNDERSTAND THIS ADDENDUM

_____ _____

Signature Firm Name

ADDENDUM NO. 3
December 3, 2013

PROJECT: LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA

CONSTRUCTION CONTRACT NO: 1101

BID OPENING: IMMEDIATELY AFTER 3:30:00 P.M., DECEMBER 9, 2013

The bid due date is hereby extended to December 9, 2013, prior to 3:30:00 PM. Bids will be opened and tabulated immediately after 3:30:00 PM on said date.

Addendum #4 will be released at a later time and date.

With the exception of the above noted item, all other requirements, terms, and conditions of the Bid Documents and previous addenda remain in full force and effect.

WARNING: It is the bidder's responsibility to monitor the County's website for possible addenda to this bid to inform the bidder of the most current specifications, terms, and conditions; and to submit a bid in accordance with the original bid requirements and all addenda. All related addenda can be found at http://www.placer.ca.gov/admin/procurement/openbids. Failure of the bidder to obtain this information shall not relieve the bidder of the requirements contained therein. Additionally, failure of the bidder to respond to any addenda, when required, may be cause for rejection of the bidder's bid.

IMPORTANT: All addenda must either be signed and returned with the bidder's proposal or acknowledged in the Bid Document in order for the bid to be considered responsive.

I HAVE READ AND UNDERSTAND THIS ADDENDUM

_____ _____

Signature Firm Name

ADDENDUM NO. 2
NOVEMBER 27, 2013

PROJECT: LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA

CONSTRUCTION CONTRACT NO: 1101

BID OPENING: IMMEDIATELY AFTER 3:30:00 P.M., DECEMBER 3, 2013

BOOK 1 OF 2

BID:

1. Pages 4 of 24, Bid Items List No. 2, Utility Relocation. The following is a clarification for this section:

   The Air Release Valve (ARV), Detail 11 on Sheet D-5. The Air Release Assembly is to be relocated an additional five and one half (5.5) feet further away from the centerline of the road. It is the County and Tahoe City Public Utility District's intent to salvage as much of the existing ARV as possible. Any components, parts, or other items needed to relocate the ARV the 5.5 feet or other items required due to damage while excavating or moving the assembly will be included in the cost for the relocation. The ARV was installed in 2011 and should match the detail on the plans.

2. Pages 5 of 24, Bid Items List No. 27, Settling Basin. The following is a clarification for this section:

   The settling basin geotextile fabric requirements are noted on Pages 112 and 113 of 145 and will conform to Section 5, Filter Fabric, of the Standard Specifications.

BOOK 2 OF 2

SPECIAL PROVISIONS:

1. Page 86 of 145, Section 10-1.38, Aggregate Base, Paragraph 7 is revised as follows:

   Measurement and payment for aggregate base will be included in the contract unit price paid for various items requiring aggregate base; and no additional compensation will be allowed.

2. Page 87 of 145, Section 10-1.40, Asphalt Concrete, Paragraph 1 is revised as follows:

   Asphalt concrete shall be the high-mountain climate zone mix by Caltrans, Type B, 3/4 inch Minus, and shall conform to the provisions of Section 39, Asphalt Concrete, of the Standard Specifications and these Special Provisions.

3. Page 87 of 145, Section 10-1.40, Asphalt Concrete, Paragraph 3 is revised as follows:

Asphalt concrete shall be produced from commercial quality asphalt and aggregates. The Contractor shall conform to the spreading and compacting requirements in Section 39 of the Standard Specifications.

4. Page 88 of 145, Paragraph 9 (next to last paragraph of the section) is revised as follows:

   The contract price per square foot paid for asphalt concrete shall include full compensation for furnishing all labor, materials (including asphaltic emulsions, liquid asphalts, asphalts, and aggregate), aggregate base, tools, equipment, and incidentals, and for performing all the work involved in asphalt concrete, complete in place, including saw cutting existing asphalt concrete, raising iron for manholes/valves, and application of prime coat or paint binder (tack coat) as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

5. Page 89 of 145, Item B, Submittals, Paragraph 2. The following is added to the numerical listing:

   12. Geotextile fabric

6. Page 89 of 145, Item B, Submittals, Paragraph 2, Numerical Listing, Item 12. The following is a clarification for this item:

   The geotextile fabric required is noted on Sheet D-2, Detail 4, and will be a non-woven geotextile fabric to conform to Section 88-1.03 Filter Fabric in the Standard Specifications.

7. Page 89 of 145, Item C, Materials. The following is a clarification for this item:

   Only two chemical admixtures are approved at this time. Potential equal products, engineering and test information, must be submitted to the Placer County Project Engineer for review.

8. Page 97 of 145, Item I, Measurement of Payment, Paragraph 2 is revised as follows:

   The contract price per square foot paid for pervious concrete shall include full compensation for furnishing all labor, materials (including asphaltic emulsions, liquid asphalts, asphalts, aggregate, joints, cross drain piping and admixture), tools, equipment, and incidentals, and for performing all the work involved in pervious concrete, complete in place, including excavation, raising iron for manholes/valves, and saw cutting concrete as shown on the plans, as specified in these Special Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

9. Page 101 of 145, Section 10-1.49, Cured in Place Pipe Lining. The following paragraph is added:

   The CCIP liner system shall be designed, fabricated and installed in such a manner as to result in a maintained, full-contact tight fit to the internal circumference of the host pipe for the entire length. The installation shall adhere to the cured times and temperatures stipulated in the manufacturers' recommended installation and cure specifications. Pull-in place liner installation shall be accomplished without significant liner twisting or

stretching. Pulling force for liner installation shall not exceed established limits set by the manufacturer. All cured in-placed installations of CCIP shall be performed in dry conditions. Thoroughly rinse the cured pipe with clean water. Contractor shall capture and properly dispose of cure and rinse water, steam condensate, and/or cleaning water per the project Storm Water Pollution Prevention Plan (SWPPP) and be responsible for the proper disposal of such process residuals.

10. Page 104 of 145, Section 10-1.53, Rock for Channel Construction. The following is a clarification for this item

Geotextile fabric will be non-woven geotextile fabric to conform to Section 88-1.03 Filter Fabric in the Standard Specifications.

11. Page 106 of 145, Section 10-1.54, Settling Basin. The following is a clarification for this item:

The settling basin geotextile fabric requirements are noted on Pages 112 and 113 of 145 and will conform to Section 5, Filter Fabric, of the Standard Specifications.

12. Page 136 of 145, Section 10-2.06, Topsoil and Willow Salvage and Replacement. Willow salvage is removed from the project scope and is revised as follows:

10-2.06 TOPSOIL SALVAGE AND REPLACEMENT

Nutrient-rich topsoil has been identified in both the 1x and 4x meadows. Where a discernable topsoil or duff layer exists, a depth of 12 inches (12”) shall be removed. The soil-revegetation inspector will identify the extent of the topsoil to be removed prior to construction. Once removed, topsoil and duff shall be stockpiled in designated areas prior to excavation or equipment traffic.

Topsoil will be stored with a minimum of handling. Subsoil spoil material shall not be mixed with salvaged topsoil. Stockpiled topsoil will not be piled or compacted in a manner that significantly alters its inherent density, water holding capacity or infiltration. Topsoil shall be stockpiled for as short a time period as is possible, since storage periods of over three months have been shown to be detrimental to soil organic matter amount and quality. Topsoil shall not be compacted, used as temporary fill or further disturbed once stockpiling has occurred unless approved in writing by the soil-revegetation inspector or project engineer. Topsoil shall be stockpiled at designated material storage areas and shall not be stockpiled in a manner which destroys or damages existing vegetated areas not marked for excavation. Areas disturbed by the stockpiling of topsoil outside of designated material storage areas will be treated as per treatment specifications (UPL or FLP, as directed by Engineer).

If salvaged topsoil is lost or disturbed such that it can no longer be reused, the volume of topsoil specified for salvage shall be replaced with a comparable material (to be determined by the Project Engineer) at the Contractor’s expense.

Locations for placement of salvaged topsoil shall be as shown on the Plans. Unless otherwise specified on plans, a depth of four (4) inches of topsoil shall be applied to all revegetation treatment areas prior to soil loosening. Topsoil placed in revegetation treatment areas shall not be compacted.

13. Page 137 of 145, Section Riparian Vegetation Salvage and Replacement. The following is a clarification for this section:

    For riparian vegetation (grasses), an area of 555 square feet has been designated for salvage on SP-1 of the plan set (Sheet 43). Salvaged riparian vegetation will be installed in the 1x channel per Section 10-2.07 in the project specifications, also shown in Details A and F on SP-5 of the plan set (Sheet 47). The Contractor is required to salvage and reinstall riparian vegetation from this designated area.

14. Page 142 of 145, Section 10-2.13, Coir Fabric, Paragraph 2 is revised as follows:

    Coir fabrics are erosion control fabrics made from coconut fibers. Some coir fabrics are woven fibers and others are non-woven fibers that are held together with either biodegradable cotton/jute netting or non-biodegradable polypropylene netting. The coir fabric specified for this project is woven coir fabric. Woven coir fabric shall be DeKoWe 400 or approved equal. Each roll of coir fabric shall be identified with a tag or label securely affixed to the outside of the roll on one end. The label shall include the manufacturer or supplier, the style number, and the roll and lot numbers.

PLANS:

1. Sheet D-5, Detail 11, Air Release Valve (ARV). The following is a clarification for this item:

    The Air Release Assembly is to be relocated an additional five and one half (5.5) feet further away from the centerline of the road. It is the County and Tahoe City Public Utility District's intent to salvage as much of the existing ARV as possible. Any components, parts, or other items needed to relocate the ARV the 5.5 feet or other items required due to damage while excavating or moving the assembly will be included in the cost for the relocation. The ARV was installed in 2011 and should match the detail on the plans.

2. Sheet D-2, Detail 4. The following is a clarification for this item:

    The geotextile fabric required is noted and will be a non-woven geotextile fabric to conform to Section 88-1.03, Filter Fabric, in the Standard Specifications.

3. Sheet P-4. The following is a revision:

    Attention is directed to the placement of 2,466 square feet of 2-inch aggregate base shoulder. This work is omitted from the project.

QUESTIONS SUBMITTED VIA PUBLIC PURCHASE:

1. **Question:** Per section 10-1.41/C. Materials/2. Chemical Admixtures we see that there are two approved products. We would like to include Pervious Plus chemical admixture as an approved equal as it has been utilized in previous Placer County projects from Auburn to Tahoe. Please confirm as approved.

Pervious Plus Inc.
986 Quintana Road, Suite C
Morro Bay, CA 93442
(888) 925-9515
www.perviousplus.com

Response: The Pervious Plus admixture controls water vapor. The project specifies in Section 10-1.41, Portland Cement Pervious Concrete Pavement, plasticizer admixtures (Ecocreto or Grace product) used with success in Tahoe. Additional information and specific project examples would need to be reviewed by the Project Engineer prior to Pervious Plus being accepted as an approved equal. To offer additional clarification, a plasticizer and a hydrolizer are two different types of admixtures.

2. **Question:** Please clarify the geotextile specification for Pervious Concrete Pavement, Settling Basin Cellular Erosion Control Mat and Rock Lined Channels.

   Response: See above: Item No. 2 under "Bid"; Item Nos. 5, 6, 10, and 11 under the "Special Provisions" section and Item No. 2 under the "Plans" section of this Addendum

3. **Question:** Please clarify what is included in Bid Item No. 2 (utility relocation). Specs call out for one air release assembly relocation and reference is made to plan detail 11/D5 which is an entire new assembly. Relocate seems to indicate using existing materials moved to another location. Also, what other utilities should be quoted in this item since there are no definite quantities for relocated utilities.

   Response: See above Item No. 1 under the "Bid" section and Item No. 1 under the "Plans" section of this Addendum.

4. **Question:** Please clarify what is included in Bid Item No. 53. How is one to bid an item with no definite quantities or description such as water services and sewer services with unknown sizes and lengths?

   Response: Bid Item No. 53 was added with Addendum No. 1 for the purpose of providing the contractor a bid item for a service lateral relocation that may occur, removing the costs as included in the total costs of other items being installed. Addendum No. 1 outlines a potential relocation on Sheet PP-3.

5. **Question:** What is the quantity of manholes and valves that need to be adjusted to grade after paving is complete?

   Response: All costs for raising iron should be included in the Contractor's estimated line items for AC paving and pervious concrete. Please see Item Nos. 4 and 8 under the "Special Provisions" section of this Addendum.

6. **Question:** Does Bid Item No. 27 include additional reveg UPL outside of Bid Item No. 75?

   Response: No, it does not.

7. **Question:** Bid Item No. 60 says Done by Others. Why is this in the Bid Schedule?

Response: Please see Addendum No. 1.

8. **Question:** 10-2.13 Coir do you want a 700 or 400?

   Response: Please see Item No. 14 under the "Special Provisions" section of this Addendum.

9. **Question:** Page 132 Upland Reveg shows soil amendments, is this fertilizer?

   Response: A treatment matrix table for soil amendments is shown on Page 134 of 145 of Book 2 of 2, Special Provisions.

10. **Question:** Sod Salvage and Replace - Please clarify 10-2.05, this is more than one description specified.

    Response: Please see Item Nos. 13 and 14 of this addendum for clarification.

11. **Question:** Page 136 of 145 Willow Salvage says a limited number of willows may be salvaged and replanted elsewhere within the project. Please clarify. We assume this is part of Bid Item No. 78? Please provide S.F. of willows and S.F. of riparian material to be salvaged. Contractor has option to do or not to do?

    Response: Please see Item Nos. 12, 13, and 14 under the "Special Provisions" section of this Addendum.

12. **Question:** What Bid Item does topsoil salvage and willow salvage go to?

    Response: Please see Item Nos. 12, 13, and 14 under the "Special Provisions" section of this Addendum

13. **Question:** Section 10-1.49, Cured in Place Pipe Lining, on Page 101 of 145 is the only specification we can find pertaining to the cured-in-place pipe (CIPP) lining, but it does not contain any technical specifications, only a reference to payment. If there is currently another place in the documents that provides specifications for this work, please provide a section number and page of where it is located. If not, will there be a technical specification issued for this work, or will the work just be done per the manufacturer's recommendations? To our knowledge, there is no technical specification for this work contained in the standard specifications applicable to this project.

    Response: See above Item No. 9 under the "Special Provisions" section of this Addendum.

14. **Question:** The spreading and compacting requirements in Section 39-6.02, Spreading, and Section 39-6.03, Compacting, of the Standard Specifications will not apply, with the exception of the straightedge requirements of Section 39-6.03, Compacting, of the Standard Specifications. What do you want? Cores, nuke gauge readings, rolling pattern, etc.

    Response: Please see Item No. 3 under the "Special Provisions" section of this Addendum.

15. **Question:** Regarding the asphalt specification it states Aggregate shall conform to the 1/2 inch maximum, coarse grading specified in Section 39-2.02, Aggregate, of the Standard Specifications.

    If you are using the 2010 version then it is a QC job, if it refers to the 06 spec it refers to the aggregate quality specification.

    What year of section 39 are you using -- 06 or 2010?

    Response: The project specifications are based on the 2006 standards.

16. **Question:** Spec Section 10-1.38, Aggregate Base, Measurement and payment for aggregate base will be at the contract unit price by the cubic yard. I didn't see a separate bid item for aggregate base. Please advise.

    Response: See Item No. 1 under the "Special Provisions" section of this Addendum

17. **Question:** Does Placer County know the depths of (E) Asphalt Paving on Lake Forest, Bristlecone, Sierra View, etc?

    Response: Only Lake Forest Road depth was determined. Refer to the Geotechnical report for the boring logs. We do not have any information regarding the thickness of the profile on the side streets (Bristlecone, Sierra View, etc.)

18. **Question:** There is a call out on the plans for a 2" AGG. Base Shoulder. Which bid item should this be included in?

    Response: See above Item No. 3 under the “Plans" section of this Addendum.

19. **Question:** For Bid Item No. 48, we are told by two separate concrete pipe manufacturers that arched RCP is not available closer than Texas or farther east. In order to not pay the high cost of freight for a relatively small quantity of pipe, would 14" x 23" eliptical RCP be acceptable in lieu of the 13.5" x 22" arch spec'd? If attached to existing, a concrete collar could be formed for the transition.

    Response: In this instance, a 14" x 23" elliptical RCP is an acceptable alternative.

20. **Question:** What type of pavement markings material is required for Bid Items Nos. 65-69? The specs do not specify if the materials are paint, tape, thermoplastic, etc. Please clarify.

    Response: Pavement markings shall be paint and conform to Section 84 of the Standard Specifications.

21. **Question:** Are the signs for Bid Item No. 64 being paid per each sign panel installed, or per each post installed no matter how many sign panels are attached to the post?

    Response: Per sign, each.

22. **Question:** Will the engineer or the County be providing Construction Staking or Survey work; or are these services that will be required by the Contractor?

Response: Construction layout services will be provided for the project by the Department of Public Works. One (1) set of stakes will be provided for project survey control, limits of disturbance, grading, tree removal, storm water drainage, curb and gutter, sidewalk, and roadway surface for Lake Forest Road. Any additional staking, or if staking is accidentally destroyed/prematurely removed it will be re-established at Contractors' expense.

23. **Question**: Section 10-2.17, Maintenance Requirements. Revegetation maintenance and survival guarantee. How will payment for the two years of maintenance be paid for? Do you put this work into Bid Item Nos. 80 and 81?

Response: Yes. This is included in line items 80 and 81.

24. **Question**: On plan sheet 77 of 79, the drawings show point of connection for the irrigation on the east side of Bristlecone Street. There is another hydrant located on the south side of Aqua Drive. To avoid having to sawcut Bristlecone, would the hydrant located on Aqua Drive and Bristlecone be available to use?

Response: The Contractor is responsible for making arrangements, paying fees, and incidentals necessary to obtain service connections from the Tahoe City Public Utility District. Please refer to Page 143 of 145 of Book 2 of 2, Special Provisions.

MISCELLANEOUS

1. A copy of the sign-in sheet from the pre-bid job walk held Friday, November 15, 2013, is posted with the bid documents online on Public Purchase: http://www.publicpurchase.com

2. During the pre-bid job walk held Friday, November 15, 2013, potential bidders were informed that the Southwest Gas (SWG) main is located directly below the rock-lined channel on Panorama Drive (depicted on Sheet P-17) which will result in close tolerances with Placer County improvements. The top of the SWG conduit was located at 3.0 to 3.2 feet below proximate street grade.

3. For pre-bid questions regarding staging area(s) for the project, attention is directed to Section 5-1.25, Areas for Contractor's Use.

4. Site geotechnical reports are posted with the bid documents online on Public Purchase:

   Lake Forest Erosion Control Project Area B (Lake Forest/Panorama), dated November 3, 2011: http://www.publicpurchase.com

   Lake Forest Road Improvement Project, dated August 4, 2011: http://www.publicpurchase.com

---

With the exception of the above noted items, all other requirements, terms, and conditions of the Bid Documents remain in full force and effect.

WARNING: It is the bidder's responsibility to monitor the County's website for possible addenda to this bid to inform the bidder of the most current specifications, terms, and conditions; and to submit a bid in accordance with the original bid requirements and all addenda. All related addenda can be found at http://www.placer.ca.gov/admin/procurement/openbids. Failure of the bidder to obtain this information shall not relieve the bidder of the requirements contained therein. Additionally, failure of the bidder to respond to any addenda, when required, may be cause for rejection of the bidder's bid.

IMPORTANT: All addenda must either be signed and returned with the bidder's proposal or acknowledged in the Bid Document in order for the bid to be considered responsive.

I HAVE READ AND UNDERSTAND THIS ADDENDUM

_____	_____
Signature	Firm Name

ADDENDUM NO. 1
NOVEMBER 1, 2013

PROJECT: LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA

CONSTRUCTION CONTRACT NO: 1101

BID OPENING: IMMEDIATELY AFTER 3:30:00 P.M., DECEMBER 3, 2013

BOOK 1 OF 2

BID:

1. Pages 4 through 8 of 24. The Bid Items List is revised in its entirety and is attached hereto. Revisions made are as follows:

    a. The percentages on Item No. 1 (Mobilization), No. 3 (Water Pollution), and No. 4 (Traffic Control Systems) are removed.
    b. The unit of measure for Item No. 27 is changed from EA to LS.
    c. Item Nos. 53 and 70 were duplicates. Item No. 70 remains the same.
    d. Item No. 53 was replaced with an additional bid item for Utility Service Lateral Relocation.

SAMPLE CONTRACT:

1. Page 1 of 21. The following is added to Article 3.1, Contract Documents:

    - Amendments to the 2006 Standard Specifications, dated October 19, 2012

2. Pages 10 through 15 of 21. The Bid Items List is replaced in its entirety in accordance with the above.

BOOK 2 OF 2

SPECIAL PROVISIONS

1. Page 20 of 145, Section 5-1.21, Payments, Paragraph 3 is revised as follows:

    - Water Pollution Control = $68,000
    - Traffic Control System = $140,000
    - Clearing and Grubbing = $35,000

2. Page 42 of 145, Section 10-1.02, Progress Schedule, Paragraph 7 is revised as follows:

    The Contractor shall notify property owners a minimum of 48 hours prior to closing off access to any property. The Contractor shall notify the property owner and/or lease

holder by posting an official letter on the door of the building. Attention is directed to Section 10-1.22, Maintaining Traffic, of these Special Provisions.

3. Page 48 of 145, the following paragraph is added below the table and above the last paragraph of Section 10-1.08, Cooperation:

During the progress of the work under this Contract, the utility owner will relocate a utility shown in the following table within the corresponding number of days shown. Notify the Engineer before you work near a utility shown. The days count start on the notification date, and are defined as working days (defined elsewhere in the contract). During winter suspension, no days are counted against those listed. AT&T cannot move until Liberty Energy completes the pole installation, and Charter Communications cannot begin until AT&T completes their work.

Utility Relocation and Department Arranged Time for the Relocation

Utility	Location	Working Days
AT&T (Local Service Distribution Facilities)	STA 13 + 40 - 16 + 10 STA 29 + 60 - 32 + 40 STA 35 + 30 - 38 + 45 (15 feet right)	45
Charter Communications (Local Service Distribution Facilities)	STA 13 + 40 - 16 + 10 STA 29 + 60 - 32 + 40 STA 35 + 30 - 38 + 45 (15 feet right)	30
Liberty Energy (Electrical Distribution Facilities)	STA 13 + 40 - 16 + 10 STA 29 + 60 - 32 + 40 STA 35 + 30 - 38 + 45 (15 feet right)	60
	TOTAL	135

4. Page 61 of 145, the last paragraph of Section 10-1.13, Temporary Fencing, is revised as follows:

Full compensation for furnishing all labor, material, and equipment necessary to install, move, maintain, remove, and dispose of temporary fences shall be considered as included in the contract lump sum price paid for Water Pollution Control; and no additional compensation will be allowed.

5. Page 64 of 145, Section 10-1.15, Turbidity Curtain, Paragraph 5 is revised as follows:

Full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all the work involved in the turbidity curtain complete in place, including installation, maintenance, and removal of turbidity curtain as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, shall be considered included in the Contract lump sum unit price paid for Control of Water; and no additional compensation will be allowed.

6. Page 64 of 145, Section 10-1.16, Construct Detour, is removed in its entirety. This section will remain blank.

7. Page 65 of 145, Section 10-1.17, Temporary Culverts, Paragraph 1 is revised as follows:

Temporary culverts shall be furnished, installed, maintained, and later removed as needed as part of the dewatering plan, as specified in these Special Provisions, and as directed by the Engineer.

8. Page 75 of 145, Section 10-1.26, Road Barricade (Wood), Paragraph 2 is revised as follows:

The contract unit price paid for road barricade (wood) shall be included in the contract prices paid for the items of work under Traffic Control and for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in constructing road barricade (wood), complete in place, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

9. Page 116 of 145, the last paragraph of Section 10-1.55, Articulating Concrete Block (ACB) Revetment System, under Item D. Payment is revised as follows:

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in producing and installing the articulating concrete block revetment system, complete in place, a shown on the Plans, in accordance with these Special Provisions and as directed by the Engineer, including excavation, subgrade compaction, and installation of non-woven geotextile fabric, shall be considered as included in the contract lump sum price paid for Settling Basin; and no additional compensation will be allowed.

10. Page 121 of 145, Section 10-1.57, Snow Poles, Paragraph 2 is revised as follows:

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to construct and install snow poles including, but not limited to, excavation, backfill, posts, target plates, painting, reflectors, steel pipe, and hardware shall be considered as included in the contract unit price per each for snow pole; and no additional compensation shall be allowed.

11. Page 121 of 145, Section 10-1.59, Pavement Markings, Paragraph 3 is revised as follows:

The contract unit price per linear foot price for Caltrans Crosswalk Striping, Double Yellow Striping, Stop Bar Striping and unit price per each for “Stop” Symbol Pavement Markers, Caltrans Yield Triangles shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in painting pavement markings including establishing alignment, and layout of markings, complete in place, as specified in the Standard Specifications and these Special Provisions and as directed by the Engineer; and no additional compensation will be allowed.

12. Page 122 of 145, Section 10-1.63, Abandon Culverts and Pipe Lines, is deleted in its entirety and is replaced with the following:

10-1.63 SPEED HUMP

This work shall include, but not be limited to construction of asphalt concrete speed humps, the installation of speed hump chevrons, pavement markings, sign posts and signs at the locations and as detailed in the Plans.

Asphalt concrete shall be Type A, ½ inch aggregate and shall conform to these Special Prevision outlined in section 10-1.40 Asphalt Concrete.

The speed hump installation shall be paid for at the unit price per each for Speed Hump and shall be full compensation for all labor, materials, equipment used in the cleaning, tacking, paving, signing, striping, and incidental work involved.

13. Page 124 of 145, Section 10-1.68, Clean Channel and Vegetate, is revised in its entirety as follows:

Work under this item shall consist of the remove loose debris from unlined channels and an Upland Restoration (UPL) Revegetation Treatment in accordance with the Plans, Standard Specifications, and these Special Provisions.

The Contract unit price per square foot under Clean Channel and Vegetate shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in removal of loose debris, disposal of excess material, soil preparation, fertilizer, seed, mulch, and irrigation required to treat channels with an Upland Restoration (UPL) Revegetation to the channels; and no additional payment shall be allowed.

14. Page 126 of 145, Section 10-1.74, Roadway Signs, Paragraph 1 is revised as follows:

This work shall consist of furnishing and installing roadside signs, including Class III Bike Route signs, Speed Hump signs, 15 mph signs, Restoration Area signs, Turn Out signs, Not a County Maintained Road signs, and all other signage in locations shown on the Plans and as directed by the Engineer. Signs shall conform to the provisions of Section 56-2, Roadside Signs, of the Standard Specifications, and these Special Provisions.

15. Page 126 of 145, Section 10-1.74, Roadway Signs, Paragraph 4 is revised as follows:

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete construction and installation of the signs including, but not limited to excavation, backfill, posts, sign panels, painting, and hardware shall be considered as included in the contract unit price per each for; and no additional compensation will be allowed.

16. Page 129 of 145, the last paragraph of Section 10-1.76, Waterline Relocations and Replacements, is revised as follows:

In the event that a water service lateral will need to be relocated, full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to relocate/modify existing water service lateral, including, but not limited to excavation, sawcutting, asphalt removal, pipe and fittings, cleanouts, perpetuation of existing flows, connection to existing pipe, structural backfill, bedding, backfill, asphalt concrete trench

patch, slurry seal, and pressure testing for doing all work involved in relocate/modify existing water service lateral, complete in place, coordination with Tahoe City Public Utility District (TCPUD), as specified in these Special Provisions, and as directed by the Engineer shall be included in the Contract Unit price per each for Utility Service Lateral Relocation; and no additional payment will be allowed.

17. Page 130 of 145, Paragraph 7 (last paragraph of Section 10-1.77, Relocating Sanitary Sewer Service) is revised as follows:

In the event that a sewer service lateral will need to be relocated, full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to relocate/modify existing sanitary sewer service lateral, including, but not limited to excavation, sawcutting, asphalt removal, pipe and fittings, cleanouts, perpetuation of existing flows, connection to existing pipe, structural backfill, bedding, backfill, asphalt concrete trench patch, slurry seal, and pressure testing for doing all work involved in relocate/modify existing sanitary sewer service lateral, complete in place, coordination with Tahoe City Public Utility District (TCPUD), as specified in these Special Provisions, and as directed by the Engineer shall be included in the Contract Unit price per each for Utility Service Lateral Relocation; and no additional payment will be allowed.

18. Page 145 of 145, Section 10-2.17, Maintenance Requirements, Paragraph 1 is revised as follows:

Attention is drawn to the Permits located in Appendix A (Book 2 of 2) of these Special Provisions and the preliminary SWPPP located in Appendix B (Book 2 of 2) of these Special Provisions. All revegetated areas shall be maintained in accordance with these Special Provisions to ensure proper establishment of vegetation and so that there is no evidence of erosion, such as rills or gullies. The maintenance period begins on the date following the last installation. If at any time it is deemed that proper maintenance is not being performed, the countdown for the required maintenance period shall be stopped and not resumed until the project is compliant with the appropriate Special Provisions and proper maintenance is resumed.

PLANS:

1. Plan and Profile Sheet PP-3 has been amended to show the location of a water service lateral relocation. The revision is shown on Sheet PP-3 (Page 31 of 79) and is attached hereto.

2. The Snow Pole Details is revised on the Plans. The revision is shown on Detail Sheet D-5 (Page 63 of 79) and is attached hereto.

With the exception of the above noted items, all other requirements, terms, and conditions of the Bid Documents remain in full force and effect.

WARNING: It is the bidder's responsibility to monitor the County's website for possible addenda to this bid to inform the bidder of the most current specifications, terms, and conditions; and to submit a bid in accordance with the original bid requirements and all addenda. All related addenda can be found at http://www.placer.ca.gov/admin/procurement/openbids. Failure of the

bidder to obtain this information shall not relieve the bidder of the requirements contained therein. Additionally, failure of the bidder to respond to any addenda, when required, may be cause for rejection of the bidder's bid.

IMPORTANT: All addenda must either be signed and returned with the bidder's proposal or acknowledged in the Bid Document in order for the bid to be considered responsive.

I HAVE READ AND UNDERSTAND THIS ADDENDUM

_____	_____
Signature	Firm Name

SET NO. _____

COUNTY OF PLACER
DEPARTMENT OF PUBLIC WORKS

NOTICE TO BIDDERS, BID, AND CONTRACT

BOOK 1 OF 2
PROJECT PACKAGE TO BE SUBMITED FOR BID

FOR

LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT PANORAMA

CONTRACT NO. 1101

BID DUE: TUESDAY, DECEMBER 3, 2013, PRIOR TO 3:30:00 P.M.

FOR USE IN CONNECTION WITH STANDARD SPECIFICATIONS DATED MAY 2006, STANDARD PLANS DATED MAY 2006 AND LABOR SURCHARGE AND EQUIPMENT RATES OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION AND PLACER COUNTY GENERAL SPECIFICATIONS DATED AUGUST 2005 INSOFAR AS THE SAME MAY APPLY AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

COUNTY OF PLACER
DEPARTMENT OF PUBLIC WORKS

NOTICE TO BIDDERS

Sealed bids for the work shown on the plans entitled:

LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA
CONTRACT NO. 1101

Sealed bids will be received at the Office of Procurement Services, located at 2964 Richardson Drive, DeWitt Center, Auburn, California 95603 prior to 3:30:00 p.m., December 3, 2013. Any bids received at or after 3:30:00 p.m. shall be returned unopened. Bids will be opened and tabulated at said location immediately after 3:30:00 p.m. on said date. Any protest regarding the award of the Contract must be submitted pursuant to Section 10.0 of the Placer County Purchasing Policy Manual, a copy of which is available at the following link:
http://www.placer.ca.gov/departments/admin/procurement/purchasing%20policy%20manual.

General Work Description: The scope of work, in general, includes, but is not limited to, stream restoration and general erosion control facilities; grading; drainage inlets; curb and gutter; road shoulder treatment; modification of existing drainage channels; associated revegetation; habitat restoration; culvert replacements; and recreational facility improvements associated with restoration objectives. Other items and details, not mentioned above, that are required by the Plans, Specifications, or Special Provisions shall be performed, placed, and constructed, and/or installed.

Project Location: The project is located on the north shore of Lake Tahoe, approximately two miles east of Tahoe City.

Bidders are strongly encouraged to attend the pre-bid job walk Friday, November 15, 2013, at 1:00 p.m. at the Skylandia Park parking lot (corner of Aspen Drive and Lake Forest Road).

The Engineer's estimate for this project is $3,534,535.

Bids are required for the entire work described herein. The Department reserves the right to reject any and all bids and to waive any irregularities in said bids.

Attention is directed to the requirements specified in Section 7-1.01C, Contractor's Licensing Laws, of the Standard Specifications. The Contractor shall possess a valid California Class A Contractor's License. In addition, the Contractor shall possess or have a listed subcontractor to perform specified work, specifically, a C-27 Landscaping contractor for all revegetation work. Required specialty contractors shall be listed on

the Subcontractors List regardless of contract value. Licenses are required at the time of the bid award. All licenses shall remain in effect throughout the term of this Contract.

Official copies of the Contract Documents for bidding may be downloaded free of charge at the following link: http://www.placer.ca.gov/departments/admin/procurement/openbids Alternatively, these documents may be purchased in person at the Office of Procurement Services, 2964 Richardson Drive, Auburn, CA 95603, (530) 886-2122.

All questions concerning this project shall be submitted in the Question/Answer section of the project posted on **Public Purchase** website:

http://www.publicpurchase.com/gems/placerco,ca/buyer/public/home.

Placer County makes no assurances that questions received within five (5) days of the bid opening date will be answered prior to bid opening.

Bid Bonds will be required for this project. The successful bidder shall be required to furnish a Payment Bond and a Performance Bond and certificates of liability and property damage insurance. The amounts of liability and property damage insurance shall not be less than the amounts shown in the Special Provisions and shall include an Additional Insured Endorsement to the Contractor's liability insurance policy naming Placer County, its officers, agents, and employees as additional insured. The successful bidder shall also be required to furnish an additional Revegetation Maintenance Bond for work associated with revegetation establishment and maintenance as described in Section 10-2.00, Revegetation, of the Special Provisions.

This project is made possible through a grant from the USDA Forest Service. In accordance with federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. This institution is an equal opportunity provider.

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

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

Pursuant to Section 1773 of the Labor Code, the general prevailing rate of wages in the county in which the work is to be done has been determined by the Director of the Department of Industrial Relations. For bidding purposes, these wage rate publications may be examined at the office of the Department of Public Works, 3091 County Center Drive, Suite 220, Auburn, CA 95603 or at the Office of the Purchasing Agency, County of Placer, 2964 Richardson Drive, Auburn, CA 95603. Future effective wage rates, which have been predetermined and are on file with the Department of Industrial Relations are referenced but not printed in said publication.

Minimum Wage Rates for this project as predetermined by the Secretary of Labor are set forth in the Special Provisions. If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and prevailing wage rates determined by the Department of Industrial Relations for similar classifications of labor, the Contractor and his subcontractors shall pay not less than the higher wage rate. The Department will not accept lower State wage rates not specially included in the federal wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the federal wage determinations. Where federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor and subcontractors, the Contractor and subcontractors shall pay not less than the federal minimum wage rate which most closely approximates the duties of the employees in question.

The Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished will apply to work done under this Contract.

Bidders should be aware that all required permits have not been received as of this date including those from Tahoe Regional Planning Agency, Lahontan, Fish and Game, and Army Corps of Engineers. However, permits are expected to be in place by May 1, 2014.

BID
TO THE COUNTY OF PLACER
DEPARTMENT OF PUBLIC WORKS

LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA
CONTRACT NO. 1101

Full Legal Name of Bidder: _____

Type of Entity: _____ State of Incorporation / Organization: _____
(*corporation, partnership, etc.)*

Mailing Address: _____

City, State, Zip: _____

Physical Address: _____
(*must be included even if post office box is used for mailing*)

City, State, Zip: _____

Telephone Number: Area Code (_____) _____

Fax Number: Area code (_____) _____

Primary Email Address: _____
(notification of bid award will be done via email)

Secondary Email Address: _____
(notification of bid award will be done via email)

Placer County will use email to notify bidders of the decision of the County on the award of this bid. Therefore, it is essential that bidders identify one or more contact persons who have frequent access to email. The County will not be responsible for delivery failure of email due to firewalls, spam filters, or individuals' failure to retrieve email messages. The County will not attempt to redeliver any messages which fail due to no fault of the County.

California Contractor License No. _____

California Contract License Classification(s): _____

The work for which this bid is submitted is for construction in conformance with the special provisions (including the payment of not less than the State general prevailing wage rates or federal minimum wage rates), the project plans, including any addenda thereto, the contract annexed hereto, and also in conformance with the California Department of Transportation Standard Plans, dated May 2006, the Standard Specifications, dated May 2006, the Placer County General Specifications, dated

August 2005, and the Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished.

The special provisions and project plans for the work to be done were approved and are entitled:

COUNTY OF PLACER
DEPARTMENT OF PUBLIC WORKS
LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA
CONTRACT NO. 1101

Bids are to be submitted for the entire work. The amount of the bid for comparison purposes will be based upon Total Bid.

The bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for that purpose. In the case of unit basis items, the amount set forth under the "Item Total" column shall be the product of the unit price bid and the estimated quantity for the item.

In case of discrepancy between the unit price and the total set forth for a unit basis item, the unit price shall prevail, except as provided in (a) or (b), as follows:

(a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item total column, then the amount set forth in the item total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price;

(b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage-wise the unit price or item total in the County of Placer's Final Estimate of cost.

If both the unit price and the item total are unreadable or otherwise unclear, or are omitted, the bid may be deemed irregular. Likewise if the item total for a lump sum item is unreadable or otherwise unclear, or is omitted, the bid may be deemed irregular unless the project being bid has only a single item and a clear, readable total bid is provided.

Symbols such as commas and dollar signs will be ignored and have no mathematical significance in establishing any unit price or item total or lump sums. Written unit prices, item totals and lump sums will be interpreted according to the number of digits and, if applicable, decimal placement. Cents symbols also have no significance in establishing any unit price or item total since all figures are assumed to be expressed in dollars and/or decimal fractions of a dollar. Bids on lump sum items shall be item totals only; if

any unit price for a lump sum item is included in a bid and it differs from the item total, the items total shall prevail.

The foregoing provisions for the resolution of specific irregularities cannot be so comprehensive as to cover every omission, inconsistency, error or other irregularity which may occur in a bid. Any situation not specifically provided for will be determined in the discretion of the County of Placer, and that discretion will be exercised in the manner deemed by the County of Placer to best protect the public interest in the prompt and economical completion of the work. The decision of the County of Placer respecting the amount of a bid, or the existence or treatment of an irregularity in a bid, shall be final.

If this bid shall be accepted and the undersigned shall fail to enter into the contract and furnish the two bonds in the sums required by the State Contract Act, with surety satisfactory to the County of Placer, within ten (10) days, not including Saturdays, Sundays and legal holidays, after the bidder has received notice from the County of Placer that the contract has been awarded, the County of Placer may, at its option, determine that the bidder has abandoned the contract, and thereupon this bid and the acceptance thereof shall be null and void and the forfeiture of the security accompanying this bid shall operate and the same shall be the property of the County of Placer.

The undersigned, as bidder, declares that the only persons or parties interested in this bid as principals are those named herein; that this bid is made without collusion with any other person, firm, or corporation; that he has carefully examined the location of the proposed work, the annexed proposed form of contract, and the plans therein referred to; and he proposes, and agrees if this bid is accepted, that he will contract with the County of Placer, in the form of the copy of the contract annexed hereto, to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the materials specified in the contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that he will take in full payment therefore the following prices, to wit:

BID ITEMS
LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA
CONTRACT NO. 1101

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
1	MOBILIZATION (5%)	LS	1		
2	UTILITY RELOCATION	EA	1		
3	WATER POLLUTION CONTROL (2%)	LS	1		
4	TRAFFIC CONTROL SYSTEM (4%)	LS	1		
5	CONTROL OF WATER	LS	1		
6	REMOVE DI	EA	3		
7	REMOVE CULVERT	LF	876		
8	REMOVE ASPHALT / CONCRETE PAVEMENT	SF	162,507		
9	REMOVE TREE (6-12 INCH)	EA	23		
10	REMOVE TREE (13-18 INCH)	EA	8		
11	REMOVE TREE (19-24 INCH)	EA	11		
12	REMOVE TREE (25-36 INCH)	EA	9		
13	REMOVE TREE (37-48 INCH)	EA	2		
14	REMOVE HEADWALL	EA	1		
15	CLEARING AND GRUBBING	LS	1		
16	EARTHWORK	CY	2,225		

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
17	LAKE FOREST ROAD PAVING (>STA 16)	SF	91,566		
18	LAKE FOREST ROAD PAVING (<STA 16)	SF	37320		
19	LAKE FOREST ROAD SLURRY SEAL	SF	7570		
20	AC PAVING	SF	27,910		
21	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 1	TONS	125		
22	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 2	TONS	344		
23	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 3	TONS	145		
24	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 4	TONS	50		
25	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 5	TONS	40		
26	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 6	TONS	15		
27	SETTLING BASIN	EA	1		
28	RIPRAP 6" to 9"	CY	30		
29	GRAVEL (6" DEPTH)	SF	981		
30	DRAIN ROCK	CY	18		
31	SEDIMENT CAN WITH SIDE OPENING	EA	12		
32	SADDLE SD MANHOLE TYPE A	EA	1		
33	WEIRED MANHOLE WITH SOLID LID	EA	1		

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
34	8' DIA JELLYFISH	EA	1		
35	JELLYFISH DROP INLET	EA	2		
36	CONSTRUCT DROP INLET	EA	5		
37	15-INCH CIPP LINING	LF	79		
38	18-INCH CIPP LINING	LF	163		
39	24-INCH CIPP LINING	LF	119		
40	36-INCH CIPP LINING	LF	121		
41	48-INCH CIPP LINING	LF	433		
42	48-INCH X 32-INCH ARCH CIPP LINING	LF	66		
43	12-INCH HDPE PIPE	LF	419		
44	15-INCH HDPE PIPE	LF	355		
45	18-INCH HDPE PIPE	LF	145		
46	24-INCH HDPE PIPE	LF	133		
47	48-INCH X 32-INCH ARCH CMP	LF	6		
48	13.5-INCH X 22-INCH ARCH RCP	LF	61		
49	PERVIOUS CONCRETE PAVEMENT SIERRA VIEW	SF	6,250		
50	PERVIOUS CONCRETE PAVEMENT SHOULDER	SF	12,902		

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
51	CONCRETE CURB BARRIER	LF	6,641		
52	PARKING BARRIER (WOOD POSTS)	EA	307		
53	PARKING BARRIER (SHRUB/BOLDER)	LF	98		
54	ROLLED CURB AND GUTTER	LF	4,735		
55	3' TO 8' VALLEY GUTTER TRANSITION	EA	2		
56	8' CURB END TRANSITION	EA	19		
57	3' CONCRETE VALLEY GUTTER	LF	748		
58	8' CONCRETE VALLEY GUTTER	LF	50		
59	CONCRETE 3' CURB CUT	EA	5		
60	CLEAN CHANNEL AND VEGETATE	SF	22,963		
61	REMOVE LOOSE DEBRIS FROM LINED CHANNEL	SF	1,200		
62	ROADSIDE SIGNS RESET	EA	1		
63	RELOCATE PROJECT SIGN	EA	1		
64	SIGNS	EA	14		
65	CALTRANS YIELD TRIANGLES	EA	8		
66	CALTRANS CROSSWALK STRIPING	LF	48		
67	DOUBLE YELLOW STRIPING	LF	4,975		

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
68	STOP BAR STRIPING	LF	159		
69	"STOP" SYMBOL PAVEMENT MARKER	EA	4		
70	SHRUB/BOULDER BARRIER	LF	98		
71	SPEED HUMP	EA	1		
72	BOARDWALK	LF	238		
73	CALTRANS STD 24" CULVERT HEADWALL	EA	2		
74	SNOW POLES	EA	60		
75	REVEGTATION TREATMENT TYPES- UPL	SF	24,860		
76	REVEGTATION TREATMENT TYPES- SOD	SF	4,886		
77	REVEGTATION TREATMENT TYPES- FLP	SF	32,835		
78	REVEGTATION TREATMENT TYPES- RIP	SF	555		
79	REVEGTATION TREATMENT TYPES- INF	SF	5,258		
80	IRRIGATION 1X	LS	1		
81	IRRIGATION 4X	LS	1		

TOTAL BID: _____

NOTE: "Total Bid" line is provided for convenience purposes only. The actual bid shall be computed as described above.

Name of Bidder: _____

California Contractor License No.: _____

Bid Submitted By: _____
(signature)

Print Name: _____

Title: _____

Date: _____

The foregoing quantities are approximate only, being given as a basis for comparison of bids, and the Department of Public Works does not express or by implication agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work, as may be deemed necessary, or advisable by the Engineer.

ENVELOPES CONTAINING BIDS shall be marked:

LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA
CONTRACT NO. 1101

NOT TO BE OPENED UNTIL IMMEDIATELY AFTER
3:30:00 P.M., TUESDAY, DECEMBER 3, 2013

County reserves the right to reject any or all bids and to waive any irregularities in bids.

THE BIDDER'S EXECUTION ON THE SIGNATURE PORTION OF THIS BID SHALL ALSO CONSTITUTE AN ENDORSEMENT AND EXECUTION OF THOSE CERTIFICATIONS WHICH ARE A PART OF THIS BID

LIST OF SUBCONTRACTORS

The Bidder shall list the name and address of each subcontractor to whom the Bidder proposes to subcontract portions of the work, as required by the provisions in Section 2-1.01, General, of the Special Provisions. Attention is also directed to section 5-1.17, Subcontracting, of the Special Provisions.

Name and Location	License Designation/ License Number	Description of Portion of Work Subcontracted	Percent of Total Work

LIST OF PROPOSED SUBSTITUTIONS

Pursuant to Public Contract Code Section 3400, the following substitutions are proposed as "Equals" for those set forth in the Contract. All data substantiating the proposed substitutions shall be submitted to the County upon request.

Contract Section	Name of Product to be Substituted Out	Name and Manufacturer of Proposed Product to be Substituted	Model/Quantity of Proposed Product

EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

The bidder _____,

proposed subcontractor _____,

hereby certifies that he has _____, has not _____, participated in a previous contract or subcontract subject to the equal opportunity clauses, as required by Executive Orders 10925, 11114, or 11246, and that, where required, he has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filling requirements.

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7[b] [1]), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts, which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has ___ , has not ___ been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. The above Statement is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

In conformance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:
Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes _____ No _____

If the answer is yes, explain the circumstances in the following space.

PUBLIC CONTRACT CODE 10232 STATEMENT

In conformance with Public Contract Code Section 10232, the Contractor, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Note: The above Statement and Questionnaire are part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement and Questionnaire.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

NONCOLLUSION AFFIDAVIT
(Title 23 United States Code Section 112 and
Public Contract Code Section 7106)

To the COUNTY of PLACER
DEPARTMENT OF PUBLIC WORKS.

In accordance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Note: The above Noncollusion Affidavit is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Noncollusion Affidavit.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

DEBARMENT AND SUSPENSION CERTIFICATION

TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29

The bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager:

- is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- does not have a proposed debarment pending; and
- has not been indicted, convicted, or had a civil judgement rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Note: Providing false information may result in criminal prosecution or administrative sanctions.

The above certification is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Certification.

NONLOBBYING CERTIFICATION
FOR FEDERAL-AID CONTRACTS

The prospective participant certifies, by signing and submitting this bid or bid, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in conformance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or bid that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

1. Type of Federal Action:	2. Status of Federal Action:	3. Report Type:
☐ a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	☐ a. bid/offer/application b. initial award c. post-award	☐ a. initial b. material change For Material Change Only: year _____ quarter _____ date of last report _____

4. Name and Adress of Reporting Entity:	5. If Reporting Entity in No. 4 is Subawardee. Enter Name and Address of Prime:
☐ Prime ☐ Subawardee Tier _____ , *if known* Congressional District, *if known:*	 Congressional District, *if known:*
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, *if applicable* _____
8. Federal Action Number, *if known:*	9. Award Amount, *if known:* **$**
10. a. Name and Address of Lobbying Entity *(if individual, last name, first name, MI):*	b. Individuals Performing Services *(including address if different from No. 10a)* *(last name, first name, MI):*

(attach Continuation Sheet(s) if necessary)

11. Amount of Payment (check all that apply):	13. Type of Payment (check all that apply)
$ _____ ☐ actual ☐ planned	☐ a. retainer ☐ b. one-time fee ☐ c. commission ☐ d. contingent fee ☐ e. deferred ☐ f. other, specify: _____
12. Form of Payment (check all that apply): ☐ a. cash ☐ b. in-kind; specify: nature _____ value _____	

14. Brief Description of Services Performed or to be performed and Date(s) of Service, including officer(s), employee(s), or member(s) contacted, for Payment Indicated in Item 11:

(attach Continuation Sheet(s) if necessary)

15. Continuation Sheet(s) attached: Yes ☐ No ☐

16.	
Information requested through this form is authorized by Title 31 U.S.C. Section 1352. This disclosure of lobbying reliance is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____

Federal Use Only:

Authorized for Local Reproduction
Standard Form - LLL
Standard Form LLL Rev. 04-28-06

INSTRUCTIONS FOR COMPLETION OF SF-LLL,
DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of covered Federal action or a material change to previous filing pursuant to title 31 U.S.C. section 1352. The filing of a form is required for such payment or agreement to make payment to lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress an officer or employee of Congress or an employee of a Member of Congress in connection with a covered Federal action. Attach a continuation sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence, the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last, previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District if known. Check the appropriate classification of the reporting entity that designates if it is or expects to be a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the first tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in Item 4 checks "Subawardee" then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organization level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identification in item 1 (e.g., Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract grant. or loan award number, the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitments for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influenced the covered Federal action.
    (b) Enter the full names of the individual(s) performing services and include full address if different from 10 (a). Enter Last Name, First Name and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed or will be expected to perform and the date(s) of any services rendered. Include all preparatory and related activity not just time spent in actual contact with Federal officials. Identify the Federal officer(s) or employee(s) contacted or the officer(s) employee(s) or Member(s) of Congress that were contacted.
15. Check whether or not a continuation sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name title and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

Accompanying this Bid is: _____

(Inset, as the case may be, the words: Cash ($ _____), Cashier's Check, Certified Check, or Bidder's Bond)
in amount equal to at least ten percent of the total of the bid.

IMPORTANT NOTICE: If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual copartners composing firm; if bidder or other interested person is an individual, state first and last names in full.

Licensed in conformance with an act providing for the registration of Contractors:

License Number: _____

Expiration Date: _____

Classification(s): _____

ADDENDA - This Bid is submitted with respect to the changes to the contract included in addenda number(s) (a*cknowledge receipt of bid addenda by inserting the addenda number(s) in the following space):*

Addendum No.	Date Acknowledged

IMPORTANT: In order for the Bid to be considered responsive, all addenda must either be signed and returned with the Bidder's proposal or acknowledged in the space above.

The County will use e-mail generated by Public Purchase to notify plan holders of the availability of addenda issued to this bid. All addenda will be posted on the Public Purchase website and can only be downloaded by plan holders who are fully registered with Public Purchase (have completed the two-step registration process). Firms that download the Contract Documents from the Public Purchase website will be added to the plan holders list. Hard Copy Purchases: The email address provided by the plan holder at the time of purchase of hard copy Contract Documents will be used by the County for addenda notification. Therefore, at the time of purchase of hard copy bid documents, it is essential that the plan holder provide an email address for one or more contact persons who have frequent access to email. The County will not be responsible

for delivery failure of email due to firewalls, spam filters, or individuals' failure to retrieve email messages. The County will not attempt to redeliver any messages which fail due to no fault of the County. The County will not be responsible for addenda missed due to late registration or bidder's failure to complete the registration process with Public Purchase. Addenda notifications will not be mailed or faxed. Addenda documents will not be emailed or faxed.

By my signature on this bid I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Sections 10162, 10232 and 10285.1 are true and correct and that the bidder has complied with the requirements of Section 8103 of the Fair Employment and Housing Commission Regulations (Chapter 5, Title 2 of the California Administrative Code). By my signature on this Bid I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Noncollusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106; and the Title 49 Code of Federal Regulations, Part 29 Debarment and Suspension Certification are true and correct.

Date: _____, _____, 20_____

Signature of Bidder Representative: _____

Printed Name of Bidder Representative: _____

Title of Bidder Representative: _____

Full Legal Name of Bidder: _____

Type of Entity: _____
(corporation, partnership, etc.)

State of Incorporation / Organization: _____

Business Mailing Address: _____

Business Physical Address: _____

Signature Requirements

- The Bid must be signed by an officer empowered by the proposing entity to sign such material and thereby commit the proposing entity to the obligations contained in the proposal. Further, the signing and submission of a response shall indicate the intention of the proposer to adhere to the provisions described in this proposal and a commitment to enter a binding contract.

- Bids submitted on behalf of a Partnership shall be signed in the firm name by a partner or the Attorney-In-Fact. If signed by the Attorney-In-Fact, there shall be

attached to the proposal a Power-Of-Attorney evidencing authority to sign proposals, dated the same date as the proposal and executed by all partners of the firm.

- Bids which are submitted on behalf of a Corporation shall have the correct corporate name thereon and the actual signature of the authorized officer of the corporation written (not typed) below the corporate name. The title of the office held by the person signing for the corporation shall appear below the signature of the officer.

- Bids which are submitted by an Individual doing business under a firm name ("dba") shall be signed in the name of the individual doing business under the proper firm name and style.

COUNTY OF PLACER
DEPARTMENT OF PUBLIC WORKS

BIDDER'S BOND

We, _____ as Principal,

and _____ as Surety
are bound unto the County of Placer, State of California, hereafter referred to as "Obligee", in the penal sum of ten percent (10%) of the total amount of the bid of the Principal submitted to the Obligee for the work described below, for the payment of which sum we bind ourselves, jointly and severally. In no case shall the liability of the surety hereunder exceed the sum of _____Dollars ($_____).

THE CONDITION OF THIS OBLIGATION IS SUCH, THAT:

WHEREAS, the Principal is submitted to the Obligee, for stream restoration and general erosion control facilities; grading; drainage inlets; curb and gutter; road shoulder treatment; modification of existing drainage channels; associated revegetation; habitat restoration; culvert replacements; and recreational facility improvements associated with restoration objectives on the north shore of Lake Tahoe, approximately two miles east of Tahoe City for the Lake Forest Water Quality Improvement Project - Panorama, Construction Contract No. 1101.

NOW, THEREFORE, if the Principal is awarded the contract and, within the time and manner required under the specifications, after the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in conformance with the bid, and files two bonds with the Obligee, one to guarantee faithful performance of the contract and the other to guarantee payment for labor and materials as provided by law, then this obligation shall be null and void; otherwise, it shall remain in full force.

In the event suit is brought upon this bond by the Obligee and judgement is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the court.

Date: _____, _____, 20_____

_____

_____

_____
Principal

_____
Surety

By _____
Attorney-in-fact

CERTIFICATE OF ACKNOWLEDGEMENT

State of California
City/County of: _____

On this _____ day of _____ in the year _____

before me, _____

personally appeared, _____
Attorney in Fact

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument as the attorney in fact of _____

and acknowledged to me that he/she subscribed the name of the said company thereto as surety, and his/her own name as attorney in fact.

(SEAL)

_____
Notary Public

Note: Signature of those executing for the surety must be properly acknowledged.

STATE OF CALIFORNIA
COUNTY OF PLACER
DEPARTMENT OF PUBLIC WORKS
SAMPLE
CONSTRUCTION CONTRACT

This contract is made on the date set forth below, by and between the County of Placer, a political subdivision of the State of California (hereinafter COUNTY), and _____, a *(insert the business form and state of license, i.e., a California Corporation)* (hereinafter CONTRACTOR). The COUNTY and CONTRACTOR for the consideration hereinafter mentioned agree as follows:

ARTICLE 1: SCOPE OF WORK

1.1 CONTRACTOR agrees to furnish all work, labor, tools, materials, transportation, equipment, services, and other means of construction necessary to perform and complete in a good and workmanlike manner, those certain improvements as called for, and in the manner designated in, and in strict conformity with Contract No. 1101 entitled LAKE FOREST EROSION CONTROL PROJECT - PANORAMA (hereafter Project), in compliance with the contract documents as described in Article 3.

1.2 CONTRACTOR understands and agrees that the work, labor, tools, materials, transportation, equipment, incidentals, services, and other means of construction for the Project shall be furnished and the work performed as required in the contract documents under the sole direction and control of CONTRACTOR, and subject to the inspection and approval of the COUNTY or its representatives.

ARTICLE 2: CONTRACT PRICE

2.1 The COUNTY agrees to pay and the CONTRACTOR agrees to accept, in full payment for the work above agreed to be done, the sum of _____ DOLLARS ($_____) subject to additions and deductions as provided in the contract documents.

ARTICLE 3: CONTRACT DOCUMENTS

3.1 The complete contract consists of the following documents, to wit:

- Notice to Contractors
- Executed Bid, including the Bidder's Bond
- Construction Contract
- Project Plans for this Project
- Special Provisions for this Project
- Placer County General Specifications, dated August 2005
- Caltrans Standard Specifications, dated May 2006
- Caltrans Standard Plans, dated May 2006
- Caltrans Traffic Manual, dated May 2006
- Equipment Rental Rates and General Prevailing Wage Rates of the State of California, Department of Transportation, and where applicable, Federal wage rates and Section 14 Federal Fund S enclosures

- Executed Performance Bond
- Executed Payment Bond
- Executed Revegetation Maintenance Bond

3.2 Any and all obligations of the COUNTY and the CONTRACTOR are fully set forth and described in the above documents. All of the above documents are intended to cooperate so that any work called for in one and not mentioned in the other or vice versa is to be executed the same as if mentioned in all said documents. The documents comprising the complete contract are sometimes collectively referred to as the contract documents.

ARTICLE 4: TIME FOR PERFORMANCE - LIQUIDATED DAMAGES

4.1 The commencement date of the contract for determination of the time for completion shall be the date CONTRACTOR is directed to proceed by the Director of Public Works, as stated in the Notice to Proceed. The CONTRACTOR shall complete all work required by the contract within **180** working days after said commencement date, as adjusted and provided for in the contract documents.

4.2 In the event CONTRACTOR does not complete all work required by the contract within the time specified above, liquidated damages shall be imposed upon the CONTRACTOR. CONTRACTOR agrees that if all the work called for under this contract in all parts and requirements is not completed within the performance time period set forth above, damage will be sustained by COUNTY. As it is and will be impracticable to ascertain and determine the actual damage the COUNTY shall sustain, CONTRACTOR agrees to pay to COUNTY ONE THOUSAND DOLLARS ($1,000) per calendar day for each and every day(s) delay in finishing the work in excess of the working days described. Time is of the essence in this contract. CONTRACTOR further agrees that COUNTY may deduct the amount of these damages from any moneys due or that may become due the CONTRACTOR under this contract. To the extent appropriate, as determined by COUNTY in its sole discretion, COUNTY shall administer this article in accordance with the California Department of Transportation Standard Specifications Section 8-1.07, Liquidated Damages, dated May 2006.

ARTICLE 5: INDEMNITY AND HOLD HARMLESS

5.1 The COUNTY and all officers, employees, outside parties hired to inspect the work and volunteers thereof connected with the work, including, but not limited to, the Director and the Engineer, shall not be answerable or accountable in any manner: for any loss or damage to any of the materials or other things used or employed in performing the work; for injury to or death of any person, either workmen or the public; or for damage to property from any cause which might have been prevented by the CONTRACTOR or his workmen or anyone employed by him.

5.2 The CONTRACTOR shall be responsible for any liability imposed by law and for injuries to or death of any person including, but not limited to, workmen and the public or damage to property resulting from defects or obstructions or from any cause whatsoever during the progress of the work or at any time before its completion and final acceptance.

5.3 The CONTRACTOR shall indemnify and save harmless the COUNTY and all officers, employees, outside parties hired to inspect the work and volunteers thereof connected with the work, including, but not limited to, the Director and the Engineer, from all claims, suits,

or actions of every name, kind, and description brought forth or on account of injuries to or death of any person, including, but not limited to, workmen and the public or damage to property resulting from the performance of the contract except as otherwise provided by statute. The duty of the CONTRACTOR to indemnify and save harmless includes the duties to defend as set forth in Section 2778 of the Civil Code.

5.4 With respect to third party claims against the CONTRACTOR, the CONTRACTOR waives any and all rights to any type of express or implied indemnity against the COUNTY, its officers or employees.

5.5 It is the intent of the parties that the CONTRACTOR will indemnify and hold harmless the COUNTY, its officers, employees and agents, from any and all claims, suits, or actions as set forth above, regardless of the existence or degree of fault or negligence on the part of the COUNTY, the CONTRACTOR, the subcontractor or employee of any of these, other than the active negligence of the COUNTY, its officers and employees.

ARTICLE 6: INSURANCE

6.1 CONTRACTOR shall file with COUNTY concurrently herewith a Certificate of Insurance, in companies acceptable to COUNTY, with a Best's Rating of no less than A-:VII showing.

6.2 Worker's Compensation and Employers Liability Insurance:

Worker's Compensation Insurance shall be provided as required by any applicable law or regulation. Employer's liability insurance shall be provided in amounts not less than one million dollars ($1,000,000) each accident for bodily injury by accident, one million dollars ($1,000,000) policy limit for bodily injury by disease, and one million dollars ($1,000,000) each employee for bodily injury by disease.

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

Each Workers' Compensation policy shall be endorsed with the following specific language:

> Cancellation Notice - "This policy shall not be changed without first giving thirty (30) days prior written notice and ten (10) days prior written notice of cancellation for non-payment of premium to the County of Placer."

Waiver of Subrogation - The workers' compensation policy shall be endorsed to state that the workers' compensation carrier waives its right of subrogation against the County, its officers, directors, officials, employees, agents or volunteers, which might arise by reason of payment under such policy in connection with performance under this agreement by the CONTRACTOR.

CONTRACTOR shall require all subcontractors to maintain adequate Workers' Compensation insurance. Certificates of Workers' Compensation shall be filed forthwith with the County upon demand.

6.3 General Liability Insurance:

6.3.a. Comprehensive General Liability or Commercial General Liability insurance covering all operations by or on behalf of CONTRACTOR, providing insurance for bodily injury liability and property damage liability for the limits of liability indicated below and including coverage for:

(1) Premises and operations;
(2) Products and completed operations;
(3) Contractual liability insuring the obligations assumed by PROVIDER in this Agreement;
(4) Broad form property damage (including completed operations);
(5) Explosion, collapse, and underground hazards;
(6) Personal injury liability; and

Except with respect to bodily injury and property damage included within the products and completed operations hazards, the aggregate limits, where applicable, shall apply separately to CONTRACTOR'S work under the Contract.

6.3.b. One of the following forms is required:

(1) Comprehensive General Liability;
(2) Commercial General Liability (Occurrence); or
(3) Commercial General Liability (Claims Made).

6.3.c. If CONTRACTOR carries a Comprehensive General Liability policy, the limits of liability shall not be less than a Combined Single Limit for bodily injury, property damage, and Personal Injury Liability of:

Two million dollars ($2,000,000) each occurrence
Two million dollars ($2,000,000 aggregate

6.3.d. If CONTRACTOR carries a Commercial General Liability (Occurrence) policy:

(1) The limits of liability shall not be less than:

Two million dollars ($2,000,000) each occurrence (combined single limit for bodily injury and property damage)
Two million dollars ($2,000,000) for personal injury liability
Two million dollars ($2,000,000) for products-completed operations
Two million dollars ($2,000,000) general aggregate

(2) If the policy does not have an endorsement providing that the General Aggregate Limit applies separately, or if defense costs are included in the aggregate limits, then the required aggregate limits shall be two million dollars ($2,000,000).

6.3.e Special Claims Made Policy Form Provisions:

CONTRACTOR shall not provide a Commercial General Liability (Claims Made) policy without the express prior written consent of COUNTY, which consent, if given, shall be subject to the following conditions:

(1) The limits of liability shall not be less than:

Two million dollars ($2,000,000) each occurrence (combined single limit for bodily injury and property damage)
Two million dollars ($2,000,000) for personal injury liability
Two million dollars ($2,000,000) for products-completed operations
Two million dollars ($2,000,000) general aggregate

(2) The insurance coverage provided by CONTRACTOR shall contain language providing coverage up to one (1) year following the completion of the contract in order to provide insurance coverage for the hold harmless provisions herein if the policy is a claims made policy.

6.4 Conformity of Coverages - If more than one policy is used to meet the required coverages, such as a separate umbrella policy, such policies shall be consistent with all other applicable policies used to meet these minimum requirements. For example, all policies shall be Occurrence Liability policies or all shall be Claims Made Liability policies, if approved by the County as noted above. In no cases shall the types of polices be different.

6.5 Additional Requirements

6.5.a Premium Payments - The insurance companies shall have no recourse against the COUNTY and funding agencies, its officers and employees or any of them for payment of any premiums or assessments under any policy issued by a mutual insurance company.

6.5.b Policy Deductibles - The CONTRACTOR shall be responsible for all deductibles in all of the CONTRACTOR's insurance policies. The maximum amount of allowable deductible for insurance coverage required herein shall be $25,000.

6.5.c CONTRACTOR's Obligations - CONTRACTOR's indemnity and other obligations shall not be limited by the foregoing insurance requirements and shall survive the expiration of this agreement.

6.5.d Verification of Coverage - CONTRACTOR shall furnish the County with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the County before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the CONTRACTOR's obligation to provide them. The County reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

6.5.e Material Breach - Failure of the CONTRACTOR to maintain the insurance required by this agreement, or to comply with any of the requirements of this section, shall constitute a material breach of the entire agreement.

6.6 Endorsements:

Each Comprehensive or Commercial General Liability policy shall be endorsed with the following specific language:

A. "The County of Placer, its officers, agents, employees, and volunteers are to be covered as insured for all liability arising out of the operations by or on behalf of the named insured in the performance of this Agreement."

B. "The insurance provided by the Contractor, including any excess liability or umbrella form coverage, is primary coverage to the County of Placer with respect to any insurance or self-insurance programs maintained by the County of Placer and no insurance held or owned by the County of Placer shall be called upon to contribute to a loss."

C. “This policy shall not be changed without first giving thirty (30) days prior written notice and ten (10) days prior written notice of cancellation for non-payment of premium to the County of Placer.”

6.7. Automobile Liability Insurance:

Automobile Liability insurance covering bodily injury and property damage in an amount no less than two million dollars ($2,000,000) combined single limit for each occurrence. Covered vehicles shall include owned, non-owned, and hired automobiles/trucks.

6.8. Pollution Liability:

Contractor shall purchase and thereafter maintain, so long as such insurance is available on a commercially reasonable basis, Pollution Liability insurance in the amount of one million dollars ($1,000,000) covering liability arising from the sudden and accidental release of pollution on the Facility Site.

ARTICLE 7: PRECEDENCE IN CONFLICTING DOCUMENTS

7.1 It is further expressly agreed by and between the parties hereto that should there be any conflict between the terms of this instrument and the bid of said CONTRACTOR, then this instrument shall control and nothing herein shall be considered as acceptance of the said terms of said bid conflicting herewith.

ARTICLE 8: BOND REQUIREMENTS

8.1 CONTRACTOR shall furnish both a Faithful Performance Bond and a Payment Bond (hereinafter collectively "Bonds") in the full amount of the Contract on the forms provided by the COUNTY. COUNTY shall retain the Performance Bond for a one-year guarantee period from the date of the COUNTY’s acceptance of the work.

In addition, the CONTRACTOR shall guarantee the success of the revegetation work associated with this Contract by furnishing a security in the form of a Revegetation

Maintenance Bond in the amount of THREE THOUSAND DOLLARS ($3,000) as defined in Section 10-2.00, Revegetation, of the Special Provisions.

8.2 The bonds shall be obtained from a California admitted surety, which is licensed by the State of California to act as surety upon bonds and undertakings and which maintains in this state at least one office for the conduct of its business. The surety shall furnish reports as to its financial condition from time to time upon request by COUNTY.

8.3 In case of any conflict between the terms of the contract and the terms of the bonds, the terms of the contract shall control and the bonds shall be deemed to be amended thereby.

8.4 CONTRACTOR agrees to obtain the consent of the surety, if required, to any change, extension of time, alteration, or addition to any of the terms of the contract documents.

ARTICLE 9: COMPLIANCE WITH LAWS

9.1 CONTRACTOR is an independent contractor and shall, at its sole cost and expense comply with all laws, rules, ordinances and regulations of all governing bodies having jurisdiction over the work, obtain all necessary permits (unless specifically stated elsewhere in the contract documents to be obtained by COUNTY) and licenses therefore, pay all manufacturers' taxes, sales taxes, use taxes, processing taxes, and all federal and state taxes, insurance and contributions for social security and unemployment which are measured by wages, salaries or any remuneration paid to CONTRACTOR's employees, whether levied under existing or subsequently enacted laws, rules or regulations. CONTRACTOR shall also pay all property tax assessments on materials or equipment used until acceptance by COUNTY. If any discrepancy or inconsistency is discovered in any of the contract documents in relation to any such law, rule, ordinance, regulation, order or decree, the CONTRACTOR shall forthwith report the same to the COUNTY in writing.

9.2 Without limitation, materials furnished and performance by CONTRACTOR hereunder shall comply with safety orders of the Division of Industrial Safety, State of California, federal safety regulations of the Bureau of Labor, Department of Labor; and any other applicable state or federal regulations.

9.3 CONTRACTOR, upon request, shall furnish evidence satisfactory to COUNTY that any or all of the foregoing obligations have been or are being fulfilled. CONTRACTOR warrants to COUNTY that it is licensed by all applicable governmental bodies to perform this contract and will remain so licensed throughout the progress of the work, and that it has, or will have, throughout the progress of the work, the necessary experience, skill, and financial resources to enable it to perform this contract.

9.4 CONTRACTOR is required to insure that material safety data sheets (MSDS's) for any material requiring a MSDS pursuant to any federal or state law are available in a readily accessible place on the Project premises. CONTRACTOR is also required to insure (a) the proper labeling of any substance brought onto the Project premises by CONTRACTOR or any subcontractors or material suppliers, and (b) that the person(s) working with the material, or within the general area of the material, are appropriately informed about the hazards of the substance and follow proper handling and protection procedures.

9.5 CONTRACTOR is required to comply with Health and Safety Sections 25249 et seq. (Prop. 65), which requires the posting and giving of notice to persons who may be exposed to any chemical known to the State of California to cause cancer.

9.6 CONTRACTOR shall comply with Title VI of the Civil Rights Act of 1964 (PL 88-352) and all regulations or other requirements issued pursuant to that Act, including, without limitation, United States Department of Agriculture nondiscrimination regulations found at 7 CFR Part 15.

ARTICLE 10: PROGRESS SCHEDULE

10.1 The CONTRACTOR shall submit within ten (10) days (or as specified in the Special Provisions for this Project) after execution of the contract a detailed work schedule or schedules that details the actions of the CONTRACTOR and subcontractors working at the site in accordance with the requirements specified in Special Provisions. This schedule(s) shall show the dates at which the CONTRACTOR will start and complete the several parts of the work and shall conform to the completion time specified in the contract. The COUNTY may submit comments on the work schedule. Acceptance of the schedule by COUNTY shall not constitute approval of the plan by CONTRACTOR for completion of the work.

10.2 The CONTRACTOR shall review and, if necessary, revise the progress schedule at least once a month or as specified in the Special Provisions for this Project. In any event, the CONTRACTOR shall submit a current schedule to the Engineer at the Engineer's request at any time during the contract period.

10.3 No progress payments will be made for any work performed until a satisfactory schedule has been submitted and approved by the Engineer. An updated schedule shall be required from the CONTRACTOR if the project falls ten (10) working days behind schedule. For delays or portions of delays for which the CONTRACTOR is responsible, no payment will be made or time extension allowed for increase in work force, equipment, and working hours needed to put the Project on schedule.

ARTICLE 11: PROMPT PAYMENT PROVISIONS

11.1 Prompt payment provisions in accordance with Section 20104.50 of the Public Contract Code shall apply to this contract.

11.2 If COUNTY fails to make a progress payment within thirty (30) days after receipt of an undisputed and properly submitted payment request from CONTRACTOR, COUNTY shall pay interest to CONTRACTOR equivalent to 0.833 percent per month (10 percent per annum).

11.3 COUNTY shall review each payment request as soon as practicable after receipt to determine whether the payment request is proper. Any payment request determined to be an improper payment request shall be returned to CONTRACTOR as soon as practicable, but not later than seven (7) days, after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.

ARTICLE 12: ANTITRUST CLAIM ASSIGNMENT

12.1 In entering into a Public Works contract or a subcontract to supply goods, services, or materials pursuant this contract, the CONTRACTOR and all subcontractors shall offer and agree to assign to COUNTY all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the contract or any subcontract. This assignment shall be made and become effective at the time the COUNTY tenders final payment to CONTRACTOR, without further acknowledgment by the parties.

ARTICLE 13: PREVAILING WAGES

13.1 CONTRACTOR acknowledges that it has examined the prevailing rate of per diem wages as established by the California Director of Industrial Relations. The CONTRACTOR agrees to pay workers not less than the applicable prevailing rate of per diem wages, as set forth in these requirements and Labor Code section 1770 et seq. CONTRACTOR agrees specifically to comply with the provisions of Labor Code Sections 1720, 1773.3, 1776, and 1777.5, as well as Section 7-1.01A of the Department of Transportation Standard Specifications and these contract documents.

ARTICLE 14: SEVERABILITY

14.1 Nothing contained in the contract documents shall be construed to require the commission of any act contrary to law. Should a conflict arise between any provisions contained herein and any present or future statute, law, ordinance, or regulation contrary to which the parties have no legal right to contract or act, the latter shall be curtailed and limited but only to the extent necessary to bring it within the requirements of the law. If such curtailment or limitation is not possible, the affected provision shall be of no force and effect. Except as previously mentioned, such illegality shall not affect the validity of this contract.

ARTICLE 15: COMPLETE AGREEMENT

15.1 These contract documents supersede any and all agreements, either oral or in writing, between the parties with respect to the subject matter herein. Each party to this contract acknowledges that no representation by any party, which is not embodied herein, or any other agreement, statement, or promise not contained in these contract documents shall be valid and binding.

ARTICLE 16: INTERPRETATION

16.1 The parties hereto acknowledge and agree that each has been given the opportunity to independently review this contract with legal counsel, and/or has the requisite experience and sophistication to understand, interpret and agree to the particular language of the provisions of the contract.

16.2 In case of a controversy or dispute between the parties concerning the provisions herein, this document shall be interpreted according to the provisions herein and no presumption shall arise concerning the draftsmanship of such provision.

ARTICLE 17: GOVERNING LAW

17.1 This contract is subject to the laws and jurisdiction of the State of California. Venue for any legal proceeding brought in conjunction with this contract shall be the Superior Court of the County of Placer, State of California. CONTRACTOR waives any federal court removal and/or original jurisdiction rights it may have pursuant to any applicable law.

ARTICLE 18: FEDERAL FUNDING REQUIREMENTS

18.1 CONTRACTOR shall comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

18.2 CONTRACTOR shall comply with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3).

18.3 CONTRACTOR shall comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR Part 5).

18.4 CONTRACTOR shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5).

18.5 CONTRACTOR shall comply with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity", as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR Chapter 60).

18.6 CONTRACTOR shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).

ARTICLE 19: BID ITEMS

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
1	MOBILIZATION (5%)	LS	1		
2	UTILITY RELOCATION	EA	1		
3	WATER POLLUTION CONTROL (2%)	LS	1		
4	TRAFFIC CONTROL SYSTEM (4%)	LS	1		

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
5	CONTROL OF WATER	LS	1		
6	REMOVE DI	EA	3		
7	REMOVE CULVERT	LF	876		
8	REMOVE ASPHALT / CONCRETE PAVEMENT	SF	162,507		
9	REMOVE TREE (6-12 INCH)	EA	23		
10	REMOVE TREE (13-18 INCH)	EA	8		
11	REMOVE TREE (19-24 INCH)	EA	11		
12	REMOVE TREE (25-36 INCH)	EA	9		
13	REMOVE TREE (37-48 INCH)	EA	2		
14	REMOVE HEADWALL	EA	1		
15	CLEARING AND GRUBBING	LS	1		
16	EARTHWORK	CY	2,225		
17	LAKE FOREST ROAD PAVING (>STA 16)	SF	91,566		
18	LAKE FOREST ROAD PAVING (<STA 16)	SF	37320		
19	LAKE FOREST ROAD SLURRY SEAL	SF	7570		
20	AC PAVING	SF	27,910		
21	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 1	TONS	125		

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
22	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 2	TONS	344		
23	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 3	TONS	145		
24	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 4	TONS	50		
25	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 5	TONS	40		
26	ROCK FOR CHANNEL CONSTRUCTION -ROCK TYPE 6	TONS	15		
27	SETTLING BASIN	EA	1		
28	RIPRAP 6" to 9"	CY	30		
29	GRAVEL (6" DEPTH)	SF	981		
30	DRAIN ROCK	CY	18		
31	SEDIMENT CAN WITH SIDE OPENING	EA	12		
32	SADDLE SD MANHOLE TYPE A	EA	1		
33	WEIRED MANHOLE WITH SOLID LID	EA	1		
34	8' DIA JELLYFISH	EA	1		
35	JELLYFISH DROP INLET	EA	2		
36	CONSTRUCT DROP INLET	EA	5		
37	15-INCH CIPP LINING	LF	79		
38	18-INCH CIPP LINING	LF	163		

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
39	24-INCH CIPP LINING	LF	119		
40	36-INCH CIPP LINING	LF	121		
41	48-INCH CIPP LINING	LF	433		
42	48-INCH X 32-INCH ARCH CIPP LINING	LF	66		
43	12-INCH HDPE PIPE	LF	419		
44	15-INCH HDPE PIPE	LF	355		
45	18-INCH HDPE PIPE	LF	145		
46	24-INCH HDPE PIPE	LF	133		
47	48-INCH X 32-INCH ARCH CMP	LF	6		
48	13.5-INCH X 22-INCH ARCH RCP	LF	61		
49	PERVIOUS CONCRETE PAVEMENT SIERRA VIEW	SF	6,250		
50	PERVIOUS CONCRETE PAVEMENT SHOULDER	SF	12,902		
51	CONCRETE CURB BARRIER	LF	6,641		
52	PARKING BARRIER (WOOD POSTS)	EA	307		
53	PARKING BARRIER (SHRUB/BOLDER)	LF	98		
54	ROLLED CURB AND GUTTER	LF	4,735		
55	3' TO 8' VALLEY GUTTER TRANSITION	EA	2		

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
56	8' CURB END TRANSITION	EA	19		
57	3' CONCRETE VALLEY GUTTER	LF	748		
58	8' CONCRETE VALLEY GUTTER	LF	50		
59	CONCRETE 3' CURB CUT	EA	5		
60	CLEAN CHANNEL AND VEGETATE	SF	22,963		
61	REMOVE LOOSE DEBRIS FROM LINED CHANNEL	SF	1,200		
62	ROADSIDE SIGNS RESET	EA	1		
63	RELOCATE PROJECT SIGN	EA	1		
64	SIGNS	EA	14		
65	CALTRANS YIELD TRIANGLES	EA	8		
66	CALTRANS CROSSWALK STRIPING	LF	48		
67	DOUBLE YELLOW STRIPING	LF	4,975		
68	STOP BAR STRIPING	LF	159		
69	"STOP" SYMBOL PAVEMENT MARKER	EA	4		
70	SHRUB/BOULDER BARRIER	LF	98		
71	SPEED HUMP	EA	1		
72	BOARDWALK	LF	238		

ITEM NO	DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
73	CALTRANS STD 24" CULVERT HEADWALL	EA	2		
74	SNOW POLES	EA	60		
75	REVEGTATION TREATMENT TYPES- UPL	SF	24,860		
76	REVEGTATION TREATMENT TYPES- SOD	SF	4,886		
77	REVEGTATION TREATMENT TYPES- FLP	SF	32,835		
78	REVEGTATION TREATMENT TYPES- RIP	SF	555		
79	REVEGTATION TREATMENT TYPES- INF	SF	5,258		
80	IRRIGATION 1X	LS	1		
81	IRRIGATION 4X	LS	1		

TOTAL COST: _____

WITNESS WHEREOF, the parties have hereunto set their hands the year and date first above written.

APPROVE AS TO PROCEDURE:

By: _____
Ken Grehm, Director
Department of Public Works

Date: _____

APPROVE AS TO FUNDS:

By: _____
Auditor, Placer County

Date: _____

APPROVE AS TO FORM:

By: _____
County Counsel, Placer County

Date: _____

ATTACHMENTS:
Attachment A - Federal Tax ID Number

"COUNTY"
COUNTY OF PLACER

By: _____
Chair, Board of Supervisors

Date: _____

"CONTRACTOR"

(Type full legal name of contractor, entity type, state of organization, .i.e., XYZ Corp., Inc., a California Corporation or a Nevada Corporation, etc.)

By: _____
Officer Signature No. 1
(Signature Notarized)

By: _____
Print Name and Title

Date: _____

By: _____
Officer Signature No. 2
(Signature Notarized)

By: _____
Print Name and Title

Date: _____

Licensed in accordance with an act providing for the registration of Contractors,
Contractor's License No: _____

"If Contractor is a corporation, contract must be signed by the following two corporate officers, one from each category: (1) Chairman of the Board, President or any Vice President, and (2), Corporate Secretary, any Assistant Corporate Secretary, Chief Financial Officer or any Treasurer or Assistant Treasurer, unless an authenticated copy of a resolution of the corporation which delegates to a single officer the authority to bind the corporation is attached to this contract.

If Contractor is another type of business entity, such as a partnership or limited liability company, contract must be signed by officer(s) possessing legal authority to bind the entity. An authenticated copy of a resolution, partnership agreement, operating agreement or other legal evidence of signature authority must be attached to this contract."

CERTIFICATION

LABOR CODE SECTION 1861

STATE OF CALIFORNIA)
COUNTY OF PLACER)

I, the undersigned, do hereby certify:

That I am aware of the provisions of Section 3700 of the Labor Code of the State of California, which requires 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.

Executed at: _____

On: _____

I certify under the penalty of perjury that the foregoing is true and correct.

CONTRACTOR - EMPLOYER

By: _____

Print Name: _____

Title: _____

BOND FOR LABOR AND MATERIALS

KNOW ALL MEN BY THESE PRESENTS, THAT WHEREAS, COUNTY OF PLACER, STATE OF CALIFORNIA, hereinafter called the "Owner" has awarded to _____, as Principal, hereinafter designated as the "Contractor," a contract for the work described as follows: LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA, CONTRACT NO. 1101, AND WHEREAS, the Contractor is required to furnish a bond in connection with said contract, to secure the payment of claims of laborers, mechanics, materialmen, and other persons as provided by law;

NOW, THEREFORE, we, the undersigned Contractor and _____ Surety, are held and firmly bound unto the Owner in the amount required by law, in the sum of _____Dollars ($_____) for which payment well and truly to be made we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION of this obligation is such, that if the Contractor, his or its heirs, executors, administrators, successors or assigns, or subcontractors shall fail to pay any of the persons referred to in Civil Code 3181, amounts due under the Unemployment Insurance Code with respect to work or labor performed by any such claimant, or amount due the Franchise Tax Board as provided in Civil Code 3248, that the surety or sureties herein will pay for the same, in amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought in this bond, the said surety will pay reasonable attorneys' fee to be fixed by the court.

This bond shall insure to the benefit of any of the persons referred to in Civil Code 3181 so as to give a right of action to such persons or their assigns in any suit brought upon this bond. Any such right of action shall be subject to the provisions of Civil Code 3267.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

PROVIDED, FURTHER, that surety covenants that it is an Admitted Surety Insurer in the State of California as defined by California Code of Civil Procedures, Section 995.120.

Approved as to form:

By: _____
County Counsel
Placer County

_____
*Surety Attorney-In-Fact
(Signature must be notarized)

Name:_____

Date: _____

_____
CONTRACTOR
(Signature must be notarized)

Name: _____

Date: _____

*Attorney-In-Fact must have Power of Attorney on file with County Clerk of Placer County or include a copy of Power of Attorney with this Bond.

BOND OF FAITHFUL PERFORMANCE

KNOW ALL MEN BY THESE PRESENTS THAT WE _____,
the Contractor in the Contract hereto annexed, as principal, and _____as surety are held and firmly bound unto the County of Placer in the sum of _____ Dollars ($_____) lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, jointly and severally, firmly by these presents.

The condition of the above obligation is that if said principal as Contractor in the contract hereto annexed shall faithfully perform each and all of the conditions of said contract to be performed by him, and shall furnish all tools, equipment, apparatus, facilities, transportation, labor, and material, other than material, if any, agreed to be furnished by the County, necessary to perform and complete, and to perform and complete in a good workmanlike manner, and to guarantee acceptable performance of the work for a period of one year following the acceptance of the project, the work of LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA, CONTRACT NO. 1101, in strict conformity with the terms and conditions set forth in the contract hereto annexed, and after a period of one year following the acceptance of the project, then this obligation shall be null and void, otherwise to remain in full force and effect; and the said surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall, in any wise, affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

Surety further agrees in case suit is brought upon this bond that it will pay, in addition to the basic obligation herein, all court costs, expenses, and all reasonable attorney's fees to be awarded and fixed by the Court, and to be taxed as costs, and to be included in the judgment therein rendered.

Approved as to form:

By: _____
County Counsel
Placer County

_____
*Surety Attorney-In-Fact
(Signature must be notarized)

Name:_____

Date: _____

_____
CONTRACTOR
(Signature must be notarized)

Name:_____

Date: _____

*Attorney-In-Fact must have Power of Attorney on file with County Clerk of Placer County or include a copy of Power of Attorney with this Bond.

REVEGETATION MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS THAT WE _____, the Contractor in the Contract hereto annexed, as principal, and _____ as surety are held and firmly bound unto the County of Placer in the sum of _____Dollars ($_____) lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, jointly and severally, firmly by these presents.

The condition of the above obligation is that if said principal as Contractor in the contract hereto annexed shall faithfully perform each and all of the conditions of said contract SPECIFICALLY RELATING TO REVEGETATION ESTABLISHMENT to be performed by him, and shall furnish all tools, equipment, apparatus, facilities, transportation, labor, and material, other than material, if any, agreed to be furnished by the County, necessary to perform and complete, and to perform and complete in a good workmanlike manner, and to guarantee SUCCESSFUL REVEGETATION AS DESCRIBED IN THE SPECIAL PROVISIONS for a period of **two years** following the acceptance of the project, the work of LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA, CONTRACT NO. 1101, in strict conformity with the terms and conditions set forth in the contract hereto annexed, and after a period of **two years** following the acceptance of the project, then this obligation shall be null and void, otherwise to remain in full force and effect; and the said surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall, in any wise, affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

Surety further agrees in case suit is brought upon this bond, that it will pay, in addition to the basic obligation herein, all court costs, expenses, and all reasonable attorney's fees to be awarded and fixed by the Court, and to be taxed as costs, and to be included in the judgment therein rendered.

APPROVED AS TO FORM:

By _____	By _____	By _____
COUNTY COUNSEL PLACER COUNTY	*SURETY (Attorney-In-Fact) (signature must be notarized)	CONTRACTOR (signature must be notarized)
	Name:_____	Name:_____
	Date:_____	Date:_____

*ATTORNEY-IN-FACT MUST HAVE POWER OF ATTORNEY ON FILE WITH COUNTY CLERK OF PLACER COUNTY OR INCLUDE A COPY OF POWER OF ATTORNEY WITH THIS BOND.

FEDERAL MINIMUM
WAGE RATES

See the Federal Website: http://www.dot.ca.gov/davisbacon for current rates.

ATTACHMENT A

CONFIDENTIAL

THIS EXHIBIT CONTAINS SENSITIVE INFORMATION
DO NOT RELEASE THIS ATTACHMENT TO ANY THIRD PARTY

COUNTY OF PLACER
DEPARTMENT OF PUBLIC WORKS

LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA
CONTRACT NO. 1101

FEDERAL EMPLOYER IDENTIFICATION NUMBER

The following is the federal employer identification number for:

(insert the contractor's name here)

_____
Federal Employer Identification Number

SET NO. _____

COUNTY OF PLACER
DEPARTMENT OF PUBLIC WORKS

SPECIAL PROVISIONS, PERMITS, STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

BOOK 2 OF 2

FOR

LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT PANORAMA

CONTRACT NO. 1101

BID DUE: TUESDAY, DECEMBER 3, 2013, PRIOR TO 3:30:00 P.M.

FOR USE IN CONNECTION WITH STANDARD SPECIFICATIONS DATED MAY 2006, STANDARD PLANS DATED MAY 2006 AND LABOR SURCHARGE AND EQUIPMENT RATES OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION AND PLACER COUNTY GENERAL SPECIFICATIONS DATED AUGUST 2005 INSOFAR AS THE SAME MAY APPLY AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

CONSTRUCTION CONTRACT NO. 1101

The special provisions contained herein have been prepared by or under the direction of the following Registered Engineer.

MARK RAYBACK, P.E.

TABLE OF CONTENTS
SPECIFICATIONS

Section Title Page

Section Title Page

SPECIAL PROVISIONS
LAKE FOREST WATER QUALITY IMPROVEMENT PROJECT - PANORAMA

CONTRACT NO. 1101

SECTION 1. SPECIFICATIONS AND PLANS

1-1.01 GENERAL

The work embraced herein shall conform to the Project Plans, the Standard Specifications dated May 2006, the Standard Plans dated May 2006, and amendments to the May 2006 Standard Specifications of the California Department of Transportation, and the Placer County General Specifications dated August 2005 (insofar as the same may apply and in accordance with these Special Provisions).

The work associated with Section 10-1.09, Water Pollution Control, of these Special Provisions, shall conform to Section 13 of the 2010 version of the Standard Specifications of the California Department of Transportation.

Amendments to the Standard Specifications set forth in these Special Provisions shall be considered as part of the Standard Specifications for the purposes set forth in Section 5-1.04, Coordination and Interpretation of Plans, Standard Specifications and Special Provisions, of the Standard Specifications. Whenever either the term "Standard Specifications is amended" or the term "Standard Specifications are amended" is used in the Special Provisions, the text following said term shall be considered an amendment to the Standard Specifications. In case of conflict between such amendments and the Standard Specifications, the amendments shall take precedence over and be used in lieu of the conflicting portions.

In case of conflict between the Placer County General Specifications, Standard Specifications and these Special Provisions, the Special Provisions shall govern, take precedence over, and be used in lieu of such conflicting portions. The Standard Specifications and the Standard Plans shall govern over the Placer County General Specifications.

Units in the United States Standard Measures shall apply to this Contract.

1-1.02 DEFINITIONS AND TERMS

Except when referring to documents, laws, or departments of the State of California and unless the context otherwise requires, wherever in the Standard Specifications and other contract documents, the following terms are used, the intent and meaning shall be interpreted as provided in this Section 1-1.02, Definitions and Terms, of these Special Provisions. In the event of any doubt or question arising respecting the true meaning of these terms, reference shall be made to the Engineer, whose decision thereon shall be final.

County: The County of Placer

Department: The Board of Supervisors of the County of Placer, State of California (except when referring to documents, laws, or departments of the State of California). Any reference in question shall be as designated by the Engineer.

Director: The Director of Public Works of the County of Placer, State of California.

Director of Transportation: The Director of Public Works of the County of Placer, State of California.

District Director of the District: The Director of Public Works of the County of Placer, State of California.

Engineer: The Director of Public Works of the County of Placer, State of California, acting either directly or through properly authorized agents, the agents acting within the scope of the particular duties delegated to them.

Highway Right-of-Way: The Placer County right-of-way and the project area, including Assessor Parcel Numbers (as defined by license agreement).

California Tahoe Conservancy	094-171-080
United States Coast Guard	093-030-009
McGeever	093-052-013
	093-052-010
Narlock	093-052-009
Tahoe City Public Utility District	093-043-002
California Department of Parks and Recreation	093-054-001
	093-055-001
	093-043-003
Wildlife Conservation Board	093-020-022

Laboratory: The Office of Materials and Foundations of the Department of Transportation of the State of California or laboratories authorized by the Engineer to test materials and work involved in the Contract, except when referring to documents, laws, or departments of the State of California. Any reference in question shall be as designated by the Engineer.

Standard Specifications: The 2006 edition of the Standard Specifications of the State of California, Department of Transportation. Any reference therein to the State of California or a state agency, office, or officer shall be interpreted to refer to the County or its corresponding agency, office, or officer acting under this Contract except when referring to documents, laws, or departments of the State of California. Any reference in question shall be as designated by the Engineer.

Standard Plans: The 2006 edition of the Standard Plans of the State of California, Department of Transportation.

State: The County of Placer, except when referring to documents, laws, or departments of the State of California. Any reference in question shall be as designated by the Engineer.

State Highway Engineer: The Director of Public Works, County of Placer, State of California.

Transportation Building, Sacramento: The Board of Supervisors of the County of Placer, State of California, except when referring to documents, laws, or departments of the State of California. Any reference in question shall be as designated by the Engineer.

1-1.03 PRIORITY OF DOCUMENTS

All of the documents listed below constitute the contract documents for this project and are incorporated into the Public Works Contract. In cases where there may be conflicting provisions or requirements between any of the contract documents, the order of priority shall be as follows (beginning with the highest priority and ending with the lowest priority):

1. Approved contract change orders.
2. The Construction Contract between Placer County and the Contractor.
3. The Bid to the County of Placer.
4. The Notice to Bidders.

5. The Special Provisions, Sections 1 through 10.
6. Any specifications referenced in the Special Provisions, not included in this priority list, including Placer County General Specifications.
7. The approved Project Plans.
8. The Caltrans Standard Specifications, dated May 2006.
9. The Caltrans Standard Plans, dated May 2006.

SECTION 2. PROPOSAL REQUIREMENTS AND CONDITIONS

2-1.01 GENERAL

Attention is directed to the provisions in Section 2, Proposal Requirements and Conditions, of the Standard Specifications and these Special Provisions for the requirements and conditions that must be observed in the preparation of the bid form and the submission of the bid.

Each Bid shall include unit costs and total costs for the base bid.

Bidders are required to specify a physical business street address to receive certified mail in accordance with the Bid. The County shall be notified in writing a minimum of thirty (30) days in advance of any change of address.

2-1.02 REQUIRED LISTING OF PROPOSED SUBCONTRACTORS

Section 2-1.054, Required Listing of Proposed Subcontractors, of the Standard Specifications is amended in its entirety to read:

> *Each bid shall have listed therein the name, location, Contractor's license classification, and license number of each subcontractor to whom the bidder proposes to subcontract portions of the work in an amount in excess of five thousand dollars ($5,000) and designate the portion and percentage of the total work to be performed by the subcontractor. The Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code, is otherwise fully applicable to this Contract. The bidder's attention is invited to other provisions of the Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized subcontractors or by making unauthorized substitutions.*
>
> *In addition to the required listed subcontractors, each bid shall have listed herein the name and address and license designation number of each subcontractor to whom the bidder proposes to directly subcontract portions of the work. The list of subcontractors shall also set forth the portion of work that will be done by each subcontractor listed.*

A sheet for listing the subcontractors, as required herein, is included in the Bid.

2-1.03 REQUIRED LISTING OF PROPOSED PRODUCTS "OR EQUALS"

On the sheet provided herein, to be submitted as part of the Bid, the bidder shall list each proposed substitution of an "equal" product. The bidder shall identify the proposed substitution by the section of the specifications that specifies the product, the name of the product proposed to be substituted out, and the name and manufacturer of the product proposed to be substituted. Prior to the award of the Contract and upon the request of the Engineer, the bidder shall submit the written request for substitution within three (3) days. The request shall be accompanied by evidence satisfactory to the Engineer that the materials and products proposed for use are equal to or better than the materials and products specified or detailed on the Plans. The burden of proof as to the quality and suitability

of substitutions shall be upon the bidder. Failure to submit the information as requested by the Engineer shall be deemed a voluntary withdrawal of the proposed substitution.

No requests for any substitutions will be considered unless substitution is listed on the sheet provided. No requests for substitution will be considered after the opening of the Bid. Requests for substitution will be reviewed and considered by the Engineer promptly after the award of the Contract. At his/her sole discretion, the Engineer may request additional information about the proposed substitution.

The Engineer will be the sole judge as to whether a proposed substitution is an “equal” product. The Engineer’s decision will be made based upon the information submitted and will be final.

2-1.04 EXAMINATION OF PLANS, SPECIFICATIONS, CONTRACT, AND SITE OF WORK

Section 2-1.03, Examination of Plans, Specifications, Contract, and Site of Work, of the Standard Specifications is amended to read:

The bidder shall examine carefully the site of the work contemplated, the plans and specifications, and all of the contract documents including the bid and contract forms. The submission of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the general and local conditions to be encountered; as to the character, quality, and scope of work to be performed; the quantities of materials to be furnished; and as to the requirements of the bid, plans, specifications, and the contract.

The submission of a bid shall also be conclusive evidence that the bidder is satisfied with the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information was reasonably ascertainable from an inspection of the site and the records of exploratory work done by the department as shown in the bid documents, as well as from the plans and specifications made a part of the contract.

Where the department has made investigations of site conditions including subsurface conditions in areas where work is to be performed under the contract or in other areas, some of which may constitute possible local material sources, bidders or contractors may, upon written request, inspect the records of the department as to those investigations subject to and upon the conditions hereinafter set forth.

Where there has been prior construction by the department or other public agencies within the project limits, records of the prior construction that are currently in the possession of the department and which have been used by or are known to the designers and administrators of the project will be made available for inspection by bidders or contractors upon written request, subject to the conditions hereinafter set forth. The records may include, but are not limited to, as-built drawings, design calculations, foundation and site studies, project reports, and other data assembled in connection with the investigation, design, construction, and maintenance of the prior projects.

Inspection of the records of investigations and project records may be made at the department office.

When a log of test borings or other record of geotechnical data obtained by the department's investigation of surface and subsurface conditions is included with the contract plans, it is furnished for the bidders' or contractors' information, and its use shall be subject to the conditions and limitations set forth in this section.

In some instances, information considered by the department to be of possible interest to bidders or contractors has been compiled as "materials information". The use of the

materials information shall be subject to the conditions and limitations set forth in Section 6-2, Local Materials, of the Standard Specifications and this section.

When cross sections are not included with the plans but are available, bidders or contractors may inspect the cross sections and obtain copies for their use, at their expense.

When cross sections are included with contract plans, it is expressly understood and agreed that the cross sections do not constitute part of the contract; do not necessarily represent actual site conditions or show locations, characters, dimensions, and details of work to be performed; and are included in the plans only for the convenience of bidders; and their use is subject to the conditions and limitations set forth in this section.

When contour maps were used in the design of the project, the bidders may inspect those maps, and if available, they may obtain copies for their use.

The availability or use of information described in this section is not to be construed in any way as a waiver of the provisions of the first paragraph in this section; and bidders and contractors are cautioned to make independent investigations and examination as they deem necessary to be satisfied as to conditions to be encountered in the performance of the work and with respect to possible local material sources, the quality and quantity of material available from the property, and the type and extent of processing that may be required in order to produce material conforming to the requirements of the specifications.

The department assumes no responsibility for conclusions or interpretations made by a bidder or contractor based on the information or data made available by the department. The department does not assume responsibility for representation made by its officers or agents before the execution of the contract concerning surface or subsurface conditions, unless that representation is expressly stated in the contract.

No conclusions or interpretations made by a bidder or contractor from the information and data made available by the department will relieve a bidder or contractor from properly fulfilling the terms of the contract.

2-1.05 PRE-BID INQUIRIES

All questions concerning this project shall be provided in the Question/Answer section of the project posted on Public Purchase website (through the Placer County Procurement Services Division website link):

http://www.publicpurchase.com/gems/placerco,ca/buyer/public/home.

Placer County makes no assurances that questions received less than five (5) days of the bid opening date will be answered prior to bid opening.

2-1.06 PROPOSAL GUARANTY

The form of a Bidder's Bond mentioned in the last paragraph in Section 2-1.07, Proposed Guaranty, of the Standard Specifications will be found following the signature page of the Bid, annexed hereto.

2-1.07 NON-COLLUSION AFFIDAVIT

In accordance with Public Contract Code 7106, a Non-Collusion Affidavit is included in the Bid. Signing the Bid shall also constitute signature of the Non-Collusion Affidavit.

2-1.08 FEDERAL LOBBYING RESTRICTIONS

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

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

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

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

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

A. A cumulative increase of twenty-five thousand dollars ($25,000) or more in the amount paid or expected to be paid for influencing or attempting to influence a covered federal action.

B. A change in the person(s) or individual(s) influencing or attempting to influence a cover federal action.

C. A change in the officer(s), employee(s), or member(s) contacted to influence or attempt to influence a covered federal action.

2-1.09 DISADVANTAGED BUSINESS ENTERPRISES (DBE) GOAL FOR THIS PROJECT

This project does not include any specific DBE goals. However, bidders are urged to obtain Minority Business Enterprises (MBE), Women Business Enterprises (WBE), and Disable Veterans Business Enterprises (DVBE) participation on this project.

SECTION 3. AWARD AND EXECUTION OF CONTRACT

3-1.01 GENERAL

Attention is directed to the provisions in Section 3, Award and Execution of Contract, of the Standard Specifications and these Special Provisions for the requirements and conditions concerning award and execution of the Contract.

3-1.02 AWARD OF CONTRACT

Section 3-1.01, Award of Contract, of the Standard Specifications is amended in its entirety to read:

The right is reserved to reject any and all bids.

The award of the Contract, if it is awarded, will be to the lowest responsible bidder whose bid complies with all the requirements prescribed. The award, if made, will be made within sixty (60) days after the opening of the bids. This period will be subject to extension for such further period as may be agreed upon in writing between the Department and the bidder concerned.

All bids will be compared on the basis of the Engineer's Estimate of quantities of work to be done.

3-1.03 CONTRACT BONDS

Section 3-1.02, Contract Bonds, of the Standard Specifications, is amended in its entirety to read:

The Contractor shall provide, at the time of the execution of the agreement or Contract for work, and at his own expense, a surety bond ("Performance Bond") in an amount equal to at least 100 percent (100%) of the Contract price as security for the faithful performance of the Contract within the time prescribed, in a manner satisfactory to the Engineer, and that all materials and workmanship will be free from original or developed defects. This Performance Bond must remain in effect until the end of all warranty periods set forth in these Special Provisions with the exception of the maintenance bond required for bid items which are associated with project revegetation as described in Section 10-2.00 of the Special Provisions. The Contractor shall also provide, at the time of the execution of the agreement or Contract for work, and at his own expense, a separate surety bond ("Payment Bond") in an amount equal to at least 100 percent (100%) of the Contract price as security for the payment of all persons performing labor and furnishing materials in connection with the Contract. This Payment Bond shall be maintained by the Contractor in full force and effect until the work is accepted by the County and until all claims for materials and labor are paid and shall otherwise comply with Civil Code. Sureties on each of the bonds shall be satisfactory to the County Attorney.

Should any bond become insufficient, the Contractor shall renew the bond within ten (10) working days after receiving notice from the Engineer.

Should any surety at any time be unsatisfactory to the State, a notice will be given the Contractor to that effect. No further payments shall be deemed due or will be made under said agreement until a new surety shall qualify and be accepted by the State.

Changes in said agreement or extensions of time, made pursuant to the agreement, shall in no way release the Contractor or surety from its obligations. Notice of such changes or extensions shall be waived by the surety.

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

4-1.01 GENERAL

Attention is directed to the provisions in Section 8-1.03, Beginning of Work, in Section 8-1.06, Time of Completion, and in Section 8-1.07, Liquidated Damages, of the Standard Specifications, and these Special Provisions.

All revegetation and planting including seeding shall be completed by December 1, 2014. The exact date will be determined by the Engineer based on the climate conditions during the fall planting window of that period.

4-1.02 BEGINNING OF WORK

Section 8-1.03, Beginning of Work, of the Standard Specifications is amended by replacing the first paragraph in its entirety to read:

> *The Contractor shall begin work within ten (10) calendar days after being instructed in writing by the Engineer to proceed with the work and shall diligently prosecute the same before the expiration of **180** working days beginning on the first day of work or the tenth day after the date stated in the Notice to Proceed, whichever comes first.*
>
> *Work to be completed within 180 working days shall be all work covered under this Contract with the exception of the maintenance and restoration work described in Section 10-1.09, Water Pollution Control and associated SWPPP documents especially with respect to removal of temporary BMPs, the maintenance and restoration work described in Section 10.1-28, Control of Water particularly with respect to rewatering, diversion removal, and associated site restoration, and the irrigation, maintenance, and restoration work described in Section 10-2.00, Revegetation, of these Special Provisions*

Due to the very limited construction season in the Lake Tahoe Basin (generally between May 1 and October 15 for grading and earthwork), time is of the essence to complete contract work.

4-1.03 LIQUIDATED DAMAGES

The Contractor shall pay to the County of Placer the sum of On Thousand Dollars ($1,000) per day for each and every calendar day's delay in completing the work in excess of the 180 working days prescribed above. At the Engineer's option, said sum may be deducted from any payments due to, or to become due to, the Contractor.

The reference to "Director" in the second paragraph of Section 8-1.07, Liquidated Damages, of the Standard Specifications, shall be interpreted to mean the Director of Public Works of Placer County for the purpose of that section.

4-1.04 WINTERIZATION

This project is anticipated to extend through multiple construction seasons. This Section of the Special Provisions shall be applicable to the end of each construction season with dates ending on October 15 of each year that construction and maintenance occur.

The Contractor shall, at his sole expense, winterize the project if construction activities are not completed by October 15, 2014. An acceptable winterization plan shall be submitted to the Engineer no later than October 1, 2014.

The winterization plan shall conform to the Tahoe Regional Planning Agency (TRPA) Handbook of Best Management Practices, Volume III (2012), and .the provisions of Sections 4-1.04 and 10-1.09 of these Special Provisions.

The intent of winterization is as follows:

1. To assure that no earthen materials are deposited into any downstream waters and ultimately Lake Tahoe.

2. To assure that storm waters are allowed to pass through the site without substantial damage to the project site or adjacent surroundings.

After the acceptance of a winterization plan and the installation of all required temporary winterization measures, work may proceed after October 15 if approval is obtained in writing from TRPA, the California Regional Water Quality Control Board (Lahontan Region), and the Engineer. All work done after October 15 must be able to be winterized within twenty-four (24) hours notice.

Full compensation for conforming to the provisions of this Section, not otherwise provided for in other Sections of these Special Provisions, shall be considered as included in prices paid for the various Contract items of work involved; and no additional compensation will be allowed.

4-1.05 PRE-CONSTRUCTION CONFERENCE

A pre-construction conference will be held for the purpose of discussing with the Contractor the scope of work, contract drawings, specifications, existing conditions, materials to be ordered, equipment to be used, and all essential matters pertaining to the prosecution and the satisfactory completion of the project as required. The Contractor's representative at this conference shall include all major superintendents for the work and may include major subcontractors. A "Key Personnel and Emergency Phone Numbers" list (for which these key personnel could be contacted twenty-four [24] hours per day, seven [7] days per week) shall be submitted to the County. Attendance by the Contractor or the Contractor's authorized representative is mandatory.

4-1.06 EXTRA WORK

Section 4-1.03D, Extra Work, of the Standard Specifications is amended by adding the following between the second and third paragraphs:

> *If in the opinion of the Engineer, such work cannot reasonably be performed concurrently with other items of work and if a controlling item of work is delayed thereby, an adjustment of contract time will be made.*

SECTION 5. GENERAL

SECTION 5-1. MISCELLANEOUS

The Contractor and all subcontractors shall comply with California Labor Code Sections 1774 and 1775 and related codes.

5-1.01 LABOR NONDISCRIMINATION

Attention is directed to the following notice that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

NOTICE OF REQUIREMENT FOR NONDISCRIMINATION PROGRAM
(GOVERNMENT CODE, SECTION 12990)

Your attention is called to the "Nondiscrimination Clause" set forth in Section 7-1.01A(4), Labor Nondiscrimination, of the Standard Specifications that is applicable to all nonexempt State contracts and subcontracts and to the Standard California Nondiscrimination Construction Contract Specifications set forth therein. The specifications are applicable to all nonexempt State construction contracts and subcontracts of five thousand dollars ($5,000) or more.

5-1.02 PREVAILING WAGE

Attention is directed to Section 7-1.01A(2), Prevailing Wage, of the Standard Specifications.

The general prevailing wage rates and any applicable changes to these wage rates are available at the Placer County Department of Public Works located at 3091 County Center Drive, Suite 220, Auburn, CA 95603. General prevailing wage rates are also available from the California Department of Industrial Relations' internet web site at: http://www.dir.ca.gov.

Attention is directed to the federal minimum wage rate requirements. If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classification of labor, the Contractor and subcontractors shall pay not less than the higher wage rate.

5-1.03 LABOR CODE REQUIREMENTS

Attention is directed to the provisions in Section 7-1.01A(1), Hours of Labor; Section 7-1.01A(2)(a), Travel and Subsistence Payments; and 7-1.01A(3), Payroll Records, of the Standard Specifications.

5-1.04 ARBITRATION

Section 9-1.10, Arbitration, of the Standard Specifications is amended in its entirety to read as follows:

9-1.10 DISPUTE RESOLUTION

All claims filed with the County must be in writing and include the documents necessary to substantiate the claim. Claims must be filed within the time limits set forth in this Contract. In no circumstances, however, may a claim be filed after the day of final payment. Nothing in this subsection is intended to extend the time limit or supersede notice requirements for the filing of claims as set forth elsewhere in this Contract.

1. Claims of $50,000 or Less

a. The County will respond in writing to all written claims less than or equal to fifty thousand dollars ($50,000) within forty-five (45) days of receipt of the claim. Within thirty (30) days of receipt of the claim, the County may request any additional documentation supporting the claim or relating to defenses or claims the County may have against the claimant.

b. If additional information is thereafter required, it shall be requested and provided pursuant to this subsection upon mutual agreement of the County and the claimant.

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

2. Claims Between $50,000 and $375,000

a. The County will respond in writing to all written claims between fifty thousand dollars and one cent ($50,000.01) and less than or equal to three hundred seventy-five thousand dollars ($375,000) within in sixty (60) days of receipt of the claim. Within thirty (30) days of receipt of the claim, the County may request in writing any additional documentation supporting the claim or relating to defense to the claim the County may have against the claimant.

b. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision upon mutual agreement of the County and the claimant.

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

3. Claims in Excess of $375,000

The County shall, within a reasonable time after the presentation of any claim in excess of $375,000, make a decision in writing on such claim.

4. Meet and Confer Conference

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

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

5. Contractor's Duty During Claim Resolution

The Contractor shall proceed with the work in accordance with the plans and specifications and determinations and instructions of the County Engineer during the resolution of any claims disputes.

6. Certification

The Contractor shall certify in writing at the time of submission of any claim as follows:

I certify under penalty of perjury under the laws of the State of California that the claim is made in good faith, that the supporting data are accurate and complete, and that the amount requested accurately reflects the monies due for work performed under the Contract for which the County of Placer is liable.

By: _____

(Contractor's Signature)

7. County Remedies

In the event the Contractor refuses or neglects to make good any loss or damage for which the Contractor is responsible under this Contract, the County may itself, or by the employment of others, make good any such loss or damage and the cost and expense of doing so, including any reasonable engineering, legal, and other consultant fees, and any costs of administrative and managerial services shall be charged to the Contractor. Such costs and expenses may be deducted by the County from claims for payment made by the Contractor for work completed or remaining to be completed.

8. Assignment

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to this Contract, the Contractor and all subcontractors shall offer and agree to assign to the County all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S. Code Section 15) or under the Cartwright Act, Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code arising from purchases of goods, services, or materials pursuant to the public works contract or subcontract. This assignment shall be made and become effective at the time the County tenders final payment to the Contractor, without further acknowledgement by the parties.

9. Contractor Waiver and Limitation

The Contractor agrees that it can be adequately compensated by money damages for any breach of this Contract which may be committed by the County and hereby agrees that no default, act, or omission of the County or the Engineer shall constitute a material breach of the Contract entitling the Contractor to cancel or rescind the provisions of this Contract or (unless the County shall so consent or direct in writing) to suspend or abandon performance of all or any part of the work. The Contractor hereby waives any and all rights and remedies to which it might otherwise be or become entitled, save only its right to money damages.

10. Venue

Any litigation arising out of this Contract shall be brought in the Superior Court of Placer County, and the Contractor hereby waives the removal provisions of Code of Civil Procedure Section 394.

5-1.05 NOTICE OF POTENTIAL CLAIM

Attention is directed to the requirements specified in Section 9-1.04, Notice of Potential Claim, of the Standard Specifications.

5-1.06 FINAL PAYMENT AND CLAIMS

Attention is directed to Section 9-1.07B, Final Payment and Claims, of the Standard Specifications.

If the Contractor files a timely written statement of claims in response to the proposed final estimate, the County will submit a claim position letter to the Contractor by hand delivery or deposit in the United States mail. The claim position letter will delineate the County's position on the Contractor's claims. If the Contractor disagrees with the claim position letter, the Contractor shall submit a written notification of its disagreement to be received by the County not later than fifteen (15) days after the Contractor's receipt of the claim position letter. The written notification of disagreement shall set forth the basis for the Contractor's disagreement and be submitted to the office designated in the claim position letter. The Contractor's failure to provide a timely, written notification of disagreement shall constitute the Contractor's acceptance and agreement with the determinations provided in the claim position letter and with final payment pursuant to the claim position letter.

If the Contractor files a timely notification of disagreement with the County claim position letter, the County Director of Public Works or a board of review appointed by the County Director of Public Works shall review claims that remain in dispute and may meet with the Contractor within forty-five (45) days after receipt by the County of the notification of disagreement. Attendance by the Contractor at the County meeting concerning the notification of disagreement shall be mandatory.

If the County fails to submit a claim position letter to the Contractor within 135 days after the acceptance of the contract and the Contractor has claims that remain in dispute, the Contactor may request a meeting with the County Director of Public Works or a board of review appointed by the County Director of Public Works to review claims that remain in dispute. The Contractor's request for a meeting shall identify the claims that remain in dispute. If the Contractor files a request for a meeting, the County Director of Public Works or a board of review appointed by the County Director of Public Works will meet with the Contractor within forty-five (45) days after the County receives the request for the meeting. Attendance by the Contractor at this review meeting shall be mandatory.

Failure of the Contractor to file a timely written statement of claims in response to the proposed final estimate, or to file a timely notification of disagreement with the County's claim position letter, or to attend the County's review meeting shall constitute a failure to pursue diligently and exhaust the administrative remedies in the contract and shall be a bar to future legal proceedings by Contractor.

5-1.07 EXCLUSION OF RETENTION

The third paragraph of Section 9-1.06, Partial Payments of the Standard Specifications and Section 9-1.065, Payment of Withheld Funds, of the Standard Specifications shall not apply.

5-1.08 UNSATISFACTORY PROGRESS

If the number of working days charged to the contract exceeds 75 percent (75%) of the working days in the current time of completion and the percent working days elapsed exceeds the percent work completed by more than 15 percentage points, the Department will withhold 10 percent (10%) of the amount due on the current monthly estimate.

The percent working days elapsed will be determined from the number of working days charged to the contract divided by the number of contract working days in the current time of completion,

expressed as a percentage. The number of contract working days in the current time of completion shall consist of the original contract working days increased or decreased by time adjustments approved by the Engineer.

The percent work completed will be determined by the Engineer from the sum of payments made to date plus the amount due on the current monthly estimate, divided by the current total estimated value of the work, expressed as a percentage.

When the percentage of working days elapsed minus the percent of work completed is less than or equal to 15 percentage points, the funds withheld shall be returned to the Contractor with the next monthly progress payment.

Funds kept or withheld from payment, due to the failure of the Contractor to comply with the provisions of the contract, will not be subject to the requirements of the Public Contract Code 7107 or to the or payment of interest pursuant to Public Contract Code Section 10261.5.

5-1.09 INTEREST ON PAYMENTS

Interest shall be payable on progress payments, payments after acceptance, final payments, extra work payments, and claim payments as follows:

A. Unpaid progress payments, payment after acceptance, and final payments shall begin to accrue interest in thirty (30) days after the Engineer prepares the payment estimate.

B. Unpaid extra work bills shall begin to accrue interest thirty (30) days after preparation of the first pay estimate following the receipt of a properly submitted and undisputed extra work bill. To be properly submitted, the bill must be submitted within seven (7) days of the performance of the extra work and in accordance with the requirements of Section 9-1.03C, Records, and Section 9-1.06, Partial Payments, of the Standard Specifications. An undisputed extra work bill not submitted within seven (7) days of performance of the extra work will begin to accrue interest thirty (30) days after the preparation of the second pay estimate following submittal of the bill.

C. The rate of interest payable for unpaid progress payments, payments after acceptance, final payments, and extra work payments shall be 10 percent (10%) per annum.

D. The rate of interest payable on a claim, protest, or dispute ultimately allowed under this Contract shall be 6 percent (6%) per annum. Interest shall begin to accrue sixty-one (61) days after the Contractor submits to the Engineer information in sufficient detail to enable the Engineer to ascertain the basis and amount of said claim, protest, or dispute.

The rate of interest payable on any award in arbitration shall be 6 percent (6%) per annum if allowed under the provisions of Civil Code Section 3289.

5-1.10 PUBLIC SAFETY

The Contractor shall provide for the safety of traffic and the public in conformance with the provisions in Section 7-1.09, Public Safety, of the Standard Specifications.

The Contractor shall install temporary railing (Type K) between a lane open to public traffic and an excavation, obstacle, or storage area when the following conditions exist:

A. Excavations

The near edge of the excavation is 12 feet or less from the edge of the lane, except:

1. Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.

2. Excavations less than 1 foot deep.

3. Trenches less than 1 foot wide for irrigation pipe or electrical conduit or excavations less than 0.3-m in diameter.

4. Excavations parallel to the lane for the purpose of pavement widening or reconstruction.

5. Excavations in side slopes, where the slope is steeper than 1:4 (vertical:horizontal).

6. Excavations protected by existing barrier or railing.

B. Temporarily Unprotected Permanent Obstacles

The work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and the Contractor elects to install the obstacle prior to installing the protective system; or the Contractor, for the Contractor's convenience and with permission from the Engineer, removes a portion of an existing protective railing at an obstacle and does not replace such railing complete in place during the same day.

C. Storage Areas

Material or equipment is stored within 12 feet of the lane and the storage is not otherwise prohibited by the provisions of the Standard Specifications and these Special Provisions.

The approach end of temporary railing (Type K), installed in conformance with the provisions in this section and in Section 7-1.09, Public Safety, of the Standard Specifications, shall be offset a minimum of 15 feet from the edge of the traffic lane open to public traffic. The temporary railing shall be installed on a skew toward the edge of the traffic lane of not more than 1 foot transversely to 10 feet longitudinally with respect to the edge of the traffic lane. If the 15 feet minimum offset cannot be achieved, the temporary railing shall be installed on the ten-to-one skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules shall be installed at the approach end of the temporary railing.

Temporary railing (Type K) shall conform to the provisions in Section 12-3.08, Temporary Railing (Type K), of the Standard Specifications. Temporary railing (Type K), conforming to the details shown on 1999 Standard Plan T3, may be used. Temporary railing (Type K) fabricated prior to January 1, 1993 and conforming to 1988 Standard Plan B11-30 may be used, provided the fabrication date is printed on the required Certificate of Compliance.

Except for installing, maintaining, and removing traffic control devices, whenever work is performed or equipment is operated in the following work areas, the Contractor shall close the adjacent traffic lane unless otherwise provided in the Standard Specifications and these Special Provisions.

APPROACH SPEED OF PUBLIC TRAFFIC (POSTED LIMIT) MILES PER HOUR	WORK AREAS
Over 45 Miles per Hour	Within 6 feet of a traffic lane but not on a traffic lane
35 to 45 Miles per Hour	Within 3 feet of a traffic lane but not on a traffic lane

The lane closure provisions of this section shall not apply if the work area is protected by permanent or temporary railing or barrier.

When traffic cones or delineators are used to delineate a temporary edge of a traffic lane, the line of cones or delineators shall be considered to be the edge of the traffic lane; however, the Contractor shall not reduce the width of an existing lane to less than 10 feet without written approval from the Engineer.

When work is not in progress on a trench or other excavation that required closure of an adjacent lane, the traffic cones or portable delineators used for the lane closure shall be placed off of an adjacent to the edge of the traveled way. The spacing of the cones or delineators shall be not more than the spacing used for the lane closure.

Suspended loads or equipment shall neither be moved nor positioned over public traffic or pedestrians.

Full compensation for conforming to the provisions in this section, including furnishing and installing temporary railing (Type K) and temporary crash cushion modules, shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed.

5-1.11 DIFFERING SITE CONDITIONS

Attention is directed to section 5-1.116, Differing Site Conditions, of the Standard Specifications.

During the progress of the work, if subsurface or latent conditions are encountered at the site differing materially from those indicated in the material information, log of test borings, other geotechnical data obtained by the Department's investigation of subsurface conditions, or an examination of the ground conditions at the site; the party discovering those conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed above and before the affected work is performed.

The Contractor will be allowed fifteen (15) days from the notification of the Engineer's determination of whether or not an adjustment of the contract is warranted, in which to file a notice of potential claim in conformance with the provisions of Section 9-1.04, Notice of Potential Claim, of the Standard Specifications and as specified herein; otherwise the decision of the Engineer shall be deemed to have been accepted by the Contractor as correct. The notice of potential claim shall set forth in what respects the Contractor's position differs from the Engineer's determination and provide any additional information obtained by the Contractor, including but not limited to additional geotechnical data. The notice of potential claim shall be accompanied by the Contractor's certification that the following were made in preparation of the bid: a review of the contract; a review of the materials information; a review of other records of geotechnical data to the extent they were made available to bidders prior to the opening of bids; and an examination of the conditions above round at the site. Supplementary information, obtained by the Contractor subsequent to the filing of the notice of potential claim, shall be submitted to the Engineer in an expeditious manner.

In addition to the above, this contract is subject to Public Contract Code, Section 7104, and specifically Subsection (c) that states, in the event that a dispute arises between the public entity and the Contractor whether the conditions materially differ or involve hazardous waste or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the contract but shall proceed with all work to be performed under the contract. The Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

5-1.12 SURFACE MINING AND RECLAMATION ACT

Attention is directed to the Surface Mining and Reclamation Act of 1975, commencing in Public Resources Code, Mining and Geology, Section 2710, which establishes regulations pertinent to surface mining operations and to California Public Contract Code Section 10295.5.

Material from mining operations furnished for this project shall only come from permitted sites in compliance with the California Public Contract Code Section 10295.5.

The requirements of this section shall apply to materials furnished for the project except for acquisition of materials in conformance with the provisions in Section 4-1.05, Use of Materials Found on the Work, of the Standard Specifications.

5-1.13 EXCAVATION SAFETY PLANS

The Contractor's attention is directed to requirements of the Section titled 10-1.36, Earthwork, of these Special Provisions concerning temporary shoring plan.

The Contractor shall submit a Temporary Shoring Safety System Plan to the Engineer prior to the start of the work in accordance with Section 10-1.36, Earthwork, of these Special Provisions. The Contractor's attention is directed to the requirements specified in Section 10-1.36, Earthwork, of these Special Provisions.

Full compensation for conforming to the provisions of this section, not otherwise provided for in other sections of these Special Provisions, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

5-1.14 BUY AMERICAN REQUIREMENT

Attention is directed to the Buy American requirements of the Surface Transportation Assistance Act of 1982 (Section 165) and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) Sections 1041(a) and 1048(a), and the regulations adopted pursuant thereto. In conformance with the law and regulations, all manufacturing processes for steel and iron materials furnished for incorporation into the work on this project shall occur in the United States; with the exception that pig iron and processed, pelletized and reduced iron ore manufactured outside of the United States may be used in the domestic manufacturing process for such steel and iron materials. The application of coatings, such as epoxy coating, galvanizing, painting, and other coating that protects or enhances the value of steel or iron materials shall be considered a manufacturing process subject to the Buy American requirements. A Certificate of Compliance, conforming to the provisions of 6-1.07, Certificates of Compliance, of the Standard Specifications, shall be furnished for steel and iron materials. The certificates, in addition to certifying that the materials comply with the specifications, shall specifically certify that all manufacturing processes for the materials occurred in the United States, except for the above exceptions.

The requirements imposed by the law and regulations do not prevent a minimal use of foreign steel and iron materials if the total combined cost of the materials used does not exceed one-tenth of 1 percent (0.1 percent) of the total contract cost or $2,500 whichever is greater. The Contractor shall furnish the Engineer acceptable documentation of the quantity and value of the foreign steel and iron prior to incorporating the materials into the work.

5-1.15 REMOVAL OF ASBESTOS AND HAZARDOUS SUBSTANCES

When the presence of asbestos or hazardous substances are not shown on the plans or indicated in the specifications and the Contractor encounters materials that the Contractor reasonably believes to be asbestos or a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, and the asbestos or hazardous substance has not been rendered harmless, the Contractor may continue work in unattended areas reasonably believed to be safe. The Contractor shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In conformance with Section 25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including exploratory work to identify and determine the extent of the asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for the delay in conformance with the provisions in Section 8-1.09, Right of Way Delays, of the Standard Specifications.

5-1.16 PERFORMANCE OF SUBCONTRACTORS

The subcontractors listed by the Contractor in the bid book shall list therein the name and location of each subcontractor to whom the bidder proposes to subcontract portions of the work in an amount in excess of one-half of 1 percent of the total bid or $10,000 whichever is greater, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code. The bidder's attention is invited to other provisions of the Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized subcontractors or by making unauthorized substitutions.

5-1.17 SUBCONTRACTING

No subcontract releases the Contractor from the contract or relieves the Contractor of their responsibility for a subcontractor's work.

If the Contractor violates Public Contract Code Section 4100 et seq., the County of Placer may exercise the remedies provided under Public Contract Code Section 4110. The County of Placer may refer the violation to the Contractors State License Board as provided under Public Contract Code Section 4111.

The Contractor shall perform work equaling at least 30 percent of the value of the original total bid with the Contractor's own employees and equipment, owned or rented, with or without operators.

Each subcontract must comply with the contract.

Each subcontractor must have an active and valid State contractor's license with a classification appropriate for the work to be performed (California Business and Professions Code Section 7000 et seq.).

Contractor shall submit copies of subcontracts upon request by the Engineer.

Before subcontracted work starts, the Contractor shall submit a Subcontracting Request Form.

Contractor shall not use a debarred contractor. A current list of debarred contractors is available at the Department of Industrial Relations' website.

Upon request by the Engineer, the Contractor is to immediately remove and not again use a subcontractor who fails to prosecute the work satisfactorily.

5-1.18 PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS

A prime Contractor or subcontractor shall pay any subcontractor not later than ten (10) days of receipt of each progress payment in accordance with the provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to subcontractors. The ten (10) days is applicable unless a longer period is agreed to in writing. Any delay or postponement of payment over thirty (30) days may take place only for good cause and with the Agency's prior written approval. Any violation of Section 7108.5 shall subject the violating Contractor or subcontractor to the penalties, sanction, and other remedies of that section. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime Contractor, deficient subcontract performance, or noncompliance by a subcontractor.

5-1.19 PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS

The Agency shall hold retainage from the prime Contractor and shall make prompt and regular incremental acceptances of portions, as determined by the Agency, of the contract work, any pay retainage to the prime Contractor based on these acceptances. The prime Contractor, or subcontractor, shall return all monies withheld in retention from a subcontractor within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the Agency. Federal law (49CFR26.29) requires that any delay or postponement of payment over 30 days may take place only for good cause and with the Agency's prior written approval. Any violation of this provision shall subject the violating prime Contractor or subcontractor to the penalties, sanctions, and other remedies specified in section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractural, administrative, or judicial remedies otherwise available to the prime Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime Contractor, deficient subcontract performance, or noncompliance by a subcontractor.

5-1.20 PARTNERING

The County of Placer will promote the formation of a partnering relationship with the Contractor in order to effectively complete the contract to the benefit of both parties. The purpose of this relationship will be to maintain cooperative communication and mutually resolve conflicts at the lowest possible management level.

The Contractor may request the formation of such a partnering relationship by submitting a request in writing to the Engineer after approval of the contract. If the Contractor's request for partnering is approved by the Engineer, scheduling of a partnering workshop, selecting the partnering facilitator and workshop site, and other administrative details shall be as agreed to by both parties.

The costs involved in providing a facilitator and a workshop site will be borne equally by the County of Placer and the Contractor. The Contractor shall pay all compensation for the wages and expenses of the facilitator and of the expenses for obtaining the workshop site. The State's share of such costs will be reimbursed to the Contractor in a change order written by the Engineer. Markups will not be added. All other costs associated with the partnering relationship will be borne separately by the party incurring the costs.

The establishment of a partnering relationship will not change or modify the terms and conditions of the contract and will not relieve either party of the legal requirements of the contract.

5-1.21 PAYMENTS

Attention is directed to Section 9-1.06, Partial Payments, and Section 9-1.07, Payment After Acceptance, of the Standard Specifications and these Special Provisions.

For the purpose of making partial payments pursuant to Section 9-1.06, Partial Payments, of the Standard Specifications, the amount set forth for the contract line items of work hereinafter listed shall be deemed to be the maximum value of said contract item of work which will be recognized for progress payment purposes.

- Mobilization
- Water Pollution Control
- Traffic Control System
- Clearing and Grubbing

After acceptance of the contract pursuant to Section 7-1.17, Acceptance of Contract, of the Standard Specifications, the amount (if any) payable for a contract item of work in excess of the maximum value for progress payment purposes, hereinabove listed for said item, will be included for payment in the first estimate made after acceptance of the contract.

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

5-1.22 SOUND CONTROL REQUIREMENTS

Sound control shall conform to the provisions in Section 7-1.01I, Sound Control Requirements, of the Standard Specifications and the provisions in these Special Provisions.

The noise level from the Contractor's operations between the hours of 8 p.m. and 8 a.m. shall not exceed eighty-six (86) dBa at a distance of fifty (50) feet. This requirement shall not relieve the Contractor from responsibility for complying with local ordinances regulating noise level.

The noise level requirement shall apply to the equipment on the job or related to the job including, but not limited to, trucks, transit mixers, or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this sections shall be considered as included in the prices paid for the various contract items of work involved, and no additional compensation will be allowed.

5-1.23 RESPONSIBILITY TO OTHER ENTITIES

The Contractor shall be responsible for any liability imposed by law and for injuries to or death of any person including, but not limited to, workers and the public or damage to property, and shall indemnify and save harmless the County of Placer, the California State Department of Transportation, the California State Department of Fish and Game, the California State Water Quality Control Board, and any county, city, or district, it officers and employees connected with the work, within the limits of jurisdiction of the California State Water Quality Control Board and the California Department of Fish and Game, all in the same manner and to the same extent conforming to the provisions in Section 7-1.12, Indemnification and Insurance, of the Standard Specifications, for the protection of the County of Placer, the California State Department of Transportation, the

California State Department of Fish and Game, the California State Water Quality Control Board and all their officers and employees thereof connected to the work.

5-1.24 RECORDS

The Contractor shall maintain cost accounting records for the contract pertaining to, and in such a manner as to provide a clear distinction between, the following six categories of costs of work during the life of the contract:

A. Direct costs of contract item work.
B. Direct costs of changes in character in conformance with Section 4-1.03C, Changes in Character of Work, of the Standard Specifications.
C. Direct costs of extra work in conformation with Section 4-1.03D, Extra Work, of the Standard Specifications.
D. Direct costs of work not required by the contract and performed for others.
E. Direct costs of work performed under a notice of potential claim in conformance with the provisions in Section 9-1.04, Notice of Potential Claim, of the Standard Specifications.
F. Indirect costs of overhead.

Cost accounting records shall include the information specified for daily extra work reports in Section 9-1.03C, Records, of the Standard Specifications. The requirements for furnishing the Engineer completed daily extra work reports shall only apply to work paid for on a force account basis.

The cost accounting records for the contract shall be maintained separately from other contracts, during the life of the contract, and for a period of not less than three (3) years after the date of acceptance of the contract. If the Contractor intends to file claims against the Department, the Contractor shall keep the cost accounting records specified above until complete resolution of all claims has been reached.

Full compensation for conforming to the provisions of this section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

5-1.25 AREAS FOR CONTRACTOR'S USE

Attention is directed to the provisions specified in Section 7-1.19, Rights in Land and Improvements, of the Standard Specifications, the provisions in these Special Provisions.

The project area (contract limits) shall be used only for purposes that are necessary to perform the required work. The Contractor shall not occupy the right of way, or allow others to occupy the right of way, for purposes that are not necessary to perform the required work.

No area is available within the contract limits for the exclusive use of the Contractor. The Contractor shall secure, at the Contractor's own expense, areas required for plant sites, storage of equipment or materials, or for other purposes.

However, temporary storage of equipment and materials and/or an office trailer on County property may be arranged with the Engineer, subject to the prior demands of County maintenance forces and to other contract requirements. Use of the Contractor's work areas and other County-owned property shall be at the Contractor's own risk, and the County shall not be held liable for damage to or loss of materials or equipment located within such areas.

The Contractor shall obtain encroachment permits prior to occupying County-owned parcels outside the contract limits. The required encroachment permits may be obtained from the Placer County Department of Public Works, 3091 County Center Drive, Auburn, CA

The Contractor shall remove all equipment, materials, and rubbish from the work areas and other state-owned property that the Contractor occupies and shall leave the areas in a presentable condition, in accordance with the provisions in Section 4-1.02, Final Cleaning Up, of the Standard Specifications.

The Contractor shall take all necessary precautions to protect the staging area from chemical contamination due to oil or fuel spills or any other contaminants. If contamination occurs, the site shall be decontaminated to the satisfaction of the Engineer prior to further improvement to the contaminated area or to further construction activities in general whichever is applicable as determined by the Engineer. Methods of decontamination shall include any method deemed appropriate by the Engineer including removal and disposition of the contaminated soils in conformance with the California Environmental Quality Act (CEQA) and regulatory agency requirements.

The Contractor shall revegetate, areas for which Contractor used for his work, conforming to the provisions in Section 10-2.00, Revegetation, of the these Special Provisions, all areas disturbed by the Contractor required for plant sites, storage of equipment or materials, or for other purposes.

Full compensation for conforming to the requirements of this section (including furnishing all labor, materials, tools, equipment, and incidentals as it relates to this section) shall be considered as included in the prices paid for the various items of work involved, and no additional compensation will be allowed.

5-1.26 WARRANTY

Should any failure of the work occur within a period of one (1) year from the acceptance of the project by the Board of Supervisors due to faulty materials, poor workmanship, or defective equipment, the Contractor shall promptly make the needed repairs at his expense in accordance with these Special Provisions and to the satisfaction of the Engineer.

Security for this warranty shall be in the form of the Performance Bond, required elsewhere in these specifications, which shall remain in effect for a period of one (1) year after acceptance of the project by the Placer County Board of Supervisors. The Performance Bond will not be reduced to an amount less than the bid amount of the project prior to the expiration of the one (1) year warranty period. An additional maintenance bond shall also be required for Bid Items 60, 61, and 75 through 81, which are associated with revegetation in Section 10-2.00 of these Special Provisions.

The County is hereby authorized to make such repairs (or to have such repairs made by others) if the Contractor fails to make such repairs (or to have such repairs made by others), if the Contractor fails to make or undertake with due diligence the aforesaid repairs within ten (10) days after receiving written notice of such failure or within a time specified in the notice if different. Provided however, that in the case of an emergency where in the opinion of the Engineer, that delay would cause serious loss or damages or a serious hazard to the public and a reasonable attempt has been made to notify the Contractor, the repairs may be made on lights, signs, and barricades erected without prior notice to the Contractor, and the Contractor's sureties shall be liable for the entire cost.

5-1.27 AIR POLLUTION CONTROL

Air pollution control shall conform to the provisions in Section 7-1.01F, Air Pollution Control, of the Standard Specifications, these Special Provisions.

No burning of materials to be disposed of will be permitted for this project.

The Contractor shall contact the Placer County Air Pollution Control District engineer prior to the start of construction to determine if any of the equipment to be used on the construction site requires a stationary source or Authority to Construct Permit.

Full compensation for conforming to the provisions of this section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

5-1.28 PROJECT APPEARANCE

The Contractor shall maintain a neat appearance to the work and shall clean up all tracked material and debris on a daily basis.

In any area visible to the public, the following shall apply:

A. When practical, broken concrete and debris developed during clearing and grubbing shall be disposed of concurrently with its removal. If stockpiling is necessary, the material shall be removed or disposed of weekly.

B. The Contractor shall furnish trash bins for all debris from structure construction. All debris shall be placed in trash bins daily. Forms or false work that are to be reused shall be stacked neatly concurrently with their removal. Forms and false work that are not to be reused shall be disposed of concurrently with their removal.

Full compensation for conforming to the provisions of this section, not otherwise provided for, shall be considered as included in the prices paid for the various items of work involved, and no additional compensation will be allowed.

5-1.29 COST REDUCTION INCENTIVE

Attention is directed to Section 5-1.14, Cost Reduction Incentive, of the Standard Specifications.

Prior to preparing a cost reduction proposal, the Contractor shall request a meeting with the Engineer to discuss the proposal in concept. Items of discussion will also include permit issues, impact on other projects, impact on the project schedule, peer reviews, overall merit of proposal, and review times required by the Department and other agencies.

If a cost reduction proposal submitted by the Contractor, and subsequently approved by the Engineer, provides for a reduction in traffic congestion or avoidance of traffic congestion during construction, 50 percent of the estimated net savings in costs attributable to the incentive will be paid to the Contractor.

In addition to the requirements in Section 5-1.14, Cost Reduction Incentive, of the Standard Specifications, the Contractor shall provide detailed comparisons of the traffic handling between the existing contract and the proposed change, and estimates of the traffic volumes and congestion.

5-1.32 PERMITS

Attention is directed to the provisions in Section 7-1.04, Permits and Licenses, and 7-1.12, Indemnification and Insurance, of the Standard Specifications.

The County shall obtain the following permits for this project:

1. Tahoe Regional Planning Agency (TRPA) Permit

Attention is directed to the provisions in Section 5-1.31 of these Special Provisions.

The location of work is within an area controlled by TRPA. The TRPA permit is pending covering work to be performed under this Contract. The Contractor shall become fully informed of all rules, regulations, and conditions that may govern the Contractor's operations in the area and shall conduct the work accordingly. A copy of the permit will be provided in Book 3 of 3 of these Special Provisions. The Contractor shall comply with the permit requirements for Best Management Practices, revegetation, grading season restrictions, and all agency approval conditions.

A copy of the TRPA permit shall be kept on the construction site any time the work is being performed.

Any change proposed by the Contractor to the conditions listed in the permit shall be submitted by the Contractor to the Engineer for transmittal to TRPA for approval. Changes shall not be implemented until TRPA gives approval in writing.

A pre-grading inspection by TRPA is required before any disturbance of the existing ground surface conditions. The Contractor should arrange with TRPA and the Engineer for pre-grading inspection. Upon written request by the Contractor, the Engineer will arrange with TRPA for the pre-grading inspection. The written request shall be submitted to the Engineer not less than five (5) working days before the inspection is required by the Contractor.

2. California Regional Water Quality Control Board (Lahontan Region) Permit

Attention is directed to the provisions in Section 5-1.32 of these Special Provisions, and Section 10 of these Special Provisions regarding water quality and pollution prevention control.

The location of the work is within an area controlled by the California Regional Water Quality Control Board (Lahontan Region). A California Regional Water Quality Control Board (Lahontan Region) order, herein referred to as the Lahontan permit, will be issued covering work to be performed under this Contract. A copy of the permit is provided in Book 3 of 3 of these Special Provisions. The Contractor shall become fully informed of all rules, regulations, and conditions that may govern the Contractor's operations in the area and shall conduct the work accordingly.

A copy of the permit shall be kept on the construction site any time the work is being performed.

Any change proposed by the Contractor to the conditions listed in the Lahontan permit shall be submitted by the Contractor to the Engineer for transmittal to the California Regional Water Quality Control Board (Lahontan Region) for approval. Changes shall not be implemented until the California Regional Water Quality Control Board (Lahontan Region) gives approval in writing.

A second permit from the Lahontan Region certifying water quality under Section 401 is also applicable to the project. A copy of this permit can be provided upon request. It is not necessary to keep a copy of the 401 permit at the construction site.

3. United States Army Corps of Engineers, Clean Water Act Section 404 Permit

Attention is directed to the provisions in Section 5-1.33 of these Special Provisions.

A portion of the work is within an area controlled by the United States Army Corps of Engineers. A Clean Water Act Section 404 Permit, herein referred to as the permit, will be issued covering work to be performed under this Contract. A copy of the permit is provided in Book 3 of 3 of these Special Provisions. The Contractor shall become fully informed of all rules, regulations, and conditions that may govern the Contractor's operations in the area and shall conduct the work accordingly.

A copy of the permit shall be kept on the construction site any time the work is being performed.

Any change proposed by the Contractor to the conditions listed in the permit shall be submitted by the Contractor to the Engineer for transmittal to the United States Army Corps of Engineers for approval. Changes shall not be implemented until the United States Army Corps of Engineers gives approval in writing.

4. State of California, Department of Fish and Game, Streambed Alteration Agreement

Attention is directed to the provisions in Section 5-1.34 of these Special Provisions.

A portion of the work is within an area controlled by the State of California Department of Fish and Game. A Streambed Alteration Agreement (SAA), herein referred to as the SAA permit, will be issued covering work to be performed under this Contract. A copy of the permit is provided in Book 3 of 3 of these Special Provisions. The Contractor shall become fully informed of all rules, regulations, and conditions that may govern the Contractor's operations in the area and shall conduct the work accordingly.

A copy of the permit shall be kept on the construction site any time the work is being performed.

Any change proposed by the Contractor to the conditions listed in the permit shall be submitted by the Contractor to the Engineer for transmittal to the State of California Department of Fish and Game for approval. Changes shall not be implemented until the State of California Department of Fish and Game gives approval in writing.

Full compensation for conforming to the requirements of this section and to the requirements in these permits shall be considered as included in the prices paid for the various contract items of work involved, and no additional compensation will be allowed.

Full compensation for fees for any additional permits required to perform the work under this contract, other than those permits mentioned in this section, shall be considered as included in the contract prices paid for the items of work involved, and no additional compensation will be allowed.

5-1.31 RELATIONS WITH THE TAHOE REGIONAL PLANNING AGENCY (TRPA)

The location of work is within an area controlled by TRPA. The TRPA permit has been issued covering work to be performed under this Contract. The Contractor shall become fully informed of all rules, regulations, and conditions that may govern the Contractor's operations in the area and shall conduct the work accordingly.

No work will be allowed that is inconsistent with existing requirements of either the permit or the plans without receiving prior approval from the TRPA and the County. The County will not pay for any delays due to processing and obtaining approvals for modifications proposed by the Contractor.

Any change proposed by the Contractor to the conditions shall be submitted by the Contractor to the Engineer for transmittal to the TRPA for approval. Changes shall not be implemented until TRPA gives approval in writing.

A pre-grading inspection by TRPA is required before any disturbance of the existing ground surface conditions. Upon written request by the Contractor, the Engineer may arrange with TRPA for the pre-grading inspection. The written request shall be submitted to the Engineer not less than five (5) working days before the inspection is required by the Contractor.

Full compensation for conforming to the requirements of this section (including furnishing all labor, materials, tools, equipment, and incidentals as it relates to this section) shall be considered as included in the prices paid for the various items of work involved, and no additional compensation will be allowed.

5-1.32 RELATIONS WITH THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (LAHONTAN REGION)

The location of the work is within an area controlled by the California Regional Water Quality Control Board (Lahontan Region). The Contractor shall be fully informed of all rules, regulations, and conditions that may govern the Contractor's operation in the area and shall conduct the work accordingly.

No work will be allowed that is inconsistent with existing requirements of either the permit or the plans without receiving prior approval from the California Regional Water Quality Control Board (Lahontan Region) and the County. The County will not pay for any delays due to processing and obtaining approvals for modifications or extensions proposed by the Contractor.

Any change proposed by the Contractor to the conditions shall be submitted by the Contractor to the Engineer for transmittal to the California Regional Water Quality Control Board (Lahontan Region) for approval. Changes shall not be implemented until the California Regional Water Quality Control Board (Lahontan Region) gives approval in writing.

Full compensation for conforming to the requirements of this section (including furnishing all labor, materials, tools, equipment, and incidentals as it relates to this section) shall be considered as included in the prices paid for the various items of work involved, and no additional compensation will be allowed.

Attention is directed to the provisions in Section 10-1.09, Water Pollution Control, of these Special Provisions.

5-1.33 RELATIONS WITH THE UNITED STATES ARMY CORPS OF ENGINEERS

A portion of the work is within an area controlled by the United States Army Corps of Engineers. The Contractor shall be fully informed of all rules, regulations, and conditions that may govern the Contractor's operation in the area and shall conduct the work accordingly.

No work will be allowed that is inconsistent with existing requirements of either the permit or the plans without receiving prior approval from the United States Army Corps of Engineers and the County. The County will not pay for any delays due to processing and obtaining approvals for modifications or extensions proposed by the Contractor.

Any change proposed by the Contractor to the conditions shall be submitted by the Contractor to the Engineer for transmittal to the United States Army Corps of Engineers for approval. Changes shall not be implemented until the United States Army Corps of Engineers gives approval in writing.

Full compensation for conforming to the requirements of this section (including furnishing all labor, materials, tools, equipment, and incidentals as it relates to this section) shall be considered as included in the prices paid for the various items of work involved, and no additional compensation will be allowed.

5-1.34 RELATIONS WITH THE STATE OF CALIFORNIA DEPARTMENT OF FISH AND GAME

The location of the work is within an area controlled by the California Department of Fish and Game. A California Department of Fish and Game order, herein referred to as the permit, has been issued covering work to be performed under this Contract. A copy of the permit is provided in Book 3 of 3 of these Special Provisions. The Contractor shall become fully informed of all rules, regulations, and conditions that may govern the Contractor's operations in the area and shall conduct the work accordingly.

A copy of the permit shall be kept on the construction site any time the work is being performed.

Any change proposed by the Contractor to the conditions listed in the permit shall be submitted by the Contractor to the Engineer for transmittal to the California Department of Fish and Game for approval. Changes shall not be implemented until the California Department of Fish and Game gives approval in writing.

5-1.35 TESTING

Testing of materials and work shall conform to the provisions of Section 6-3, Testing, of the Standard Specifications and these Special Provisions.

Whenever the provisions of Section 6-3.01, General, of the Standard Specifications refer to tests or testing, it shall mean tests to assure the quality and to determine the acceptability of the materials and work.

The Engineer will deduct the costs for testing of materials and work found to be unacceptable, as determined by the tests performed by the Department, and the costs for testing of material sources identified by the Contractor which are not used for the work, from moneys due or to become due to the Contractor. The amount deducted will be determined will be determined by the Engineer.

5-1.36 ENVIRONMENTALLY SENSITIVE AREA

Attention is directed to the designated Environmental Sensitive Areas (ESA) shown on the plans. The exact location of the boundaries of ESA will be determined by the Engineer and shall be clearly delineated by the placement of temporary fence (Type ESA) as specified in these Special Provisions.

Vehicle access, storage or transport of material and equipment, or other project related activities are prohibited within the boundaries of ESAs.

An ESA shall consist of an area within and near the limits of construction where access is prohibited or limited for the preservation of archeological site or existing vegetation, or protection of biological habitat as shown on the plans. The Engineer will determine the exact location of boundaries of the ESA. No work shall be conducted within the ESA.

Attention is directed to Section 7-1.01, Laws to be Observed, and Section 7-1.0r, Permits and Licenses, of the Standard Specifications regarding state and federal regulations, permits, or agreements which pertain to an ESA.

The Contractor shall repair or perform work to mitigate damage or impacts to ESAs caused by the Contractor's operations at the Contractor's expense. If the Engineer determines repairs or mitigation work will be performed by others or if mitigation fees are assessed, the Department deductions from moneys due or to become due the Contractor will be made for the repair or mitigation costs.

Attention is directed to trees designated on the plans to be preserved that may be impacted by Contractor's operations and to Section 10-1.13, Temporary Fencing (Type ESA), of these Special Provisions. The Contractor shall construction temporary fence (Type ESA) at or outside the drip line of the designated trees unless work is required under the canopy. No vehicles, construction equipment, mobile offices, or material shall be parked, stored, or located within the drip line of trees designated to be preserved except with written approval from the Engineer.

Full compensation for conforming to the provisions in this section shall be considered as included in the contract price paid per linear foot of temporary fence (Type ESA), and no additional payment will be allowed.

5-1.37 DISCOVERY OF CULTURAL RESOURCES

The Contractor shall immediately provide an oral notification to the Engineer of the discovery of any and all antiquities or other objects of cultural, historic, or scientific interest. Objects under consideration include, but are not limited to, historic or prehistoric ruins, human remains, funerary objects, and artifacts discovered as the result of activities under this contract and right of entry. The Contractor shall immediately cease activity in the area of discovery, make a reasonable effort to protect such discovery, and wait for written approval from the Engineer before resuming the activity. Protective and mitigative measures specified by the Engineer shall be the responsibility of the County.

5-1.38 PLANS AND WORKING DRAWINGS

When the specifications require working drawings to be submitted to the Division of Structure Design, the drawings shall be submitted to the Engineer, unless otherwise specifically noted.

5-1.39 COMPENSATION

Except as otherwise provided herein, full compensation for all expenses involved in conforming to the requirements of Section 5 shall be considered as included in the unit prices paid for the various contract items, and no additional compensation will be allowed.

5-1.40 CONTRACTOR'S LICENSING LAWS

Attention is directed to the requirements specified in Section 7-1.01C, Contractor's Licensing Laws, of the Standard Specifications. The Contractor shall possess a valid California Class A contractor's license. The Contractor, or a subcontractor as identified in the Contractor's bid proposal, shall also possess a C-27 Landscaping contract license. All licenses shall remain in effect throughout the term of this Contract.

5-1.41 MBE, WBE, AND DVBE RECORDS

There is no specific DBE goal included in this project; therefore, there is no requirement for submittal of DBE, MBE, WBE, or DVBE records.

5-1.42 INSURANCE

CONTRACTOR shall file with COUNTY concurrently herewith a Certificate of Insurance, in companies acceptable to COUNTY, with a Best's Rating of no less than A-:VII showing.

Worker's Compensation and Employers Liability Insurance:

Worker's Compensation Insurance shall be provided as required by any applicable law or regulation. Employer's liability insurance shall be provided in amounts not less than one million dollars ($1,000,000) each accident for bodily injury by accident, one million dollars ($1,000,000) policy limit for bodily injury by disease, and one million dollars ($1,000,000) each employee for bodily injury by disease.

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

Each Workers' Compensation policy shall be endorsed with the following specific language:

> Cancellation Notice - "This policy shall not be changed without first giving thirty (30) days prior written notice and ten (10) days prior written notice of cancellation for non-payment of premium to the County of Placer."

Waiver of Subrogation - The workers' compensation policy shall be endorsed to state that the workers' compensation carrier waives its right of subrogation against the County, its officers, directors, officials, employees, agents or volunteers, which might arise by reason of payment under such policy in connection with performance under this agreement by the CONTRACTOR.

CONTRACTOR shall require all subcontractors to maintain adequate Workers' Compensation insurance. Certificates of Workers' Compensation shall be filed forthwith with the County upon demand.

General Liability Insurance:

Comprehensive General Liability or Commercial General Liability insurance covering all operations by or on behalf of CONTRACTOR, providing insurance for bodily injury liability and property damage liability for the limits of liability indicated below and including coverage for:

(1) Premises and operations;
(2) Products and completed operations;
(3) Contractual liability insuring the obligations assumed by PROVIDER in this Agreement;
(4) Broad form property damage (including completed operations);
(5) Explosion, collapse, and underground hazards;
(6) Personal injury liability; and

Except with respect to bodily injury and property damage included within the products and completed operations hazards, the aggregate limits, where applicable, shall apply separately to CONTRACTOR'S work under the Contract.

One of the following forms is required:

(1) Comprehensive General Liability;
(2) Commercial General Liability (Occurrence); or
(3) Commercial General Liability (Claims Made).

If CONTRACTOR carries a Comprehensive General Liability policy, the limits of liability shall not be less than a Combined Single Limit for bodily injury, property damage, and Personal Injury Liability of:

Two million dollars ($2,000,000) each occurrence
Two million dollars ($2,000,000) aggregate

If CONTRACTOR carries a Commercial General Liability (Occurrence) policy:

(1) The limits of liability shall not be less than:

Two million dollars ($2,000,000) each occurrence (combined single limit for bodily injury and property damage)
Two million dollars ($2,000,000) for personal injury liability
Two million dollars ($2,000,000) for products-completed operations
Two million dollars ($2,000,000) general aggregate

(2) If the policy does not have an endorsement providing that the General Aggregate Limit applies separately, or if defense costs are included in the aggregate limits, then the required aggregate limits shall be two million dollars ($2,000,000).

Special Claims Made Policy Form Provisions:

CONTRACTOR shall not provide a Commercial General Liability (Claims Made) policy without the express prior written consent of COUNTY, which consent, if given, shall be subject to the following conditions:

(1) The limits of liability shall not be less than:

Two million dollars ($2,000,000) each occurrence (combined single limit for bodily injury and property damage)
Two million dollars ($2,000,000) for personal injury liability
Two million dollars ($2,000,000) for products-completed operations
Two million dollars ($2,000,000) general aggregate

(2) The insurance coverage provided by CONTRACTOR shall contain language providing coverage up to one (1) year following the completion of the contract in order to provide insurance coverage for the hold harmless provisions herein if the policy is a claims made policy.

Conformity of Coverages - If more than one policy is used to meet the required coverages, such as a separate umbrella policy, such policies shall be consistent with all other applicable policies used to meet these minimum requirements. For example, all policies shall be Occurrence Liability policies or all shall be Claims Made Liability policies, if approved by the County as noted above. In no cases shall the types of polices be different.

Additional Requirements

Premium Payments - The insurance companies shall have no recourse against the COUNTY and funding agencies, its officers and employees or any of them for payment of any premiums or assessments under any policy issued by a mutual insurance company.

Policy Deductibles - The CONTRACTOR shall be responsible for all deductibles in all of the CONTRACTOR's insurance policies. The maximum amount of allowable deductible for insurance coverage required herein shall be $25,000.

CONTRACTOR's Obligations - CONTRACTOR's indemnity and other obligations shall not be limited by the foregoing insurance requirements and shall survive the expiration of this agreement.

Verification of Coverage - CONTRACTOR shall furnish the County with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the County before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the CONTRACTOR's obligation to provide them. The County reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Material Breach - Failure of the CONTRACTOR to maintain the insurance required by this agreement, or to comply with any of the requirements of this section, shall constitute a material breach of the entire agreement.

Endorsements:

Each Comprehensive or Commercial General Liability policy shall be endorsed with the following specific language:

A. "The County of Placer, its officers, agents, employees, and volunteers are to be covered as insured for all liability arising out of the operations by or on behalf of the named insured in the performance of this Agreement."

B. "The insurance provided by the Contractor, including any excess liability or umbrella form coverage, is primary coverage to the County of Placer with respect to any insurance or self-insurance programs maintained by the County of Placer and no insurance held or owned by the County of Placer shall be called upon to contribute to a loss."

C. "This policy shall not be changed without first giving thirty (30) days prior written notice and ten (10) days prior written notice of cancellation for non-payment of premium to the County of Placer."

Automobile Liability Insurance:

Automobile liability insurance covering bodily injury and property damage in an amount no less than two million dollars ($2,000,000) combined single limit for each occurrence. Covered vehicles shall include owned, non-owned, and hired automobiles/trucks.

Pollution Liability:

Contractor shall purchase and thereafter maintain, so long as such insurance is available on a commercially reasonable basis, pollution liability insurance in the amount of one million dollars ($1,000,000) covering liability arising from the sudden and accidental release of pollution on the Facility Site.

SECTION 6. (BLANK)

SECTION 7. (BLANK)

SECTION 8. MATERIALS

8-1.01 MEASUREMENT OF QUANTITIES

Attention is directed to the provisions in Section 9-1.01, Measurement of Quantities, of the Standard Specifications.

In lieu of the provisions in paragraph 14 of Section 9-1.01, Measurement of Quantities, of the Standard Specifications, the Contractor may use scales in the State of Nevada and Weighmaster licensed in accordance with the rules and regulations of the State of Nevada. Said scales shall have a current seal, and the load slips or summary weigh sheets shall be properly certified.

Within the limits of the project or at the plant site, the Contractor shall provide a vehicle platform scale of sufficient weighing capacity to check full production sized batches from the proportioning scales to be used in producing materials for the project. This vehicle platform scale shall conform to the provisions in Section 9-1.01, Measurement of Quantities, of the Standard Specifications.

Full compensation for conforming to the requirements of this section (including furnishing all labor, materials, tools, equipment, and incidentals as it relates to this section) shall be considered as included in the prices paid for the various items of work involved, and no additional compensation will be allowed.

SECTION 8-2. CEMENT

8-2.01 PORTLAND CEMENT CONCRETE

Portland Cement Concrete shall conform to the provisions in Section 90, Portland Cement Concrete, of the Standard Specifications and these Special Provisions.

References to Section 90-2.01, Portland Cement, of the Standard Specifications shall mean Section 90-2.01, Cement, of the Standard Specifications.

Mineral admixture shall be combined with cement in conformance with the provisions in Section 90-4.08, Required Use of Mineral Admixtures, of the Standard Specifications for the concrete materials specified in Section 56-2, Roadside Signs, of the Standard Specifications.

The requirements of Section 90-4.08, Required Use of Mineral Admixture, of the Standard Specifications shall not apply to Section 19-3.025C, Soil Cement Bedding, of the Standard Specifications.

The Department maintains a list of sources of fine and coarse aggregate that have been approved for use with a reduced amount of mineral admixture in the total amount of cementitious material to be used. A source of aggregate will be considered for addition to the approved list if the producer of the aggregate submits to the Transportation Laboratory certified test results from a qualified testing laboratory that verify the aggregate complies with the requirements. Prior to starting the testing, the aggregate test shall be registered with the Department. A registration number can be obtained by calling (916) 227-7228. The registration number shall be used as the identification for the aggregate sample in correspondence with the Department. Upon request, a split of the tested sample shall be provided to the Department. Approval of aggregate will depend upon compliance with the specifications, based on the certified test results submitted, together with any replicate testing the Department may elect to perform. Approval will expire three (3) years from the date the most recent registered and evaluated sample was collected from the aggregate source.

Qualified testing laboratories shall conform to the following requirements:

A. Laboratories performing ASTM Designation: C 1293 shall participate in the Cement and Concrete Reference Laboratory (CCRL) Concrete Proficiency Sample Program and shall have received a score of three (3) or better on all tests of the previous two (2) sets of concrete samples.

B. Laboratories performing ASTM Designation: C 1260 shall participate in the Cement and Concrete Reference Laboratory (CCRL) Pozzolan Proficiency Sample Program and shall have received a score of three (3) or better on the shrinkage and soundness tests of the previous two (2) sets of pozzolan samples.

Aggregates on the list shall conform to one of the following requirements:

A. When the aggregate is tested in conformance with the requirements in California Test 554 and ASTM Designation: C 1293, the average expansion at one year shall be less than or equal to 0.040 percent; or

B. When the aggregate is tested in conformance with the requirements in California Test 554 and ASTM Designation: C 1260, the average of the expansion at 16 days shall be less than or equal to 0.15 percent.

The amounts of cement and mineral admixture used in cementitious material shall be sufficient to satisfy the minimum cementitious material content requirements specified in Section 90-1.01, Description, or Section 90-4.05, Optional Use of Chemical Admixtures, of the Standard Specifications and shall conform to the following:

A. The minimum amount of cement shall not be less than 75 percent by mass of the specified minimum cementitious material content.

B. The minimum amount of mineral admixture to be combined with cement shall be determined using one of the following criteria:

    1. When the calcium oxide content of a mineral admixture is equal to less than 2 percent by mass, the amount of mineral admixture shall not be less than 15 percent by mass of the total amount of cementitious material to be used in the mix.

    2. When the calcium oxide content of a mineral admixture is greater than 2 percent by mass, and any of the aggregates used are not listed on the approved list as specified in these Special Provisions, then the amount of mineral admixture shall not be less than 25 percent by mass of the total amount of cementitious material to be used in the mix.

    3. When the calcium oxide content of a mineral admixture is greater than 2 percent by mass and the fine and coarse aggregates are listed on the approved list as specified in these Special Provisions, then the amount of mineral admixture shall not be less than 15 percent by mass of the total amount of cementitious material to be used in the mix.

    4. When a mineral admixture that conforms to the provisions for silica fume in Section 90-2.04, Admixture Materials, of the Standard Specifications is used, the amount of mineral admixture shall not be less than 10 percent by mass of the total amount of cementitious material to be used in the mix.

    5. When a mineral admixture that conforms to the provisions for silica fume in Section 90-2.04, Admixture Materials, of the Standard Specifications is used and the fine and coarse aggregates are listed on the approved list as specified in these Special Provisions, then

the amount of mineral admixture shall not be less than 7 percent by mass of the total amount of cementitious material to be used in the mix.

C. The total amount of mineral admixture shall not exceed 35 percent by mass of the total amount of cementitious material to be used in the mix. Where Section 90-1.01, Description, of the Standard Specifications specifies a maximum cementitious content in pounds per cubic foot, the total mass of cement and mineral admixture per cubic foot shall not exceed the specified maximum cementitious material content.

Full compensation for conforming to the requirements of this section (including furnishing all labor, materials, tools, equipment and incidentals as it relates to this section) shall be considered as included in the prices paid for the various items of work involved, and no additional compensation shall be allowed.

8-2.02 FREEZING CONDITION REQUIREMENTS

Portland Cement Concrete and precast Portland Cement Concrete products shall contain not less than 770 lbs of cement per cubic yard unless a higher cement content is required elsewhere in these Special Provisions.

An air-entraining admixture conforming to the requirements in Section 90-4, Admixtures, of the Standard Specifications shall be added to the concrete at the rate required to result in an air content of 6 $\pm$ 1.5 percent in the freshly mixed concrete, unless a different air content is specified elsewhere in these Special Provisions.

Aggregates proposed for use in Portland Cement Concrete and precast Portland Cement Concrete products shall pass the freezing and thawing test, as specified in Section 90-2.02, Aggregates, of the Standard Specifications and these Special Provisions.

A list of sources of aggregates, which have previously passed the freeze-thaw test, is available at the Caltrans District Office at 703 B Street, Marysville, California, telephone (530) 741-4181.

The Contractor's attention is directed to the fact that California Test 528M, Test for Freeze-Thaw Resistance of Aggregates in Air-Entrained Concrete, does not include procedures that determine compliance of the aggregates with the other requirements of the plans and specifications.

The mortar strength of fine aggregate relative to the mortar strength of Ottawa sand shall be 100 percent (100%), minimum, as determined by California Test 515.

Full compensation for conforming to the requirements of this section (including furnishing all labor, materials, tools, equipment and incidentals as it relates to this section) shall be considered as included in the prices paid for the various items of work involved, and no additional compensation shall be allowed.

8-2.03 PREQUALIFIED AND TESTED SIGNING AND DELINEATION MATERIALS

The California State Department of Transportation (Caltrans) maintains the following list of prequalified and tested signing and delineation materials. The Engineer shall not be precluded from sampling and testing products on the list of prequalified and tested signing and delineation materials.

The manufacturer of products on the list of prequalified and tested signing and delineation materials shall furnish the Engineer a Certificate of Compliance in conformance with the provisions in Section 6-1.07, Certificates of Compliance, of the Standard Specifications for each type of traffic product supplied.

For those categories of materials included in the list of prequalified and tested signing and delineation materials, only those products shown within the listing may be used in the work. Other categories of products not included in the list of prequalified and tested signing and delineation materials may be used in the work provided they conform to the requirements of the Standard Specifications.

Materials and products may be added to the list of prequalified and tested signing and delineation materials if the manufacturer submits a New Product Information Form to the New Product Coordinator at the Transportation Laboratory (Caltrans). Upon a departmental (Caltrans) request for samples, sufficient samples shall be submitted to permit performance or required tests. Approval of materials or products will depend upon compliance with the specifications and tests the Department (Caltrans) may elect to perform.

Pavement Markers, Permanent Type

Retroreflective with Abrasion Resistant Surface (ARS)

A. Apex, Model 921 (4 inches x 4 inches)
B. Avery Dennison (formerly Stimsonite), Models C88 (4 inches x 4 inches), 911 (4 inches x 4 inches), 953 (2.7 inches x 4.5 inches)
C. Ray-O-Lite "AA" ARS (4 inches x 4 inches)
D. 3M Series 290 (3.5 inches x 4 inches)
E. 3M Series 290 PSA with pressure sensitive adhesive pad (3.5 inches x 4 inches)

Retroreflective with Abrasion Resistant Surface (ARS)
(Used for recessed applications only)

A. Avery Dennison (formerly Stimsonite), Model 948 (2.3 inches x 4.7 inches)
B. Avery Dennison (formerly Stimsonite), Model 944SB (2 inches x 4 inches)*
C. Ray-O-Lite, Model 2002 (2.3 inches x 4.6 inches)
D. Ray-O-Lite, Model 2004 ARS (2 inches x 4 inches)*

*For use only in 4.5 inches wide (older) recessed slots.

Non-Reflective, 4 inches Round

A. Alpine Products, "D-Dot" and "ANR" (ABS)
B. Apex Universal (Ceramic)
C. Apex Universal, Models 929 (ABS) and 929PP (Polypropylene)
D. Elgin Molded Plastics, "Empco-Lite" Model 900 (ABS)
E. Glowlite (Ceramic)
F. Hi-Way Safety, Inc., Models P20-2000W and 2001Y (ABS)
G. Interstate Sales, "Diamond Back" (ABS) and (Polypropylene)
H. Novabrite Models Cdot (White) Cdot-y (Yellow), Ceramic
I. Novabrite Models Adot-w (White) Adot-y (Yellow), (ABS)
J. Novabrite Models Pdot-w (White) Pdot-y (Yellow), Polypropylene
K. Road Creations, Model RCB4NR (Acrylic)
L. Three D Traffic Works TD10000 (ABS), TD10500 (Polypropylene)
M. Zumar Industries, "Titan TM40A" (ABS)

Pavement Markers, Temporary Type

Temporary Markers For Long-Term Day/Night Use (6 months or less)

A. Apex Universal, Model 924 (4 inches x 4 inches)
B. Elgin Molded Plastics, "Empco-Lite" Model 901 (4 inches x 4 inches)
C. Road Creations, Model R41C (4 inches x 4 inches)
D. Vega Molded Products "Temporary Road Marker" (3 inches x 4 inches)

Temporary Markers For Short-Term Day/Night Use (14 days or less)
(For seal coat or chip seal applications, clear protective covers are required)
A. Apex Universal, Model 932
B. Bunzl Extrusion, Models T.O.M., T.R.P.M., and "HH" (High Heat)
C. Hi-Way Safety, Inc., Model 1280/1281

Striping and Pavement Marking Materials

Permanent Traffic Striping and Pavement Marking Tape
A. Advanced Traffic Marking, Series 300 and 400
B. Brite-Line, Series 1000
C. Brite-Line, "DeltaLine XRP"
D. Swarco Industries, "Director 35" (For transverse application only)
E. Swarco Industries, "Director 60"
F. 3M, "Stamark" Series 380 and 5730
G. 3M, "Stamark" Series 420 (For transverse application only)

Temporary (Removable) Striping and Pavement Marking Tape (6 months or less)
A. Advanced Traffic Marking, Series 200
B. Brite-Line, Series 100
C. Garlock Rubber Technologies, Series 2000
D. P.B. Laminations, Aztec, Grade 102
E. Swarco Industries, "Director-2"
F. Trelleborg Industri, R140 Series
G. 3M Series 620 "CR", and Series A750
H. 3M Series A145 Removable Black Line Mask
(Black Tape: For use only on Asphalt Concrete Surfaces)
I. Advanced Traffic Marking Black "Hide-A-Line"
(Black Tape: For use only on Asphalt Concrete Surfaces)
J. Brite-Line "BTR" Black Removable Tape
(Black Tape: For use only on Asphalt Concrete Surfaces)
K. Trelleborg Industri, RB-140
(Black Tape: For use only on Asphalt Concrete Surfaces)

Preformed Thermoplastic (Heated in place)
A. Avery Dennison, "Hotape"
B. Flint Trading, "Premark", "Premark 20/20 Flex", and "Premark 20/20 Flex Plus"

Ceramic Surfacing Laminate, 150-mm x 150-mm
A. Safeline Industries/Highway Ceramics, Inc.

Class 1 Delineators

One Piece Drivable Flexible Type, 66 inches
A. Bunzl Extrusion, "Flexi-Guide Models 400 and 566"
B. Carsonite, Curve-Flex CFRM-400
C. Carsonite, Roadmarker CRM-375
D. FlexStake, Model 654 TM
E. GreenLine Models HWD1-66 and CGD1-66
F. J. Miller Industries, Model JMI-375 (with soil anchor)

Special Use Type, 66 inches
A. Bunzl Extrusion, Model FG 560 (with 18 inches U-Channel Base)
B. Carsonite, "Survivor" (with 18 inches U-Channel base)

C. Carsonite, Roadmarker CRM-375 (with 18 inches U-Channel Base)
D. FlexStake, Model 604
E. GreenLine Models HWDU and CGD (with 18 inches U-Channel Base)
F. Impact Recovery Model D36 with #105 Drivable Base
G. Safe-Hit with 8 inches pavement anchor (SH248-GP1)
H. Safe-Hit with 15 inches soil anchor (SH248-GP2) and with 18 inches soil anchor (SH248-GP3)

Surface Mount Flexible Type, 48 inches
A. Bent Manufacturing Company, Masterflex Model MF-180EX-48
B. Carsonite, "Super Duck II"
C. FlexStake, Surface Mount, Models 704 and 754TM
D. Impact Recovery Model D48 with #101 Fixed (Surface-Mount) Base
E. Three D Traffic Works "Channelflex" ID No. 522248W

Channelizers

Surface Mount Type, 36 inches
A. Bent Manufacturing Company, Masterflex Models MF-360-36 (Round) and MF-180-36 (Flat)
B. Bunzl Extrusion, Flexi-Guide Models FG300LD and FG300UR
C. Carsonite, "Super Duck" (Flat SDF-436, Round SDR-336)
D. Carsonite, "Super Duck II" Model SDCF203601MB "The Channelizer"
E. FlexStake, Surface Mount, Models 703 and 753TM
F. GreenLine, Model SMD-36
G. Hi-Way Safety, Inc., "Channel Guide Channelizer" Model CGC36
H. Impact Recovery Model D36, with #101 Fixed (Surface Mount) Base
I. Repo, Models 300 and 400
J. Safe-Hit, Guide Post, Model SH236SMA
K. The Line Connection, "Dura-Post" Model DP36-3 (Permanent)
L. The Line Connection, "Dura-Post" Model DP36-3C (Temporary)
M. Three D Traffic Works "Channelflex" ID No. 522053W

Lane Separation System
A. Bunzl "Flexi-Guide (FG) 300 Curb System"
B. Qwick Kurb, "Klemmfix Guide System"
C. Recycled Technology, Inc., "Safe-Lane System"

Conical Delineators, 42 inches
(For 700-mm Traffic Cones, see Standard Specifications)
A. Bent Manufacturing Company "T-Top"
B. Plastic Safety Systems "Navigator-42"
C. Radiator Specialty Company "Enforcer"
D. Roadmaker Company "Stacker"
E. TrafFix Devices "Grabber"
F. Three D Traffic Works "Ringtop" TD7000, ID No. 742143

Object Markers

Type "K", 18 inches
A. Bunzl, Model FG318PE
B. Carsonite, Model SMD-615
C. FlexStake, Model 701KM
D. Repo, Models 300 and 400
E. Safe-Hit, Model SH718SMA
F. The Line Connection, Model DP21-4K

Type "K-4" / "Q" Object Markers, 24 inches
A. Bent Manufacturing "Masterflex", Model MF-360-24
B. Bunzl Extrusion, Model FG324PE
C. Carsonite, Super Duck II
D. FlexStake, Model 701KM
E. Repo, Models 300 and 400
F. Safe-Hit, Models SH8 24SMA_WA and SH8 24GP3_WA
G. The Line Connection, Model DP21-4Q
H. Three D Traffic Works "Q" Marker, ID No. 531702W

Concrete Barrier Markers and Temporary Railing (Type K) Reflectors

Impactable Type
A. ARTUK, "FB"
B. Bunzl Extrusion, Models PCBM-12 and PCBM-T12
C. Duraflex Corp., "Flexx 2020" and "Electriflexx"
D. Hi-Way Safety, Inc., Model GMKRM100
E. Plastic Safety Systems "BAM" Models OM-BARR and OM-BWAR
F. Sun-Lab Technology, "Safety Guide Light Model TM-5"
G. Three D Traffic Works "Roadguide" 9304 Series, ID No. 903176 (One-Way), ID No. 903215 (Two-Way)

Non-Impactable Type
A. ARTUK, JD Series
B. Plastic Safety Systems "BAM" Models OM-BITARW and OM-BITARA
C. Vega Molded Products, Models GBM and JD

Metal Beam Guard Rail Post Markers
(For use to the left of traffic)
A. Bunzl Extrusion, "Mini" (3 inches x 10 inches)
B. Creative Building Products, "Dura-Bull, Model 11201"
C. Duraflex Corp., "Railrider"

Concrete Barrier Delineators, 16 inches
(For use to the right of traffic)
A. Bunzl Extrusion, Model PCBM T-16
B. Safe-Hit, Model SH216RBM
C. Sun-Lab Technology, "Safety Guide Light, Model TM16" (3 inches x 12 inches)
D. Three D Traffic Works "Roadguide" ID No. 904364 (White), ID No. 904390 (Yellow)

Concrete Barrier-Mounted Mini-Drum (10 inches x 14 inches x 22 inches)
A. Stinson Equipment Company "SaddleMarker"

Sound Wall Delineator
(Applied vertically. Place top of 3 inches x 12 inches reflective element at 48 inches above roadway)
A. Bunzl Extrusion, PCBM S-36
B. Sun-Lab Technology, "Safety Guide Light, Model SM12" (3 inches x 12 inches)

Guard Railing Delineator
(Place top of reflective element at 48 inches above plane of roadway)

Wood Post Type, 27 inches
A. Bunzl Extrusion, FG 427 and FG 527
B. Carsonite, Model 427

C. FlexStake, Model 102 GR
D. GreenLine GRD 27
E. J.Miller Model JMI-375G
F. Safe-Hit, Model SH227GRD
G. Three D Traffic Works "Guardflex" TD9100 Series, ID No. 510476

Steel Post Type
A. Carsonite, Model CFGR-327 with CFGRBK300 Mounting Bracket

Retro-reflective Sheeting

Channelizers, Barrier Markers, and Delineators
A. Avery Dennison T-6500 Series (Formerly Stimsonite, Series 6200)
(For rigid substrate devices only)
B. Avery Dennison WR-6100 Series
C. Nippon Carbide, Flexible Ultralite Grade (ULG) II
D. Reflexite, PC-1000 Metalized Polycarbonate
E. Reflexite, AC-1000 Acrylic
F. Reflexite, AP-1000 Metalized Polyester
G. Reflexite, Conformalight, AR-1000 Abrasion Resistant Coating
H. 3M, High Intensity

Traffic Cones, 13 inches Sleeves
A. Reflexite SB (Polyester), Vinyl or "TR" (Semi-transparent)

Traffic Cones, 4 inches x 6 inches Sleeves
A. Nippon Carbide, Flexible Ultralite Grade (ULG) II
B. Reflexite Vinyl, "TR" (Semi-transparent) or "Conformalite"
C. 3M Series 3840

Barrels and Drums
A. Avery Dennison WR-6100
B. Nippon Carbide, Flexible Ultralite Grade (ULG) II
C. Reflexite, "Conformalight", "Super High Intensity" or "High Impact Drum Sheeting"
D. 3M Series 3810

Barricades: Type I, Medium-Intensity
(Typically Enclosed Lens, Glass-Bead Element)
A. American Decal, Adcolite
B. Avery Dennison, T-1500 and T-1600
C. 3M, Engineer Grade, Series 3170

Barricades: Type II, Medium-High Intensity
(Typically Enclosed Lens, Glass-Bead Element)
A. Avery Dennison, T-2500 Series
B. Kiwalite Type II
C. Nikkalite 1800 Series

Signs: Type II, Medium-High Intensity
(Typcially Enclosed Lens, Glass-Bead Element)
A. Avery Dennison, T-2500 Series
B. Kiwalite, Type II
C. Nikkalite 1800 Series

Signs: Type III, High-Intensity Grade
(Typically Encapsulated Lens, Glass-Bead Element)
A. Avery Dennison, T-5500 and T-5500A Series
B. Nippon Carbide, Nikkalite Brand Ultralite Grade II
C. 3M Series 3870

Signs: Type IV, High-Intensity
(Typically Unmetallized Micro-prismatic Element)
A. Avery Dennison, T-6500 Series (Formerly Stimsonite Series 6200)
B. Nippon Carbide, Crystal Grade, 94000 Series

Signs: Type VI, Elastomeric (Roll-Up) High-Intensity, without Adhesive
A. Avery Dennison, WU-6014
B. Novabrite LLC, "Econobrite"
C. Reflexite "Vinyl"
D. Reflexite "SuperBright"
E. Reflexite "Marathon"
F. 3M Series RS34 (Orange) and RS20 (Fluorescent Orange)

Signs: Type VII, Super-High-Intensity
(Typically Unmetallized Micro-prismatic Element)
A. 3M LDP Series 3924 (Fluorescent Red/Orange)
B. 3M LDP Series 3970

Signs: Type VIII, Super-High-Intensity
(Typically Unmetallized Micro-prismatic Element)
A. Avery Dennison, T-7500 Series

Signs: Type IX, Very-High-Intensity
(Typically Unmetallized Micro-prismatic Element)
A. 3M VIP Series 3981 Diamond Grade (Fluorescent Yellow)
B. 3M VIP Series 3983 Diamond Grade (Fluorescent Yellow/Green)
C. 3M VIP Series 3990 Diamond

Specialty Signs
A. All Sign Products, STOP Sign (All Plastic), 30 inches
B. Relexite "Endurance" Work Zone Sign (with Semi-Rigid Plastic Substrate)

Sign Substrate for Construction Area Signs

Fiberglass Reinforced Plastic (FRP)
A. Fiber-Brite
B. Sequentia, "Polyplate"
C. Inteplast Group "InteCel" (0.5 inch for Post-Mounted CZ Signs, 48 inches or less)

Aluminum Composite
A. Alcan Composites "Dibond Material, 0.08 inch"
(For temporary construction signs only)
B. Mitsubishi Chemical America, Alpolic 350
(For temporary construction signs only)

SECTION 8-3. WELDING

8-3.01 WELDING ELECTRODES

Flux core welding electrodes conforming to the requirements of AWS A5.20 E6XT-4 or E7XT-4 shall not be used to perform any type of welding for this project.

SECTION 9. DESCRIPTION OF WORK

9-1.01 LOCATION AND DESCRIPTION OF WORK

The project is located on the north shore of Lake Tahoe, approximately two miles east of Tahoe City.

The scope of work, in general, includes, but is not limited to, stream restoration and general erosion control facilities that include grading, stream channel construction and modification of existing channels, associated revegetation and habitat restoration, culvert replacements, and recreational facility improvements associated with restoration objectives. Other items and details not mentioned above that are required by the Plans, Specifications, or these Special Provisions shall be performed, placed, constructed, and/or installed.

SECTION 10. CONSTRUCTION DETAILS

10-1. GENERAL

10-1.01 ORDER OF WORK

Order of work shall conform to the provisions in Section 5-1.05, Order of Work, of the Standard Specifications and these Special Provisions. The Contractor shall submit to the Engineer, prior to commencing work, a sequence and schedule of the entire work for review and acceptance in accordance with Section 10-1.02, Progress Schedule, of these Special Provisions. This schedule shall include the revegetation work detailed in Section 10-2.00 Revegetation, of these Special Provisions.

Work shall be performed in a manner that will minimize the amount of time that groundwater dewatering activities are needed and the volume of groundwater to be extracted. All materials necessary for the construction of improvements in dewatered locations shall be present onsite, staged, and prepared such that construction can proceed expeditiously once the required excavation depths and conditions have been achieved.

Attention is also directed to Section 10-1.02, Progress Schedule, and Section 10-1.20, Traffic Control Systems of these Special Provisions regarding the submittal and approval of a project schedule and traffic control plan prior to performing work.

Work for the project includes Skylandia Park which is a California State Park maintained by Tahoe City Public Utility District. The work needs to be coordinated around summer camps activity during the period of mid-June to mid-August that are held there each summer. The Contractor shall notify Tahoe City Public Utility District in writing at least two (2) weeks in advance of work occurring within the park.

The Contractor should complete work within 4X and 1X as early in the season as possible in order to allow ample time to stabilize all drainage ways. This will allow for the removal of diversion structures within the first year of construction. If construction of reaches 1X and/or 4X is not possible with the

beginning of the first season's construction, alternative diversions may be required through the winter.

The Contractor should install storm drain manhole #1 at station 24+01 (shown on PP-2) as late in the season as possible in order to ensure flows within the existing 48 inch Corrugated Metal Pipe are at minimum. This will minimize or eliminate the need for dewatering in this location.

Relocation or abandonment of existing electrical, water, and sanitary sewer facilities will be required as part of this project. As a first order of work, the Contractor is responsible for verifying the location of all existing underground facilities, within the project area, that may have potential to conflict with the location of proposed storm drains, channels, ditches, manholes, sediment traps, drop inlets, pavement, and other work as shown on the Plans. The Contractor is responsible for contacting all agencies and/or owners to verify this information prior to and during construction of any of the proposed improvements. Design of relocations may be necessary for one or more utilities.

The Contractor shall not begin work within twenty (20) feet of any overhead line prior to contacting Nevada Energy and AT&T at least two weeks in advance of the work.

The Contractor shall notify property owners a minimum of 48 hours prior to closing off access to any property. The Contractor shall notify the owner and/or lease by posting an official letter on the door of the building.

Should the Contractor elect to perform work after October 15, of the given year, adjustments due to site conditions are the responsibility of the Contractor. The County is not responsible for changed site conditions or accessibility.

10-1.02 PROGRESS SCHEDULE

Progress schedules will be required for this contract and shall conform to the provisions in Section 8-1.04, Progress Schedule, of the Standard Specifications and these Special Provisions.

The progress schedule shall show the order in which the Contractor proposes to carry out the work within the contract time and contract requirements. Additionally, the progress schedule shall show the beginning times and completion times for the salient features of the work provided in the contract. The progress schedule shall be in the form of an arrow network, precedence diagram, or other similar schedule developed under a critical path method. The schedule shall outline in sufficient detail the proposed operations, the interrelations of the various operations, and the order of performance so that the progress of the work can be evaluated accurately at any time during the performance of the contract. The network shall reflect activity durations in a calendar and working day time frame. The network shall include details regarding lane closures, particularly the widths of the closure and the associated durations conforming to the provisions of in the Standard Specifications, the Standard Plans, the Plans, and these Special Provisions. An electronic copy of the progress schedule shall be submitted to the Engineer at least three (3) working days in advance of the preconstruction conference.

In addition to the project schedule, the Contractor shall provide a detailed weekly work agenda at each weekly construction meeting that describes the work item and time frame in the form of a bar graph, listed-itemized schedule, or any other form agreed to by the Engineer. Weekly project meetings will be attended by the Engineer, County personnel, or County subconsultants, and the Contractor's key personnel.

The progress schedule shall follow the general order of work detailed in Section 10-1.01, Order of Work, of these Special Provisions and shall meet the milestones listed in Section 4-1.01, General, of Section 4, Beginning of Work, Time of Completion and Liquidated Damages, of these Special Provisions.

The progress schedule is to be reviewed by the Engineer and at all times be acceptable to the Engineer and any federal, state, or local agency regulating water quality including the Tahoe Regional Planning Agency (TRPA) and the California Regional Water Quality Control Board (Lahontan Region).

Subsequent to the time that submittal of a progress schedule is required in accordance with the Standard Specifications and these Special Provisions, no progress payments will be made for any work until a satisfactory schedule has been submitted to the Engineer.

Full compensation for conforming to the provisions of this section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

10-1.03 LINES AND GRADES

Lines and grades shall conform to the provisions in Section 5-1.07, Lines and Grades, of the Standard Specifications and these Special Provisions. It is the intent of this section to define the staking services that the Engineer will furnish and to set forth the responsibilities of the Contractor respecting the use and maintenance of such.

Notification

Prior to the start of construction the Contractor shall provide the Engineer a written schedule of the dates when specific staking services are desired. If these dates change and the Contractor needs stakes other than shown on the staking schedule, the Contractor shall submit a staking request in writing at least 72 hours (3 working days) in advance of when the stakes will be required. Any lost working days due to Contractor not providing written schedule of dates when specific staking services are desired and/or providing the Engineer a staking request in writing at least 72 hours (3 working days) in advance of when the stakes will be required shall be charged against the Contractor's allowable working days and no additional compensation will be allotted.

Control Stakes

Horizontal and vertical survey control, as shown on the Plans, are reference points for all construction work shall be set and conspicuously marked with paint or plastic flagging tape. It shall be the responsibility of the Contractor to inform his employees and his subcontractors of their importance and the necessity for their preservation. If a control point cannot be avoided, the Contractor shall notify the Engineer in writing at least forty-eight (48) hours in advance of the date the control point will be disturbed.

Staking Service

The Engineer will set only one (1) set of construction stakes at the County's expense. Any restaking necessary will be at the Contractor's sole expense and subject to inspection and approval by the Engineer prior to continuing finish grading. The Contractor shall be fully responsible for conformance and agreement of the work with lines and elevations as shown on the contract Plans.

The Engineer will provide the following stakes:

A. Limits of disturbance for areas outside existing roadways and shoulders. Stakes will be set at approximately 50-foot intervals and at angle points.

B. Offset alignment and grade stakes for storm drains at manholes, drop inlets, sediment traps, headwalls, and at beginning and end of vertical curves.

C. Offset alignment and grade stakes for ditches and swales at beginning and end of curves and at grade breaks.

D. Offset alignment and grade stakes for the reaches 1X and 4X at 10-foot intervals.

The Contractor shall be responsible for his own construction layout from the stakes provided by the Engineer.

Re-staking

Stakes or reference marks will be set one time only, sufficient to construct the project as designed per the contract Plans and these Special Provisions. Any re-staking, for whatever reason, will be performed only when ordered in writing by the Contractor and such re-staking shall be at the Contractor's expense. In case any of the construction stakes or reference points are disturbed, removed, or destroyed, the Contractor shall be liable for the cost of replacement thereof, and such cost may be deducted from payments due the Contractor. The Engineer shall be notified at least forty-eight (48) hours in advance of the date when re-staking is required.

Checking Service

Should occasion arise where the validity of a stake is questionable, either as to its location or the offset marked thereon or as to the elevation of cut or fill marked thereon, the Contractor shall notify the Engineer who will check the stake or stakes in question. It shall be the Contractor's responsibility to examine the stakes before commencing operations. Any stakes found to be in error, will be reset. There will be no charge to the Contractor for this service, and it is understood that the Engineer will not be charged for any standby or down time as a result of such checking and/or resetting procedure.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for various contract items of work, and no additional compensation will be allowed.

10-1.04 PRESERVATION OF PROPERTY

Attention is directed to the provisions in Section 7-1.11, Preservation of Property, of the Standard Specifications, Caltrans Standards Section 15-1.02, Preservation of Property, and these Special Provisions.

Work within areas covered by encroachment permits, easements, rights of entry, and license agreements shall be performed with the utmost care. Under no circumstances are trees to be removed unless so noted on the Plans, without express written permission from the owner and/or Engineer. Equipment used in agreement areas will be limited to the smallest practicable size necessary for the job. Trucks delivering rock and other materials shall be of the minimum practicable size and will be restricted to areas where they will not damage existing vegetation and foliage. All operations within agreement areas will be subject to prior approval of Engineer to the end that a minimum disturbance to the existing terrain and culture results.

Only those trees designated on the Plans to be removed or those mentioned in written authorization from the Engineer shall be removed to facilitate project construction. Removed trees shall be reused during channel construction, as indicated on the Plans. A sum of one hundred dollars ($100) per one (1) inch of diameter will be charged the Contractor for any tree removed which has not been designated by the Engineer or owner. The above penalty shall apply to all trees fourteen (14) inches or greater in diameter, measured at a breast height, 4.5 feet above the ground.

The Contractor must take extreme care to prevent permanent damage to root systems of trees to be saved.

No grading or operation of heavy equipment shall take place within the area bounded by the drip line of any tree on or off the property. This does not apply to those trees that are to be removed, or are not indicated as to be removed but are within the grading area, according to the Plans.

Major roots four (4) inches or greater in diameter, encountered in the course of excavation from trees that are not to be removed, shall be exposed but not severed and they shall be wrapped in burlap as a protective measure while exposed. Minor roots two to four (2 to 4) inches in diameter that are severed in the course of excavation, and major roots that are accidentally cut, shall be neatly trimmed back to an undamaged area and coated with a heavy coat of tree seal approved by the Engineer.

Willows are to be preserved within all meadow locations, as indicated on the Plans, and where practical within channels where work is being performed.

When working around willows, the procedures stated in Section 10-2.06, Topsoil Salvage and Replacement, of these Special Provisions shall be used unless an alternative procedure is approved by the Engineer.

Work within willows shall be confined so as to cause a minimum amount of disturbance. After operations are completed, the area shall be cleaned up and left in a neat and satisfactory condition and revegetated as detailed herein.

Existing trees, shrubs, and other plants, that are not to be removed as shown on the plans or specified elsewhere in these Special Provisions and are injured or damaged by reason of the Contractor's operations, shall be replaced in kind by the Contractor at the direction of the Engineer. Replacement planting shall conform to the requirements in Section 20-4.07, Replacement, of the Standard Specifications.

Trees that are indicated on the Plans as necessary for removal are to be first reused on site in channel construction as indicated on the Plans. At the option of the Engineer, removed trees that are not reused during channel construction and shrubs may be reduced to chips. The chipped material shall be used within the limits of disturbance as described in Section 10-2.08, Wood Chip/Tub Grinding Amendment of these Special Provisions.

Damaged or injured plants shall be removed and disposed of outside the project site in accordance with the provisions in Section 7-1.13, Disposal of Material Outside The Highway Right-of-Way, of the Standard Specifications.

Replacement planting of injured or damaged trees, shrubs, and other plants shall be completed not less than twenty (20) working days prior to final payment. Replacement plants shall be watered and maintained as described in Section 10-2.15, Irrigation, to maintain the plants in a healthy condition.

Replacement plants shall be furnished and planted by the Contractor at his expense.

Full compensation for furnishing all labor, materials, tools, equipment, incidentals, and maintenance and for doing all the work involved in the preservation of property shall be considered included in the Contract price paid for various items of work, and no additional compensation will be allowed.

10-1.05 OBSTRUCTIONS

Attention is directed to Sections 8-1.10, Utility and Non-Highway Facilities, and 15, Existing Highway Facilities, of the Standard Specifications.

The Contractor's attention is directed to the existence of certain underground facilities that may require special precautions be taken by the Contractor to protect the health, safety, and welfare of workers and of the public. Facilities requiring special precautions include, but are not limited to: conductors of petroleum products, oxygen, chlorine, and toxic or flammable gases; natural gas in pipelines greater than 6 inches in diameter or pipelines operating at pressures greater than 60 psi [gage]); and underground electric supply system conductors or cables with potential to ground of more than 300 V, either directly buried or in duct or conduit which do not have concentric grounded or other effectively grounded metal shields or sheaths, water mains, gravity sanitary sewer line, sanitary sewer force main, and telephone conduits.

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least two (2) working days, but not more than fourteen (14) calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire, or other structure. Regional notification centers include but are not limited to the following:

Notification Center	Telephone Number
Underground Service Alert-Northern California (USA)	(800) 642-2444 (800) 227-2600

The Contractor is hereby notified that prior to commencing construction, he/she is responsible for contacting all utility companies for verification at the construction site of the locations of all underground facilities that may conflict with the placement of the improvements shown on the Plans. Where potential conflict exists, the Contractor shall pothole existing utilities to determine their elevation. Call “Underground Service Alert" at 800-227-2600 forty-eight (48) hours before any excavation is started. Contractor shall submit underground service alert ticket numbers to Engineer within five (5) days of issuance.

Certain existing utilities are known to conflict with the proposed location of improvements included in this project. It is the Contractor’s responsibility to verify that all existing utilities that conflict with the proposed improvements are identified and relocated. Attention is directed to the provisions of these Special Provisions, the Plans, and the Standard Specifications.

Full compensation for conforming to the requirements of this section, including any potholing or exposing existing utilities shall be included in the various items of work, and no additional compensation will be allowed. No Contractor time delay claims shall be approved due to lack of initial potholing by the Contractor.

10-1.06 MOBILIZATION

Mobilization shall conform to the provisions of Section 11, Mobilization, of the Standard Specifications and these Special Provisions.

Measurement and payment shall be provided in Section 11, Mobilization, of the Standard Specifications and these Special Provisions.

10-1.07 UTILITY RELOCATION

Attention is directed to Section 10-1.01, Order of Work, of these Special Provisions regarding utility location prior to performing work.

Relocation or abandonment of existing out-of-service water and sanitary sewer facilities will be required as part of this project, and relocation of existing electrical and water facilities may be

required in coordination with the utility purveyors. Gas line will also be required to be located and possibly relocated by Southwest Gas.

At known locations indicated on the Plans and identified below, a suspected utility conflict has been identified and is to be potholed by the Contractor. The Contractor shall be responsible for contacting the utility agency to arrange for relocation of the conflicting utility. Contractor shall work with the Engineer to schedule surveyors to be onsite during potholing of conflicts for utility elevation verification. Such utilities may require relocation by the utility agency or its agents. Any delays that may result from failure of the Contractor to pothole a potential utility conflict shall be at the Contractor's expense.

Potholing shall be completed at locations where conflicts are known to and appear to exist and shall be completed a minimum of twenty (20) working days before beginning construction on the proposed improvements which appear to cause conflict.

The Contractor shall be responsible for verifying the location of all existing underground facilities within the project area, that may have potential to conflict with the location of proposed culverts, channels, and other work as shown on the Plans and as indicated by USA markings.

The County has made every effort to show locations of any and all existing surface and subsurface structures. In addition, service connections may require relocation; however these relocations are not specifically indicated on the Plans. Actual field conditions and locations can vary considerably from the Plan locations; therefore, the County cannot, and does not, assume responsibility for the existence or location of any structure such as, but not limited to, pipelines, utilities, and sewers. The Contractor shall be responsible for contacting all agencies and/or owners to verify this information prior to and during construction of any of the proposed improvements. The Contractor shall notify the Engineer in advance of all potholing activities.

If any existing utilities that are not shown by USA or on the Plans as indicated to be relocated by others are found to be in conflict with the proposed location of the improvements shown on the Plans, the Contractor shall contact the Engineer.

The Engineer will either provide the Contractor with new grades to eliminate such conflicts or shall contact the utility agency to arrange for relocation of the conflicting utility. Contractor shall work with the Engineer to schedule surveyors to be onsite during potholing of conflicts for utility elevation verification. Any delays that may result from failure of the Contractor to pothole a potential utility conflict shall be at the Contractor's expense.

The Contract unit price paid for each utility location shall include full compensation for furnishing all labor, potholing, excavation, backfill, restoration, materials, tools, equipment, and incidentals for all work associated with coordinating with the applicable utility companies, and potholing of the facilities as shown on the Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer; and no additional compensation will be allowed. All other work involved in provisions of this Section shall be considered as included in prices paid for the various Contract items of work involved; and no additional compensation will be allowed.

10-1.08 COOPERATION

Attention is directed to Sections 7-1.14, Cooperation, and 8-1.10, Utility and Non-Highway Facilities, and 15, Existing Highway Facilities, of the Standard Specifications.

The following is a list of some but not necessarily all of the utilities that have facilities in the project area.

Company	Utility	Contact Person	Telephone Number
Tahoe City Public Utility District	Water/Sewer	Matt Homolka	(530) 508-6042, Ext. 342
North Tahoe Fire Protection District	Fire District	Steve Hook	(530) 583-6913
Tahoe Park Water Company	Water	Rick DeWante	(530) 581-2623
AT&T	Telephone	Rich Valdez	(530) 582-7943
Liberty Energy	Electricity	Rick Madrid	(530) 546-1736
Charter Communications	Television	Eli Ruiz	(530) 576-8555
Southwest Gas Corporation	Gas	Matt Helmers	(775) 887-2864

Full compensation for conforming to the provisions of this section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

10-1.09 WATER POLLUTION CONTROL

Water pollution control work shall conform to the provisions of Section 7-1.01G, Water Pollution, of the Standard Specifications, these Special Provisions, the Tahoe Regional Planning Agency (TRPA) Handbook of Best Management Practices, Volume III (2012), and the permits established for the project by the California Regional Water Quality Control Board (Lahontan Region) and the Tahoe Regional Planning Agency (provided in Book 3 of 3 of these Special Provisions). These permits, hereafter referred to as the "Permit", regulate storm water discharges associated with construction activities. In case of conflict between any of these requirements, the most stringent shall apply.

Copies of the TRPA BMP Handbook may be obtained from the TRPA web site; http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm. A copy of the TRPA Handbook and the Lake Tahoe Hydrologic Unit General Waste Discharge Requirements (NPDES No. CAG61002) are available for review at the Placer County Department of Public Works, Tahoe Engineer Division, 7717 North Lake Blvd (State Route 28), Kings Beach, CA 96143.

Water pollution control work shall conform to the requirements in the Construction Contractor's Guide and specifications of the Caltrans Storm Water Quality Handbook, dated September 2002, and addenda thereto issued up to and including the date of advertisement of the project, hereafter referred to as the "Handbook".

The Contractor shall become fully informed of and comply with the applicable provisions of the Handbook, Permit, and federal, state, and local regulations that govern the Contractor's operations and storm water discharges from both the project site and areas of disturbance outside the project limits during construction.

Unless arrangements for disturbance of areas outside the project limits are made by the Department and made part of the contract, it is expressly agreed that the Department assumes no responsibility to the Contractor or property owner whatsoever with respect to any arrangements made between the Contractor and property owner to allow disturbance of areas outside the project limits.

The Contractor shall be responsible for the costs and for any liability imposed by law as a result of the Contractor’s failure to comply with the requirements set forth in this section, including but not limited to, compliance with the applicable provisions of the Handbook, Permit, and federal, state, and local regulations. For the purposes of this paragraph, costs and liabilities include, but are not limited to, fines, penalties, and damages whether assessed against the State or the Contractor, including those levied under the Federal Clean Water Act and the State Porter Cologne Water Quality Act. In addition to any remedy authorized by law, so much of the money due the Contractor under the

contract that shall be considered necessary by the Department may be retained by the State of California until disposition has been made of the costs and liabilities.

The retention of money due the Contractor shall be subject to the following:

1. The Department will give the Contractor thirty (30) days notice of its intention to retain funds from any partial payment that may become due to the Contractor prior to acceptance of the contract. Retention of funds from any payment made after acceptance of the contract may be made without prior notice to the Contractor.

2. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.06, Partial Payments, of the Standard Specifications.

3. If the Department has retained funds and it is subsequently determined that the State is not subject to the costs and liabilities in connection with the matter for which the retention was made, the Department shall be liable for interest on the amount retained at the legal rate of interest for the period of the retention.

Conformance with the requirements of this Section 10-1.09, Water Pollution Control, shall not relieve the Contractor from the Contractor's responsibilities, as provided in Section 7, Legal Relations and Responsibilities, and Section 7-1.11, Preservation of Property, of the Standard Specifications.

The Contractor shall, at reasonable times, allow authorized agents of the California Regional Water Quality Control Board (Lahontan Region), State Water Resources Control Board, U.S. Environmental Protection Agency, Tahoe Regional Planning Agency (TRPA), and Placer County, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the construction site and the Contractor's facilities pertinent to the work.

2. Have access to and copy any records that must be kept as specified in the Permit.

3. Inspect the construction site and related soil stabilization practices and sediment control measures.

4. Sample or monitor for the purpose of ensuring compliance with the Permit.

The Contractor shall notify the Engineer immediately upon request from regulatory agencies to enter, inspect, sample, monitor or otherwise access the project site or the Contractor's records.

Storm Water Pollution Prevention Plan Preparation, Approval And Updates

As part of the water pollution control work, a Storm Water Pollution Prevention Plan, hereafter referred to as the SWPPP, is required for this contract work and is a key component of the Lahontan Permit for the project.

The SWPPP has been prepared for the project by a professional with current qualifications (QSD). The SWPPP conforms to the requirements in Section 13, Water Pollution Control, of the 2010 Standard Specifications, the requirements in the TRPA Handbook, the requirements of NPDES No. CAG616002 and these Special Provisions.

The SWPPP is located in Book 3 of 3 of these Special Provisions. It is critical that the Contractor read and be familiar with the requirements and structure of the project SWPPP.

The Contractor will be required, upon award, to provide updated SWPPP information to the County that includes, but is not limited to:

1. Name of General Contractor's company.

2. Name, address, and telephone number of the Contractor's designated Storm Water Pollution Prevention Manager (SWPPM). This person will be the Contractor's designated contact regarding water quality issues, pollution prevention and BMPs for the County during the duration of the contract.

3. List of training, training log and certifications received by Contractor's designated SWPPM. Training can be formal or/and informal covering the key aspects of BMPs and storm water pollution prevention.

4. List of all subcontractors associated with project.

5. Schedule of values for contract items under Water Pollution Control (Bid item No. 10).

6. Any changes or revisions proposed to the SWPPP (i.e., changes to staging or storage areas, erosion/sediment control methods, waste handling/disposal methods, or additional hazardous substances not already listed) that may impact water quality or pollution controls.

Upon the Engineer's acceptance of the above-listed SWPPP information, the Contractor shall be deemed to have fulfilled the requirements of the Water Pollution Control Program. No work having potential to cause water pollution as determined by the Engineer shall be performed until the SWPPP information requested in this section has been accepted by the Engineer.

Contractor shall provide SWPPP information to the Engineer for review and comments no later than five (5) working days after receipt of the Notice to Proceed. Construction ground disturbance shall not begin until the SWPPP information provided by the Contractor has been reviewed and accepted by the Engineer and the Lahontan Regional Water Quality Control Board (if applicable). The Contractor shall allow five (5) working days for the Engineer's review. If revisions are required, as determined by the Engineer, the Contractor shall resubmit the updated SWPPP information within five (5) calendar days of receipt of the Engineer's comments and shall allow five (5) working days for the Engineer to review the revisions. Upon acceptance, the SWPPP will be updated by the Engineer, incorporating all the required Contractor information and applicable approved changes. In order to allow construction activities to proceed, the Engineer may conditionally accept the SWPPP information provided by the Contractor while minor revisions are being completed. Failure to submit acceptable updated SWPPP information shall not in any way delay the start of the contract working days.

The objective of the SWPPP is to identify pollution sources that may adversely affect the quality of storm water discharges associated with the project and to identify, construct, implement and maintain water pollution control measures, hereafter referred to as control measures, to reduce to the extent feasible pollutants in storm water discharges from the construction site both during and after construction is completed under this contract.

The SWPPP incorporates control measures in the following categories:

1. Soil stabilization practices.

2. Sediment control practices.

3. Sediment tracking control practices.

4. Wind erosion control practices.

5. Non-storm water management, waste management and disposal control practices. Specific objectives and minimum requirements for each category of control measures are contained in the TRPA Handbook.

The following contract items of work, as shown on the project Plans or required by the Special Provisions, are incorporated into the SWPPP as critical temporary control measures: Temporary Erosion Control; Temporary Irrigation System; and Maintain Temporary Irrigation System. The Contractor shall consider other control measures to supplement the critical temporary control measures when necessary to meet the pollution control objectives of the SWPPP.

The Engineer may request the Contractor to install additional control measures as requested by the Regional Board, TRPA or by warranted weather conditions. Costs for additional control measures will be paid to the Contractor using the schedule of value rates in the SWPPP information provided.

The following contract items of work, as shown on the project Plans or required by the Special Provisions, shall be incorporated into the SWPPP as permanent post-construction control measures:

- Revegetation Type INF (Infiltration Treatment)
- Revegetation Type UPL (Upload Restoration)
- Revegetation Type SOD (Sod Salvage and Replacement)
- Revegetation Type FLP (Floodplain Restoration)
- Revegetation Type RIP (Riparian Vegetation Salvage and Replacement)

These control measures can be utilized during construction as control measures.

Attention is directed to Section 10-1.01, Order of Work, of these Special Provisions. The Contractor shall consider other control measures to supplement these permanent, post-construction control measures when necessary to meet the pollution control objectives of the SWPPP. The Contractor shall maintain and protect the permanent control measures throughout the duration of the project and shall restore these controls to the lines and grades shown on the plans prior to acceptance of the project.

The SWPPP includes the following items as described in the TRPA Handbook and the Lahontan Permit:

1. Source Identification.
2. Erosion and Sediment Controls.
3. Non-Storm Water Management.
4. Waste Management and Disposal.
5. Maintenance, Inspection and Repair.
6. Training.
7. Name of Contractor and list of Subcontractors.
8. Post-Construction Storm Water Management.
9. Preparer and preparer's QSD/QSP credentials.
10. A copy of the Notice of Intent submitted by the County for this project.
11. Copy of the Lahontan Permit
12. BMP Consideration Checklist.
13. SWPPP Checklist.
14. Schedule of Values (provided by the Contractor per this section requirement)
15. Water Pollution Control Drawings.
16. Rain Event Action Plans
17. Construction Site Monitoring and Reporting Plan

During construction, the Contractor's SWPPP Manager shall assist the Engineer in amending the SWPPP, graphically and in narrative form, whenever there is a change in construction activities or operations which may affect the discharge of significant quantities of pollutants to surface waters, ground waters, municipal storm drain systems, or when deemed necessary by the Engineer. The SWPPP shall also be amended if the project is in violation of any condition of the Lahontan Permit or if laboratory results show that the SWPPP has not effectively achieved the objective of reducing pollutants in storm water discharges. Amendments shall show additional control measures or revised operations, including those in areas not shown in the initially accepted SWPPP, which are required on the project to control water pollution effectively. Amendments to the SWPPP shall be submitted for review and accepted by the Engineer in the same manner specified for the initially accepted SWPPP. Approved amendments shall be dated and logged in the SWPPP. Upon acceptance of the amendment, the Contractor shall implement the additional control measures or revised operations.

Copies of the SWPPP

There will be a minimum of two (2) designated stamped copies of the SWPPP; one copy will be maintained by the Engineer and one copy will be maintained by the Contractor's SWPP Manager and remain at the project site for reference. The Contractor shall keep a copy of the SWPPP and accepted amendments at the project site in a location that is known to personnel and subcontractor personnel. The SWPPP shall be made available upon request of a representative of the Regional Water Quality Control Board (Lahontan Region), State Water Resources Control Board, U.S. Environmental Protection Agency, or TRPA field inspectors. Requests by the public to inspect or produce the SWPPP shall be directed to the Engineer.

Schedule of Values

The Contractor shall submit with the SWPPP information, for acceptance by the Engineer, a schedule of values detailing the cost breakdown of the contract lump sum item for water pollution control. The schedule of values shall reflect the items of work, BMP or control measure types, quantities, and costs for control measures shown in the SWPPP, except for critical temporary controls and permanent control measures which are shown on the project Plans and for which there is a contract item of work. Adjustments in the items of work and quantities listed in the schedule of values shall be made when required to address accepted amendments to the SWPPP.

The sum of the individual amounts for the types of BMPs and/or control measures listed in the schedule of values shall be equal to the contract lump sum price for water pollution control in the accepted project bid.

If approved in writing by the Engineer, the schedule of values will be used to determine progress payments for water pollution control during the progress of the work and as the basis for calculating any adjustment in compensation for the contract item for water pollution control due to changes in the work ordered by the Engineer.

SWPPP Implementation

Upon acceptance of the SWPPP information, the Contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting and maintaining the control measures included in the SWPPP and any amendments thereto and for removing and disposing of temporary control measures. Unless otherwise directed by the Engineer or specified in these Special Provisions, the Contractor's responsibility for SWPPP implementation shall continue throughout any temporary suspension of work ordered in accordance with Section 8-1.05, Temporary Suspension of Work, of the 2006 Standard Specifications and/or as dictated by the Lake Tahoe Basin October 15 grading deadline. Requirements for installation, construction, inspection, maintenance, removal, and disposal of control measures are specified in the TRPA Handbook and these Special Provisions.

Temporary sediment controls placed at existing permanent drainage structures shall be installed in a manner that will not interfere with existing drainage flows.

Soil stabilization practices and sediment control measures, including minimum requirements, shall be provided throughout the winter season, defined as between October 15 and May 1, if applicable. Implementation of soil stabilization practices and sediment control measures for soil-disturbed areas of the project site shall be completed, except as provided for below, no later than five (5) days prior to the beginning of the winter season or upon start of applicable construction activities for projects which begin either during or within five (5) days of the winter season.

Throughout the winter season, the active, soil-disturbed area of the project site shall be no more than 0.01 hectares (1,000 feet^2). The Engineer may approve, on a case-by-case basis, expansions of the active, soil-disturbed area limit. The Contractor shall demonstrate the ability and preparedness to fully deploy soil stabilization practices and sediment control measures to protect soil-disturbed areas of the project site before the onset of precipitation. The Contractor shall maintain a quantity of soil stabilization and sediment control materials on site equal to 100 percent (100%) of that sufficient to protect unprotected, soil-disturbed areas on the project site and shall maintain a detailed plan for the mobilization of sufficient labor and equipment to fully deploy control measures required to protect unprotected, soil-disturbed areas on the project site prior to the onset of precipitation. The Contractor shall include a current inventory of control measure materials and the detailed mobilization plan as part of the SWPPP.

Throughout the winter season, soil-disturbed areas of the project site must be fully protected. Areas that will become non-active either during the winter season or within five (5) days thereof shall be fully protected with soil stabilization practices and sediment control measures within twenty-four (24) hours of the discontinuance of soil disturbing activities or prior to the onset of precipitation, whichever is first to occur.

Throughout the construction period, active soil-disturbed areas of the project site shall be fully protected at the end of each day with soil stabilization practices and sediment control measures unless fair weather is predicted through the following workday. The Contractor's SWPPP Manager shall monitor the weather forecast on a daily basis, with the input and cooperation of the Engineer. The National Weather Service NOAA forecast for the zip code 96148 (Tahoe Vista, California) will be used by the Contractor and the Engineer to determine the prediction of weather. If a 30 percent (30%) or greater chance of precipitation is predicted prior to the end of the following workday, construction scheduling shall be modified as required, and the Contractor shall deploy functioning control measures prior to the onset of the precipitation to ensure soil and potential pollutants are stabilized.

The Contractor shall implement, year-round and throughout the duration of the project, control measures included in the SWPPP for sediment tracking, wind erosion, non-storm water management and waste management and disposal.

The Engineer may order the suspension of construction operations that create water pollution if the Contractor fails to conform to the requirements of this section, as determined by the Engineer.

Maintenance

To ensure the proper implementation and functioning of control measures, the Contractor's SWPP Manager shall regularly inspect and maintain the construction site BMPs and control measures identified in the SWPPP. The Contractor shall identify corrective actions and time frames to address any damaged measures or reinitiate any measures that have been discontinued.

The construction site inspection checklist provided in the SWPPP shall be used to ensure that the necessary measures are being properly implemented, and to ensure that the control measures are functioning adequately. The Contractor's SWPP Manager shall submit one (1) copy of each site inspection record to the Engineer.

During the winter season, inspections of the construction site shall be conducted by the Contractor's SWPP Manager to identify deficient measures, as follows:

1. Prior to forecast storm.

2. After any precipitation that causes runoff capable of carrying sediment from the construction site.

3. At 24-hour intervals during extended precipitation events.

4. Routinely, a minimum of once every two weeks.

If the Contractor's SWPPP Manager or the Engineer identifies a deficiency in the deployment or functioning of a control measure, the deficiency shall be corrected by the Contractor immediately, or by a later date and time if requested by the Contractor in writing and accepted by the Engineer, but not later than the onset of subsequent precipitation events. The correction of deficiencies shall be at no additional cost to the County.

Payment

The contract lump sum price paid for Water Pollution Control shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in installing, constructing, maintaining, sample analysis, removing and disposing of control measures, and winterization as necessary, except those shown on the project plans and for which there is a contract item of work, and excluding developing, preparing, obtaining acceptance of, revising and amending the SWPPP, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Changes in control measures required by an accepted amendment to the SWPPP, except changes to those control measures shown on the project Plans and for which there is a contract item of work, will be considered extra work, in accordance with Section 4-1.03D, Extra Work, of the Standard Specifications and the following:

If the control measure is listed in the accepted SWPPP schedule of values, an adjustment in compensation for the contract item for water pollution control will be made by applying the increase or decrease in quantities to the accepted schedule of values. No adjustment of compensation will be made to the unit price listed for any item in the schedule of values due to any increase or decrease in the quantities, regardless of the reason for the increase or decrease. The provisions in Section 4-1.03B, Increased or Decreased Quantities, of the Standard Specifications, shall not apply to items listed in the schedule of values. If the control measure is not listed in the accepted SWPPP schedule of values, payment will be made by force account.

Those control measures, which are shown on the project plans and for which there is a contract item of work, will be measured and paid for as that item of work.

The Engineer will retain an amount equal to 25 percent (25%) of the estimated value of the contract work performed during estimate periods in which the Contractor fails to conform to the requirements of this section, as determined by the Engineer.

Retentions for failure to conform to the requirements of this section shall be in addition to the other retentions provided for in the contract. The amounts retained for failure of the Contractor to conform to the requirements of this section will be released for payment on the next monthly estimate for partial payment following the date that an accepted SWPPP has been implemented and maintained, and water pollution is adequately controlled, as determined by the Engineer.

10-1.10 WATERING / DUST CONTROL

Watering shall conform to the provisions in Section 17, Watering, of the Standard Specifications and these Special Provisions. Dust control shall conform to the provisions in Section 10, Dust Control, of the Standard Specifications and these Special Provisions. Reference is made to the preliminary SWPPP and the preliminary Control of Water Plan provided in Appendix B. Attention is drawn to Section 10-1.36, Earthwork, of these Special Provisions.

No chemical additives shall be permitted for any watering operations.

At a minimum, dust control shall conform to the provisions in Section 10, Dust Control, of the Standard Specifications and these Special Provisions and the TRPA Handbook of Best Management Practices, Volume III (2012).

Full compensation for furnishing all labor, materials, and equipment associated with watering/dust control shall be considered as included in the Contract lump sum price paid for water pollution control, and no additional compensation will be allowed.

10-1.11 TEMPORARY EROSION CONTROL

Temporary erosion control shall consist of, but not be limited to, constructing facilities identified in the SWPPP, and taking such measures as are necessary to prevent, control, and abate water, mud, and erosion damage to public and private property and also prevent discharges of pollutants to the storm drainage system or to watercourses as a result of the construction of this project. **Straw and hay bales shall not be allowed for temporary erosion control.** Attention is directed to the requirements specified in Section 10-1.09, Water Pollution Control, of these Special Provisions.

Conformance with the requirements of this Section shall in no way relieve the Contractor from his responsibilities, as provided in Section 7-1.01G, Water Pollution, Section 7-1.11, Preservation of Property, and Section 7-1.12, Indemnification and Insurance, of the Standard Specifications.

The requirements in said Section 7-1.01G shall apply to temporary erosion control work. The program for water pollution control to be submitted shall include the Contractor's plans for erosion control measures for all phases of the work.

During construction activities, efforts shall be made to prevent disturbed soil movement by both wind and water. All soil-disturbed areas where grading activities have been completed, shall at minimum be temporarily stabilized with pine needle mulch or wood chips immediately after grading activities have ceased. Should wind erosion become an evident problem, a water truck will be required to maintain moist soil conditions in the construction area.

Temporary erosion control shall be installed as temporary sediment barriers in areas where sheet or overland flows are expected and around stockpiles, including those locations and facilities identified on the Plans or as directed by the Engineer, prior to initiating any other site work.

Attention is directed to the BMP detail sheets of the Plans.

Silt Fence Installation Requirements

A. The height of the barrier shall not exceed three (3) feet. Higher barriers may impound volumes of water sufficient to cause failure of the structure. Ideally, the filter fence shall be placed ten (10) feet away from the toe of slope.

B. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum six (6) inches overlap and securely sealed. See manufacturer's recommendations.

C. Posts shall be spaced a maximum of ten (10) apart at the barrier location or as recommended by the manufacturer if less than ten (10) and driven securely into the ground (minimum of 1 foot). The posts and fence shall be angled ten (10) degrees off vertical up-slope for stability.

D. A trench shall be excavated approximately four (4) inches wide and six (6) inches deep along the line of posts and upslope from the barrier in accordance with manufacturer's recommendations.

E. A wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one (1) inch long, tie wires or hog rings. The wire mesh shall extend into the trench a minimum of two (2) inches and shall not extend more than three (3) feet above the original ground surface.

F. The filter fabric shall be installed on the upslope side of the wire mesh fence and shall be stapled, wired, or tied to the wire fence and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than three (3) feet above the original ground surface. Filter fabric shall not be stapled to existing trees.

G. The trench shall be backfilled and the soil compacted over the filter fabric.

Fiber Roll Wattles Installation Requirements

A. Installation shall follow the manufacturer’s recommendations and shall comply with the following minimum requirements.

B. Prior to wattle installation, the Contractor shall excavate a concave trench along the contour line, three (3) inches to five (5) inches deep. Soil excavated from the trench shall be placed on the uphill or flow side of the roll to prevent water from undercutting the roll.

C. The Contractor shall place the wattle in the trench and stake on both sides of the wattle within eight (8) inches of each end and then at a maximum spacing of four (4) feet, using one (1) by two (2) inch stakes.

D. When more than one wattle is placed, the wattles shall be abutted securely together to provide a tight joint, not overlapped.

Gravel/Sand Bag Installation Requirements

Temporary gravel/sand bag berm shall be installed as follows:

A. Temporary gravel/sand bag berm shall consist of a single layer of gravel/sand bags placed with ends abutted tightly and not overlapped.

B. The bedding area for the temporary gravel/sand bag berm shall be cleared of obstructions including rocks, clods, and debris greater than one (1) inch in diameter prior to installation.

C. Temporary gravel/sand bag berm shall be installed approximately parallel to the slope contour.

D. The last six (6) inches of the temporary gravel/sand bag berm shall be angled up slope.

Installed temporary erosion control features shall be maintained as follows:

A. Filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

B. Should the fabric decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.

C. Sediment deposits and other debris shall be removed when they reach approximately one-half the height of the barrier and disposed of in a manner acceptable to the Engineer, Lahontan, TRPA, and conforms to the requirements of the SWPPP.

D. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be removed to the satisfaction of the Engineer in accordance with the SWPPP.

E. Temporary gravel/sand bag berm shall be maintained to provide a sediment holding capacity of approximately one-third the height of the gravel/sand bag berm above the ground. When sediment exceeds this height or when directed by the Engineer, sediment shall be removed. Removed sediment shall be disposed of in accordance with the SWPPP to the satisfaction of the Engineer.

F. Temporary gravel/sand bag berm shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary gravel/sand bag berm resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

G. Gravel/sand bags shall be replaced when the bag material is ruptured or when the yarn has failed, allowing the bag contents to spill out.

Temporary sediment barriers shall be maintained until the disturbed areas have stabilized. This includes stabilization of new vegetation and the completion of all applicable structures. Final removal of the temporary sediment barriers shall be accepted by the Engineer prior to removal.

When no longer required, as determined by the Engineer, temporary sediment barriers shall become the property of the Contractor and shall be removed and disposed of in conformance with the provisions in Section 7-1.13, Disposal of Material Outside the Highway Right of Way, of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary gravel/sand bag berm shall be backfilled and repaired in conformance with the provisions in Section 15-1.02, Preservation of Property, of the Standard Specifications.

Prior to start of winter season, October 15 through May 1, in all areas of the project where construction has been completed and silt fencing is in place, the silt fencing shall be replaced by wattle as per previously mentioned installation procedure.

Full compensation for furnishing all labor, materials, tools, equipment, incidentals, and maintenance and for doing all the work involved in temporary erosion control shall be considered as included in the Contract price paid for water pollution control, and no additional compensation will be allowed.

10-1.12 TEMPORARY CONCRETE WASHOUT FACILITY

Temporary concrete washout facilities shall be constructed, maintained, and later removed at the locations shown on the SWPPP in conformance with Section 10-1.09, Water Pollution Control, of these Special Provisions and in conformance with details shown on the Plans.

Attention is directed to Section 10-1.09, Water Pollution Control, of these Special Provisions.

Temporary concrete washout facilities shall be one of the water pollution control practices for sediment control. The SWPPP includes the use of a temporary concrete washout facility.

A. Plastic Liner

Plastic liner shall be single ply, new polyethylene sheeting, a minimum of 0.001-inch thick, and shall be free of holes, punctures, tears, or other defects that compromise the impermeability of the material. Plastic liner shall not have seams or overlapping joints.

B. Gravel-filled Bags

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

Specifications	Requirements
Mass per unit area, pounds per square foot, min. ASTM Designation: D 5261	(0.0002)
Grab tensile strength (25-mm grip), kips, min. ASTM Designation: D 4632*	(0.2 kip)
Ultraviolet stability, percent tensile strength retained after 500 hours ASTM Designation: D 4355, xenon arc lamp method	70
*Or appropriate test method for specific polymer	

Gravel bags shall be between 2 feet and 2.5 feet in length and between 1.3 feet and 1.6 feet in width.

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 1/2 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 28 pounds and 218 pounds in mass.

C. Stakes

Stakes shall be wood or metal. Wood stakes shall be untreated fir, redwood, cedar, or pine; shall be cut from sound timber; and shall be straight and free from loose or unsound knots and other defects which would render them unfit for the purpose intended. Wood stakes shall be minimum one (1) inch x two (2) inches in size. Metal stakes may be used as an alternative and shall be a minimum 1/2 inch in diameter. Stakes shall be a minimum four (4)

feet in length. The tops of the metal stakes shall be bent at a 90-degree angle or capped with an orange or red plastic safety cap that fits snugly to the metal stake. The Contractor shall submit a sample of the metal stake and plastic cap, if used, for Engineer's approval prior to installation.

D. Staples

An alternative attachment device such as geotextile pins or plastic pegs may be used instead of staples. The Contractor shall submit a sample of the alternative attachment device for Engineer's approval prior to installation.

E. Sign

Wood posts for the temporary concrete washout facility sign shall conform to the provisions in Section 56-2.02B, Wood Posts, of the Standard Specifications. Lag screws shall conform to the provisions in Section 56-2.02D, Sign Panel Fastening Hardware, of the Standard Specifications.

Plywood shall be freshly painted for each installation with not less than two (2) applications of flat, white paint. Sign letters shown on Sheet BMP-- of the Plans shall be stenciled with commercial quality, exterior black paint. Testing of paint will not be required.

The temporary concrete washout facility shall be installed as follows:

A. The temporary concrete washout facility shall be installed prior to beginning placement of concrete and located a minimum of 50 (fifty) feet from storm drain inlets, open drainage facilities, and water courses unless determined infeasible by the Engineer. The facility shall be located away from construction traffic or access areas at the location shown on the Plans.

B. The sign shall be installed adjacent to each washout facility at a location determined by the Contractor and approved by the Engineer. Signs shall be installed in conformance with the provisions in Section 56-2.03, Construction, and Section 56-2.04, Sign Panel Installation, of the Standard Specifications.

C. The length and width of the temporary concrete washout facility may be increased from the minimum dimensions shown on the Plans, at the Contractor's expense, and upon approval of the Engineer.

D. The temporary concrete washout facility shall be constructed in sufficient size to contain liquid and concrete waste generated by washout operations for concrete wastes. The facility shall be constructed to contain liquid and concrete waste without seepage, spillage, or overflow.

E. As an alternative, a below grade temporary concrete washout facility may be constructed after approval by the Engineer. Berms for below grade temporary concrete washout facilities shall be constructed from compacted native material. Gravel may be used in conjunction with compacted native material.

F. Plastic liner shall be installed in a below grade temporary concrete washout facility.

Details for an alternative temporary concrete washout facility shall be submitted to the Engineer for approval at least seven (7) days prior to installation.

When a temporary concrete washout facility is no longer required for the work, as determined by the Engineer, the hardened concrete and liquid residue shall be removed and

disposed of in conformance with the provisions in Section 15-3.02, Removal Methods, of the Standard Specifications. The temporary concrete washout facility shall become the property of the Contractor and all materials associated with it shall be disposed of in conformance with the provisions in Section 7-1.13, Disposal of Material Outside the Highway Right of Way, of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary concrete washout facility shall be backfilled and repaired in conformance with the provisions in Section 15-1.02, Preservation of Property, of the Standard Specifications.

The temporary concrete washout facility shall be maintained to provide adequate holding capacity with a minimum freeboard of twelve (12) inches. Maintaining the temporary concrete washout facility shall include removing and disposing of hardened concrete and returning the facilities to a functional condition. Hardened concrete materials shall be removed and disposed of in conformance with the provisions 15-3.02, Removal Methods, of the Standard Specifications. Holes, rips, and voids in the plastic liner shall be patched and repaired by taping, or the plastic liner shall be replaced. Plastic liner shall be replaced when patches or repairs compromise the impermeability of the material as determined by the Engineer.

Gravel bags shall be replaced when the bag material is ruptured or when the yarn has failed, allowing the bag contents to spill out.

The temporary concrete washout facility shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary concrete washout facility resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

The Contract lump sum paid for water pollution control shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in constructing temporary concrete washout facility, complete in place, including excavation and backfill, maintenance, and removal of temporary concrete washout facility, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

10-1.13 TEMPORARY FENCING

Temporary fencing shall be provided around areas not to be disturbed including construction limits, trees and vegetation requiring protection, completed construction as work is progressing, and stockpiled topsoil and vegetation and other items as directed by the Engineer.

All trees within the limits of disturbance that are not marked for removal that cannot be adequately protected by temporary fencing will be protected by 2 inches x 1/2 inch wood batter boards placed vertically around the entire circumference of each tree trunk and temporarily fastened with tie-wire or rope in a manner that does not damage the tree.

All trees not to be removed shall be protected with temporary fencing as directed by the Engineer in the field.

Allowable material shall be Tensar Orange Safety Fence, Pearlweave Safety Netting, or an approved equal.

Posts shall be either metal or wood at the Contractor’s option.

Wood posts shall be at a minimum of 1-1/2 inches. x 1-1/2 inches or as accepted by the Engineer.

Temporary fences shall be furnished, constructed, maintained, and later removed as specified in these Special Provisions and as directed by the Engineer.

Except as otherwise specified in this section, temporary fences shall conform to the Plan details and the specifications for permanent fences of similar character as provided in Section 80, Fences, of the Standard Specifications. Fencing should be installed to have a height of 48 inches.

Used materials may be installed providing the used materials are good, sound, and are suitable for the purpose intended, as determined by the Engineer.

Materials may be commercial quality providing the dimensions and sizes of the materials are equal to, or greater than, the dimensions and sizes shown on the Plans or specified herein.

Galvanizing and painting of steel items will not be required.

Treating wood with wood preservatives will not be required.

Concrete footings for metal posts will not be required.

Temporary fences that are damaged from any cause during the progress of the work shall be repaired or replaced by the Contractor at the Contractor's expense.

When no longer required for the work as determined by the Engineer, temporary fences shall be removed.

Removed facilities shall become the property of the Contractor and shall be removed from the site of the work, except as otherwise provided in this section.

Holes caused by the removal of temporary fences shall be backfilled in accordance with the provisions in the second paragraph of Section 15-1.02, Preservation of Property, of the Standard Specifications.

Full compensation for furnishing all labor, material, and equipment necessary to install, move, maintain, remove, and dispose of temporary fences shall be considered as included in the contract lump sum price paid for temporary fencing, and no additional compensation will be allowed.

10-1.14 TEMPORARY CONSTRUCTION ENTRANCE

Temporary construction entrances shall be constructed, maintained, and later removed at the locations approved for construction staging and/or at locations indicated in the SWPPP in conformance with Section 10-1.09, Water Pollution Control, of these Special Provisions and in conformance with details shown on the Plans and these Special Provisions.

Attention is directed to Section 10-1.09, Water Pollution Control, of these Special Provisions.

Temporary construction entrances shall be one of the water pollution control practices for tracking control. The SWPPP includes the use of temporary construction entrances.

At the option of the Contractor, temporary construction entrances shall be Type 1 or Type 2 and constructed as described herein and as depicted on as detailed on the BMP Sheets of the Plans.

A. Fabric (for Type 1 Temporary Construction Access)

Temporary entrance fabric shall conform to the following requirements:

Temporary entrance fabric shall be manufactured from polyester, nylon, or polypropylene material or any combination thereof. Temporary entrance fabric shall be a non-woven, needle-punched fabric, free of any needles that may have broken off during the manufacturing process. Temporary entrance fabric shall be permeable and shall not act as a wicking agent.

Temporary entrance fabric shall be manufactured from virgin, or recycled or a combination of virgin and recycled, polymer materials. No virgin or recycled materials shall contain biodegradable filler materials that can degrade the physical or chemical characteristics of the finished fabric. The Engineer may order tests to confirm the absence of biodegradable filler materials in conformance to the requirements in ASTM Designation: E 204 (Fourier Transformed Infrared Spectroscopy - FTIR).

B. Rocks (for Type 1 Temporary Construction Access)

Rocks shall be angular to sub-angular in shape and shall conform to the material quality requirements in Section 72-2.02, Materials, of the Standard Specifications for apparent specific gravity, absorption, and durability index. Rocks used for the temporary entrance shall conform to the following sizes:

Square Screen Size	Percent Passing
6 inches	100
3 inches	0-20

C. Corrugated Steel Panels (for Type 2 Temporary Construction Access)

Corrugated steel panels shall be prefabricated and shall be pressed or shop welded with a slot or hooked section to facilitate coupling at the ends of the panels.

Installation

A Type 1 temporary construction entrance shall be installed as follows:

A. Prior to placing the temporary entrance fabric, the areas shall be cleared of all trash and debris. Vegetation shall be removed to the ground level. Trash, debris, and removed vegetation shall be disposed of in conformance with the provisions in Section 7-1.13, Disposal of Material Outside Highway Right of Way, of the Standard Specifications.

B. A sump shall be constructed within 20 feet of each temporary construction entrance as shown on the Plans. The exact location of the sump will be determined by the Engineer.

C. Before placing the temporary entrance fabric, the ground shall be graded to a uniform plane. The relative compaction of the top 1.5 feet shall not be less than 90 percent (90%). The ground surface shall be free of sharp objects that may damage the temporary entrance fabric and shall be graded to drain to the sump as shown on the Plans.

D. Temporary entrance fabric shall be positioned longitudinally along the alignment of the entrance, as directed by the Engineer.

E. The adjacent ends of the fabric shall be overlapped a minimum length of 12 inches.

F. Rocks to be placed directly over the fabric shall be spread in the direction of traffic, longitudinally and along the alignment of the temporary construction entrance.

G. During spreading of the rocks, vehicles or equipment shall not be driven directly on the fabric. A layer of rocks of minimum 6 inches thick shall be placed between the fabric and the spreading equipment to prevent damage to the fabric. Fabric damaged during rock placement shall be repaired by placing a new piece of fabric over the damaged area. The piece of fabric shall be large enough to cover the damaged area and provide a minimum 18 inches overlap on all edges.

A Type 2 temporary construction entrance shall be installed as follows:

A. A minimum of six (6) coupled panel sections shall be installed for each temporary construction entrance. Prior to installing the panels, the ground surface shall be cleared of all debris to ensure uniform contact with the ground surface.

Details for an alternative temporary construction entrance shall be submitted to the Engineer for approval at least seven (7) days prior to installation.

If buildup of soil and sediment deter the function of the temporary construction entrance, the Contractor shall immediately remove and dispose of the soil and sediment and install additional corrugated steel panels and/or spread additional fabric and rocks to increase the capacity of the temporary construction entrance at the Contractor's expense.

When no longer required as determined by the Engineer, temporary construction entrances shall become the property of the Contractor and be removed and disposed of in conformance with the provisions in Section 7-1.13, Disposal of Material Outside the Highway Right of Way, of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary construction entrance, including the sumps, shall be backfilled and repaired in conformance with the provisions in Section 15-1.02, Preservation of Property, of the Standard Specifications. The entrances located on existing unpaved areas shall be restored in accordance with Section 10-2.00, Revegetation, of these Special Provisions.

While the temporary construction entrance is in use, pavement shall be cleaned and sediment removed at least once a day and as often as necessary when directed by the Engineer. Soil and sediment or other extraneous material tracked onto existing pavement shall not be allowed to enter drainage facilities.

Maintenance

The Contractor shall maintain each temporary construction entrance throughout the Contract or until removed as directed by the Engineer. The Contractor shall prevent displacement or migration of the rock surfacing or corrugated steel panels. Any significant depressions resulting from settlement or heavy equipment shall be repaired by the Contractor, as directed by the Engineer.

Each temporary construction entrance shall be maintained to minimize tracking of soil and sediment onto existing public roads.

Each temporary construction entrance shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary construction entrance resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

Full compensation for furnishing all labor, materials, tools, equipment, incidentals, and maintenance and for doing all the work involved in the temporary construction entrance complete in place, including excavation and backfill, maintenance, and removal of temporary construction entrance as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer and shall be considered included in the Contract price paid for water pollution control, and no additional compensation will be allowed.

10-1.15 TURBIDITY CURTAIN

A turbidity curtain shall be constructed, maintained, and later removed at the outlet of the project area at Lake Tahoe at the location shown on the Plans in conformance with Section 10-1.09, Water Pollution Control, of these Special Provisions and in conformance with details shown on the Plans and these Special Provisions.

Attention is directed to Section 10-1.09 Water Pollution Control, of these Special Provisions. The turbidity curtain is intended to serve as the last line of defense in the water pollution control element of this project.

The turbidity curtain shall be Elastec/American Marine's "Fastwater Screen" or approved equal installed in accordance with the manufacturer's recommendations and under the direction of the Engineer.

When no longer required as determined by the Engineer, the turbidity curtain shall become the property of the Contractor and be removed and disposed of in conformance with the provisions in Section 7-1.13, Disposal of Material Outside the Highway Right of Way, of the Standard Specifications.

Full compensation for furnishing all labor, materials, tools, equipment, incidentals, and maintenance and for doing all the work involved in the turbidity curtain complete in place, including installation, maintenance, and removal of turbidity curtain as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer and shall be considered included in the Contract unit price paid per each for turbidity curtain, and no additional compensation will be allowed.

10-1.16 CONSTRUCT DETOUR

A detour shall be constructed and maintained at the location of and to the typical section shown on the Plans, according to the provisions in Section 4-1.04, Detours, of the Standard Specifications, and these Special Provisions.

Imported borrow used in the detour shall conform to the provisions in Section 19-7-02, Imported Burrow, of the Standard Specifications.

The Contractor shall furnish and install drainage culverts sufficient to maintain detour and the normal flow of 2 cubic feet per second (CFS). Culverts shall conform to the provisions in Section 10-1.17, Temporary Culverts, of these Special Provisions.

Aggregate base used in the detour shall be Class 2 and shall conform to the provisions in Section 26, Aggregate Bases, of the Standard Specifications.

Prime coat used in the detour shall conform to the provisions in Section 39-4.02, Prime Coat and Paint Binder (Tack Coat), of the Standard Specifications. The grade of liquid asphalt shall be SC-250 or as determined by the Engineer.

Where ordered by the Engineer, sand cover conforming to the requirements in Section 19-3.025B, Sand Bedding, of the Standard Specifications shall be spread uniformly over areas where prime coat has been applied. Sand shall be spread at the approximate rate of from 12 to 14 pounds per square yard.

Class 1 delineators used in the detour shall conform to the provisions in Section 82, Markers and Delineators, of the Standard Specifications and these Special Provisions.

Class 1 delineators on flexible posts shall be as specified in Section 8-1.02, Prequalified and Tested Signing and Delineation Materials, of these Special Provisions. Flexible posts shall be made from a flexible white plastic which shall be resistant to impact, ultraviolet light, ozone, and hydrocarbons. Flexible posts shall resist stiffening with age and shall be free of burns, discoloration, contamination, and other objectionable marks or defects, which affect appearance or serviceability.

Reflective sheeting for metal and flexible target plates shall be the reflective sheeting designated for channelizers, markers, and delineators specified in Section 8-1.02, Prequalified and Tested Signing and Delineation Materials, of these Special Provisions.

The Contractor shall maintain the detour to ensure a stabilized surface which will be reasonably smooth, even, and dust free for use by public traffic at all times.

Full compensation for constructing and maintaining the detour, complete and in place, as shown on the Plans and in conformance with these Special Provisions, including earthwork; aggregate base; prime coat; sand cover; and delineators; shall be considered as included in the contract lump sum price paid for construct detour line item, and no additional compensation will be allowed. The detour shall remain in use until the new roadway and approaches.

10-1.17 TEMPORARY CULVERTS

Temporary culverts shall be furnished, installed, maintained, and later removed as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer.

The size and type of temporary culvert to be installed at each location shall be at the option of the Contractor. However, the culvert shall be capable of sustaining the intended load and of discharging a quantity of water equivalent to the type and size of culvert shown on the Plans. Adequacy as to equivalent strength and capacity shall be subject to approval, in writing, by the Engineer.

Used materials may be installed provided the used materials are good, sound, and are suitable for the purpose intended, as determined by the Engineer.

Excavation and backfill for temporary culverts shall be performed in a manner that will provide adequate support for the culvert with a firm, non-settling foundation for the roadbeds to be constructed over the culverts.

Temporary culverts that are damaged from any cause during the progress of the work shall be repaired or replaced by the Contractor at the Contractor's expense.

When no longer required for the work as determined by the Engineer, temporary culverts shall be removed. Removed facilities shall become the property of the Contractor and shall be removed from the site of work, except as otherwise provided in this section.

Removed temporary culverts that are not damaged may be installed in the permanent work provided the culverts conform to the requirements specified for the permanent work and the culverts are new when installed as temporary culverts.

Trenches and pits caused by the removal of temporary culverts shall be backfilled in conformance with the provisions in the second paragraph of Section 15-1.02, Preservation of Property, of the Standard Specifications.

Full compensation for maintaining, removing, and disposing of temporary culverts shall be considered as included in the contract prices paid for various items of work that require temporary culverts, and no additional compensation will be allowed.

10-1.18 CONSTRUCTION AREA SIGNS

Construction area signs shall be furnished, installed, maintained, and removed when no longer required in accordance with the provisions in Section 12, Construction Area Traffic Control Devices, of the Standard Specifications and these Special Provisions.

The Contractor shall notify the appropriate regional notification center for operators of subsurface installations at least two (2) working days, but not more than fourteen (14) calendar days, prior to commencing excavation for construction area sign posts. The regional notification centers include but are not limited to the following:

Notification Center	Telephone Number
Underground Service Alert - Northern California (USA)	(800) 227-2600 (800) 642-2444

All excavations required to install construction area signs shall be performed by hand methods without the use of power equipment, except that power equipment may be used if it is determined there are no utility facilities in the area of the proposed post holes.

Sign substrates for stationary mounted construction area signs may be fabricated from fiberglass-reinforced plastic as specified under Section 8-1.02, Prequalified and Tested Signing and delineation Materials, of these Special Provisions.

Type IV reflective sheeting for sign panels for portable construction area signs shall conform to the requirements specified under Section 8-1.02, Prequalified and Tested Signing and delineation Materials, of these Special Provisions.

The term "construction area signs" shall also include temporary object markers required for the direction of public traffic through or around the work during construction. Object markers listed or designated on the Contractor's accepted traffic control plan, or as directed by the Engineer, shall be considered to be signs and shall be furnished, erected, maintained, and removed by the Contractor in the same manner specified for construction area signs and the following:

A. Object markers shall be stationary mounted on wood or metal posts in accordance with the details shown on the plans and the requirements in Section 82, Markers and Delineators, of the Standard Specifications.

B. Marker panels for Type N, Type P, and Type R object markers shall conform to the requirements for sign panels for stationary mounted signs.

C. Target plates for Type K and Type L object markers and posts, reflectors, and hardware shall conform to the requirements in Section 82, Markers and Delineators, of the Standard Specifications but need not be new.

Full compensation for construction area signs required for contract items and work within the project limits shall be included in the contract price paid for traffic control system, and no additional compensation will allowed.

Construction area signs shown on the Contractor's accepted traffic control plan, or as directed by the Engineer, will be included in the contract price paid for traffic control system and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in furnishing construction area signs required for the direction of public traffic through or around the work and for erecting or placing, maintaining (including covering and uncovering as needed) and, when no longer required, removing construction area signs.

10-1.19 CONSTRUCTION ACCESS / STAGING AREAS

The Contractor shall take care within the right-of-way to cause the least amount of disturbance possible to the existing facilities including trees, fences, and slopes.

When no longer in use, the construction access area shall be returned, as nearly as possible, to the lines and grades which originally existed.

The reclaimed access and staging areas as applicable shall be treated with Upland Seed Mix (Revegetation Type UPL) as shown on the Plans. If not shown on the Plans, the reclaimed areas shall be treated with Revgetation Type UPL as provided for in Section 10-2.00, Revegetation, of these Special Provisions.

Full compensation for construction access, including restoration and erosion along with temporary fences and gates installed for the convenience of the Contractor, shall be considered as included in the contract price paid for the various other items of work, and no additional compensation will be allowed.

10-1.20 TRAFFIC CONTROL

As part of the work, a traffic control plan is required for this Contract. The traffic control plan shall conform to the requirements of the Caltrans Encroachment Permit, the Standard Specifications, and these Special Provisions. A preliminary traffic control plan was prepared by the Project Engineer and is included in the Plans. The Contractor will be required, upon award, to update the traffic control plan with information that includes, but is not limited to any changes or revisions to the preliminary traffic control plan.

Full compensation for traffic control required for Contract items and work within the project limits shall be included in the Contract lump sum price paid for traffic control system, and no additional compensation will be allowed.

10-1.21 CONSTRUCTION AREA TRAFFIC CONTROL DEVICES

Flagging, signs, and all other traffic control devices furnished, installed, maintained, and removed when no longer required shall conform to the provisions in Section 12, Construction Area Traffic Control Devices, of the Standard Specifications and these Special Provisions.

Category 1 traffic control devices are defined as those devices that are small and lightweight (less than 100-lbs) and have been in common use for many years. The devices shall be known to be crashworthy by crash testing, crash testing of similar devices, or years of demonstrable safe performance. Category 1 traffic control devices include traffic cones, plastic drums, portable delineators, and channelizers.

If requested by the Engineer, the Contractor shall provide written self-certification for crashworthiness of Category 1 traffic control devices. Self-certification shall be provided by the manufacturer or Contractor and shall include the following: date; federal aid number (if applicable); expenditure authorization; district; county; route of project limits; company name of certifying vendor, street address, city, state, and zip code; printed name, signature, and title of certifying person; and an indication of which Category 1 traffic control devices will be used on the project. The Contractor may obtain a standard form for self-certification from the Engineer.

Category 2 traffic control devices are defined as those items that are small and light weight (less than 100-lbs) and that are not expected to produce significant vehicular velocity change but may otherwise be potentially hazardous. Category 2 traffic control devices include barricades and portable sign supports.

Category 2 devices purchased on or after October 1, 2000 shall be on the Federal Highway Administration (FHWA) Acceptable Crashworthy Category Hardware for Work Zones list. This list is maintained by FHWA and can be located at the following internet address:

http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/wzd/

The Department maintains a secondary list at the following internet address:

http://www.dot.ca.gov/hq/traffops/signtech/signdel/pdf.htm

Category 2 devices that have not received FHWA acceptance and were purchased before October 1, 2000, may continue to be used until they complete their useful service life or until January 1, 2003, whichever comes first. Category 2 devices in use that have received FHWA acceptance shall be labeled with the FHWA acceptance letter number and the name of the manufacturer by the start of the project. The label shall be readable. After January 1, 2003, all Category 2 devices without a label shall not be used on the project.

If requested by the Engineer, the Contractor shall provide a written list of Category 2 devices to be used on the project at least five (5) days prior to beginning any work using the devices. For each type of device, the list shall indicate the FHWA acceptance letter number and the name of the manufacturer.

Full compensation for providing self-certification for crashworthiness of Category 1 traffic control devices and for providing a list of Category 2 devices used on the project and labeling Category 2 devices as specified shall be considered as included in the prices paid for the various contract items of work requiring the use of the Category 1 or Category 2 traffic control devices, and no additional compensation will be allowed.

10-1.22 MAINTAINING TRAFFIC

Attention is directed to Sections 7-1.08, Public Convenience, 7-1.09, Public Safety, and 12, Construction Area Traffic Control Devices, of the Standard Specifications and to Section 5-1.09, Public Safety, and Section 10-1.01, Order of Work, elsewhere in these Special Provisions. Nothing in these Special Provisions shall be construed as relieving the Contractor from his responsibility as provided in said Section 7-1.09 of the Standard Specifications.

At the end of each working day if a difference in excess of 4-inches exists between the elevation of the existing pavement and the elevation of any excavation within 5 feet of the traveled way, material shall be placed and compacted against the vertical cuts adjacent to the traveled way. During excavation operations, native material may be used for this purpose; however, once the placing of the structural section commences, structural material shall be used. The material shall be placed to the level of the elevation of the top of existing pavement and tapered at a slope of 1:4

(vertical:horizontal) or flatter to the bottom of the excavation. Treated base shall not be used for the taper.

Full compensation for placing the material on a 1:4 (vertical:horizontal) slope, regardless of the number of times it is required and subsequent removing or reshaping of the material to the lines and grades shown on the plans shall be considered as included in the contract price paid for the materials involved and no additional compensation will be allowed. No payment will be made for material placed in excess of that required for the structural section as identified in the project plans.

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

Access to driveways, parking lots, and businesses within the project area shall be maintained at all times during the entire duration of construction, unless otherwise approved by the Engineer. If a road closure is necessary to facilitate construction activities ,the Contractor shall hand deliver notices to the effected property owners and/or property leases no later than seven (7) days and at least forty-eight (48) hours prior to closing the street. The notices shall indicate construction schedule and the restrictions related to ingress and egress. The Contractor is responsible for notification of emergency services prior to any road closure. The Contractor is also responsible for supplying “No Parking Signs” along sections of road to be closed seven (7) days prior to the beginning of work on that section of road. The Engineer will assist the Contractor in identifying the effected property owners.

The Contractor shall notify local authorities of the Contractor's intent to begin work at least seven (7) days before work is to begin. The Contractor shall cooperate with local authorities relative to handling traffic through the area and shall make all arrangements relative to keeping the working area clear of parked vehicles.

Lane closures shall conform to the provisions in the Section 10-1.20, Traffic Control, of these Special Provisions.

Whenever vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed with fluorescent traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25 feet intervals to a point not less than 25 feet past the last vehicle or piece of equipment. A minimum of nine (9) cones or portable delineators shall be used for the taper. A C23 (Road Work Ahead) or C24 (Shoulder Work Ahead) sign shall be mounted on a portable sign stand with flags. The sign shall be placed where designated by the Engineer and/or as required as part of the Contractor’s accepted traffic control plan.

A minimum of one (1) paved traffic lane, not less than 10 feet wide, shall be open for use by public traffic. When construction operations are not actively in progress, not less than two such lanes shall be open to public traffic.

The full width of the traveled way shall be open for use by public traffic on Saturdays, Sundays, designated legal holidays, after 4:00 p.m. on Fridays, and when construction operations are not actively in progress.

Designated legal holidays are: January 1st, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, November 11th, Thanksgiving Day, and December 25th. When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When November 11th falls on a Saturday, the preceding Friday shall be a designated legal holiday.

The Contractor shall provide access to parking lots, driveways, and businesses within the project area during the entire length of construction. Access to parking lots, driveways, and businesses within the project area shall be detailed in the Contractor's traffic control plan for review and acceptance by the Engineer.

When traffic cones or delineators are used to delineate a temporary edge of traffic lane, the line of cones or delineators shall be considered to be the edge of the traffic lane. However, the Contractor shall not reduce the width of an existing lane to less than 10 feet without written approval from the Engineer. The lane closure provisions of this section shall not apply if the work area is protected by a temporary railing or barrier.

Minor deviations from the requirements of this section concerning hours of work which do not significantly change the cost of work may be permitted upon the written request of the contractor if, in the opinion of the Engineer, public traffic will be better served and the work expedited. These deviations shall not be adopted by the Contractor until the Engineer has approved the deviations in writing. Other modifications will be made by contract change order.

Pedestrian and bicycle access facilities shall be provided through the construction areas within the project right-of-way as specified herein and included in the Contractor's traffic control plan for review and acceptance by the Engineer. The Contractor shall provide signs requiring bicyclists to walk their bicycles through the construction areas. The signs shall be in accordance with the provisions in Section 12-3.06, Construction Area Signs, Section 12-3.06A, Stationary Mounted Signs of the Standard Specifications and these Special Provisions. Messages for these signs shall be included in the Contractor's traffic control plan for review and acceptance by the Engineer. Pedestrian walkways shall be provided with surfacing of asphalt concrete, portland cement concrete, timber or as accepted by the Engineer on the Contractor's traffic control plan. Surfacing shall be skid resistant and free of irregularities. Hand railings shall be provided on each side of the pedestrian walkways as necessary to protect pedestrian traffic from hazards due to construction operations or adjacent vehicular traffic. Railings, as required for pedestrian protection, shall be constructed of wood, S4S and shall be painted white. Railings and walkways shall be maintained in good condition by the Contractor. The Contractor shall remove and dispose of all pedestrian access facilities when no longer required and approved by the Engineer. The Contractor shall revegetate areas disturbed by the pedestrian access facilities in accordance with the requirements of Section 10-2.00, Revegetation, and Section 10-1.04, Preservation of Property, of these Special Provisions. Full compensation for providing, constructing, removing, revegetating, and disposing of said pedestrian facilities shall be considered as included in the prices paid for the various contract items of work involved, and no additional compensation will be allowed.

Full compensation for all flagging costs required for contract items and work within the project limits shall be included in the contract price paid for the traffic control system line item, and no additional compensation will be allowed.

Full compensation for maintaining traffic required shall be included in the contract price paid for traffic control system, and no additional compensation will be allowed. Full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in maintaining traffic will be included in the contract price paid for under various items for traffic control traffic control system, and no additional compensation will be allowed.

10-1.23 TRAFFIC CONTROL SYSTEM

A traffic control system shall consist of closing traffic lanes in accordance with the details shown on the plans; the provisions of Section 12, Construction Area Traffic Control Devices, of the Standard Specifications; and the provisions under Section 10-1.01, Order of Work, Section 10-1.18, Construction Area Signs, and Section 10-1.22, Maintaining Traffic, and elsewhere in these Special Provisions.

Adequate temporary pavement markings shall be maintained along roadways in temporary traffic control zones designated in the Contractor's traffic control plan or as directed by the Engineer. Any conflicting markings shall be completely removed as identifiable pavement markings under daylight or at night, wet or dry conditions.

Any existing traffic stripes, pavement markings, or pavement markers that are obliterated or removed by the Contractor or as directed by the Engineer shall be reinstalled by the Contractor before the completion of this project.

Before obliterating any pavement delineation that is to be replaced on the same alignment and location, as described in the Contractor's accepted traffic control plan or as determined by the Engineer, the pavement delineation shall be referenced by the Contractor with a sufficient number of control points to reestablish the alignment and location of the new pavement delineation. The references shall also include the limits or changes in striping pattern, including one- and two-way barrier lines, limit lines, crosswalks, and other pavement markings. Full compensation for referencing pavement delineation shall be considered as included in the contract prices paid for other items of work, and no additional compensation will be allowed.

Before applying any asphaltic emulsion that would obliterate existing traffic stripes, the Contractor shall place temporary raised pavement markers on the existing traffic stripes as specified in Section 10-1.27, Temporary Pavement Delineation, elsewhere in these Special Provisions.

Wherever final sweeping or brooming of the seal coat surface has been completed, permanent traffic stripes and pavement markings shall be completed within ten (10) calendar days.

The provisions in this section will not relieve the Contractor from his responsibility to provide such additional devices or take such measures as may be necessary to comply with the provisions in Section 7-1.09, Public Safety, of the Standard Specifications.

During traffic stripe operations and pavement marker placement operations using bituminous adhesive, traffic shall be controlled, at the option of the Contractor, with either stationary or moving type lane closures. During all other operations, traffic shall be controlled with stationary type lane closures. The Contractor's attention is directed to the provisions in Section 84-1.04, Protection From Damage, and Section 85-1.06, Placement, of the Standard Specifications.

If any component in the traffic control system is displaced or ceases to operate or function as specified from any cause during the progress of the work, the Contractor shall immediately repair said component to its original condition or replace said component and shall restore the component to its original location.

Traffic Control Plan

The traffic control plan for controlling the traffic and parking, including detours and lane closures on County roadways, applicable bikeways, pedestrian facilities, and state highways in conjunction with the work shall be submitted by the Contractor. The traffic control plan shall be consistent with all specific site conditions and work conditions for this project.

Contractor shall submit an electronic copy in either Microsoft Word or PDF format of the proposed traffic control plan to the Engineer for review and comments no later than five (5) working days after the pre-construction conference. Construction shall not begin until the traffic control plan has been reviewed and accepted by the Engineer. The Contractor shall allow five (5) working days for the Engineer’s review. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the traffic control plan within five (5) calendar days of receipt of the Engineer’s comments and shall allow five (5) working days for the Engineer to review the revisions. Upon

acceptance of the traffic control plan by the Engineer, a final electronic copy of the traffic control plan, incorporating all the required changes, shall be submitted to the Engineer. Failure to submit an acceptable traffic control plan shall not in any way delay the start of the contract working days.

The site-specific traffic control plan shall be prepared and stamped by a civil engineer or traffic engineer licensed to practice engineering in the State of California. If the Contractor makes significant changes to the accepted traffic control plan, these changes must also be prepared and stamped by a licensed civil engineer or traffic engineer.

The traffic control plan shall conform to Plans, Standard Specifications, the Manual of Traffic Controls, cited in Section 12, Construction Area Traffic Control Devices, of the Standard Specifications, the Manual of Traffic Controls, cited in Section 12 of the Standard Specifications, Caltrans Standard Plan T13 and these Special Provisions.

The traffic control plan shall be accepted by the Engineer prior to the start of construction. The Contractor shall not proceed with any construction until proper traffic control has been provided to the satisfaction of the Engineer. Failure to comply with any specification herein or with direction from the Engineer may result in stoppage of the work until compliance is restored.

Any lost days due to improper traffic control will be charged against the Contractor's allowable working days.

The Contractor's traffic control plan shall include and detail pedestrian access facilities through the construction areas within the project right-of-way in accordance with Section 10-1.22, Maintaining Traffic, of these Special Provisions for review and acceptance by the Engineer.

The traffic control plan shall include preparation of a plan for the work to be performed within the project limits including, but not limited to, all flagging, signs, portable message signs, barricades, temporary striping, cones, pedestrian access facilities, and other incidentals associated with, but not limited to, the culverts, utilities, and storm drain construction and abandoning existing culverts.

Acceptance by the Engineer of the submitted traffic control plan shall in no way relieve the Contractor of his responsibility for any and all safety requirements conforming to the Standard Specifications, these Special Provisions, or others of any public authority having jurisdiction for the safety of persons and property or to protect them from damage, injury or loss.

Full compensation for furnishing the traffic control plan shall be considered as included in the lump sum paid for the contract item traffic control system, and no additional compensation will be allowed.

Stationary Type Lane Closure

When lane closures are made for work periods only, at the end of each work period, all components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way, shall be removed from the traveled way and shoulder. If the Contractor so elects, the components may be stored at selected central locations, accepted by the Engineer, within the limits of the project right-of-way.

Each vehicle used to place, maintain, and remove components of a traffic control system on multi-lane highways shall be equipped with a Type II flashing arrow sign and radios which shall be in operation when the vehicle is being used for placing, maintaining, or removing the components. Vehicles equipped with Type II flashing arrow sign not involved in placing, maintaining, or removing the components when operated within a stationary type lane closure shall only display the caution display mode. The sign shall be controllable by the operator of the vehicle while the vehicle is in motion. The flashing arrow sign shown on the plans shall not be used on the vehicles which are

doing the placing, maintaining, and removing of components of a traffic control system and shall be in place before a lane closure requiring its use is completed.

When flaggers are required, they shall have radios and be in contact with personnel in the work area.

The Contract lump sum price paid for traffic control system shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for performing all the work involved in installing, constructing, maintaining, removing and disposing of traffic control measures, and shall include developing, preparing, obtaining acceptance of, revising and amending the traffic control plan, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Moving Type Lane Closure

Flashing arrow signs used in moving lane closures shall be truck mounted. Changeable message signs used in moving lane closure operations shall conform to Section 12-3.12, Portable Changeable Message Signs, of the Standard Specifications, except the signs shall be truck mounted and the full operation height of the bottom of the sign may be less than 7 feet above the ground but should be as high as practicable.

Flashing arrow signs shall be in the caution display mode when used on two-lane two-way highways.

Truck-mounted attenuators (TMA) for use in moving lane closures shall be any of the following approved models, or equal:

1. Hexfoam TMA Series 3000, Alpha 1000 TMA Series 1000, Alpha 2001 TMA Series 2001, manufactured by Energy Absorption Systems, Inc., One East Wacker Drive, Chicago, IL 60601-2076, telephone number (312) 467-6750.

2. Distributor(Northern): Traffic Control Service, Inc., 8585 Thys Court, Sacramento, California 95828, telephone number (800) 884-8274, fax number (916) 387-9734.

3. Distributor (Southern): Traffic Control Service, Inc., 1881 Betmor Lane, Anaheim, California 92805, telephone number (800) 222-8274.

4. Cal T-001 Model 2 or Model 3, manufacturer and distributor; Hexcel Corporation, 11711 Dublin Boulevard, P.O. Box 2312, Dublin, California 94568, telephone number (510) 828-4200.

5. Renco Rengard Model Nos. CAM 8-815 and RAM 8-815, manufacturer and distributor, Renco Inc., 1582 Pflugerville Loop Road, P.O. Box 730, Pflugerville, TX 78660-0730, telephone number (800) 654-8182.

Each TMA shall be individually identified with the manufacturer's name, address, TMA model number, and a specific serial number. The names and numbers shall each be a minimum 8 inches high and located on the left (street) side at the lower front corner. The TMA shall have a message next to the name and model number in 8 inches high letters which states, "The bottom of this TMA shall be a minimum of 4 feet above the ground at all points for proper impact performance." Any TMA that is damaged or appears to be in poor condition shall not be used unless re-certified by the manufacturer. The Engineer shall be the sole judge as to whether used TMAs supplied under this contract need re-certification. Each unit shall be certified by the manufacturer to meet the requirements for TMAs in accordance with the standards established by the Transportation Laboratory (Caltrans).

Approvals for new TMA designs proposed as equal to the above-approved models shall be in accordance with the procedures (including crash testing) established by the Transportation Laboratory (Caltrans). For information regarding submittal of new designs for evaluation, contact: Transportation Laboratory (Caltrans), 5900 Folsom Boulevard, Sacramento, California 95819.

New TMAs proposed as equal to approved TMAs or approved TMAs determined by the Engineer to need re-certification shall not be used until approved or re-certified by the Transportation Laboratory (Caltrans).

In lieu of Section 12-2.02 Flagging Costs, of the Standard Specifications, full compensation for all flagging costs required for contract items shall be included in the contract price paid for traffic control system, and no additional compensation will be allowed.

Full compensation for traffic control system required for contract items shall be included in the contract lump sum price paid for Traffic Control System, and no additional compensation will be allowed.

Full compensation for furnishing all labor (including flagging costs), materials (including signs), tools, equipment, and incidentals and for doing all work involved in placing, removing, storing, maintaining, moving to new locations, replacing and disposing of the components of the traffic control system as shown on the plans, as shown on the Contractor's accepted traffic control plan, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer will be included in the contract price paid for traffic control system, and no additional compensation will be allowed.

Attention is directed to Sections 9-1.06, Partial Payments, and 9-1.07, Payment After Acceptance, of the Standard Specifications.

The adjustment provisions in Section 4-1.03, Changes, of the Standard Specifications shall not apply to the item of traffic control system. Adjustments in compensation for traffic control system will be made only for increased or decreased traffic control system required by changes ordered by the Engineer and will be made on the basis of the cost of the increased or decreased traffic control necessary. The adjustment will be made on a force account basis as provided in Section 9-1.03, Force Account Payment, of the Standard Specifications for increased work and estimated on the same basis in the case of decreased work.

Traffic control system required by work that is classed as extra work, as provided in Section 4-1.03D, Extra Work, of the Standard Specifications, will be paid for as a part of the extra work.

10-1.24 TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE

A traffic control system shall consist of closing traffic lanes in accordance with the details shown on the Plans, the provisions of Section 12, Construction Area Traffic Control Devices, of the Standard Specifications, the provisions of Section 10-1.22, Maintaining Traffic, and Section 10-1.18, Construction Area Signs, of these Special Provisions.

The provisions in this section will not relieve the Contractor from the responsibility to provide such additional devices or take such measures as may be necessary to comply with the provisions in Section 7-1.09, Public Safety, of the Standard Specifications.

The illumination of portable signs shown on the Plans for the traffic control system will not be required.

If any component in the traffic control system is displaced or ceases to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair

said component to its original condition or replace said component and shall restore the component to its original location.

When lane closures are made for work periods only, at the end of each work period, all components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way, shall be removed from the traveled way and shoulder. If the Contractor so elects, said components may be stored at selected central locations, approved by the Engineer, within the limits of the highway right of way.

One-way traffic shall be controlled through the project in accordance with Standard Plan T13 entitled Traffic Control System for Lane Closure on Two-Lane Conventional Highways and these Special Provisions.

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

Full compensation for providing the traffic control system, including signs and flagging costs, shall be considered as included in the contract prices paid for the various items of work, and no separate payment will be made.

Traffic control system required by work which is classed as extra work, as provided in Section 4-1.03D, Extra Work, of the Standard Specifications, will be paid for as a part of said extra work.

10-1.25 BARRICADES

Barricades shall be furnished, placed, and maintained at the locations designated by the Engineer, as required per the Contractor's accepted traffic control plan, shown on the plans, or specified and shall conform to the provisions in Section 12, Construction Area Traffic Control Devices, of the Standard Specifications and these Special Provisions.

Attention is directed to Section 8-1.02, Prequalified and Tested Signing and Delineation Materials, of these Special Provisions regarding retroflective sheeting for barricades.

Full compensation for furnishing, placing, maintaining, and removing barricades as required per the Contractor's accepted traffic control plan and/or as ordered by the Engineer shall be considered as included in the contract prices paid for the items of work that require the barricades, and no separate payment will be made.

10-1.26 ROAD BARRICADE (WOOD)

Road barricade (wood) shall be constructed as shown on the Plans and as directed by the Engineer and shall conform to the provisions in Section 12, Construction Area Traffic Control Devices, of the Standard Specifications and these Special Provisions.

The contract unit price paid for road barricade (wood) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in constructing road barricade (wood), complete in place, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

10-1.27 TEMPORARY PAVEMENT DELINEATION

Temporary pavement delineation shall be furnished, placed, maintained, and removed in accordance with the provisions in Section 12-3.01, General, of the Standard Specifications and these Special Provisions. Nothing in these Special Provisions shall be construed as to reduce the minimum standards specified in the Manual of Traffic Controls published by the Department or as

relieving the Contractor from his responsibility as provided in Section 7-1.09, Public Safety, of the Standard Specifications.

General

Whenever the work causes obliteration of pavement delineation, temporary or permanent pavement delineation shall be in place prior to opening the traveled way to public traffic. Replacement/temporary lane line or centerline pavement delineation shall be provided at all times for traveled ways open to public traffic.

All work necessary, including any required lines or marks, to establish the alignment of temporary pavement delineation shall be performed by the Contractor. Surfaces to receive temporary pavement delineation shall be dry and free of dirt and loose material. Temporary pavement delineation shall not be applied over existing pavement delineation or other temporary pavement delineation. Temporary pavement delineation shall be maintained until superseded or replaced with a new pattern of temporary pavement delineation or permanent pavement delineation.

Temporary pavement markers and removable traffic type tape which conflicts with a new traffic pattern or which is applied to the final layer of surfacing or existing pavement to remain in place shall be removed when no longer required for the direction of public traffic, as determined by the Engineer.

Temporary Lane Line and Centerline Delineation

Whenever lane lines and centerlines are obliterated, the minimum lane line and centerline delineation to be provided shall be temporary reflective raised pavement markers placed at longitudinal intervals of not more than 24 feet. The temporary reflective raised pavement markers shall be the same color as the lane line or centerline the markers replace. Temporary reflective raised pavement markers shall be, at the option of the Contractor, one of the temporary pavement markers listed for short-term day/night use 14 days or less) or long-term day/night use (six [6] months or less) in Section 8-1.02, Prequalified and Tested Signing and Delineation Materials, elsewhere in these Special Provisions.

Temporary reflective raised pavement markers shall be placed in accordance with the manufacturer's instructions and shall be cemented to the surfacing with the adhesive recommended by the manufacturer, except epoxy adhesive shall not be used to place pavement markers in areas where removal of the markers will be required.

Temporary lane line or centerline delineation consisting entirely of temporary reflective raised pavement markers placed on longitudinal intervals of not more than 24 feet shall be used on lanes opened to public traffic for a maximum of fourteen (14) days. Prior to the end of the fourteen (14) days, the permanent pavement delineation shall be placed. If the permanent pavement delineation is not placed within the fourteen (14) days, the Contractor shall provide, at the Contractor's expense, additional temporary pavement delineation. The additional temporary pavement delineation to be provided shall be equivalent to the pattern specified for the permanent pavement delineation for the area, as determined by the Engineer.

Where no passing centerline pavement delineation is obliterated, the following no passing zone signing shall be installed prior to opening the lanes to public traffic. C18 "ROAD CONSTRUCTION AHEAD" or C23 "ROAD WORK AHEAD" signs shall be installed from 1,000 feet to 2,000 feet ahead of no passing zones. R63 "DO NOT PASS" signs shall be installed at the beginning and at every 600-meter interval within no passing zones. For continuous zones longer than 2 miles, W71 "NEXT _____ MILES" signs shall be installed beneath the C18 or C23 signs installed ahead of no passing zones. R64 "PASS WITH CARE" signs shall be installed at the end of no passing zones. The exact location of no passing zone signing will be as determined by the Engineer and shall be maintained in

place until permanent no passing centerline pavement delineation has been applied. The signing for no passing zones shall be removed when no longer required for the direction of public traffic. The signing for no passing zones shall conform to the requirements in Section 10-1.18, Construction Area Signs of these Special Provisions, except for payment.

Full compensation for furnishing, placing, maintaining, and removing the temporary reflective raised pavement markers, used for temporary lane line and centerline delineation (including the signing specified for no passing zones) and for providing equivalent patterns of permanent traffic lines for these areas when required, shall be considered as included in the contract price paid for traffic control system, and no additional compensation will be allowed.

10-1.28 CONTROL OF WATER

Work described in this Section shall conform to the provisions of Section 7-1.01G, Water Pollution, of the Standard Specifications, these Special Provisions, the Tahoe Regional Planning Agency (TRPA) Handbook of Best Management Practices, Volume III (2012), and the project permits which regulate water discharges associated with construction activities. In case of conflict between any of these requirements, the most stringent shall apply.

Control of Water Plan Preparation, Approval and Updates

As part of the water pollution control work, a Control of Water Plan is required for this Contract. The Control of Water Plan shall conform to the requirements in Section 7-1.01G, Water Pollution, of the Standard Specifications, the requirements in the Handbook, the requirements of the Permits and these Special Provisions. Attention is drawn to Section 10-1.09, Water Pollution Control of these Special Provisions, with specific reference to SWPPP submittals.

The Contractor will be required, upon award, to submit a Control of Water Plan stamped by a registered professional engineer in the State of California.

No work having potential to cause water pollution as determined by the Engineer shall be performed until the Control of Water Plan has been accepted by the Engineer.

Contractor shall submit an electronic copy of the Control of Water Plan to the Engineer for review and comments no later than five (5) working days after the pre-construction conference. Construction shall not begin until the Control of Water Plan has been reviewed and accepted by the Engineer and all materials required for work are on site. The Contractor shall allow five (5) working days for the Engineer's review. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the Control of Water Plan within five (5) calendar days of receipt of the Engineer's comments and shall allow five (5) working days for the Engineer to review the revisions. Upon acceptance of the Control of Water Plan by the Engineer, a final electronic version of the Control of Water Plan, incorporating all the required changes, shall be submitted to the Engineer. In order to allow construction activities to proceed, the Engineer may conditionally accept the Control of Water Plan while minor revisions are being completed. Failure to submit an acceptable updated Control of Water Plan shall not in any way delay the start of the Contract working days.

The Control of Water Plan shall address the following elements: diversion of water, dewatering, temporary storage and treatment of captured flows, disposal of captured flows, and rewatering of channels.

The Contractor shall dewater all three construction areas as necessary to enable construction activities to be completed in a timely manner. Dewatering shall be necessary for drop inlet, manhole, culvert, media inlet, and new channel construction, backfilling of existing abandoned channel, structure removal, bank stabilization and channel enhancement, habitat structure

construction, and all other construction required in the river channel or excavations. Surface runoff from the work area and water pumped from excavations may contain suspended sediments, total dissolved solids (TDS), and/or other materials, and shall not be discharged directly into Lake Tahoe or its tributary waters without dissipation and treatment. Discharged waters shall conform to all applicable laws and permit requirements. Collected effluent meeting the discharge requirements may be used for irrigation or dust control.

The Contractor shall be responsible for installation, operation, and maintenance of the channel rewatering system(s) as required for completion of work. Containment structures such as those already in place for dewatering and diversion shall effectively seal the channel being flushed from allowing surface flow past the structure. Pumps operated just upstream of the containment structure shall divert the flushing effluent into the dewatering treatment system until the effluent quality reaches the regulatory water quality criteria. Items of work such as capping abandoned storm drains and daylighting of piped water shall contribute to the final project modified flow patterns.

Conformance with all applicable laws and permit requirements shall be met at all times.

The Contractor shall maintain a secured control of water system, including treatment and disposal, for the entire duration of the work. Diversion features shall remain in place and functioning throughout the winter season(s).

Monitoring as required by the Permits shall be executed in conjunction with the water pollution control and control of water items. Full compensation for the monitoring related activities, including supplying suitable sampling locations for access by the Engineer, and other items is included in the Contract lump sum price for control of water and no additional compensation will be allowed.

Schedule of Values

The Contractor shall submit with the Control of Water Plan, for acceptance by the Engineer, a schedule of values detailing the cost breakdown of the Contract lump sum items for diversion, dewatering, treatment, and rewatering under control of water. The schedule of values shall reflect the items of work, quantities, and costs for control measures shown in the Control of Water Plan. Adjustments in the items of work and quantities listed in the schedule of values shall be made when required to address accepted amendments to the Control of Water Plan.

The sum of the amounts for the units of work listed as diversion, dewatering, treatment, and rewatering in the schedule of values shall be equal to the Contract lump sum price for control of water.

If approved in writing by the Engineer, the schedule of values will be used to determine progress payments for control of water during the progress of the work and as the basis for calculating any adjustment in compensation for the Contract item for control of water due to changes in the work ordered by the Engineer.

The Contract price paid for Control of Water will be a lump sum for areas in accordance with the accepted schedule of values shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for performing all the work involved in installing, constructing, maintaining, removing and disposing of control measures, except those shown on the Plans for which there is a Contract item of work, and shall include developing, preparing, obtaining acceptance of, revising and amending the Control of Water Plan, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer. This section does not include payment for items covered under Section 10-1.09, Water Pollution Control or Section 10-1.36, Earthwork, of these Special Provisions, and no additional compensation will be allowed.

10-1.29 EXISTING HIGHWAY FACILITIES

The work performed in connection with various existing highway facilities shall conform to the provisions in Section 15, Existing Highway Facilities, of the Standard Specifications and these Special Provisions.

10-1.30 REMOVE EXISTING IMPROVEMENTS

The work performed in connection with various existing highway facilities shall conform to the provisions in Section 15, Existing Highway Facilities, of the Standard Specifications and these Special Provisions.

Removal of existing improvements include:

1. The removal, abandonment, or cleaning of portions or entire lengths of existing culverts, drainage facilities, drop inlets, sediment cans and lateral pipes, backfill, and compaction. Surplus existing asphalt concrete pavement from trenches shall become the property of the Contractor and shall be removed and disposed of outside of 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, outside of the Tahoe Basin, and in accordance with these Special Provisions.

2. The removal, storing, and reinstallation of existing fences, boulders, cable barriers, mail boxes, snow poles and other roadside items. Existing fences, cable barriers and mailboxes, snow poles may be replaced with comparable items of equal quality in lieu of storage at the Contractor's option.

Fence removal operations shall be coordinated with the new fence construction so that the access is controlled at all times.

No gap shall be left between existing cross fences and the fence being installed. The gap shall be closed with the same material as the existing cross fence and shall be made in accordance with the provisions in Section 80-1.04, Connections, of the Standard Specifications.

All existing post holes not used for the new fence shall be backfilled and compacted with a suitable material to a consistency of not less than the surrounding ground.

Full compensation for removing and disposing of existing culverts, including excavation and backfill, shall be considered as included in the contract unit price paid per linear foot for remove culvert, and no additional compensation will be allowed.

Full compensation for saw cutting, removal, and disposal of existing asphalt concrete and aggregate base is included in the contract square foot price for remove concrete/asphalt pavement, and no additional compensation will be allowed.

Full compensation for saw cutting, removal, and disposal of existing drop is included in the contract unit price per each for remove drop inlet, and no additional compensation will be allowed.

Full compensation for removal, storing, and reinstallation of existing fences, boulders, cable barriers, mail boxes, and other roadside items is included in the contract lump sum price for remove existing improvements, and no additional compensation will be allowed.

10-1.31 TREE REMOVAL

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary for the removal and disposal of trees larger than 6 inches in diameter, measured at an elevation of 5 feet above the existing ground surface adjacent to the tree. Trees larger than 6 inches in diameter to be removed are shown on the Plans and will be marked in the field by the Engineer.

Trees to be removed shall be marked by the Engineer with the letter "X" made with orange paint. The Contractor shall give the Engineer forty-eight (48) hours notice in requesting trees to be marked for removal.

Compensation for the removal, salvaging, and chipping of trees less than or equal to 6 inches in diameter and shrubs, as necessary for construction of the various items of work and as staked by the Engineer, shall be included in the contact unit prices paid for clearing and grubbing, and no additional compensation shall be made.

Attention is directed to Section 10-1.35, Clearing and Grubbing, of these Special Provisions.

All wood products must be removed from the site prior to resale.

Contractor shall obtain a timber operator's license from the California Division of Forestry prior to starting work if the fuel wood or timber is to be sold.

Contractor is responsible for complete site cleanup, including slash disposal. No slash may be stored or burned on site.

At the option of the Contractor, removed trees and shrubs greater than 6 inches in diameter may be reduced to chips. The chipped material shall be spread within the project site at locations designated by the Engineer in accordance with Section 10-2.00, Revegetation, of these Special Provisions.

Prior to timber harvest, all project temporary erosion control devices must be in place.

Attention is directed to Section 10-1.04, Preservation of Property, of these Special Provisions.

The contractor shall be liable for damage to utility service lines, fences, or other structures.

Trees shall be felled to minimize disturbance to surrounding vegetation and traffic flow.

Contractor shall be responsible for all traffic control during timber removal in accordance with the Contractor's accepted Traffic control plan, Section 12, Construction Area Traffic Control Devices, of the Standard Specifications, the State Manual of Traffic Controls, and these Special Provisions.

All trees must be removed from the site or chipped within forty-eight (48) hours to reduce the spread of insects.

Full compensation for removal of trees greater than 6 inches in diameter, measured at an elevation of 5 feet above ground, shall be included in the Contract unit price per each for tree removal and shall include full compensation for furnishing all labor, materials, tools, obtaining permits and licenses, equipment, and incidentals, and for doing all work involved in removing trees as specified above, and no additional compensation will be allowed.

10-1.32 REMOVE TRAFFIC STRIPES AND PAVEMENT MARKINGS

Traffic stripes and pavement markings to be removed, shall be removed in conformance with Section 15-2, Miscellaneous Highway Facilities, of the Standard Specifications and these Special Provisions and as designated on the Contractor's accepted traffic control plan.

Where blast cleaning is used for the removal of painted traffic stripes and pavement markings or for removal of objectionable material, and such removal operation is being performed within 10 feet of a lane occupied by public traffic, the residue including dust shall be removed immediately after contact between the sand and the surface being treated. Such removal shall be by a vacuum attachment operating concurrently with the blast cleaning operation.

Nothing in these Special Provisions shall relieve the Contractor from the Contractor's responsibilities as provided in Section 7-1.09, Public Safety, of the Standard Specifications.

Any materials removed in conformance with this section shall become the property of the Contractor and be removed and disposed of by the Contractor in conformance with Section 7-1.13, Disposal of Material Outside the Highway Right-of-Way, of the Standard Specifications.

The contract unit price for traffic control system shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for performing all work involved in remove traffic stripes and pavement markings, complete in place as shown on the Contractor's accepted traffic control plan, as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer. No separate payment will be allowed.

10-1.33 REMOVE PAVEMENT MARKERS

Existing pavement markers, when no longer required for traffic lane delineation as directed by the Engineer, shall be removed and disposed of.

Full compensation for removing and disposing of pavement markers shall be considered as included in the contract price paid for various contract items, and no additional compensation will be allowed.

10-1.34 REMOVE CONCRETE / ASPHALT PAVEMENT

Removing concrete/asphalt pavement shall conform to the provisions in Section 15-3, Removing Concrete, of the Standard Specifications and these Special Provisions.

Where no joint exists in the pavement on the line at which pavement is to be removed, a straight, neat cut with a power driven saw shall be made along the line to a minimum depth of 2-1/2 inches before removing pavement. If saw cut pavement is damaged prior to paving, it shall be the Contractor's responsibility to re-cut any damaged portion prior to paving at his own expense.

Any materials removed in conformance with this provision shall become the property of the Contractor and shall be removed and disposed of by the Contractor in conformance with Standard Specification Section 7-1.13, Disposal of Material Outside the Highway Right-of-Way, of the Standard Specifications and in accordance with the requirements of these Special Provisions.

Full compensation for saw cutting, removal, and disposal of existing asphalt concrete and aggregate base is included in the contract unit price per square foot for remove asphalt/concrete pavement, and no additional compensation will be allowed.

10-1.35 CLEARING AND GRUBBING

Clearing and grubbing shall conform to Section 16, Clearing and Grubbing, of the Standard Specifications and these Special Provisions.

Attention is directed to Section 10-1.31, Tree Removal, of these Special Provisions.

Existing vegetation outside the areas to be cleared and grubbed, shall be protected from injury or damage resulting from the Contractor's operations.

Vegetation shall be cleared and grubbed only in the areas showing proposed improvements on the Plans and/or bounded by the markings in the field by the Engineer. The Contractor shall protect all trees, shrubs, and other vegetation identified to not be disturbed during construction. Protection methods shall be by methods described in the Tahoe Regional Planning Agency (TRPA) Handbook of Best Management Practices, Volume III (2012). Fallen branches, loose debris, and otherwise dead material shall be removed.

Removal and Disposal of Materials

All inorganic materials removed during the clearing and grubbing operation shall become the property of the Contractor and shall be disposed of at the end of each working day outside the project 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 and these Special Provisions. The Contractor shall follow all local ordinances and acquire any necessary permits. Broken concrete, asphalt, and other construction debris developed during clearing and grubbing operations shall be considered unsuitable and disposed of outside the project 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 and these Special Provisions.

All organic materials removed during the clearing and grubbing operation including, but not limited to, pine needles, leaves, duff, trees smaller than 6 inches in diameter, stumps, and roots shall be stockpiled and used for revegetation as detailed in Section 10-2.00, Revegetation, of these Special Provisions. The Contractor shall make allowances for chipping larger organic materials such as trees, roots, branches, and stumps so that these materials can be used for project revegetation efforts.

The Contractor shall not stockpile any debris or vegetation generated as a result of the clearing and grubbing operations. All debris, stumps, roots, and unsuitable material shall be removed from the job site by the end of each working day.

Existing vegetation outside the areas to be cleared shall be protected from injury or damage resulting from the Contractor's operations.

Nothing herein shall be construed as relieving the Contractor of the Contractor's responsibility for final cleanup of the project limits as provided in Section 4-1.02, Final Cleaning Up, of the Standard Specifications.

The contract lump sum price paid for clearing and grubbing shall include full compensation for the removal and salvaging of vegetation, trees less than 6 inches in diameter measured at an elevation of 5 feet above existing ground, and disposal of inorganic materials including trash, miscellaneous materials, and debris, and furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in clearing and grubbing as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer. No additional compensation will be allowed.

10-1.36 EARTHWORK

Earthwork shall conform to the provisions in Section 19, Earthwork, of the Standard Specifications and these Special Provisions.

During construction, it may be necessary to temporarily stockpile excavated material on site. The stockpiling of this material shall not interfere with normal site operations. No excavated material shall be stored on native vegetation or in a stream environment zone. Stockpiled excavated material shall be in accordance with the requirements of Section 10-1.09, Water Pollution Control, of these Special Provisions, the requirements of California Regional Water Quality Control Board (Lahontan Region), Tahoe Regional Planning Agency (TRPA), and these Special Provisions.

No trench work is to be left open overnight. Any section of open trench shall have adequate barricades to protect the general public. All stored excavated material left overnight shall be protected per applicable TRPA Best Management Practices.

The Contractor is responsible for stored excavated materials from subcontractors. Surplus excavated material shall become the property of the Contractor and shall be disposed of off site in accordance with the provisions in Section 7-1.13, Disposal of Material Outside Highway Right-of-Way, of the Standard Specifications and these Special Provisions. Additionally, the excavated material shall be disposed of outside the Lake Tahoe basin; the only exception being with prior written approval by TRPA, the California Regional Water Quality Control Board (Lahontan Region), and the Engineer.

All articles of archaeological interest that may be uncovered by the Contractor during the progress of the work shall be reported immediately to the Engineer. The further operations of the Contractor with respect to the findings will be decided under the direction of the Engineer. In no case shall any archaeological findings result in any claim to be made by the Contractor including, but not limited to, project delay.

Compaction shall conform to all the provisions in Section 19-5, Compaction, of the Standard Specifications. Payment for compaction of earthwork shall be considered as included in the various items of work requiring compaction, and no additional compensation will be allowed.

Embankment construction shall conform to all the provisions in Section 19-6, Embankment Construction, of the Standard Specifications. Payment for embankment construction of earthwork shall be considered as included in the various items of work requiring embankment construction, and no additional compensation will be allowed.

Roadway Excavation

In addition to the provisions of the Standard Specifications (Section 19), roadway excavation shall include excavation, grading, and embankment construction necessary to construct roadway widening, roadway paving, asphalt concrete swales, curb and gutter subgrades, vegetated swales, and slopes.

Removal of concrete asphalt pavement shall be in conformance with the requirements of Section 10-1.34, Remove Concrete/Asphalt Pavement, of these Special Provisions.

Surplus excavated material shall become the property of the Contractor and shall be removed and disposed of in accordance with the provisions in Section 7-1.13, Disposal Outside the Highway Right-of-Way, of the Standard Specifications and these Special Provisions.

Relative compaction of subgrade shall conform to Section 19, Earthwork, of the Standard Specifications and these Special Provisions.

If the Contractor elects to excavate and replace basement material to facilitate compaction, full compensation for that work will be considered as included in the contract item of work requiring the compaction of earthwork, and no separate payment will be made.

Roadway excavation including, but not limited to, excavations, grading, backfilling existing drainage ditches, and embankment construction required to construct road widening, roadway paving, curb and gutters, vegetated swales, embankments, and slopes shall be constructed and compacted in accordance with the requirements of Section 19, Earthwork, of the Standard Specifications and these Special Provisions.

Contractor shall submit a construction phasing schedule to the Engineer at least ten (10) days prior to roadside trench construction showing that no more than 1,000 linear feet of roadside trench construction will be disturbed at any given time.

Full compensation for furnishing all labor, materials, and equipment necessary for the excavation, grading, backfilling existing drainage ditches, and embankment construction required to construct the road widening, asphalt concrete swales, curb and gutters, vegetated swales, embankments and slopes, including, but not limited to, excavation, stockpiling, loading, transporting, compacting, disposal, and all grading shall be included in the items of work that require roadway excavation, and no separate payment will be made.

Structure Excavation and Backfill

Structure excavation and backfill for culverts, drainage inlets, drop structures, and control structure shall conform to the provisions of Section 19-3, Structure Excavation and Backfill, of the Standard Specifications, the Standard Plans, the Plans, and these Special Provisions. Unless indicated otherwise, backfill composition shall conform to Paragraph 9 of Section 19-3.06 of the Standard Specifications. Other backfill materials are specified on the Plans or in these Special Provisions.

Surplus structural excavation shall become the property of the Contractor and shall be removed and disposed of outside the project 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 and these Special Provisions.

Full compensation for furnishing all labor, materials, incidentals, and equipment necessary for all structural backfill, including, but not limited to, placement/compaction of backfill, slurry cement backfill, and Class C concrete backfill shall be included in the contract prices paid for the items of work that require the structural backfill, and no separate payment will be made.

Full compensation for furnishing all labor, materials, incidentals, and equipment necessary for all structural excavation and excavation, stockpiling, loading, transporting, compacting, and disposing of surplus material, including, but not limited to, excavation for culverts, drainage inlets, drop structures, control structures, manholes, pipes, and any other structures and all grading shall be included in the contract prices paid for the items of work that require the structural excavation and backfill, and no separate payment will be made.

Channel Excavation

Excavation of channels shall conform to the provisions in Section 19-4, Ditch Excavation, of the Standard Specifications, these Special Provisions, and the Plans.

Attention is directed to Section 10-1.51, Rock Slope Protection and Rock Rip-Rap, of these Special Provisions.

Surplus excavation shall become the property of the Contractor and shall be removed and disposed of outside of the project 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 and these Special Provisions.

Compaction shall conform to all the provisions and requirements of Section 19, Earthwork, of the Standard Specifications and these Special Provisions.

Full compensation for furnishing all labor, materials, incidentals, and equipment necessary to excavate, backfill, grade, and compact channels shall be included in the contract lump sum price paid for earthwork, and no additional compensation will be allowed.

Mass Grading

The Contractor shall perform all earthwork necessary for shaping of the subgrade to the elevations, lines and grades, as shown of the Plans. Shaped, trimmed and finished slopes of channel banks and floodplain surfaces shall conform to the finished lines and grades shown on the Plans.

The Contractor shall remove all roots, debris, and stones larger than four (4) inches in diameter, and other materials that may puncture the fabric are

Temporary Shoring

Temporary shoring will be required for any work where the excavation/trenching exceeds 5 feet in depth. The Contractor shall be responsible for the design, installation, and maintenance of the temporary shoring system. The Temporary Shoring Safety System Plan shall be prepared by a registered civil engineer in the State of California.

Attention is directed to Section 5-1.02A, Trench Excavation Safety Plan, of the Standard Specifications.

All bracing and shoring shall comply with rules, orders, and regulations of the California Division of Industrial Safety. Trenching below 5 feet in depth will require the Contractor to secure the appropriate California Division of Industrial Safety permit and evidence of said permit to Placer County.

The Contractor shall submit three (3) copies of the proposed temporary shoring system plan to the Engineer at minimum of five (5) working days prior to the pre-construction conference. The Contractor shall not start construction of items of work requiring shoring before the temporary shoring plan has been reviewed and accepted by the Engineer.

The Contractor shall allow five (5) working days for the Engineer's review. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the temporary shoring system plan within five (5) calendar days of receipt of the Engineer's comments and shall allow five (5) working days for the Engineer to review the revisions. Upon acceptance of the temporary shoring system plan by the Engineer, three (3) additional copies of the temporary shoring system plan, incorporating all the required changes, shall be submitted to the Engineer. Failure to submit an acceptable temporary shoring system plan shall not in any way delay the start of the contract working days. If the Contractor makes significant changes to the accepted temporary shoring system plan, these changes must also be prepared and stamped by a licensed civil engineer.

Full compensation for temporary shoring, temporary shoring plans, for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in temporary shoring, complete in place, as shown on the Contractor's accepted temporary shoring system, as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer shall be included in the contract prices paid for the items of work that require temporary shoring, and no additional compensation will be allowed.

10-1.37 FINISHING ROADWAY

Finishing of roadway shall conform to the provisions of Section 22, Finishing Roadway, of the Standard Specifications and these Special Provisions.

Payment for finishing roadway shall be considered as included in the various items of work, and no additional compensation will be allowed. Said payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in finishing the entire project, including all filling and grading behind the curbs, gutters and dikes, driveways, ramps, connecting roads and streets, whether inside or outside the right-of-way, and all other areas disturbed by the Contractor's operations, all as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer.

10-1.38 AGGREGATE BASE

Aggregate base shall be Class 2, 3/4 inch maximum grading and shall conform to the provisions in Section 26, Aggregate Bases, of the Standard Specifications and these Special Provisions.

Aggregate base shall not contain volcanic cinder material.

The first paragraph of Section 26-1.02A, Class 2 Aggregate Base, of the Standard Specifications is amended by replacing the second sentence with the following sentences:

> *Aggregate may include or consist of material processed from reclaimed asphalt concrete, portland cement concrete, lean concrete base, cement treated base, glass, or a combination of any of these materials. Aggregate base incorporating reclaimed glass shall not be placed at locations where surfacing will not be placed over the aggregate base.*

The fourth paragraph in said Section 26-1.02A, is amended by adding the following sentence:

> *Untreated reclaimed asphalt concrete and portland cement concrete will not be considered to be treated with lime, cement, or other chemical material for purposes of performing the Durability Index test.*

Aggregate shall be stockpiled at designated material storage areas and shall not be stockpiled in a manner that destroys or damages existing vegetation in areas not shown on plans for excavation. Areas disturbed by the stockpiling of aggregate outside of designated storage areas will be revegetated at the Contractors expense, and no additional compensation will be allowed.

Measurement and payment for aggregate base will be at the contract unit price by the cubic yard in accordance with Section 26 of the Standard Specifications.

Full compensation for all labor, material, and equipment necessary to furnish and apply aggregate base shall be considered as included in the contract price paid for various items requiring aggregate base, and no additional compensation will be allowed.

10-1.39 SLURRY SEAL

Slurry seal shall conform to the provisions in Section 37-2, Slurry Seal, of the Standard Specifications and these Special Provisions.

The aggregate for slurry seal shall be Type II as specified in Section 37-2.02C, Aggregate, of the Standard Specifications.

Full compensation for all labor, material, and equipment necessary to furnish and apply slurry seal coat shall be considered as included in the contract price paid for various items requiring slurry seal, and no additional compensation will be allowed, with the exception of Sta: 50+43 to Sta: 52+62 on Lake Forest Road. Slurry seal for the existing roadway section will be paid by the square foot. Compensation will include all labor, materials, and equipment necessary to furnish and apply the slurry seal coat.

10-1.40 ASPHALT CONCRETE

Asphalt concrete shall be Type A, 1/2 inch maximum, coarse grading and shall conform to the provisions of Section 39, Asphalt Concrete, of the Standard Specifications and these Special Provisions.

Attention is directed to Section 10-1.22, Maintaining Traffic, of these Special Provisions concerning the requirements and payment for temporary asphalt concrete pavement.

Asphalt concrete shall be produced from commercial quality asphalt and aggregates. The spreading and compacting requirements in Section 39-6.02, Spreading, and Section 39-6.03, Compacting, of the Standard Specifications will not apply, with the exception of the straightedge requirements of Section 39-6.03, Compacting, of the Standard Specifications.

Asphalt concrete shall be placed to the lines and dimensions shown on the Plans or as directed by the Engineer.

Asphalt binder shall be viscosity grade PG 64-28 conforming to Section 92, Asphalts, of the Standard Specifications.

Where a portion of existing asphalt surface is to be removed, the outline of the area to be removed shall be cut on a neat line with a power-driven saw to a minimum depth of 2-1/2 inches before removing the surfacing. If saw cut pavement is damaged before paving, it is the Contractor's responsibility, and at his expense, to re-cut any damaged portion before paving.

A prime coat of liquid asphalt shall be applied in accordance with the provisions in Section 39-4.02, Prime Coat and Paint Binder (Tack Coat), of the Standard Specifications and shall be applied to all vertical surfaces of existing pavement, curb and gutter and construction joints in the surfacing against which additional material is to be placed and to other surfaces as designated by the Engineer.

The asphalt concrete shall conform to the following requirements:

A. Asphalt concrete shall be produced at a central mixing plant.

B. Aggregate shall conform to the 1/2 inch maximum, coarse grading specified in Section 39-2.02, Aggregate, of the Standard Specifications.

C. The amount of asphalt binder to be mixed with the aggregate shall be between 4 percent (4%) and 7 percent (7%) by mass of the dry aggregate as determined by the Engineer. The fifth through eighth paragraphs in Section 39-3.03, Proportioning, of the Standard Specifications shall not apply.

D. Asphalt concrete shall be spread in one operation with a self-propelled spreader ready for compaction without further shaping.

E. Compaction shall be performed with a tandem roller weighing not less than 7.2 tonnes.

F. The finished surface shall meet the straightedge requirements of Section 39-6.03, Compacting, of the Standard Specifications.

A fog seal coat shall be applied to the finish surface of all asphalt concrete installed by the Contractor in accordance with the provisions in Section 39-7.02, Seal Coat, of the Standard Specifications. Asphaltic emulsion for fog seal coat shall be either SS1h or CSS1h grade.

Full compensation for all labor, material, and equipment necessary to furnish and apply fog seal shall be considered as included in the contract prices paid for the items of work requiring asphalt concrete, and no additional compensation will be allowed.

Asphalt concrete swales shall be installed in accordance with Section 39-7, Miscellaneous, of the Standard Specifications. Swales shall be constructed with transition to driveway crossings, culvert inverts, and roadways as per the Plans or as directed by the Engineer. Asphalt concrete swales shall be compacted using either a hand roller or vibroplate device such that a smooth uniform finish is created.

Payment for asphalt concrete shall be at the contract unit price per square foot (SF) of asphalt concrete installed to the limits shown on the Plans and as required by the Standard Specifications and these Special Provisions.

The contract price per square foot paid for asphalt concrete shall include full compensation for furnishing all labor, materials (including asphaltic emulsions, liquid asphalts, asphalts, and aggregate), aggregate base, tools, equipment, and incidentals, and for performing all the work involved in asphalt concrete, complete in place, including saw cutting existing asphalt concrete and application of prime coat or paint binder (tack coat) as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

The contract price per each of speed humps shall include full compensation for furnishing all labor, materials (including asphaltic emulsions, liquid asphalts, asphalts, and aggregate), tools, equipment, and incidentals, and for performing all the work involved in asphalt concrete construction of speed humps, complete in place, and application of prime coat or paint binder (tack coat) as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

10-1.41 PORTLAND CEMENT PERVIOUS CONCRETE PAVEMENT

This work will include installation of pervious concrete roadway and driveway aprons shown on the plans, including excavation, installation of cross drain pipes, drain rock, expansion joints, shoulder treatment rock, AB base rock, and pervious concrete slab.

A. Description

Install pervious concrete paving with hydraulic cement and a chemical admixture per the lines and grades depicted on the plans. Work covered by this section includes saw-cutting and

removal of existing pavement, excavation, preparation and compaction of subgrade, placement of and compaction of drain rock base course, placement of pervious concrete, complete and in place, in conformance with the plans and specifications, including all materials, equipment, labor and incidentals.

B. Submittals

Required submittal information shall be provided in accordance with the procedures described in the Standard Specifications. Submittal items shall include, but are not limited to: Materials, Suppliers, Equipment, and Mix Designs.

The Contractor will be required to submit a proposal of the pervious concrete criteria as described in this section, a minimum of five (5) working days prior to the commencement of the pervious concrete installation. The pervious concrete criteria list will including the following:

1. Concrete Mix Design.
2. Excavation and Grading.
3. Sub-Base Preparation.
4. Form Work.
5. Pervious Concrete Delivery Method.
6. Placement Method and Tooling Specifications.
7. Wet Pervious Concrete Delivery and Preparation.
8. Curing.
9. Jointing.
10. Unit Weight.
11. Post-Construction Surface Raveling.

C. Materials

1. Cement

Furnish cement conforming to Special Provisions Section 8-2, Cement. Select Type II or V (ASTM C-150).

2. Chemical Admixtures

The following sources are approved:

- Pervious concrete will be constructed with a plasticizing admixture. Contractor will use admixture in accordance with manufacturer's instructions and recommendations. Ecocreto™ Admixture Type 1. Obtain from Ecocreto™ of Texas, Inc. (ETI), located at 1807 West Slaughter Lane, No. 200-496, Austin, TX, 78748, Telephone No. (512) 291-8394.

- Grace V-MAR VSC 500, Grace & Company, 62 Whittemore Avenue. Cambridge, MA 02140, Telephone No. 1-877-423-6491.

3. Water

Furnish mixing and curing water that is free from oils, acids, organic matter, or other deleterious substances, conforming to the requirements in ASTM C1602 and Section 8-2.

4. Coarse Aggregate

Supply coarse aggregates that meet the requirements in Section 8-2 and ASTM C33. Coarse aggregate course shall consist of hard, durable, angular gravel or crushed stone and shall be free from organic material, clay balls, fines or other deleterious substances. Provide light-colored coarse aggregate consisting of durable particles of crushed stone that are free from frozen material and from injurious amounts of salt, alkali, vegetable matter, or other objectionable material, either free or as an adherent coating. Provide coarse aggregate of uniform quality throughout.

Unless otherwise specified, provide aggregate conforming to the gradation requirements shown below:

Coarse Aggregate Gradation Chart

Sieve Size	Percent Passing on Each Sieve
½"	100
3/8"	40-60
No. 4	10-20
No. 8	0-10

5. Drain Rock Base Course

Aggregate for use in drain rock base course shall consist of hard, durable, washed gravel or crushed stone and shall be free from organic material, clay balls, fines or other deleterious substances. The percentage composition by weight of permeable material shall conform to the following gradings:

Drain Rock Base Course Gradation Chart

Sieve Size	Percent Passing on Each Sieve
2"	100
1-1/2"	95-100
3/4"	10-20
½"	0-10

Drain rock base course material shall have a durability index of not less than 40.

6. Cross Drain Pipe

Perforated pipe and fittings shall meet the requirements of Section 10-1.48, Plastic Pipe, of these Special Provisions. Cross drain pipe shall be ADS H25 N-12 perforated HDPE.

7. Storage of Materials.

(a) Cement

Store all cement in weatherproof enclosures that will protect them from dampness or absorption of moisture.

When permitted, small quantities of sacked cement may be stored in the open, on a raised platform, and under waterproof covering for up to 48 hours.

(b) Aggregates

Handle and store concrete aggregates in a manner that prevents contamination with foreign materials. If the aggregates are stored on the ground, clear the sites for the stockpiles of all vegetation, level the sites, and do not use the bottom 6-inch layer of aggregate without cleaning the aggregate before use.

Where space is limited, separate the stockpiles using physical barriers. Store aggregates from different sources in different stockpiles unless the Engineer authorizes pre-blending of the aggregates. Minimize segregation in stockpiles. Remix and test stockpiles when segregation is apparent.

Sprinkle stockpiles to control moisture and temperature as necessary. Maintain reasonably uniform moisture content in aggregate stockpiles.

(c) Admixtures

Store admixtures in accordance with manufacturer's recommendations. Admixtures must be prevented from freezing.

8. Measurement of Materials

Except for volumetric mixers, measure concrete materials by weight. Measure mixing water, consisting of water added to the batch, ice added to the batch, water occurring as surface moisture on the aggregates, and water introduced in the form of admixtures, by volume or weight. Measure ice by weight. Measure cement and supplementary cementing materials in a weigh hopper and on a separate scale from those used for other materials. Measure the cement first when measuring the cumulative weight. Measure concrete chemical admixtures in powdered form by weight. Measure concrete chemical admixtures in liquid form by weight or volume.

When measuring cementitious materials at less than 30 pecent of scale capacity, ensure that the quantity measured is accurate to not less than the required amount and not more than 4% in excess. When measuring aggregates in a cumulative weigh batcher at less than 30% of the scale capacity, ensure that the cumulative quantity is measured accurate to ±0.3 percent of scale capacity or ±3 percent of the required cumulative weight, whichever is less.

For volumetric mixers, base tolerances on volume–weight relationship established by calibration, and measure the various ingredients according to ASTM C685.

Correct batch weight measurements for moisture.

When approved, under special circumstances, measure cement in bags of standard weight. Weighing of sacked cement is not required. Do not use fractional bags except for small hand-mixed batches of approximately 5 cubic feet or less and when an approved method of volumetric or weight measurement is used.

9. Mix Design

Contractor shall furnish a proposed mix design with proportions of materials to Engineer prior to commencement of work. The Contractor shall furnish the mix design based on data provided by either Ecocreto of Texas, Inc., or Grace & Company, subject to approval of the Engineer, to insure proper design for available aggregate in that region.

(a) Mix Design Properties

The proposed mix design shall have a minimum compressive strength of 4500 psi at 28 days. The mix design shall/may also incorporate the use of hydration stabilizer and air entrainment chemical admixtures or approved equivalent.

(b) Cementitious Materials

Use cementitious materials from prequalified sources; otherwise, request sampling and testing for approval before use. Unless otherwise specified or approved, limit cementitious material content to between 630 to 700 lb. per cubic yard.

(c) Chemical Admixtures

Mix Ecocreto™ Admixture Type 1 or Grace V-MAR VSC 500 amount in accordance with manufacturer's instructions and recommendations.

(d) Water

Mix water quantity shall be such that the cement paste displays a wet metallic sheen without causing the paste to flow from the aggregate. Mix water quantity yielding a cement paste with a dull-dry appearance has insufficient water for hydration. Insufficient water results in inconsistency in the mix and poor aggregate bond strength. High water content results in the paste sealing the void system primarily at the bottom and poor aggregate surface bond.

D. Equipment

1. Concrete Plants and Mixing Equipment

Except for volumetric mixers (auger/mixer), each plant and truck mixer must be currently certified by the National Ready Mixed Concrete Association (NRMCA) or have an inspection report signed and sealed by a licensed professional engineer showing that concrete measuring, mixing, and delivery equipment meets all requirements of ASTM C 94. A new certification or signed and sealed report is required every time a plant is moved. Plants with a licensed engineer's inspection require reinspection every 2 years. Provide a copy of the certification or the signed and sealed inspection report to the Engineer. When equipment or facilities fail to meet specification requirements, remove them from service until corrected.

(a) Scales

Check all scales prior to beginning of operations, after each move, or whenever their accuracy or adequacy is questioned, and at least once every 6 mo. Immediately correct deficiencies, and recalibrate. Provide a record of calibration showing scales in compliance with ASTM C 94 requirements. Check batching accuracy of volumetric water batching devices and admixture dispensing devices at least every 90 days. Perform daily checks as necessary to ensure measuring accuracy.

(b) Volumetric Mixers

Provide volumetric mixers with rating plates defining the capacity and the performance of the mixer in accordance with the Volumetric Mixer Manufacturers Bureau or equivalent. Provide volumetric mixers that comply with ASTM C 685.

(c) Agitators and Truck and Stationary Mixers

Inspect and furnish inspection reports on truck mixers and agitators annually. If an inspection within 12 months is not practical, a two-month grace period (for a maximum of 14 months between inspections) is permitted. Include in the report the condition of blades and fins and their percent wear from the original manufacturer's design. Repair mixing equipment exhibiting 10% or more wear before use. Provide truck mixers and agitators equipped with means to readily verify the number of revolutions of the drum, blades, or paddles.

Provide stationary and truck mixers capable of combining the ingredients of the concrete within the specified time or the number of revolutions specified into a thoroughly mixed and uniform mass and capable of discharging the concrete.

Inspect and maintain mixers and agitators. Keep them reasonably free of concrete buildup, and repair or replace worn or damaged blades or fins.

Ensure all mixers have a plate affixed showing manufacturer's recommended operating speed and rated capacity for mixing and agitating.

2. Hauling Equipment

Provide hauling equipment capable of maintaining the mixed concrete in a thoroughly mixed and uniform mass and of discharging the concrete with a satisfactory degree of uniformity.

When using non-agitating equipment for transporting concrete, provide equipment with smooth, mortar-tight metal containers equipped with gates that prevent accidental discharge of the concrete.

3. Testing Equipment

Unless otherwise shown on the plans or specified, in accordance with the pertinent test procedure, furnish and maintain:

- test molds,
- curing facilities,
- wheelbarrow or other container acceptable for the sampling of the concrete.

Provide strength-testing equipment in accordance with ASTM C39 unless noted otherwise.

E. Construction

1. Placing, Finishing, and Curing Concrete

Place, finish, and cure concrete in accordance with the pertinent Items.

(a) Subgrade Preparation and Formwork:

-- Subgrade: Excavation shall be in accordance with Section 10-1.36, Earthwork, of these Special Provisions. The subsoil shall be prepared by removing all surface vegetation and soil to final subsoil grade. The subsoil surface beneath infiltration areas must be level and proof-rolled with minimum compaction to eliminate soft or wet areas. Deviation from profile grade must be less than 3 inches in 100 feet (0.25%). The subgrade must not be compacted or subjected to construction

vehicle traffic prior to the placement of base rock material. Subgrade work must be sequenced to minimize passes of construction vehicles in the beds themselves. If the excavated subgrade is exposed to rainfall runoff, it may accumulate fines. These must be removed prior to geotextile fabric and base placement. Grading should not occur during wet soil conditions to minimize smearing and sealing of the soil surface. If such sealing occurs, the surface must be scarified to restore natural texture and permeability.

-- Base Material: Immediately following preparation of the subgrade, base material shall be placed in 12-inch lifts and compacted using a vibratory plate or other equivalent means. Base placement is to start at one edge of the bed and move across the bed surface. Equipment traffic on placed base material shall be minimized to avoid tracking of soils onto the placed material. The surface of the base material should be approximately parallel to the final design pavement grade.

-- Forms: Forms may be of wood or steel and shall be the depth of the pavement. Forms shall be of sufficient strength and stability to support mechanical equipment without deformation of plan profiles following spreading, strike-off and compaction operations.

2. Mixing and Delivering Concrete

Mix and deliver concrete (without admixtures) by means of one of the following operations:

- central-mixed,
- volumetric mixer-mixed, or
- hand-mixed (patching and small placements only).

Add Ecocreto™ Admixture Type 1 or Grace V-MAR VSC 500 at site and mix a minimum of 40 revolutions or to required consistency per admixture recommendations and/or specifications.

Operate mixers and agitators within the limits of the rated capacity and speed of rotation for mixing and agitation as designated by the manufacturer of the equipment.

Re-tempering or adding concrete chemical admixtures is only permitted at the job site when concrete is delivered in a truck mixer. Do not add water after the introduction of mixing water at the batch plant except on arrival at the job site, with approval, to adjust the slump of the concrete. Turn the drum or blades at least 30 additional revolutions at mixing speed to ensure thorough and uniform mixing of the concrete. Do not add water or chemical admixtures to the batch after any concrete has been discharged.

Maintain concrete delivery and placement rates sufficient to prevent cold joints.

Before unloading, furnish the delivery ticket for the batch of concrete containing the information required in accordance with Section 8.2.

(a) Central-Mixed Concrete

Provide concrete that is mixed completely in a stationary mixer. Mix concrete for a period of 1 min. for 1 cu. yd. and 15 sec. for each additional cu. yd. of rated capacity of the mixer unless mixer performance test data demonstrate that shorter mixing times can be used to obtain a uniform mix. Count the mixing time from the time all the solid materials are in the drum. Charge the mixer so that some water will enter before the

cement and aggregate. Ensure that all water is in the drum by the end of the first 1/4 of the specified mixing time. Adjust the mixing time if necessary to achieve a uniform mix. Concrete mixed completely in a stationary mixer must be delivered to the project in a truck mixer, truck agitator, or non-agitating delivery vehicle. When a truck mixer or truck agitator is used for transporting concrete, use the manufacturer's designated agitating speed for any turning during transportation. Non-agitating delivery vehicles must be clean and free of built-up concrete with adequate means to control concrete discharge. Deliver the concrete to the project in a thoroughly mixed and uniform mass, and discharge the concrete with a satisfactory degree of uniformity. Resolve questions regarding the uniformity of the concrete by testing when directed by the Engineer.

(b) Volumetric Mixer-Mixed Concrete

Unless otherwise specified or permitted, perform all mixing operations in accordance with manufacturer's recommended procedures. Provide an accurate method of measuring all ingredients by volume, and calibrate equipment to assure correct measurement of materials within the specified tolerances.

(c) Hand-Mixed Concrete

When permitted, for small placements of less than 2 cu. yd., mix up to a 2-sack batch of concrete by hand methods or in a small motor-driven mixer. For such placements, proportion the mix by volume or weight.

3. Transportation

The pervious concrete mixture may be transported or mixed on the site and should be used within one (1) hour of the introduction of mix water, unless otherwise approved by an engineer.

F. Placement

Pervious concrete shall be placed, compacted and finished in accordance with the following sections.

1. Discharge

The contents of each mixer truck must be inspected for appearance of concrete uniformity. Water may be added to obtain the required mix consistency. A minimum of 20 revolutions at the manufacturer's designated mixing speed shall be required following any addition of water to the mix. Discharge shall be continuous operation and shall be completed as quickly as possible.

2. Placing and Finishing Equipment

Unless otherwise approved by the manufacturer, the contractor shall provide mechanical equipment of either slip form, vibrator screed or vibrator plate with minimum of 10-psi vertical force. The pervious concrete pavement will be placed to the required cross section and shall not deviate more than +- 3/8 inch in 10 feet from profile grade. If placing equipment does not provide the minimum specified vertical force, a full width roller or other full width compaction device that provides sufficient compactive effort shall be used immediately following the strike-off operation. After mechanical or other approved strike-off and compaction operation, no other finishing operation will be allowed. If internal or surface applied vibration is used, it shall be shut off immediately when forward progress is halted for any reason.

3. Curing

   Curing procedures shall begin immediately after the final placement operations. The pervious concrete pavement surface shall be covered with a minimum six- (6) mil thick polyethylene sheet or other approved covering material. Prior to covering, a fog or light mist shall be sprayed above the surface when required due to ambient conditions (temperature, wind, and humidity). The cover shall overlap all exposed edges and shall be secured (without using dirt or stone) to prevent dislocation due to winds or adjacent traffic conditions. The cover shall be retained in position for 72 hours.

   Contractor shall note the importance of immediately covering the placed pervious concret related to a successful cure. Polyethylene sheets shall be staged so that coverage can commence as soon as possible after placement.

4. Jointing

   Transverse control (contraction) joints shall be installed at 20-foot intervals. They shall be installed at a depth of ¼ the thickness of pavement. Longitudinal control joints shall be installed at the midpoint if the constructed lane width exceeds 15 feet. These joints can be installed in the plastic concrete or saw cut. The procedure should begin as soon as the pavement has hardened to prevent reveling and uncontrolled cracking (normally after curing). Transverse construction joints shall be installed whenever placing is suspended a sufficient length of time that concrete may begin to harden. In order to assure aggregate bond at construction joints, a binding agent suitable for bonding fresh concrete to existing concrete shall be brushed, rolled, or sprayed on the existing pavement surface edge. Isolation (expansion) joints will be used every 40 to 60 feet as determined by design engineer.

G. Sampling and Testing of Concrete

All work and products described within this specification is subject to inspection, testing and acceptance by the Engineer. Work which has been rejected shall be remedied, or removed and replaced by the Contractor in an acceptable manner. No compensation will be allowed to the Contractor for the removal, replacement or remedial work.

The Engineer will retain an independent testing laboratory using ASTM E 329, Standard Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction. The agent of the testing laboratory performing field sampling and testing for concrete shall be certified by the American Concrete Institute as a Concrete Field Testing Technician Grade I, or by a recognized state or national authority of an equivalent level of competence.

Unless otherwise specified, all fresh and hardened concrete is subject to testing as follows:

1. Sampling and Testing Fresh Concrete

   The Engineer's independent testing agency will sample and test fresh concrete for potential use of test data use in judging acceptance in accordance with this section. A minimum of one test for each day's placement of pervious concrete in accordance with ASTM C 172 AND ASTM C 29 to verify unit weight shall be conducted. Delivered unit weights are to be determined in accordance with ASTM C 29 using 0.25 cubic foot cylindrical metal measure. The measure is to be filled and compacted in accordance with ASTM C 29 paragraph 11, jigging procedure. The unit weight of the delivered concrete shall be ± five (5) pcf of design weight.

2. In-Place Density

   In-place density of pervious concrete shall be measured in accordance with ASTM D2922. One test shall be performed for every 500 square feet of pervious concrete placed. In-place density shall be within ± five pcf of the design unit weight.

3. Testing of Hardened Concrete

   Test results will not necessarily be used for acceptance of concrete, but can be used as a portion of criteria used for acceptance.

   - Compressive Strength. ASTM C39

H. Post Construction Surface Raveling Performance Standard and Acceptance

The completed pervious concrete surface shall maintain integrity after placement for a minimum period of one-year. Raveling, or the loosening and displacement of aggregate from the matrix, shall be minimal and not affect the structural integrity for use as a travelled way of the pavement. Areas of raveling greater than 16 square inches and/or deeper than 2 inches shall be repaired by the Contractor. Should the pervious concrete pavement ravel or disintegrate for any construction method or construction practice related reason, the Contractor will repair the pavement to the original design specification.

I. Measurement and Payment

Payment for pervious concrete shall be at the contract unit price per square foot of pervious concrete installed to the lines and grades shown on the plans and as required by these Special Provisions.

The contract price per square foot paid for pervious concrete shall include full compensation for furnishing all labor, materials (including asphaltic emulsions, liquid asphalts, asphalts, aggregate, joints, cross drain piping and admixture), tools, equipment, and incidentals, and for performing all the work involved in pervious concrete, complete in place, including excavation, and saw cutting existing asphalt concrete as shown on the plans, as specified in these Special Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

10-1.42 CONCRETE STRUCTURES

Concrete structures for this project include manholes, weired manholes, drainage inlets, and grate line drains and shall conform to the provisions of Section 51-1.02, Minor Structures, of the Standard Specifications and these Special Provisions.

Where the depth of drainage structures (manholes, drainage inlets, etc.) exceeds 2.5 feet, measured from the top of grate to the floor of the structure, install steps with the lowest rung 12 inches above the floor and highest rung not more than 6 inches below the top of grate. The distance between steps shall not exceed 12 inches and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts shall comply with State Industrial Safety Requirements. See Caltrans Standard Plan D74C for step details.

Storm drain manhole shall use eccentric cones or if too shallow for cones, flat slab tops, and be in accordance with the requirements of County of Placer Department of Public Works General Specifications Plates Nos. 81, 83 and 90.

Portland cement concrete shall conform to the provisions in Section 8-2.01, Portland Cement Concrete, of these Special Provisions.

Metal frames and covers or frames and grates shall conform to the provisions in Section 10-1.46, Miscellaneous Iron and Steel, of these Special Provisions.

Trenching and shoring shall be in accordance with the requirements of Section 5-1.02A, Trench Excavation Safety Plans, of the Standard Specifications.

Surplus excavated material shall become the property of the Contractor and shall be removed and disposed of outside of 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, outside of the Tahoe Basin, and in accordance with these Special Provisions.

Surface finishes for all exposed concrete shall conform to Section 51-1.18B, Class 1 Surface Finish, of the Standard Specifications. Surface finishes for buried structures shall conform to the requirements of Section 51-1.18A, Ordinary Surface Finish, of the Standard Specifications. No concrete shall be used in the work until the mix design is approved by the Engineer.

The concrete for concrete structures shall be cured by the curing compound method. The curing compound shall be curing Compound 6 as specified in Section 90-7.01B, Curing Compound Method, of the Standard Specifications.

Attention is directed to Section 10-1.36, Earthwork, of these Special Provisions for requirements regarding structure excavation, trenching and shoring, and backfill.

All pre-cast, storm drain manholes and the pre-cast oil and sediment interceptors shall conform to the provisions in Section 70, Miscellaneous Facilities, of the Standard Specifications.

Manhole joints shall be constructed using Ram-Nek gaskets on all joints. Joints shall be primed and the gasket placed and heated. Installation shall be in strict accordance with manufacturer's instructions.

Installation of manhole rims and covers shall conform to Placer County Standard Plate 83 in the Placer County Land Development Manual.

Measurement of minor concrete structures will be by the unit of the type furnished and installed and shall conform to the provisions of Section 51-1.22, Measurement, of the Standard Specifications and these Special Provisions.

All storm drain inlets shall be furnished as specified on the Plans and in these Special Provisions. Type G1 drainage inlets shall have Type 600-12X bicycle-proof grates per Caltrans Standard Plan D77B.

All in-line curb drainage inlets shall be furnished as specified on the Plans and in these Special Provisions. In-line curb drainage inlets shall be South Bay Foundry type SBF 1904 or approved equal and shall be furnished with bicycle-proof grates.

For weired manholes, at project completion, weirs shall be set to specified elevation and sealed at all joints with silicone sealant. Sealant shall be worked into joints from both sides.

All transverse drains shall be constructed as specified on the Plans and in these Special Provisions and shall use NEENAH Model # R-4999-DX Transverse Drain or equal approved by the Engineer. Transverse drains shall be furnished with bicycle-proof grates and be H-20 rated.

Full compensation for furnishing all labor, materials (including concrete, curing compounds, reinforcement, metal frames, steps, and grates), tools, equipment, and incidentals and for doing all the work involved in minor concrete structure manholes and weired manholes, complete in place, including reinforcement, excavation, disposal, installation, rock for sumps, backfill, compaction, and any other appurtenances, as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer shall be at the contract unit price per each unit for manholes; and no additional compensation will be allowed.

Full compensation for furnishing all labor, materials (including concrete, curing compounds, reinforcement, metal frames, and grates), tools, equipment, and incidentals and for doing all the work involved in minor concrete structures drainage inlets, complete in place, including reinforcement, excavation, disposal, installation, rock for sumps, backfill, compaction, and any other appurtenances, as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer shall be at the contract unit price per each unit for drainage inlet; and no additional compensation will be allowed.

10-1.43 CONCRETE CURB AND GUTTER

Curb and gutter, 6-foot curb end transitions, curb barrier and 1-foot curb cuts shall conform to the provisions in Section 73, Concrete Curbs and Sidewalks, of the Standard specifications and these Special Provisions.

All concrete curb and gutter shall be machine formed/extruded unless otherwise directed by the Engineer.

Asphalt concrete placement between the edge of the curb and gutter and saw cut line of existing pavement shall be in conformance with the Section 10-1.40, Asphalt Concrete, of these Special Provisions.

All excavation and grading, including slope grading behind the curb and gutter, shall be in conformance with the Plans, Standard Specifications, and Section 10-1.36, Earthwork, of these Special Provisions.

UPL2 Revegetation shall be applied at a minimum width of 2 feet behind the curb and gutter or as directed by the Engineer and shall be in conformance with Section 10-1.11, Temporary Erosion Control, of these Special Provisions.

Full compensation for curb and gutter shall be at the contract unit price per linear foot for curb and gutter which shall include full compensation for furnishing all labor, materials, tools, excavation, grading, excess material disposal, structure backfill, and incidentals required for complete installation; and no additional compensation will be allowed.

Full compensation for 6-foot curb end transitions shall be at the contract unit price per linear foot for curb and gutter which shall include full compensation for furnishing all labor, materials, tools, excavation, grading, excess material disposal, structure backfill, and incidentals required for complete installation; and no additional compensation will be allowed.

Full compensation for 8-foot curb end transitions shall be at the contract unit price per linear foot for curb and gutter which shall include full compensation for furnishing all labor, materials, tools, excavation, grading, excess material disposal, structure backfill, and incidentals required for complete installation; and no additional compensation will be allowed.

Full compensation for curb barrier shall be at the contract unit price per linear foot for curb barrier which shall include full compensation for furnishing all labor, materials, tools, excavation, grading,

excess material disposal, structure backfill, and incidentals required for complete installation; and no additional compensation will be allowed.

Full compensation for 3-foot curb cuts shall be at the contract unit price per each for curb cuts which shall include full compensation for furnishing all labor, materials, tools, excess material disposal, rock rip rap slope protection, and incidentals required for complete installation of curb cuts; and no additional compensation will be allowed.

10-1.44 CONCRETE VALLEY GUTTER

Valley Gutter shall conform to the provisions in Section 73, Concrete Curbs and Sidewalks, of the Standard specifications and these Special Provisions.

Asphalt concrete placement between the edge of the valley gutter and saw cut line of existing pavement shall be in conformance with the Section 10-1.40, Asphalt Concrete, of these Special Provisions.

All excavation and grading shall be in conformance with the Plans, Standard Specifications, and Section 10-1.36, Earthwork, of these Special Provisions.

Full compensation for valley gutter shall be at the contract unit price per linear foot for valley gutter which shall include full compensation for furnishing all labor, materials, tools, excavation, grading, excess material disposal, structure backfill, and incidentals required for complete installation; and no additional compensation will be allowed.

10-1.45 REINFORCED CONCRETE PIPE

Reinforced concrete pipe shall conform to the provisions of Section 65, Reinforced Concrete Pipe of the Standard Specifications and these Special Provisions.

Attention is directed to Section 10-1.36, Earthwork, of these Special Provisions for requirements regarding structure excavation, trenching and shoring, and backfill.

Reinforced concrete pipe shall be Class IV unless otherwise shown on the Plans.

If the cover over the top of pipe is less than 18 inches, the Contractor shall provide a concrete cap over the pipe per the concrete cap detail on the Plans. If the cover over the top of pipe is greater than 18 inches, the Contractor shall backfill per Caltrans Standard Plans and Specifications.

Full compensation for furnishing all labor, material, equipment and incidentals necessary to construct storm drain pipe of various diameters including, but not limited to, excavation, bedding, backfill, pipe, concrete cap, concrete, reinforcement, and incidentals is included in the contract unit price per linear foot for each diameter of storm drain pipe; and no additional compensation will be allowed.

10-1.46 MISCELLANEOUS IRON AND STEEL

Miscellaneous iron and steel shall conform to the provisions in Section 75, Miscellaneous Metal, of the Standard Specifications and these Special Provisions.

Storm drain manhole frames and grates shall be in accordance with the requirements of County of Placer Department of Public Works General Specifications Plates Nos. 81, 83, and 90. Frames and grates located within snowplowed areas shall be placed 1/2 inch below the adjacent finished pavement grade. For drop inlets and sediment traps in paved or gutter areas, grates shall conform to Standard Plan D77B and the Plans.

Full compensation for miscellaneous iron and steel shall be included in the price paid for the item with which the miscellaneous iron and steel is associated, and no additional compensation will be allowed.

10-1.47 REINFORCEMENT

Reinforcement shall conform to the provisions in Section 52, Reinforcement, of the Standard Specifications.

Full compensation for reinforcement including furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in installation of reinforcement, complete in place, as shown on the Plans, as shown on the Standard Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer shall be considered as included in the contract prices paid for the items of work that require reinforcement; and no additional compensation will be allowed.

10-1.48 HDPE PIPE

HDPE pipe for storm drains shall conform to the provisions of Section 64, Plastic Pipe, of the Standard Specifications and these Special Provisions. Perforated plastic pipe for the infiltration bed shall conform to the provisions of Section 68, Subsurface Drains, of the Standard Specifications and these Special Provisions.

Attention is directed to Section 10-1.36, Earthwork, of these Special Provisions for requirements regarding structure excavation, trenching and shoring, and backfill.

Plastic pipe for storm drains shall be double walled Type S corrugated high-density polyethylene pipe with a smooth interior wall unless otherwise shown on the Plans. Plastic pipe for the infiltration bed shall meet the requirements of Section 68-1.02K, Perforated Plastic Pipe, of the Standard Specifications.

If the cover over the top of storm drainpipe is less than 18 inches, the Contractor shall provide a concrete cap over the pipe per the concrete cap detail on the Plans. If the cover over the top of pipe is greater than 18 inches, the Contractor shall backfill per Caltrans Standard Plans and Specifications.

Full compensation for furnishing all labor, material, equipment, and incidentals necessary to install plastic pipe of various diameters including, but not limited to, excavation, bedding, backfill, pipe, concrete cap, concrete, reinforcement, and incidentals is included in the contract unit price per linear foot for each diameter of storm drain pipe; and no additional compensation will be allowed.

10-1.49 CURED IN PLACE PIPE LINING

Full compensation for furnishing all labor, material, equipment, and incidentals necessary to install cured in place pipe (CIPP) lining of various diameters including, but not limited to pipe lining and materials and incidentals is included in the contract unit price per linear foot for each diameter of Corrugated Metal Pipe; and no additional compensation will be allowed.

10-1.50 CORRUGATED METAL PIPE AND SEDIMENT TRAPS

Corrugated metal pipe and corrugated metal pipe risers and sediment traps shall conform to the provisions of Section 66, Corrugated Metal Pipe, of the Standard Specifications and these Special Provisions.

Attention is directed to Section 10-1.36, Earthwork, of these Special Provisions for requirements regarding structure excavation, trenching and shoring, and backfill.

Corrugated metal pipe shall be fabricated from zinc-coated steel sheet. The normal thickness of the sheets for corrugated metal pipe shall be a minimum thickness of 14 gage for storm drains and 12 gage for sediment traps and pipe risers unless otherwise stated on the Plans.

Corrugated metal pipe used for the storm-drain pipe system shall be helically wrapped, exterior box ribbed, smooth interior pipe with a Manning's N value of 0.014 or less. Corrugated metal pipe used for sediment traps and pipe risers shall conform to the requirements of AASHTO Designation M 36/M36M.

All Type B sediment trap grates shall conform to the Standard Plan D77B (Bicycle Proof Grate Details-Type 900RX) or Standard Plan D75A (Pipe Inlets-Type OMP) as specified on the Plans.

Shop drawings for all corrugated metal pipe risers, sediment traps, hinged lids, and grates shall be submitted to and approved by the Engineer prior to fabrication.

Where the depth of drainage structures (sediment traps, etc.) exceeds 30 inches, measured from the top of grate to the floor of the structure, install steps or ladders with the lowest rung 12 inches above the floor and highest rung not more than 6 inches below the top of grate. The distance between steps shall not exceed 12 inches and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Step inserts may be substituted for the bar steps. Step inserts shall comply with State Industrial Safety Requirements. See Caltrans Standard Plan D75C for step details.

If the cover over the top of pipe is less than 18 inches, the Contractor shall provide a concrete cap over the pipe per the concrete cap detail as shown on the Plans. If the cover over the top of pipe is greater than 18 inches, the Contractor shall backfill per Caltrans Standard Plans and Specifications.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to construct sediment trap including, but not limited to excavation, backfill, pipe, base, cover, filter fabric, concrete Type B or Type C collar, and incidentals is included in the contract unit price paid for each for sediment trap; and no additional compensation will be allowed.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to construct 3-foot OMP/sediment trap, including, but not limited to excavation, backfill, pipe, base, grate, concrete collar and incidentals is included in the contract unit price paid for each 3-foot OMP/sediment trap, and no additional compensation will be allowed.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to construct 3-foot pipe riser including, but not limited to excavation, backfill, pipe, base, grate, concrete collar and incidentals is included in the contract unit price paid for each for 3-foot pipe riser; and no additional compensation will be allowed.

Full compensation for furnishing all labor, material, equipment, and incidentals necessary to install corrugated metal pipe of various diameters including, but not limited to, excavation, bedding, backfill, pipe, concrete cap, concrete, reinforcement, and incidentals is included in the contract unit price per linear foot for each diameter of Corrugated Metal Pipe; and no additional compensation will be allowed.

10-1.51 ROCK SLOPE PROTECTION AND ROCK RIP-RAP

Rock for use in the rock slope protection and rock rip-rap shall be of the type and size indicated on the Plans and shall conform to the provisions in Section 72-2, Rock Slope Protection, of the Standard Specifications and these Special Provisions.

Attention is directed to Section 10-1.36, Earthwork, of the Special Provisions.

Rock size shall be as shown on the Plans. Rock shall be angular and of a color that matches native granite material found in the Lake Tahoe Basin. All rock used for rock slope protection and rock rip-rap shall be uniform in color and shape. A sample of the proposed rock shall be submitted to the Engineer ten (10) working days prior to constructing any of the proposed improvements specified in this section. Rock color shall be approved by the Engineer.

Unless otherwise noted in these Special Provisions, placement of rock for rock slope protection shall be in accordance with the applicable Method A requirements of Section 72-2.03, Placing, of the Standard Specifications. Placement of rock for rock rip-rap may be by dumping from the bucket of a backhoe. Because of the confined linear nature of the drainage ditches where rock rip-rap is to be placed, only equipment that can be safely operated in the confined construction corridor will be permitted, and hand placement or manipulation of rock may be required by the Engineer to achieve the required ditch configuration. Local surface irregularities of the rock rip-rap shall not vary from the planned slopes by more than 6 inches measured at right angles to the slope.

Rock slope protection fabric (filter fabric) shall be woven or non-woven, Type B, conforming to the requirements of Section 72-2.025, Rock Slope Protection Fabric, and Section 88-1.04, Rock Slope Protection Fabric, of the Standard Specifications and these Special Provisions.

Rock slope protection shall be measured by the square meter of exposed rock slope measured in the field. Measurement shall be in the plane of the slope from the finished ground at the toe of the slope to the top of the slope.

Rock rip-rap ditch fabric (coir fiber) shall be DeKoWe 900 or equivalent and conform to the requirements of these Special Provisions. Coir fabric shall be installed as per Section 10-2.00, Revegetation, of the Special Provisions.

Rock rip-rap for channel lining shall be measured by the cubic feet as determined from the dimensions shown on the Plans or the dimensions directed by the Engineer in accordance with Section 72-2.04, Measurement, of the Standard Specifications.

Full compensation for furnishing all labor, material, equipment, and incidentals necessary to construct rock rip rap channel lining including, but not limited to excavation, rock, placement, fabric and incidentals is included in the contract unit price per square foot for rock rip-rap in the various sizes shown on the Plans; and no additional compensation will be allowed.

Full compensation for furnishing all labor, material, equipment and incidentals necessary to excavate for rock lined (rock rip-rapped) ditches including, but not limited to excavation, construction and compaction of adjacent berms, and incidentals is included in the contract lump sum price for ditch excavation; and no additional compensation will be allowed.

10-1.52 GRAVEL

This section covers the work necessary for furnishing and installing gravel. Gravel shall be hard and durable stone with less than 35 percent (35%) wear when tested for resistance to abrasion in conformance to ASTM C535. Bulk density shall not be less than 160 pounds per dry cubic foot.

Shot quarry stone, crushed rock, broken concrete or recycled construction products shall not be allowed. Each load of Gravel shall be reasonably well graded from the smallest to the maximum size specified.

Gravel: Shall conform to the following gradation:

Size	Percent Smaller by Weight
1 and 1/2-inch	100
1-inch	65-85
3/4-inch	40-50
1/2-inch	15-20
1/8-inch	5-10

Full compensation for furnishing all labor, material, equipment, and incidentals necessary to install gravel including, but not limited to, excavation and gravel is included in the contract unit price per square foot; and no additional compensation will be allowed.

10-1.53 ROCK FOR CHANNEL CONSTRUCTION

This section covers the work necessary for furnishing and installing rock materials for stream channel construction. These materials include six sizes of rock, Rock Types 1 through 6, some of which are combined to create a mix, Rock Mix A.

Rock Types describe the rock substrate placed to form the bed and boundaries of the streambed.

Rock Types consist of six (6) different grades of rock for stream construction and are specified in the Plans as six (6) types, Rock Type 1 through Rock Type 6. Rock shall be hard and durable stone with less than 35 percent (35%) wear when tested for resistance to abrasion in conformance to ASTM C535. Bulk density shall not be less than 160 pounds per dry cubic foot. The least dimension of any one rock of Rock Types 2 and 3 shall not be less than one third (1/3) the greatest dimension. Shot quarry stone, crushed rock, broken concrete or recycled construction products shall not be allowed. Each load of rock shall be reasonably well graded from the smallest to the maximum size specified. Rock size gradation shall conform to Rock Grades (see below). The Contractor shall submit samples of each Rock Type to the Engineer for approvals prior to selection of a source for each type. In addition to these characteristics, Rock Types visible from the ground surface after installation shall be of a color that matches the surrounding terrain and does not visually draw attention.

Rock Types 2 and 3 shall be naturally rounded in shape and have a naturally smooth surface such as stream or river stone. The size is measured along the B-Axis, which is the second largest dimension of the stone (i.e., use the dimensions of length, height, and width to describe the stone; with length being the A-Axis and the longest dimension of the stone, then the B-Axis is the longer of the height and width dimensions). Rock Type 1 shall be generally rectangular in shape.

Rock Grades

Rock Type 1: Shall be rectangular in general configuration and shall conform to the following dimensions:

Size
18-inch minimum height
18-inch minimum depth
30-inch minimum length

Rock Type 2: Shall conform to the following gradation:

Size	Percent Smaller by Weight
10-inch	100
8-inch	65-85
6-inch	40-50
3-inch	15-20
1-inch	5-10

Rock Type 3: Shall conform to the following gradation:

Size	Percent Smaller by Weight
6-inch	100
5-inch	65-85
3-inch	40-50
1-inch	15-20
1/2-inch	0

Rock Type 4: Shall conform to the following gradation:

Size	Percent Smaller by Weight
1 and 1/2-inch	100
1-inch	65-85
3/4-inch	40-50
1/2-inch	15-20
1/8-inch	5-10

Rock Type 5: Shall conform to the following gradation:

Size	Percent Smaller by Weight
1/2-inch	100
3/8-inch	65-85
#4 sieve	40-50
#8 sieve	15-20
#16 sieve	0

Rock Type 6: Shall conform to the following gradation:

Size	Percent Smaller by Weight
#4 sieve	93-100
#8 sieve	40-80
#16 sieve	15-60
#50 sieve	0-20
#100sieve	0-4
#200 sieve	0-2.5

Rock Type 6 shall be imported clean sand. Excavated native material may not be used as Rock Type 6.

Rock Mix A is rock substrate placed to form the bed of the streambed. Rock Types are combined to form a Rock Mix.

Rock Mix A: Shall conform to the following gradation (±5%):

Rock Type	Percent By Volume
3	60
4	20
5	15
6	5

The Contractor shall place rock types and rock mixes carefully. Placing of rocks by dumping shall NOT be permitted. The minimum thickness of the rock materials shall be those shown in the Plans. Note that the rock material thickness varies according to the rock type and rock mix and the location.

The rock mixes shall consist of the rock types indicated above and shall be mixed at the approximate percentages shown. The Contractor shall intermix the sizes of stone material to provide relatively uniform gradation between small and large material.

Contractor shall submit load slips to Engineer which shall clearly indicate type of rock and/or mix and weight. If rock mixes are made on site, Contractor shall indicate to Engineer amount of rock type used for each mix from load slips.

Full compensation for furnishing all labor, materials, and equipment associated with rock placement shall be considered as included in the Contract price paid per ton for Rock Type 1, and no additional compensation will be allowed.

Full compensation for furnishing all labor, materials, and equipment associated with rock placement shall be considered as included in the Contract price paid per ton for Rock Type 2, and no additional compensation will be allowed.

Full compensation for furnishing all labor, materials, and equipment associated with rock placement shall be considered as included in the Contract price paid per ton for Rock Type 3, and no additional compensation will be allowed.

Full compensation for furnishing all labor, materials, and equipment associated with rock placement shall be considered as included in the Contract price paid per ton for Rock Type 4, and no additional compensation will be allowed.

Full compensation for furnishing all labor, materials, and equipment associated with rock placement shall be considered as included in the Contract price paid per ton for Rock Type 5, and no additional compensation will be allowed.

Full compensation for furnishing all labor, materials, and equipment associated with rock placement shall be considered as included in the Contract price paid per ton for Rock Type 6, and no additional compensation will be allowed.

10-1.54 SETTLING BASIN

Work under this item shall consist of furnishing all labor, tools, materials, and equipment and material necessary to install settling basin in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under this item includes excavation, disposal of excess

material, compaction, furnishing and placing articulated block, rock riprap and Revegetation Type UPL.

Articulated block placement in settling basin shall be in conformance with the Section 10-1.55, Articulating Concrete Block (ACB) Revetment System, of these Special Provisions.

Rock riprap placement in settling basin shall be in conformance with the Section 10-1.51, Rock Slope Protection and Rock Riprap, of these Special Provisions

Revegetation Type UPL shall be placed in accordance with Section 10-2.04, Revegetation Treatment Types, of these Special Provisions.

The contract unit price per each Settling Basin shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in constructing and installing the settling basin, including excavation, disposal of excess material, compaction, furnishing and placing of articulated block, rock riprap, and Revegetation Type UPL, and no additional payment shall be allowed.

10-1.55 ARTICULATING CONCRETE BLOCK (ACB) REVETMENT SYSTEM

A. General

1. Scope of Work

The Contractor shall furnish all labor, materials, equipment, and incidentals required and perform all operations in connection with the installation of cellular concrete erosion control mats for the Settling Basin in accordance with the lines, grades, design and dimensions shown on the Contract Plans and as specified herein.

2. Submittal

The Contractor shall submit to the Engineer all manufacturers' hydraulic testing and calculations in support of the proposed cellular concrete mat system and geotextile.

The Contractor shall furnish the manufacturer's certificates of compliance for cellular concrete blocks/mats, revetment cable, and any revetment cable fittings and connectors. The Contractor shall also furnish the manufacturer's specifications, literature, shop drawings for the layout of the mats, and any recommendations, if applicable, that are specifically related to the project.

Alternative materials may be considered. Such materials must be pre-approved in writing by the Engineer prior to bid date. Alternative material packages must be submitted to the Engineer a minimum of fifteen (15) days prior to bid date. Submittal packages must include, as a minimum, the following:

(a) Full-scale laboratory testing performed by the submitting manufacturer and associated engineered calculations quantifying the hydraulic capacity of the proposed cellular concrete mat system in similar conditions to the specific project.

(b) A list of 5 comparable projects, in terms of size and applications, in the United States, where the results of the specific alternate revetment system use can be verified after a minimum of five (5) year of service life.

B. Product

1. General

All cellular concrete mats shall be prefabricated as an assembly of concrete blocks, with specific hydraulic capacities, laced with revetment cables. Cellular concrete mats may be assembled on-site by hand-placing the individual units either with or without subsequent insertion of cables.

Individual units in the system shall be staggered and interlocked for enhanced stability. The mats shall be constructed of open and/or closed cell units as shown on the Plans. The open cell units have two (2) vertical openings of rectangular cross section with sufficient wall thickness to resist breakage during shipping and installation. Parallel strands of cable shall extend through two (2) cable ducts in each block allowing for longitudinal binding of the units within a mat. Each row of units shall be laterally offset by one-half of a block width from the adjacent row so that any given block is cabled to four other blocks (two in the row above and two in the row below).

Each block shall incorporate interlocking surfaces that minimize lateral displacement of the blocks within the mats when they are lifted by the longitudinal revetment cables. The interlocking surfaces must not protrude beyond the perimeter of the blocks to such an extent that they reduce the flexibility or articulation capability of the cellular mats or become damaged or broken when the mats are lifted during shipment or placement. Once the mats are in place, the interlocking surfaces shall minimize the lateral displacement of the blocks even if the cables should become damaged or removed. The mats must be able to flex a minimum of 1 inch between any given row or column of blocks in the uplift direction and a minimum of 2 inches in the downward direction.

The cables inserted into the mats shall form lifting loops at one end of the mat with the corresponding cable ends spliced together to form a lifting loop at the other end of the mat. The Engineer shall approve appropriate sleeves for use in order to splice the lifting loop. The cables shall be inserted after sufficient time has been allowed for the concrete to complete the curing process.

The cellular concrete mats shall be placed on a filter fabric as specified herein. Under no circumstances shall the filter fabric be affixed (i.e. chemically bonded to the blocks) to the mattress in a manner in which would jeopardize the functionality of the filter fabric. Specifically, the filter fabric shall be independent of the block system.

2. Cellular Concrete Blocks

(a) Scope

This specification covers erosion control mats used in revetments for soil stabilization.

Note 1 - Concrete units covered by this specification are made from lightweight or normal weight aggregates, or both.

Note 2 - The values stated in U.S. customary units are to be regarded as the standard.

(b) Materials

Cementitious Materials - Materials shall conform to the following applicable ASTM specifications:

- Portland Cements - Specification C 150, for Portland Cement.
- Blended Cements - Specification C 595, for Blended Hydraulic Cements.
- Hydrated Lime Types - Specification C 207, for Hydrated Lime Types.
- Pozzolans - Specification C 618, for Fly Ash and Raw or Calcined Natural Pozzolans for use in Portland Cement Concrete.

Aggregates shall conform to the following ASTM specifications, except that grading requirements shall not necessarily apply:

- Normal Weight - Specification C 33, for Concrete Aggregates.

(c) Casting

The concrete units shall be produced by a dry cast method. The dry cast units obtain strength in a shorter duration as well as an increase in the durability and overall quality of product.

(d) Physical Requirements

At the time of delivery to the work site, the units shall conform to the physical requirements prescribed in the table below.

Compressive Strength Net Area Min. p.s.i		Water Absorption Max. lb/ft^3	
Average of three (3) units	Individual Unit	Average of three (3) units	Individual Unit
4,000	3,500	10	12

When applicable, the manufacturer shall meet all requirements pertaining to a concrete unit's durability pertaining to a freeze-thaw environment.

Units shall be sampled and tested in accordance with ASTM D 6684-04, Standard Specification for Materials and Manufacture of Articulating Concrete Block (ACB) Revetment Systems.

(e) Visual Inspection

All units shall be sound and free of defects that would interfere with either the proper placement of the unit or impair the performance of the system. Surface cracks incidental to the usual methods of manufacture, or surface chipping resulting from customary methods of handling in shipment and delivery, shall not be deemed grounds for rejection.

Cracks exceeding 0.25 inches in width and/or 1.0 inch in depth shall be deemed grounds for rejection.

Chipping resulting in a weight loss exceeding 10 percent (10%) of the average weight of a concrete unit shall be deemed grounds for rejection.

Blocks rejected prior to delivery from the point of manufacture shall be replaced at the manufacturer's expense. Blocks rejected at the job site shall be repaired with structural grout or replaced at the expense of the contractor.

(f) Sampling and Testing

The purchaser or their authorized representative shall be accorded proper access to facilities to inspect and sample the units at the place of manufacture from lots ready for delivery.

Field installation procedures shall comply with the procedures utilized during the hydraulic testing procedures of the recommended system. All system restraints and ancillary components (such as synthetic drainage mediums) shall be employed as they were during testing. For example, if the hydraulic testing installations utilize a drainage layer then the field installation must utilize a drainage layer; an installation without the drainage layer would not be permitted.

The theoretical force-balance equation used for performance extrapolation tends for conservative performance values of thicker concrete units based on actual hydraulic testing of thinner units. When establishing performance values of thinner units based on actual hydraulic testing of thicker units, there is a tendency to overestimate the hydraulic performance values of the thinner units. Therefore, all performance extrapolation must be based on actual hydraulic testing of a thinner unit then relating the values to the thicker units in the same “family” of blocks.

Additional testing, other than that provided by the manufacturer, shall be borne by the purchaser.

(g) Manufacturer

Cellular concrete blocks shall be ARMORFLEX® as manufactured and sold by:

ARMORTEC, A Contech Company
9025 Centre Pointe Dr., Suite 400
West Chester, OH 45269
Phone: 1-800-645-7000
Fax: 1-513-645-7993

Approved equivalent can be used.

The ARMORFLEX® cellular concrete blocks shall have the following nominal characteristics:

Standard Sizes of Armorflex® Blocks							
Class	Type	Block Weight		Block Size			% Open Area
30S	Open	Lbs	Lbs./Sq.ft.	Length Inches	Width Inches	Height Inches	20
		31-36	32-37	13.0	11.6	4.75	

3. Revetment Cable and Fittings

(a) Option 1

Polyester Revetment Cable and Fittings. Revetment cable shall be constructed of high tenacity, low elongating, and continuous filament polyester fibers. Cable shall consist of a core construction comprised of parallel fibers contained within an outer jacket or cover. The weight of the parallel core shall be between 65 percent (65%) to 70 percent (70%) of the total weight of the cable. The revetment cable shall have the following physical properties:

Elongation requirements specified below are based upon stabilized new, dry cable. Stabilization refers to a process in which the cable is cycled fifty (50) times between a load corresponding to $200D^2$ and a load equal to 10 percent (10%), 20 percent (20%), or 30 percent (30%) of the cable's approximate average breaking strength. Relevant elongation values are as shown in the table below. The tolerance on these values is $\pm$ 5 percent (5%).

Polyester Cable		
Nominal Cable Diameter	Approximate Average Strength	Weight per Length
(inches)	(lbs.)	(lbs./100 feet)
1/4	3,000	2.2
5/16	7,000	4.4
3/8	10,000	5.5
1/2	15,000	9.7

Elastic Elongation		
At Percentage of Breach Strength		
10	20	30
0.6	1.4	2.2

The revetment cable shall exhibit resistance to most concentrated acids, alkalis and solvents. Cable shall be impervious to rot, mildew and degradation associated with marine organisms. The materials used in the construction of the cable shall not be affected by continuous immersion in fresh or salt water.

Selection of cable and fittings shall be made in a manner that insures a safe design factor for mats being lifted from both ends, thereby forming a catenary. Consideration shall be taken for the bending of the cables around hooks or pins during lifting. Revetment cable splicing fittings shall be selected so that the resultant splice shall provide a minimum of 60 percent (60%) of the minimum rated cable strength. Fittings such as sleeves and stops shall be aluminum and washers shall be galvanized steel unless otherwise shown on the Plans.

(b) Option 2

Galvanized Steel Revetment Cable and Fittings. Revetment cable shall be constructed of preformed galvanized aircraft cable. The cables shall be made from individual wires and strands that have been formed during the manufacture into the shape they have in finished cable.

Cable shall consist of a core construction comprised of seven (7) wires wrapped within seven (7) or nineteen (19) wire strands. The revetment cable shall have the following physical properties:

Galvanized Cable			
Nominal Cable Diameter	Type	Approximate Average Strength	Weight per Length
(inches)		(lbs.)	(lbs.)/100ft
1/8	7x7	1,700	2.8
3/16	7x7	3,700	6.2
1/4	7x7	6,100	10.6
5/16	7x19	9,800	17.3
3/8	7x19	14,400	24.3

The revetment cable shall exhibit resistance to mild concentrations of acids, alkalis, and solvents. Fittings such as sleeves and stops shall be aluminum, and the washers shall be galvanized steel. Furthermore, depending on material availability, the cable type (7x7 or 7x19) can be interchanged while always ensuring the required factor of safety for the cable.

Selection of cable and fittings shall be made in a manner that insures a safe design factor for mats being lifted from both ends, thereby forming a catenary. Consideration shall be taken for the bending of the cables around hooks or pins during lifting. Revetment cable splicing fittings shall be selected so that the resultant splice shall provide a minimum of 75 percent (75%) of the minimum rated cable strength.

4. Anchors

Where permanent anchoring is required, e.g. hanging mats on steep slopes without toe construction, the cables (polyester or steel) shall be attached to the anchoring system as indicated on the Plans. The design and layout of the anchored system shall be design by a separate entity other than Armortec.

5. Filter Fabric

The geotextile filter shall meet the minimum physical requirements listed in the table below. Consultation with the manufacturer is recommended.

The geotextile must be permitted to function properly by allowing relief of hydrostatic pressure; therefore fine soil particles shall not be allowed to clog the filter fabric.

The geotextile fiber shall consist of a long-chain synthetic polymer composed of at least 85 percent (85%) by weight of propylene, ethylene, ester, or amide, and shall contain stabilizers and/or inhibitors added to the base plastic, if necessary, to make

the filaments resistant to deterioration due to ultraviolet and heat exposure. The edges of the geotextile shall be finished to prevent the outer fiber from pulling away from the geotextile.

The Contractor shall furnish the Engineer, in duplicate, manufacturer's certified test results showing actual test values obtained when the physical properties are tested for compliance with the specifications.

During all periods of shipment and storage, the filter fabric shall be protected from direct sunlight, ultraviolet rays and temperatures greater than 140 degrees Fahrenheit. To the extent possible, the fabric shall be maintained wrapped in its protective covering. The geotextile shall not be exposed to sunlight, ultraviolet rays until the installation process begins.

Physical Property	Test Procedure	Minimum Value
Grab Tensile Strength (Unaged Geotextile)	ASTM D4632	200 pounds (in any principal direction)
Breaking Elongation (Unaged Geotextile)	ASTM D4632	50 percent maximum (in any principal direction)
Burst Strength	ASTM D3786	400 p.s.i
Puncture Strength	ASTM D4833	115 pounds
A.O.S., U.S. Standard Sieve	ASTM D4751	see Design Manual
Percentage Open Area	CWO-22125-86	see Design Manual
Permittivity	ASTM D4491	see Design Manual

Final acceptance of the filtration geotextile by the Engineer shall be dependent upon the geotextile performance when tested in accordance with ASTM D5101, Standard Test Method for Measuring the Soil-Geotextile System Clogging by the Gradient Ratio test or the Hydraulic Conductivity Ratio test. Soil characteristics such as grain size distribution and plasticity shall be determined for every 200,000 square feet of geotextile installed or for each source of borrow material used during construction. Significant differences in soil characteristics shall require further performance testing by either the Gradient Ratio or the Hydraulic Conductivity Ratio tests at the discretion of the Engineer. The locations for which the material to be tested is extracted shall be approved by the Engineer. The Contractor shall provide the site-specific soil and modified proctor curves for the site-soil, at his own expense, to the manufacturer. Also, the Contractor shall be responsible for the performance of the test by a certified independent laboratory experienced in performing such test. The test shall be performed under the actual field soil conditions or as otherwise required by the Engineer.

At the time of installation, the filter fabric shall be rejected if it has been removed from its protective cover for over 72 hours or has defects, tears, punctures, flow deterioration, or damage incurred during manufacture, transportation or storage. With the acceptance of the Engineer, placing a filter fabric patch over the damaged area prior to placing the mats shall repair a torn or punctured section of fabric. The patch shall be large enough to overlap a minimum of 3 feet in all directions.

In the event pre-assembled panels of fabric are required, the panels of filter fabric shall be sewn together at the manufacturer or another approved location.

6. Size of Cellular Concrete Mats

(a) General. The cellular concrete blocks, cables and fittings shall be fabricated at the manufacturer or another approved location into mats with a width of up to eight (8) feet and a length up to forty (40) feet, which is approved by the Engineer.

(b) Mat Length: The cellular concrete mats shall have the ability for fabrication in various lengths, widths, and in combinations of length and/or widths. Special mats are a combination of two opposing dimensions either in the longitudinal or transverse direction of the mats. The special mats are available in various dimensions that allow for a custom fit to a site-specific project.

C. Foundation Preparation, Geotextile, and Mat Placement

1. Foundation Preparation

(a) General. Areas on which filter fabric and cellular concrete blocks are to be placed shall be constructed to the lines and grades shown on the Plans and to the tolerances specified in the Contract Documents, and approved by the Engineer.

(b) Grading. The slope shall be graded to a smooth plane surface to ensure that intimate contact is achieved between the slope face and the geotextile (filter fabric), and between the geotextile and the entire bottom surface of the cellular concrete blocks. All slope deformities, roots, grade stakes, and stones which project normal to the local slope face must be re-graded or removed. No holes, "pockmarks", slope board teeth marks, footprints, or other voids greater than 1.0 inch in depth normal to the local slope face shall be permitted. No grooves or depressions greater than 0.5 inches in depth normal to the local slope face with a dimension exceeding 1.0 foot in any direction shall be permitted. Where such areas are evident, they shall be brought to grade by placing compacted homogeneous material. The slope and slope face shall be uniformly compacted, and the depth of layers, homogeneity of soil, and amount of compaction shall be as required by the Engineer.

Excavation and preparation for anchor trenches, flanking trenches, and toe trenches or aprons shall be done in accordance to the lines, grades and dimensions shown in the Plans. The anchor trench hinge-point at the top of the slope shall be uniformly graded so that no dips or bumps greater than 0.5 inches over or under the local grade occur. The width of the anchor trench hinge-point shall also be graded uniformly to assure intimate contact between all cellular concrete blocks and the underlying grade at the hinge-point.

(c) Inspection. Immediately prior to placing the filter fabric and cellular concrete blocks, the prepared subgrade shall be inspected by the Engineer as well as the owner's representative. No fabric or blocks shall be placed thereon until that area has been approved by each of these parties.

2. Placement of Geotextile Filter Fabric

(a) General. Filter Fabric, or filtration geotextile, as specified elsewhere, shall be placed within the limits shown on the Plans.

(b) Placement. The filtration geotextile shall be placed directly on the prepared area, in intimate contact with the subgrade, and free of folds or wrinkles. The geotextile shall not be walked on or disturbed when the result is a loss of intimate contact between the cellular concrete block and the geotextile or between the geotextile and the subgrade. The geotextile filter fabric shall be placed so that the upstream strip of fabric overlaps the downstream strip. The longitudinal and transverse joints shall be overlapped at least two (3) feet. The geotextile shall extend at least one foot beyond the top and bottom revetment termination points. If cellular concrete blocks are assembled and placed as large mattresses, the top lap edge of the geotextile should not occur in the same location as a space between cellular concrete mats unless the space is concrete filled.

3. Placement of Cellular Concrete Blocks/Mats

(a) General. Cellular concrete block/mats, as specified in these Special Provisions, shall be constructed within the specified lines and grades shown on the Plans.

(b) Placement. The cellular concrete blocks shall be placed on the filter fabric in such a manner as to produce a smooth plane surface in intimate contact with the filter fabric. No individual block within the plane of placed cellular concrete blocks shall protrude more than one-half inch or as otherwise specified by the Engineer. To ensure that the cellular concrete blocks are flush and develop intimate contact with the subgrade, the blocks shall be "seated" with a roller or other means as approved by the Engineer.

If assembled and placed as large mattresses, the cellular concrete mats shall be attached to a spreader bar or other approved device to aid in the lifting and placing of the mats in their proper position by the use of a crane or other approved equipment. The equipment used should have adequate capacity to place the mats without bumping, dragging, tearing or otherwise damaging the underlying fabric. The mats shall be placed side-by-side and/or end-to-end, so that the mats abut each other. Mat seams or openings between mats greater than two (2) inches shall be filled with 4000 p.s.i. non-shrink grout. Whether placed by hand or in large mattresses, distinct changes in grade that results in a discontinuous revetment surface in the direction of flow shall require a grout seam at the grade change location so as to produce a continuous surface.

Anchor trenches and side trenches shall be backfilled and compacted flush with the top of the blocks. The integrity of the trench backfill must be maintained so as to ensure a surface that is flush with the top surface of the cellular concrete blocks for its entire service life. Toe trenches shall be backfilled as shown on the Plans. Backfilling and compaction of trenches shall be completed in a timely fashion. No more than 500 linear feet of placed cellular concrete blocks with non-completed anchor and/or toe trenches shall be permitted at any time.

(c) Finishing. The cells or openings in the cellular concrete blocks shall be backfilled and compacted immediately with suitable material to assure there are no voids and so that material extends from the filter fabric to one-inch above the surface of the cellular concrete block. Backfilling and compaction

shall be completed in a timely manner so that no more than 500 feet of exposed mats exist at any time.

(d) Consultation. The manufacturer of the cellular concrete blocks/mats shall provide design and construction advice during the design and initial installation phases of the project when required.

D. Payment

The contract unit price per square foot for the articulating concrete block item shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in producing and installing the articulating concrete block, complete in place, as shown on the Plans, in accordance with these Special Provisions and as directed by the Engineer, including excavation, subgrade compaction, and installation of non-woven geotextile fabric.

10-1.56 STORM WATER QUALITY FILTER TREATMENT DEVICE

A. General

1. Work Included

Specifies requirements for construction and performance of an underground storm water quality filter treatment device that separates pollutants from storm water runoff through the unit operations of sedimentation, floatation, and membrane filtration.

2. Reference Standards

- ASTM C 891: Specification for Installation of Underground Precast Concrete Utility Structures
- ASTM D 4097: Contact Molded Glass Fiber Reinforced Chemical Resistant Tanks
- ASTM C 478: Specification for Precast Reinforced Concrete Manhole Sections
- ASTM C 443: Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
- ASTM D 4101: Specification for Copolymer steps construction

3. Shop Drawings

Shop drawings are to be submitted with each order to the Contractor then forwarded to the consulting engineer. Shop drawings are to detail the precast concrete and/or fiberglass (FRP) components required and the sequence for installation.

4. Handling and Storage

Prevent damage to materials during storage and handling.

B. Products

1. General

The device shall be circular or rectangular and constructed from precast concrete riser and slab components or monolithic precast structure(s), installed to conform to ASTM C 891 and to any required state highway, municipal or local specifications. Alternatively, the device shall be constructed of fiberglass (FRP), installed to conform

to applicable sections of state, provincial and municipal building codes, highway, municipal or local specifications for the construction of such devices.

(a) Fiberglass Insert (Cartridge Deck). The concrete device shall include a fiberglass insert bolted and sealed watertight inside the concrete chamber. Alternatively, the fiberglass device shall include a fiberglass insert bolted and/or chemically welded watertight inside the fiberglass chamber. The fiberglass insert shall serve as: (a) a horizontal divider between the lower treatment zone and the upper treated effluent zone; (b) a deck for attachment of filter cartridges such that the membrane filter elements of each cartridge extend into the lower treatment zone; (c) a platform for maintenance workers to service the filter cartridges; (d) a conduit for conveyance of treated water to the effluent pipe.

(b) Membrane Filter Cartridges. Filter cartridges shall be comprised of cylindrical membrane filter elements connected to a perforated head plate. The number of membrane filter elements per cartridge shall be eleven 2.75-inch diameter elements, and alternatively ninety-one 0.75-inch diameter elements. The length of each filter element shall be a minimum 18 inches and a maximum 54 inches. The dry weight of each cartridge shall not exceed 25 pounds, and shall allow for manual installation. Each cartridge shall be fitted into the cartridge deck by insertion into a cartridge receptacle that is permanently mounted into the cartridge deck, Each cartridge shall be held fast by a lid that is threaded onto the receptacle. The maximum treatment flow rate of a cartridge shall be controlled by an orifice in the lid. The maximum treatment flow rate per cartridge shall be 50 gpm for a standard cartridge and 25 gpm for a draindown cartridge.

(c) Backwashing Cartridges. Filter cartridges shall allow for use of a manual backwashing or rinsing procedure to restore flow and sediment capacity and extend cartridge service life.

(d) Maintenance Access to Captured Pollutants. A vertical pipe (maintenance access pipe) or weir structure shall contain a large opening through the cartridge deck and thereby provide access for removal of accumulated floatable pollutants and sediment.

(e) Internal Bypass and Pressure Relief. The FRP insert shall be fitted with one or two pressure relief pipes. For devices that are installed off-line, the pressure relief pipe shall have adequate hydraulic capacity to convey the water quality treatment flow rate in case of full occlusion of filter cartridges. For devices that are installed in-line, the pressure relief pipe(s) shall have adequate hydraulic capacity to convey the bypass flow rate as specified by the design engineer.

(f) Bend Structure. The device shall be able to be used as a bend structure in the stormwater conveyance system

(g) Double-Wall Containment of Hydrocarbons. The precast concrete device shall provide double-wall containment for hydrocarbon storage by means of an inner wall of fiberglass, to a minimum depth of 12 inches below the cartridge deck. Alternatively, a fiberglass (FRP) device does not require double-wall containment as fiberglass is resistant to hydrocarbons.

(h) Separator Skirt. The device shall provide a separator skirt that extends from the underside of the cartridge deck to a minimum length equal to the length of the membrane filter elements. The separator skirt shall serve as a baffle to protect the membrane filter elements from contamination by floatables and coarse sediment.

(i) Sump. The device shall provide a minimum 2 feet of sump below the bottom of the membrane filter elements for sediment accumulation, unless otherwise specified by the design engineer.

2. Precast Concrete Sections

All precast concrete components shall be manufactured to a minimum live load of HS-20 truck loading or greater based on local regulatory specifications.

3. Gaskets

All gaskets used for the concrete joints shall be manufactured using neoprene or nitrile rubber gaskets, to prevent deterioration from presence of captured petroleum hydrocarbons. Mastic sealants or butyl tape are not an acceptable alternative as they are prone to leakage of petroleum hydrocarbons.

4. Frame and Cover

Frame and covers shall be manufactured from cast-iron and embossed with the name of the device manufacturer or the device brand name.

5. Concrete

All concrete components shall be manufactured according to local specifications and shall meet the requirements of ASTM C 478.

6. Fiberglass

The fiberglass portion of the water treatment device shall be constructed in accordance with the following standard: ASTM D-4097: Contact Molded Glass Fiber Reinforced Chemical Resistant Tanks.

7. Steps

Steps shall be constructed according to ASTM D4101 of copolymer polypropylene, and be driven into preformed or pre-drilled holes after the concrete has cured.

8. Inspection

All precast concrete sections shall be inspected to ensure that dimensions, appearance and quality of the product meet local municipal specifications and ASTM C 478

C. Execution

1. Installation

(a) Precast Device Construction Sequence.

The installation of a precast concrete device should conform to ASTM C 891 and to any state highway, municipal or local specifications for the construction of manholes. Selected sections of a general specification that are applicable are summarized below.

The precast concrete device is installed in sections in the following sequence:

- aggregate base
- base slab
- treatment chamber section(s)
- transition slab (if required)
- bypass section
- connect inlet and outlet pipes
- riser section and/or transition slab (if required)
- maintenance riser section(s) (if required)
- frame and access cover

The precast base should be placed level at the specified grade. The entire base should be in contact with the underlying compacted granular material. Subsequent sections, complete with joint seals, should be installed in accordance with the precast concrete manufacturer's recommendations.

Adjustment of the storm water quality treatment device can be performed by lifting the upper sections free of the excavated area, re-leveling the base, and reinstalling the sections. Damaged sections and gaskets should be repaired or replaced as necessary. Once the storm water quality treatment device has been constructed, any lift holes must be plugged with mortar.

(b) Inlet and Outlet Pipes. Inlet and outlet pipes should be securely set into the device using approved pipe seals (flexible boot connections, where applicable) so that the structure is watertight.

(c) Frame and Cover Installation. Adjustment units (e.g. grade rings) should be installed to set the frame and cover at the required elevation. The adjustment units should be laid in a full bed of mortar with successive units being joined using sealant recommended by the manufacturer. Frames for the cover should be set in a full bed of mortar at the elevation specified.

2. Fiberglass (FRP) Device Construction Sequence.

The installation of the FRP device should conform to applicable sections of state, provincial and municipal building codes, highway, municipal or local specifications for the construction of such devices. Selected sections of a general specification that are applicable are summarized below.

(a) Structural. Proposed installation details shall conform with all federal, provincial, state, municipal or other local specifications as may be applicable, including all building code requirements.

(b) Water Quality Device Construction Sequence. The water quality FRP device is installed in the following sequence:

- Water quality device as delivered to site placed on prepared bedding or slab using spreader bars to avoid lifting chains from contacting sides of tank. Do not drop, roll or slide vessel.
- Backfill using approved back fill material
- Pour anti-buoyancy slab
- Connect inlet and outlet pipes
- Riser sections and/or transitions (if required and if shipped separately)
- Frame and access cover

(c) Frame and Cover Installation. No direct structural connection shall be permitted to any FRP maintenance access surface riser pipe. No vertical structural connection shall be permitted to any FRP component under any circumstances unless approved by the manufacturer. A minimum 1-inch (25 mm) gap shall be left around and above any required FRP maintenance access surface risers (i.e. not a buried installation), with this gap filled with pea gravel or approved fill material against the surrounding structure that must support the frame and cover in its entirety.

3. Maintenance Access Pipe and Pressure Relief Pipe Installation

In some instances the maintenance access pipe (or weir) and pressure relief pipes will require attachment to the cartridge deck at the job site, rather than at the precaster or fiberglass fabrication facility. In this instance, installation of these components shall be performed according to instructions provided by the manufacturer.

4. Filter Cartridge Installation

Filter cartridges shall be installed in the cartridge deck after the site has stabilize, unless otherwise specified by the design engineer.

D. Quality Assurance

1. Inspection and Maintenance

The manufacture shall include an owner's manual upon request.

After construction and installation, and during operation, the device shall be inspected and cleaned as necessary based on the manufacturer’s recommended inspection and maintenance guidelines.

2. Replacement Filter Cartridges

When replacement filter cartridges are required, only cartridges approved by the manufacturer for use with the storm water quality filter device shall be installed.

E. Payment

The contract unit price per each Media Filtration System of various sizes, the 8 foot diameter Jellyfish and Drop Inlet Jellyfish, shall include full compensation for purchase and delivery of systems, furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in constructing and installing the systems, complete in place, including frame and covers, structure excavation and backfill, concrete base, steps, adjustment to grade, connection to drainage pipes and other incidentals, and no additional payment shall be allowed.

10-1.57 SNOW POLES

This work shall consist of furnishing and installing snow poles in locations shown on the Plans and as directed by the Engineer. Snow poles shall conform to the snow pole detail on the Plans and provisions of Section 82, Markers and Delineators, of the Standard Specifications and these Special Provisions.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete construction and installation of the snow poles including, but not limited to, excavation, backfill, posts, target plates, painting, reflectors, PVC pipe, and hardware shall be considered as included in the contract unit price per each for snow pole; and no additional compensation shall be allowed.

10-1.59 PAVEMENT MARKINGS

Pavement markings shall conform to the provisions in Sections 84-1, General, and 84-3, Painted Traffic Stripes and Pavement Markings, of the Standard Specifications, and these Special Provisions.

Stop bars and pavement markings that are destroyed or damaged during construction by the Contractor's activities shall be replaced at the Contractor's cost, as directed by the Engineer.

The contract lump sum price for pavement markings shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in painting pavement markings including establishing alignment, and layout of markings, complete in place, as specified in the Standard Specifications and these Special Provisions and as directed by the Engineer; and no additional compensation will be allowed.

10-1.60 DUST CONTROL

Dust control shall conform to the provisions in Section 10, Dust Control, of the Standard Specifications and these Special Provisions.

Attention is directed to Section 10-1.61, Dust Palliative, of these Special Provisions regarding the use of dust palliative control dust.

10-1.61 DUST CONTROL AND VEGETATION PROTECTION STANDARDS

At a minimum, dust control shall conform to the provisions in Section 10, Dust Control, of the Standard Specifications and these Special Provisions and the TRPA Handbook of Best Management Practices, Volume III (2012).

Full compensation shall be as provided in Section 10, Dust Control, of the Standard Specifications and these Special Provisions, and no additional compensation shall be allowed.

Protection of vegetation shall conform to these Special Provisions and the TRPA Handbook of Best Management Practices, Volume III (2012). Updated standards for vegetation protection may apply as provided by the Engineer during construction.

Full compensation for conforming to the requirements of vegetation protection shall be included in the various items of work, and no additional compensation will be allowed.

10-1.62 DUST PALLIATIVE

Dust palliatives will not be allowed within the limits of the project site.

10-1.63 ABANDON CULVERTS AND PIPE LINES

Existing culverts and pipe lines, where shown on the Plans to be abandoned, shall be abandoned in place, or at the option of the Contractor, the culverts and pipe lines shall be removed and disposed of. All resulting openings into existing structures, that are to remain in place, shall be plugged with commercial quality concrete containing not less than 300-kg of cement per cubic meter.

Abandoning culverts and pipelines in place shall conform to the following:

A. Culverts and pipe lines, that intersect the side slopes, including but not limited to, existing county roadways, shall be removed to a depth of not less than 3.3 feet measured normal to the plane of the finished side slope, before being abandoned.

B. Culverts and pipelines, 12 inches in diameter and larger, shall be backfilled with sand by any method, acceptable to the Engineer, which completely fills the pipe. Sand backfill material shall be clean, free draining, and free from roots and other deleterious substances.

C. The ends of culverts and pipelines shall be securely closed by a 6 inches thick tight-fitting plug or wall of commercial quality concrete.

D. Culverts and pipelines shall not be abandoned until their use is no longer required. The Contractor shall notify the Engineer in advance of any intended culvert or pipe abandonment.

If the Contractor elects to remove and dispose of any culvert or pipe line which is specified to be abandoned, as provided herein, including but not limited to all excavation, backfill (including slurry backfill), and disposal required for the removal of the pipe will be measured and paid for in the same manner as if the culvert or pipeline has been abandoned in place.

10-1.64 SHRUB / BOULDER BARRIER

Shrub and boulder barrier shall be installed at the locations shown on the Plans or where designated by the Engineer and in conformance with the Plans and these Special Provisions. Barrier rock shall be partially imbedded into existing ground to a minimum depth of 1 foot. Rocks used for barriers shall be no less than 3 feet in diameter and of a color that matches native granite material found in the Lake Tahoe Basin. All barrier rock shall be uniform in color and shape. A sample of the proposed rock shall be submitted to the Engineer for acceptance thirty (30) working days prior to placement.

Contractor shall supply all labor, materials, tools and equipment to add shrub planting spaced evenly between the boulders at the location shown on the Plans and as directed by the Engineer, to create a barrier to pedestrian traffic. The plantings shall conform to these Special Provisions and the detail shown on the Plans.

The Contractor shall select seedlings from the Planting List, below and conform to the requirements of Section 10-2.11, Seeding, of these Special Provisions. Seedlings must have been grown from seed or cuttings collected within the Lake Tahoe Basin or within fifty (50) miles of the Lake Tahoe Basin and within ±1000 vertical feet of the project elevation. Seedlings shall be delivered in 2-1/4 inches x 2-1/4 inches x 5 inches deep pots unless otherwise specified or approved by the Engineer. Seedlings must be approved in writing by the Engineer prior to delivery.

Seedlings shall be delivered to the project site no more than 24 hours prior to planting unless otherwise approved by the Engineer. Upon delivery to the project site, seedlings shall be kept moist and in a shaded environment. At no time shall seedlings be allowed to dry out or be exposed to direct sunlight. Seedlings will be inspected by the Engineer upon delivery in order to ascertain condition and viability. If seedlings are in poor health or show a low level of vigor, those seedlings shall not be allowed to be planted nor will payment be made for planting.

Seedlings shall be planted at an average density of one (1) seedling per square foot between the existing boulders to total the number of shrubs shown on the Plans.

Planting List	
Species (Common Name)	Species (Botanical Name)
Willows	*Salix spp.*
Aspen	*Populus tremuloides*
Tobacco Brush	*Ceanothus velutinus*
Wood Rose	*Rosa woodsii*
Snowberry	*Symphoricarpos rotundifolius*
Bitterbrush	*Purshia tridentata*
Whitethorn	*Ceanothus cordulatus*
Bitter Cherry	*Prunus emarginata*
Choke Cherry	*Prunus virginiana*

Seedling placement shall be specified by the Engineer prior to planting. If seedlings are not able to be planted by August 15, planting may not be allowed in 2014 and may be required to take place the following season. This decision will be made by the Engineer and shall be dependent on temperature, soil moisture, natural precipitation, and other factors. Seedlings shall be planted in the following manner:

A. Prior to planting seedlings, all planting areas shall be prepared in accordance with the UPL1 treatment type. A planting hole shall be dug that is a minimum of four times the diameter of the seedling pot and a minimum of two times the depth of the seedling pot. Two heaping tablespoons of Biosol 6-1-3 organic fertilizer or equivalent shall be mixed with one cup of excavated soil and added to the bottom of the planting hole. The fertilizer-soil mixture shall then be covered with 1-1/2 to 2 inches of excavated soil. The planting hole shall then be filled with water to its rim, allowed to drain and refilled a second time. When all of the water has drained from the planting hole the second time, the seedling shall be planted. The seedling shall be placed in the excavated hole and backfilled with the excavated material to the crown of the root. The Contractor shall not attempt to loosen the rootball or otherwise handle the seedling's roots.

B. After the seedling has been planted and the planting hole backfilled, 2 to 3 inches of pine needle mulch shall be placed around the plant to a diameter of at least 6 inches. Each plant shall then be re-watered, saturating each planting hole without displacing mulch or allowing water to run down the slope below the plant. Planting areas shall be irrigated for the remainder of the growing season in accordance with Section 10-2.15, Irrigation, of these Special Provisions.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete installation of shrub/boulder barrier including, but not limited to, boulder materials, shrub planting, hole preparation, soil amendments, placement, and site restoration and cleanup shall be considered as included in the contract unit price per linear foot for shrub/boulder barrier; and no additional compensation will be allowed.

10-1.65 BOARDWALK

Contractor shall supply all labor, materials, tools and equipment to install a new boardwalk at the location shown on the Plans and as directed by the Engineer. The purpose of the boardwalk is to maintain the existing southern path through the newly constructed riparian area to minimize disturbance to both the riparian area and established foot traffic patterns.

Earthwork, revegetation, and other tasks associated with construction of the boardwalk shall be performed in accordance with these Special Provisions and the detail shown on the Plans. Proper offsite disposal of all construction debris shall be in accordance with Placer County requirements and these Special Provisions.

Installation of the boardwalk shall conform to these Special Provisions and the detail shown on the Plans.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete installation of the boardwalk complete in place, including, but not limited to, excavation, materials, labor, construction, disposal, and other appurtenances shall be considered as included in the Contract unit price per linear foot for boardwalk; and no additional compensation will be allowed.

10-1.66 RELOCATION OF BEAR BOX

This section intentionally left blank.

10-1.67 PARKING BARRIERS

Work under this item shall consist of furnishing all labor, tools, materials, and equipment and material necessary to install parking barriers in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under this item includes excavation, disposal of excess material, compaction, furnishing and placing parking barriers and beveling top of posts.

Parking barriers shall be full-dimension rough-sawn 6 feet x 6 feet posts, fabricated and installed as shown on the Plans. Posts shall be Western Red Cedar, No. 2, and Better Structural per Grading Rule Paragraph 131 a, b, c, of the West Coast Lumber Inspection Bureau or the National Lumber Grades Authority. After fabrication and before delivery to the project site, parking barriers shall be machine stained with a penetrating oil-based, semi-transparent stain recommended for Western Red Cedar by its manufacturer. Stain color shall be as approved by the Engineer.

The contract unit price per each Parking Barrier shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in constructing and installing the parking barriers, including excavation, disposal of excess material, compaction, furnishing and placing barriers and beveling top of posts, and no additional payment shall be allowed.

10-1.68 CLEAN CHANNEL AND VEGETATE

This work will be done by others, and is not considered work under this contract.

10-1.69 REMOVE LOOSE DEBRIS FROM LINED CHANNEL

Work under this item shall consist of furnishing all labor, tools, materials, and equipment and material necessary to remove loose debris from lined channel in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under this item includes excavation, and disposal of excess material.

The contract unit price per square foot remove loose debris from lined channel shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in remove loose debris from lined channel, including excavation, and disposal of excess material, and no additional payment shall be allowed.

10-1.70 PROJECT SIGN

The existing project sign for construction shall be moved from the Lake Forest Meadow location and relocated to the location directed by the Engineer and shall conform to the provisions in Section 56-2, Roadside Signs, of the Standard Specifications and these Special Provisions.

Before any major physical construction work readily visible to roadway users is started on this contract, the Contractor shall relocate the existing project sign.

The letter sizes to be used shall be as shown on the project sign detail on the Plans. The information shown on the signs shall be limited to that shown on the Plans.

The signs shall be kept clean and in good repair by the Contractor.

Upon completion of the work, the signs shall become the property of the County.

10-1.71 SIGN PAINT

This section intentionally left blank.

10-1.72 RELOCATE ROADSIDE SIGNS

Existing roadside signs shall be removed and relocated at locations shown on the plans. Signs shall be stored during construction.

Each roadside sign shall be installed at the new location on the same day that the sign is no longer in conflict with construction.

Two holes shall be drilled in each existing post as required to provide a breakaway feature as shown on the Standard Plans.

The contract unit price paid per each unit for relocate roadside signs, shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in relocate roadside signs, complete in place, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions and as directed by the Engineer. No additional payment will be allowed.

10-1.73 RESET ROADSIDE SIGNS

Existing roadside signs which conflict with the work shall be removed and/or reset as directed by the Engineer.

Each roadside sign to be reset shall be reset on the same day said sign is removed. Sign panels, not reset, shall be salvaged. Salvaged sign panels shall be stored on the project site at a location designated by the Engineer.

Full compensation for doing all the work involved in removing and resetting existing roadside signs shall be considered as included in the contract lump sum price paid for clearing and grubbing, and no additional compensation will be allowed.

10-1.74 ROADWAY SIGNS

This work shall consist of furnishing and installing roadway signs, including Class III Bike Route signs, Speed Hump signs, 15 mph signs, Restoration Area, and Public Shared Driveway signs, in locations shown on the Plans and as directed by the Engineer. Signs shall conform to the provisions of Section 56-2, Roadside Signs, of the Standard Specifications, and these Special Provisions.

All signs shall be single sheet aluminum, and sizes shall be according to Plan details or a minimum of 36 inches deep. Post size shall be 3-1/2 inches by 3-1/2 inches. Mounting height to bottom of sign shall be 5 feet or as specified on plans.

Sign wording shall be according to Plans. The Contractor shall submit a drawing of the sign-wording layout to the Engineer before manufacturing the signs.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete construction and installation of the signs including, but not limited to excavation, backfill, posts, sign, painting, and hardware shall be considered as included in the contract unit price per each for bike route signage, and no additional compensation will be allowed.

10-1.75 REPLACEMENT MISCELLANEOUS LANDSCAPING AND IMPROVEMENTS

This work shall include the replacement and reconfiguration of existing privately owned landscaping, irrigation systems, and other improvements that are damaged or destroyed as part of the construction.

Landscaping and irrigation system facilities shall be replaced with items that are of the same type and quality as those that are currently in place after consultation with the property owner.

Full compensation for furnishing all labor, materials, and equipment associated with replacement and reconfiguration as defined in this section shall be considered as included in the contract price paid for the various items of work, and no additional compensation will be allowed.

10-1.76 WATERLINE RELOCATIONS AND REPLACEMENTS

This work shall conform to these special provisions and all work shall be accepted by the Tahoe City Public Utilities District (TCUD). Coordination may be required to relocate existing water lines, facilities, and service laterals in association with the installation of culvert and other improvements for this project. Attention is directed to Section 10-1.01, Order of Work, of these Special Provisions.

All components of the potable water system (pipe, fittings, and fixtures) shall be “lead-free” according to the requirements of application State of California statutes (California Health and Safety Code, Section 116875 et al).

Existing active water services are to remain active during construction. If a disruption to water service is required, the Contractor shall notify the property owners of the water service work forty-eight (48) hours in advance. Contractor shall coordinate any disruption to service with TCPUD and the property owner. The Contractor shall use all reasonable methods and equipment to minimize the length of time service is disrupted.

The locations, depths, sizes, and materials of existing utilities shown on the plans are approximate. It is recommended that the Contractor pothole all connection points to verify location, depth, size and material of existing piping. Notify the Engineer of any changes or unexpected conditions.

Service Laterals

Contractor shall assume that each parcel is served by a water service. Existing water service laterals that conflict with planned improvements will require relocation. Should a service require relocation the Contractor shall following these Special Provisions.

Utility Relocation (Air Release Valve Relocation)

The work to be performed under Utility Relocation includes the relocation of one water line Air Release Valve (ARV) and appurtenances in County right-of-way along Lake Forest Road, approximate station 14+25, for the TCPUD. The Engineer and TCPUD shall be notified minimum of forty-eight (48) hours in advance when relocating the ARV and making connections to existing water line and such connections shall be made only at a time approved and authorized by TCPUD. The utility relocation shall follow these special provisions.

1. Installation
   Install PE pipe according to ASTM D 2774 and ASTM F 645. Bury piping with depth of cover over top at least 36 inches unless otherwise indicated on the plans or approved by TCPUD.

   Install service/ ARV piping, fittings, and coupling according to AWWA C800 and Manufacturer's recommendations and the following:

   a. To the greatest extent possible, assemble piping, fitting, valves, and meter setters outside of the excavation.

   b. The ends of pipes and all fittings shall be protected at all times to prevent entrance of foreign matter and the pipe interior shall be continuously cleared of all dirt and debris as the work progresses.

   c. All open ends of pipe and fittings shall be adequately and securely closed whenever the work is discontinued for more than one-half hour.

   d. Both joint surfaces shall be clean before joints are made.

   Solid copper wire, 12 gauge, THWN-2 insulation locator wire shall be installed along the entire length of non-metallic pipeline according to the Plans and shall be electrically connecting to the water main locator wire. Locator wire shall be installed parallel to and on top of the pipe. The installation shall be capable of conducting an electric charge. Splice connectors shall be rated for wet location/direct burial installation. All splices shall be wrapped with electrical tape.

   Non-detectible underground utility warning tape; minimum 0.5 mil-thick; minimum 6 inches wide shall be installed along the entire length of pipeline. Warning tape shall be installed as close to parallel to the pipe as is practical, allowing a minimum of 12 inches vertically between the tape and the pipe. The Tape shall be resistant to all known alkalis, acids, chemical reagents, and solvents likely to be encountered in the soil. The tape shall be vivid opaque colored in safety precaution blue and imprinted with "WATER LINE" (or some variation) in black ink along its entire length.

   Insulating bushings shall be installed at all connections between pipes of different metal types. Electrical check shall be made between copper services and water mains to assure that discontinuity is maintained. Wherever electrical contract is demonstrated by such tests, the Contractor shall locate the point or points of contact and make corrections as necessary.

2. Materials

Water Service/ ARV Pipe shall be composed of Polyethylene (PE) pipe. The pipe or tubing for municipal water service shall meeting the following requirements:

a. Iron-Pipe Sized (IPS).
b. ASTM D-2239 – Inside Diameter Controlled Polyethylene (PE) Plastic Pipe
c. SIDR = 7
d. Minimum Pressure Rating: 200 psi.
e. Plastic Pipe Institute (PPI) – PE3408 or PE4710 Resin Designation
f. Bearing the National Sanitation Foundation Seal.
g. Meet the following accepted industry standards according to AWWA C-901, AWWA M55, NSF 14 and 61
h. Account and plan for thermal expansion and contraction of PE pipe.

Acceptable Manufacturers; Models:

Chevron-Phillips Chemical Company LP; DriscoPlex® 5100 Ultra-Line
J-M Manufacturing; HDPE Water Pressure Piping
Or Approved Equal.

Air-Release Valve

The Air-Release Valve shall complying with AWWA C512 and meet the following:

a. Float shall be stainless steel meeting ASTM A240.
b. Needle and seat shall be Buna-N.
c. Plug shall be Bronze meeting ASTM B124.
d. Leverage frame shall be Delrin/Cast Iron meetin ASTM-D-2133/ ASTM-A-126 GR.B.

Manufacturers: the following or approved equal:

APCO 143C for 1” ARV
APCO 145C for 2” ARV

Where approved, joints shall be made by butt fusion or compression coupling. Fittings shall be of bronze construction, recommended by the manufacturer for domestic water service applications, and shall comply with applicable industry standards. Manufactured fittings or couplings shall be the same size as, with pressure rating at least equal to, and ends compatible with and recommended for, piping to be joined.

a. When connecting to PE or copper pipe, compression-type joints shall be used.

b. When connecting to steel or ferrous metal pipe, threaded joints shall be used if possible. Otherwise, compression fittings specifically recommended for the pipe material may be used.

c. When connecting directly to another fitting, threaded joints shall be used.

d. When connecting to PE pipe, stainless steel pipe stiffening inserts shall be used.

e. When connecting pipes of dissimilar metals, use dielectric union or coupling or other insulating fitting appropriate to and with pressure rating at least equal to the pipes being connected.

3. Disinfecting, Testing, and Flushing

The Contractor shall be responsible for completing disinfection, flushing, and testing of all newly constructed water mains and services. All tests and procedures shall be approved witnessed and verify by TCPUD. The Utility District Inspector will:

a. Witness all line filling, flushing, draining, and testing activities. Any test or activity performed without District inspection will be considered invalid and shall be repeated.

b. Inspect the methods of supplying water for disinfection, flushing, and testing to verify the District's potable water system is appropriately protected.

c. Verify that flushing velocities and quantities are achieved.

d. Test for Chlorine residuals during the disinfection process.

e. Perform all bacteriological sampling and testing.

f. Place the new line into service.

g. Keep the time and measure the pressure for the leakage test.

h. Witness the electrical continuity testing of the locator wire.

i. Perform the fire hydrant flow testing.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to relocate/modify existing Air Release Valve, including, but not limited to excavation, sawcutting, asphalt removal, pipe and fittings, cleanouts, perpetuation of existing flows, connection to existing pipe, structural backfill, bedding, backfill, asphalt concrete trench patch, slurry seal, and pressure testing for doing all work involved in relocate/modify existing ARV, complete in place, coordination with TCPUD, as specified in these Special Provisions, and as directed by the Engineer shall be considered included in the Contract Unit price per each for utility relocation and no additional payment will be allowed.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to relocate/modify existing water service lateral, including, but not limited to excavation, sawcutting, asphalt removal, pipe and fittings, cleanouts, perpetuation of existing flows, connection to existing pipe, structural backfill, bedding, backfill, asphalt concrete trench patch, slurry seal, and pressure testing for doing all work involved in relocate/modify existing water service lateral, complete in place, coordination with TCPUD, as specified in these Special Provisions, and as directed by the Engineer shall be considered incidental to the storm drain improvement or other improvement with which it is associated and no additional payment will be allowed.

10-1.77 RELOCATING SANITARY SEWER SERVICE

This work shall conform to these special provisions and all work shall be accepted by the Tahoe City Public Utilities District (TCUD). Coordination may be required to relocate existing sewer laterals in association with the installation of culvert and other improvements for this project. Attention is directed to Section 10-1.01, Order of Work, of these Special Provisions.

Contractor shall assume that each parcel is served by a sewer service. Existing sewer service laterals that conflict with planned improvements will require relocation. Should a sewer lateral or service require lowering and relocation is possible:

A. The line shall be excavated in either or both directions from the crossing such that the new line can be reconnected to the existing line and maintain a constant slope greater than or equal to 2 percent (2%). Reconnections and/or relocations that are unable to meet a 2 percent minimum slope will require approval by the TCPUD and may require the use of special pipe material.

B. Polyvinyl Chloride Pipe (PVC) - Polyvinyl Chloride (PVC) pipe shall be used as a gravity sewer conduit, have a maximum SDR of 35 and shall conform to and meet the requirements of ASTM, D-3034. Service connections shall consist of PVC fittings and rubber gasketed full line tees and shall conform to the requirements of ASTM, D3034.

C. Bedding Material - Bedding material shall be imported clean sand. All material must pass a No. 3 sieve with no more than 6 percent (6%) passing a No. 200 sieve. Excavated material may not be used as Type I bedding material.

Existing active sanitary sewer services are to remain active during construction. The Contractor shall provide all necessary equipment to intercept and transport sewage around the work site. The Contractor shall use all reasonable methods and equipment to minimize the length of time sewage is bypassed from the lateral. The Contractor shall maintain access to driveways while the temporary bypass is in place.

If a disruption to sewer service is required, the Contractor shall notify the property owner of the sewer service work forty-eight (48) hours in advance. Contractor shall coordinate any disruption to service with TCPUD and the property owner.

Should a sewer main or other sewer facility other than a service lateral require lowering and/or relocation, the Engineer and TCPUD will be immediately notified of the conflict.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to relocate/modify existing sanitary sewer lateral, including, but not limited to excavation, sawcutting, asphalt removal, pipe and fittings, cleanouts, perpetuation of existing flows, connection to existing pipe, structural backfill, bedding, backfill, asphalt concrete trench patch, slurry seal, and pressure testing for doing all work involved in relocate/modify existing sanitary sewer lateral, complete in place, coordination with TCPUD, as specified in these Special Provisions, and as directed by the Engineer shall be considered incidental to the storm drain improvement or other improvement with which it is associated and no additional payment will be allowed.

10-1.78 SPECIAL REQUIREMENTS

The Contractor shall deliver a notice to all residents of properties that abut the project streets and those on connecting streets that have no other means of accessing their properties but through the project. The Contractor will provide a standard notice form in sufficient numbers to permit distribution to all homes and businesses within 1,000-foot radius of the project site. The Contractor will complete the notice forms by entering the name of the firm, local and toll free telephone number, date of issuance, and shall indicate on the notice if the street is closed or open to through traffic only.

Notice forms shall be issued no later than forty-eight (48) hours prior to any type of work affecting access to their properties. The Contractor shall be responsible for removing any notices that have not been removed by residents after all work is completed by the Contractor or as directed by the Engineer. Any costs associated with towing of vehicles in the way of construction shall be borne by the Contractor. Notice shall not be left in mailboxes, per Section PO11.2.1 of the Domestic Mail Manual. The Contractor shall be liable for any fines.

The Contractor shall notify the Sheriff's Department, fire departments, schools, ambulance service, and the Engineer forty-eight (48) hours prior to any lane closure or restriction on ingress and egress.

Notification may be in conjunction with the scheduling requirements of the scheduling portion of the Standard Specifications and these Special Provisions. The Contractor shall coordinate traffic control with the Sheriff's Department with respect to any special events that may be affected by construction activities. Particular attention shall be given to the construction of adequate facilities on any street to permit the passing of emergency vehicles.

None of the provisions specified herein shall be construed to restrict or prohibit, at any time, the prosecution of items of work that will not interfere with the use of existing streets.

Full compensation for all work associated with furnishing, distributing and removal, as required, of all notices; for contracting and coordinating with applicable agencies, schools, etc.; and for all incidentals of work required within this special requirements section will be considered as included in the contract prices for various items of work, and no separate payment will be made.

10-1.79 RECORD DRAWINGS

The Contractor shall keep accurate records on a set of project black line prints (24 inches x 36 inches) of all additions and deletions to the work and of all changes in location, elevation, and character of the work not otherwise shown or noted on the contract Plans. The County will furnish three (3) sets of full size black line prints for record drawings plans at no cost to the Contractor.

Record drawings construction plans shall be provided to the County after completion of the project. One (1) copies shall be provided with changes to the original contract work shown in red color. The Contractor shall transmit these record drawings plans to the Engineer for acceptance. Details to be shown on the record drawings plans shall include, but not be limited to, type, quantity, and location of conduit runs, location and elevations of storm drain facilities, and any other modifications, additions or adjustments to any other facilities in the project.

Record drawings plans shall be signed and dated by the Contractor or the subcontractor that actually constructed the facility. In addition, company names of the Contractor and subcontractors shall be added to the title sheet.

The cost of record keeping to provide the information for these record drawings plans and all work associated with preparing accurate record drawings plans shall be considered as included in the various contract items, and no separate payment will be made.

10-2.00 REVEGETATION

10-2.01 VEGETATION

The Contractor shall perform all vegetation work as specified herein and in accordance with the provisions of these Special Provisions, the Plans, and the Standard Specifications. The revegetation work shall consist of all site preparation associated with the vegetation treatments and shall include topsoil and duff salvage and replacement, seedbed preparation, soil amending, soil inoculating seeding, mulching, application of tackifiers, installation of erosion control blankets, and maintenance in accordance with the requirements as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

The Contractor shall request that all treatment types and boundaries are located prior to progressing with the work. All revegetated areas shall be maintained until revegetation requirements as stated in project Permits are satisfied. Inspections shall be arranged by the Engineer at the Contractor's request.

Soil disturbance shall be minimized and limited to those areas that require treatment. All existing vegetation within the project limits not designated for removal shall be protected in accordance with

the requirements of Section 10-1.13, Temporary Fencing, of these Special Provisions. Any existing vegetation damaged shall be replaced by the Contractor in accordance with Section 10-1.04, Preservation of Property, of these Special Provisions.

During clearing and grubbing, the Contractor shall stockpile vegetation and topsoil for reuse in the project area following as in accordance with Section 10-1.30, Topsoil, of these Special Provisions. Native topsoil shall be re-applied on all treatment types where available.

10-2.02 MINIMIZING UNNECESSARY DISTURBANCE

Attention is drawn to Section 10-1.04, Preservation of Property, of these Special Provisions. Care shall be taken at all times to protect and prevent any disturbance to soil and vegetation. Under no circumstances shall any disturbance be allowed to occur outside the work areas identified on the Plans. Any vegetation damaged during construction shall be repaired or replaced at the Contractor's expense as directed by the Engineer. Any areas disturbed or compacted during construction shall receive full soil and revegetation treatment at the Contractor's expense at the direction of the Engineer.

10-2.03 MATERIAL SOURCES

Materials described in these specifications can be acquired from the sources listed below:

Seed	Comstock Seed	(775) 746-3681
	Pacific Coast Seed	(926) 373-4417
	S & S Seeds	(805) 684-0436
Soil Amendments, Fertilizers	Eastern Regional Landfill	(530) 583-0148
	Full Circle Compost	(530) 583-0148
	Pacific Coast Seed	(926) 373-4417
	Bowman Construction	(303) 969-0620
	Teichert Aggregates	(530) 587-3811

The materials used shall be those prescribed for the items that constitute the finished work and shall conform to the applicable requirements in these Special Provisions. All required certificates and samples shall be submitted to the Engineer for approval prior to implementation of soil and revegetation treatments.

10-2.04 REVEGETATION TREATMENT TYPES

Revegetation shall progress in an order approved by the Engineer. The following treatment types shall be applied as shown on the Plans:

There are seven distinct soil and revegetation treatment types that shall be applied as part of the Project. These treatment types are described below. Each treatment type is a combination of specific treatment elements described herein. The eight treatment types are described below and summarized in the Treatment Matrix.

Upland Restoration (UPL)

This treatment type is for dry, upland areas. This treatment includes soil loosening, incorporation of soil amendments, application of fertilizer, seed and mulch. This type of treatment is designed to create soil conditions that maximize infiltration and support the establishment of a self-sustaining native plant community.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals, including but not limited to, applied mixed tub grindings, soil loosening/ surface roughening, fertilizer application,

seed application, and mulching is included in the unit Contract price per square foot of Revegetation – Upland Restoration; and no additional compensation will be allowed.

Sod Salvage and Replacement (SOD)

This treatment type includes the removal, temporary storage and replacement of wetland or wet meadow sod.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals, including but not limited to, sod harvesting, sod storage, sod storage area restoration, replacement, maintenance and watering not covered under Section 10-2.15, Irrigation, of these Special Provisions, soil loosening/ surface roughening, and fertilizer application, is included in the unit Contract price per square foot of Revegetation – Sod Salvage and Replacement; and no additional compensation will be allowed.

Floodplain Restoration (FLP)

This treatment type is for creating stable floodplain areas adjacent to stream channels. This treatment includes application of soil amendments, soil loosening, and application of fertilizer, seed, mulch and coir fabric.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals, including but not limited to, sod harvesting, sod storage, and sod storage area restoration applied mixed tub grindings, soil loosening/ surface roughening, fertilizer application, seed application, and mulching is included in the unit Contract price per square foot of Revegetation – Floodplain Restoration; and no additional compensation will be allowed.

Riparian Vegetation Salvage and Replacement (RIP)

This treatment type includes salvage of riparian vegetation in existing stream channels, temporary storage and replanting in new stream channels.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals, including but not limited to vegetation salvage, storage, planting, and maintenance and watering not covered under Section 10-2.15, Irrigation, of these Special Provisions, is included in the unit Contract price per square foot of Revegetation – Riparian Vegetation Salvage and Replacement; and no additional compensation will be allowed.

Infiltration Treatment (INF)

This treatment type is for increasing infiltration in rock-lined ditches and swales. This treatment includes soil loosening, incorporation of soil amendments, and application of seed over rock armor.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals, including but not limited to vegetation salvage, storage, planting, and maintenance and watering not covered under Section 10-2.15, Irrigation, of these Special Provisions, is included in the unit Contract price per square foot of Revegetation – Infiltration Treatment; and no additional compensation will be allowed.

The following matrix summarizes which treatment elements are associated with each treatment type. The treatment elements are generally organized in the order in which they shall be implemented.

Treatment Matrix

Treatment Elements	UPL	SOD	FLP	RIP	INF
Treatment Element 1: Sod Salvage and Replacement		X			
Treatment Element 2: Topsoil Salvage and Replacement	X	X	X	X	X
Treatment Element 3: Riparian Vegetation Salvage and Replacement				X	
Treatment Element 4: Wood Chip / Tub Grinding Soil Amendment	X				X
Treatment Element 5: Soil Loosening / Surface Roughening	X	X	X		X
Treatment Element 6: Fertilizer	X	X	X		X
Treatment Element 7: Seed	X		X		X
Treatment Element 8: Mulch	X		X		
Treatment Element 9: Coir Fabric			X		
Treatment Element 10: Irrigation	X	X	X	X	

This section describes each of the specific treatment elements that are the building blocks of the soil and revegetation treatment process to be utilized. The order in which the treatment elements are numbered reflects the order in which they shall typically be implemented, consisting of:

Treatment Element 1: Sod Salvage and Replacement
Treatment Element 2: Topsoil Salvage and Replacement
Treatment Element 3: Riparian Vegetation Salvage and Replacement
Treatment Element 4: Wood Chip / Tub Grinding Soil Amendment
Treatment Element 5: Soil Loosening / Surface Roughening
Treatment Element 6: Fertilizer
Treatment Element 7: Seed
Treatment Element 8: Mulch
Treatment Element 9: Coir Fabric
Treatment Element 10: Irrigation

10-2.05 SOD SALVAGE AND REPLACEMENT

All areas designated on the Plans for sod salvage and replacement (SOD) shall be irrigated for a minimum of one month during the growing season (approximately May through September) prior to salvage operations in order to ensure that above-ground vegetation and roots are robust enough to survive salvage operations.

All existing vegetation outside the areas where sod is to be removed shall be protected from injury or damage resulting from the Contractor's operations as shown in the Plans. Vegetation shall be removed only within the project limits and shall consist of sod harvested from areas designated on the Plans for sod removal.

Sod shall consist of above ground and below ground plant materials including leaves and roots, and the soil bound by the root mass. Sod shall have a minimum density of four (4) living plants per square foot. Plants shall be healthy, vigorous and well rooted. Plants which constitute the minimum density requirement shall be either perennial bunchgrasses, rushes, sedges or a combination thereof. Sod shall have 100 percent (100%) cover consisting of living plants, thatch and plant detritus. Soil mass of sod shall contain a uniform distribution of roots with a minimum 50 percent (50%) root mass by volume to a depth of 6 inches from the root crown. Sod sections shall be

rejected when, in the opinion of the Engineer, they are of insufficient root mass. Should excess sod become available, excess material shall be disposed of at a location designated by the Engineer.

Sod shall be harvested from locations as indicated on the Plans. The above ground portions of sod-forming vegetation shall be mowed prior to harvest to a height of three to four (3 to 4) inches as measured from the root crown. Sod shall be precut into three (3) foot by three (3) foot sections resulting in clean, vertical edges. Sod shall be moistened through the root zone before harvest. Sod shall be scalped from the original ground surface to a depth of no less than ten (10) inches, as measured from the root crown. Sod shall be lifted from the subgrade in contiguous sections using machinery equipped with a front end bucket or otherwise approved apparatus. Work shall progress in such a manner as to minimize the disturbance of the soil bound by the root mass and the contiguous integrity of the sod section. Sod shall be rejected when, in the opinion of the Engineer, it is improperly handled resulting in the disruption of root mass and thatch integrity. Amounts of sod removed shall be verified by the Engineer to ensure that adequate amounts of sod exist to complete restoration treatments.

The Contractor shall submit a Sod Storage Plan 48 hours prior to the commencement of sod storage. The Contractor shall not begin sod storage until the Plan is approved in writing by the Engineer. Upon receipt of approval of the Engineer, sod may be stored and maintained at locations indicated on the Plans for a period of time not to exceed 72 hours, unless approved in writing by the Engineer. Sod shall be placed roots down with edges snugly adjoining adjacent sections. Sod shall not be stacked. Sod on the perimeter of the storage area shall have the outermost edges draped with wetted burlap within thirty (30) minutes of placement for storage to protect roots and conserve soil moisture. The Contractor shall be responsible for irrigating sod to maintain moisture levels of no less than 15 percent moisture by volume (as measured with a volumetric soil moisture meter) during the interim storage period.

The Contractor shall treat the sod storage area as directed by these Special Provisions.

Locations for placement of wetland sod shall be as shown on the Plans. If there is not enough salvaged sod to cover all SOD treatment areas shown on the Plans, Contractor shall install available sod at the direction of the Engineer and apply the floodplain revegetation treatment type (FLP) to remaining areas not covered by salvaged sod.

Prior to sod placement, salvaged topsoil shall be applied to the surface of the sod placement area to a depth of four (4) inches. Topsoil shall not be compacted prior to sod placement. Biosol organic fertilizer (or equivalent) shall be applied at a rate of 500 lbs/acre to the soil surface and incorporated into the soil to a depth of one (1) to two (2) inches by raking or other approved methods. The moisture level of the soil on which sod is being placed shall be at least 15% by volume within four (4) hours of sod placement. Any irrigation water applied shall have infiltrated to a minimum depth of four (4) inches prior to sod placement.

Sod shall be placed within two (2) hours of harvest unless storage is otherwise approved by the Engineer. Sod shall be rejected when, in the opinion of the Engineer, it has been allowed to become too dry or is otherwise damaged. Sod shall be placed with sides snugly adjoining adjacent sections. Voids between sod sections shall be filled with topsoil salvaged from onsite. Sod shall be firmly tamped or rolled after placement to eliminate air pockets between the prepared surface and roots. Sod shall be placed so that the top surface forms a continuous shape. Sod which is damaged due to the Contractor’s activities during the course of work shall be replaced at the Contractor’s expense.

Sod shall be irrigated immediately following placement in accordance with Plans. The Contractor shall be responsible for irrigating all sod placed in accordance with these Special Provisions during the period of this Contract. Sod found to be desiccated due to inaction by the Contractor shall be replaced at the Contractor’s expense as directed by the Engineer.

10-2.06 TOPSOIL AND WILLOW SALVAGE AND REPLACEMENT

Nutrient-rich topsoil has been identified in both the 1x and 4x meadows. Where a discernable topsoil or duff layer exists, a depth of 12 inches (12") shall be removed. The soil-revegetation inspector will identify the extent of the topsoil to be removed prior to construction. Once removed, topsoil and duff shall be stockpiled in designated areas prior to excavation or equipment traffic.

Topsoil will be stored with a minimum of handling. Subsoil spoil material shall not be mixed with salvaged topsoil. Stockpiled topsoil will not be piled or compacted in a manner that significantly alters its inherent density, water holding capacity or infiltration. Topsoil shall be stockpiled for as short a time period as is possible, since storage periods of over three months have been shown to be detrimental to soil organic matter amount and quality. Topsoil shall not be compacted, used as temporary fill or further disturbed once stockpiling has occurred unless approved in writing by the soil-revegetation inspector or project engineer. Topsoil shall be stockpiled at designated material storage areas and shall not be stockpiled in a manner which destroys or damages existing vegetated areas not marked for excavation. Areas disturbed by the stockpiling of topsoil outside of designated material storage areas will be treated as per treatment specifications (UPL or FLP, as directed by Engineer).

If salvaged topsoil is lost or disturbed such that it can no longer be reused, the volume of topsoil specified for salvage shall be replaced with a comparable material (to be determined by the Project Engineer) at the Contractor's expense.

Locations for placement of salvaged topsoil shall be as shown on the Plans. Unless otherwise specified on plans, a depth of four (4) inches of topsoil shall be applied to all revegetation treatment areas prior to soil loosening. Topsoil placed in revegetation treatment areas shall not be compacted.

Willow Salvage

A limited number of willows may be salvaged and replanted elsewhere within the project. Prior to removal of willows, all growth over one (1) year old shall be cut to within twelve (12) inches above the crown in order to reduce transpiration during storage. All fresh shoots shall be left intact.

Willow plants shall be dug by backhoe or excavator bucket. Root wads shall be dug such that they are at least thirty-six (36) inches in diameter and in such a manner that the main root structure is not damaged. Salvaged willow root wads shall be placed within the sod storage areas indicated on the Plans in trenches dug to at least the depth of the root wads. Trenches shall be dug and then filled with water, allowed to drain completely and then filled with water again and drained. Following drainage of trenches, root wads shall be placed into the trenches and backfilled with soil removed from trenches. The entire willow storage area shall then be irrigated so that root wads are not allowed to dry.

The Contractor shall restore the willow storage area as directed by these Special Provisions.

Salvaged willows shall be placed in locations as directed by the Engineer.

Installation shall be as follows: A planting hole shall be excavated to a depth of at least 150 percent of the length of the willow root ball (measured from the root crown to the bottom of the root ball) and a width of at least 150 percent of the diameter of the root ball. Following excavation, the hole shall be filled to the top with water and allowed to drain completely (this process may take up to several hours, depending on soil conditions). Following draining of the planting holes, one cup of organic fertilizer (Biosol or equivalent) shall be placed in the bottom of the hole and covered with one (1) inch of soil. The root ball shall then be placed in the hole and small amounts of backfill soil shall be added such that the root crown is approximately level with the soil surface. Once the root ball has been

leveled so that the main stem of the willow is oriented vertical, the rest of the hole shall be backfilled. A circular watering berm shall be built at approximately the edge of the planting hole to a height of four (4) inches and a width of (8) eight inches. The berm shall be made firm and such that water will not break the berm down.

Following planting, the area inside of the watering berm shall be filled to ¾ of the depth of the berm and allowed to drain. This procedure shall be completed two more times. Following this procedure, plated willows shall be irrigated regularly and in accordance with the irrigation specifications. If construction takes place such that regular irrigation does not commence in the season of treatment, willows shall be watered as described above (fill watering berm to ¾ full) at least twice per week until October 30th or until snow covers the ground, whichever occurs first.

10-2.07 RIPARIAN VEGETATION SALVAGE AND REPLACEMENT

This section pertains to harvest, storage and planting of riparian vegetation.

Harvesting/Salvage

The term “riparian vegetation” (for this project) refers to sedges (Carex spp.) and rushes (Juncus spp.). Riparian vegetation shall be harvested from designated areas within the project limits as shown on the Plans. All existing vegetation outside the areas where riparian vegetation is to be removed shall be protected from injury or damage resulting from the Contractor's operations as shown in the Plans. Prior to harvesting, cut vegetation growth to four (4) inches above standing water level or six (6) inches above the root crown, whichever is longer. Riparian vegetation shall be harvested in approximately one (1) square foot sod blocks. Vegetation shall be harvested using a sharp-edged implement capable of removing contiguous blocks of vegetation and saturated soil-root mass. Care shall be taken to ensure that soil is not removed or otherwise separated from the salvaged root mass. Riparian vegetation shall be rejected when, in the opinion of the Engineer, it has been allowed to become too dry or is otherwise damaged. If there is not enough riparian vegetation to fulfill the riparian vegetation planting specifications, the Contractor shall be responsible for purchasing and installing comparable commercially-grown riparian vegetation plugs at the direction of the Engineer.

Storage and Handling

Riparian vegetation shall be planted within two (2) hours of harvest unless storage is otherwise approved by the Engineer. If vegetation storage is anticipated, the Contractor shall submit a Riparian Sod Storage Plan 48 hours prior to the commencement of vegetation storage. The Contractor shall not begin sod storage until the Plan is approved in writing by the Engineer. Upon receipt of approval of the Engineer, sod may be stored and maintained at locations indicated on the Plans for a period of time not to exceed 72 hours, unless approved in writing by the Engineer.

Riparian sod shall be stored in shallow, impermeable containers or containment structures capable of containing 5-6 inches of standing water. Riparian sod blocks shall be placed roots down with edges snugly adjoining adjacent sod blocks. Riparian sod blocks shall not be stacked. The Contractor shall be responsible for irrigating salvaged riparian sod to maintain saturated soil conditions (standing water) throughout the entire root zone up to the height of the root crown during the interim storage period.

The Contractor shall treat the sod storage area as directed by these Special Provisions.

Planting

Prior to planting, salvaged topsoil shall be applied to the surface of the treatment area to a depth of four (4) inches and left uncompacted. Topsoil shall then be secured with coir fabric per coir fabric

application specifications. Riparian sod blocks shall be cut into individual “plugs” sized approximately three (3) inches by three (3) inches by six (6) inches deep within two (2) hours prior to planting using a hand trowel or small saw. Each plug shall consist of at least one living riparian plant (sedges or rushes only, as defined above). All planting areas shall be well irrigated and fully saturated at the time of planting. An opening in the coir fabric large enough to insert the plug shall be created by hand or by using a small implement such as a hand trowel. Next, a hole wide and deep enough to insert the plug shall be created. One plug shall be inserted into each hole to the depth of the root crown and soil shall be hand-packed around the plug such that all roots are covered with soil. Care shall be taken to ensure that soil is not removed or otherwise separated from the root mass of each plug during the planting process. Plugs shall be installed at an average spacing of six inch (6”) centers.

10-2.08 WOOD CHIP / TUB GRINDING SOIL AMENDMENT

Tub-ground wood chips (tub grindings) are those wood materials that are produced by a hammer mill-type tub grinder and are of uneven consistency. Tub grindings shall be at least six months old prior to use in the project area. Tub grindings aged at least one season are preferred. Tub grindings shall be derived from clean, disease-free trees or tree stumps. No tub grindings derived from building materials shall be used. If tub grindings are unavailable or if wood chips are able to be produced from onsite materials, wood chips may be substituted for tub grindings if approved by the Engineer. Wood chips are those materials that are produced by a standard wood chipper and are of relatively even consistency. Neither wood chips nor tub grindings shall contain more than five percent pine needles or other non-wood material.

Tub grindings shall be placed on the soil surface with other amendments, such as topsoil, to specified depth of four (4) inches depth prior to final tilling. Tub grindings may be pre-mixed with other amendments prior to application if approved by the Engineer. Prior to tilling, amendment depth shall be inspected by the Engineer. All amendments shall be mixed during the soil loosening process such that amendments are stratified with the greatest concentration of material near the soil surface and becoming less concentrated at greater depths, to be accomplished through normal mechanical soil loosening techniques.

10-2.09 SOIL LOOSENING / SURFACE ROUGHENING

The term “soil loosening” (or decompaction) refers to processes (tilling, ripping, etc.) that remove compaction from the disturbed ground surface, also referenced herein as “soil”, prior to surface treatments (fertilization, seeding and mulching). Following grading and/or prior to surface treatments, all soil shall be loosened or decompacted unless otherwise noted. Wherever equipment has traveled during the construction process, those areas shall receive loosening treatment whether the soil was intentionally compacted or not.

Soil shall be loosened using a backhoe or excavator equipped with a bucket capable of mixing in topsoil and amendments and loosening the topsoil to the appropriate depth. Soil may be loosened with a backhoe bucket equipped with cutting teeth if loosening is done such that clods remain and topsoil is not pulverized. Soil may also be loosened by hand-tilling using implements such as pick mattocks or Pulaskis in areas where use of mechanized equipment is impractical or not possible.

Soil loosening equipment and process shall be approved in writing by the Engineer at least four (4) weeks prior to the commencement of any soil loosening. The Engineer shall also be contacted at least four (4) days prior to commencement of soil loosening so that field demonstration and coordination can take place. No soil loosening work shall commence prior to this demonstration and explanation.

Following soil loosening, all further equipment traffic (and foot traffic to the greatest extent possible) shall be eliminated from treatment areas. Compaction reduces and can completely eliminate plant

growth and increases surface runoff and erosion. Compaction shall be protected against in all treatment areas.

Following tilling, the entire soil treatment area shall be inspected by the Engineer to assure compliance with these Special Provisions. No seeding or other work shall commence until the tilling inspection is completed and the treatment approved. For monitoring or specification compliance purposes or if a question arises regarding the need for loosening treatment, the Contractor shall measure the area in question using a cone penetrometer and report all results to the Engineer that same day. Any area requiring a resistance pressure of greater than 200 pounds per square inch to reach the specified loosening depth shall be deemed compacted and shall be loosened in accordance with these Special Provisions.

Soil Loosening Application for Treatment Types UPL, FLP, INF

Soil shall be loosened after completion of grading or other activities to an average depth of twelve (12) inches in order to allow plant roots to penetrate and to increase infiltration. Soil tilling shall be conducted in a manner that mixes the subsurface material with the topsoil-amendment material and leaves the subsurface irregular or “scalloped” (i.e. rough, not smooth). Higher subsurface roughness decreases the chance of slumping or mass soil movements by “anchoring” the loosened soil and amendments near the surface until plant roots are established well enough to provide adequate soil strength. Soil conditions immediately following tilling shall be such that a cone penetrometer can penetrate to the specified loosening depth with a resistance pressure of no greater than 200 pounds per square inch.

Wherever soil loosening is to take place, tree roots and existing plants shall be avoided wherever possible. Generally, no machine loosening shall take place within the drip line of mature trees or shrubs. Where tree roots are encountered, loosening shall take place by hand implements such as pick mattocks or Pulaskis to approximately six (6) inches.

Wherever grading is specified, amendments shall be spread on the soil surface after the completion of grading and incorporated using the methods described above. Where amendments are specified and no grading is to take place, amendments shall be spread on the soil surface prior to loosening and incorporated during the soil loosening/tilling process.

Following tilling and amendment incorporation, the soil surface shall be slightly smoothed by raking prior to fertilizer application and seeding such that some amount of surface roughness is retained and the soil surface mimics native soil roughness. Soil shall not be highly smoothed but instead, rocks shall be left protruding from the surface. Specifically, vertical soil relief shall be between four and eight (4-8) inches over a twenty-four (24) inch horizontal distance. Vertical soil relief shall be discontinuous such that no parallel rows are evident in the finished soil surface, No wheeled or other mechanical equipment shall travel on the loosened soil once treatment is completed. Final grade of tilled treatment areas shall be at least six (6) inches higher than the surrounding grade to allow for settling.

Soil Loosening Application for Treatment Types SOD, RIP

Following grading but prior to installation of salvaged sod and wetland vegetation, the soil surface shall be loosened (or, applied topsoil shall be left loose and uncompacted) to an average depth of four (4) inches to allow plant roots to penetrate and to increase infiltration.

10-2.10 FERTILIZER APPLICATION

Slow-release organic fertilizer shall consist of material (Biosol 6-1-3 or equivalent) containing no more than 10% total nitrogen of which no more than 1.5% is in mineral form. Preferred material is derived from fungal mycelium byproduct with 5.5-7% total nitrogen (0.5% mineral form as NH_4 + NO_3), 1-3% available phosphoric acid (P_2O_5) and 3% soluble potash (K_2O).

Fertilizer Application for Treatment Types UPL, FLP, INF

Fertilizer shall be applied to the soil surface at a rate of 2,000 lbs/acre and incorporated into the soil to a depth of no more than two (2) inches by raking or other approved methods. Raking shall be done on contour (across the slope) or from the slope bottom to the slope top.

Fertilizer Application for Treatment Types SOD

Prior to installation of salvaged sod and wetland vegetation, fertilizer shall be applied to the soil surface at a rate of 500 lbs/acre and incorporated into the soil to a depth of no more than two (2) inches by raking or other approved methods. Raking shall be done on contour (across the slope) or from the slope bottom to the slope top.

All fertilizer bags shall be stored on site in a neat and orderly fashion for inspection by the Engineer. During or immediately following fertilizer application, the Engineer shall be contacted to arrange an inspection of the empty fertilizer bags in order to verify amounts applied.

10-2.11 SEEDING

All seed proposed for use on this project shall be approved by the Engineer prior to ordering from the seed supplier. Any seed that has not been approved in writing by the Engineer prior to application may not be used. Seed tags shall be delivered to and approved by the Engineer prior to application. Seed shall not be applied until approved by the Engineer. Seed mixes shall be ordered pre-mixed. Seed shall be certified weed-free.

Upland Seed Mix (for UPL, INF)		
Species (Common Name)	Species (Botanical Name)	PLS lbs per acre
Squirreltail (*high-elevation collection*)	*Elymus elymoides ssp. elymoides* (Sierra)	30
Mokelumne or El Dorado Brome (*or other high-elevation Tahoe collection*)	*Bromus carinatus* (Mokelumne)	40
Blue Wildrye	*Elymus glaucus*	30
Antelope Bitterbrush	*Purshia tridentata*	5
Wax currant	*Ribes cereum*	0.5
Wood Rose	*Rosa gymnocarpa*	0.5
Total PLS Pounds per Acre Rate		106

Floodplain Seed Mix (for FLP)		
Species (Common Name)	Species (Botanical Name)	PLS lbs per acre
Creeping Wildrye	*Leymus triticoides*	7
Blue Wildrye	*Elymus glaucus*	7
Mountain Brome	*Bromus carinatus*	5
Creeping Red Fescue	*Festuca rubra*	3
Tufted Hairgrass	*Deschampsia cespitosa*	0.7
Baltic Rush	*Juncus balticus*	0.2
Nebraska Sedge	*Carex nebraskensis*	1
Big Leaved Lupine	*Lupinus polyphyllus*	3

Floodplain Seed Mix (for FLP)		
Species (Common Name)	Species (Botanical Name)	PLS lbs per acre
Sticky Cinquefoil	*Potentilla glandulosa*	0.2
Wood Rose	*Rosa gymnocarpa*	0.6
Wax Currant	*Ribes cereum*	0.6
Sierra Larkspur	*Delphinium glaucum*	0.7
Sierra Queen Anne's Lace	*Yampa parishii*	0.5
Oregon Checker Mallow	*Sidalcea orega*	0.5
Total PLS Pounds per Acre Rate		30

The Contractor shall notify the Engineer at least 72 hours in advance of any seeding. The Engineer will remove seed labels from the seed bags at the time of seeding to verify species in the mix and application rate in accordance with these Special Provisions. Following soil loosening, the seed shall be spread by hand or hand applicator evenly across the treatment area. Seed shall then be raked using the flat side of a steel rake so that seed is covered by a minimum of 1/4 inch and a maximum 1/2 inch of topsoil. Hydroseed application shall not be allowed.

10-2.12 MULCHING

Mulch shall consist of pine needles and associated duff material, and/or tub grindings or wood chips produced onsite, unless approved by the Engineer. Pine needles are the preferred mulch material. Pine needles shall contain no more than 10 percent (10%) impurities by weight such as pine cones, twigs, rocks or other material. Other material shall represent no more that 0.5 percent (0.5%) of the total volume. Mulch shall contain no more than 2 percent (2%) by volume mineral soil and no more than 10 percent (10%) by volume decomposed organic matter. The needle length of pine needle material shall be as follows: 25 percent (25%) to be less than 1 inch in length; 50 percent (50%) to be between 1 inch and 3 inches; 25 percent (25%) to be greater than 3 inches. The Contractor shall submit a sample of the mulch proposed for the project to the Engineer for review and approval a minimum of five (5) working days before scheduled application of the mulch. If the mulch is rejected, a minimum of five (5) working days shall be provided to the Engineer for review of any subsequent samples. Tub grindings shall have uneven spear lengths and configurations and shall be derived from disease free, virgin wood material. Tub grindings created from recycled building materials shall not be used. Mulch shall be tackified following application in accordance with these Special Provisions.

A pine needle supplier shall be secured at the beginning of the project and a security agreement shall be submitted to the Engineer in order to assure an adequate supply. Pine needles are often available into the summer, but by fall, supplies may be low to non-existent in the Tahoe Basin.

Alternate mulch material may be acceptable if excess wood chips are available from on-site chipping or tub grinding or if an inadequate supply of pine needles exists. Any alternate mulch use must be approved in writing by the Engineer prior to use.

Following seeding, all treatment areas shall be mulched unless otherwise specified by the Engineer. Pine needle mulch will be applied by blower or by hand. Blower-applied mulch is preferred since blown mulch attains greater topsoil surface contact and therefore established greater initial erosion protection. Pine needles shall be applied evenly to the entire area to a depth of one (1) inch if applied by blower or two (2) inches if applied by hand. The discrepancy of thickness is due to the greater density of the blown material as compared to hand-applied material, which develops loft and lower density.

Pine needle mulch shall be applied so that at least 98 percent (98%) of the topsoil surface is covered. The Engineer shall inspect initial and final mulch application and shall be contacted at least four (4) working days prior to application of mulch in order to arrange an initial application inspection.

Alternate mulch (wood chips or tub grindings), if approved, shall be applied to a depth of one (1) inch and such that 98 percent of the topsoil surface is covered.

10-2.13 COIR FABRIC

Coir fabrics are erosion control fabrics made from coconut fibers. Some coir fabrics are woven fibers and others are non-woven fibers that are held together with either biodegradable cotton/jute netting or non-biodegradable polypropylene netting. The coir fabric specified for this project is woven coir fabric. Woven coir fabric shall be DeKoWe 700, Nedia KoirMat 700, or approved equal. Each roll of coir fabric shall be identified with a tag or label securely affixed to the outside of the roll on one end. The label shall include the manufacturer or supplier, the style number, and the roll and lot numbers.

Coir fabric shall be applied following mulch application in all FLP treatment areas shown on the Project Plans. Coir fabric shall be laid over the soil after all tilling, amendment, fertilization, seeding, and mulching has taken place. Coir fabric shall be toed into the soil a minimum 6 inches on the edge furthest from the channel center line. Coir fabric shall extend a minimum 12 inches underneath the rock armor in the stream channel per the Plan details. The Contractor shall install fabric stakes in the coir fabric at 3-foot centers or as approved by the Engineer. Woven coir fabric shall not be cut to install stakes: thread stakes between fabric strands. With the Engineer's approval, stakes may be tilted up to 45 degrees with respect to vertical if underlying stone materials prevent vertical insertion. Broken, split, or damaged stakes shall be removed and replaced at the Contractor's expense.

Fabric stakes shall be wooden stakes 18 inches long and have a top (head) dimension of at least 1.5 inches on one axis (thickness) and 3 inches on the second axis (width). Fabric stakes shall be manufactured by ripping an 18-inch long standard 2-inch by 4-inch wooden stud along the diagonal from corner to corner, or approved equal. Fabric stakes shall be manufactured from wood that is free of knots and not damaged. Fabric stakes shall not be treated with preservative.

Coir fabric shall be reviewed and approved in writing by the Engineer prior to installation. Coir fabric material shall be DeKoWe 400 or equivalent and meet the standards in the following table:

Coir Fabric Standards		
Properties	Test Method	DeKoWe 400
YAM	ANJENGO	Wheel spun, well cleaned, evenly spun and uniformly twisted; scorages range for 12 to 20
Weight/Unit Area (g/m^2)	ASTM-3776C	400
Open Area %		65
Wide Width Tensile, Dry (lbs/inch); Warp and Fill	ASTM D 4595-86	51/31
Elongation at Failure, Dry (MD/CD); Warp and Fill	ASTM D 4595	35/30
Maximum Shear Stress (N/m^2)		148.72
Chezy-Manning		0.0254
Roughness C		n/a
"C" Factor, 1.5:1 Slope		0.002
Water Flow Velocity (m/sec)		2.4

10-2.14 REPLACE MISCELLANEOUS LANDSCAPING AND IMPROVEMENTS

This work shall include the replacement and reconfiguration of existing landscaping and other improvements owned by others that are damaged or destroyed as part of the construction.

Landscaping and other improvements shall be replaced with items that are of the same type and quality as those that are currently in place, after consultation with the property owner.

Full compensation for furnishing all labor, materials, and equipment associated with replacement and reconfiguration as defined in these Special Provisions shall be considered as included in the Contract price paid for the various items of work, and no additional compensation will be allowed.

10-2.15 IRRIGATION

Two distinct irrigation areas (reach 1x [approximate Stations 101+50 through 104+00] and reach 4x [approximate Stations 300+00 through 307+00 and 400+00 through 403+00]) have been designated in order to complete project construction (see Sheets PH-1 and IP-1 through IP-3 of the Plans). Temporary irrigation shall be used to encourage rapid plant establishment and deep root penetration. Low-flow, long-duration irrigation is intended to provide deep infiltration to assist with initial germination, plant establishment and sod re-establishment so that above-ground biomass provides surface cover and roots provide soil strength and cohesion. Irrigation is intended solely as an initial assistance for germination and vegetation/sod establishment and is not intended to continue past the initial vegetation establishment period. This period varies for different areas within the project area and different vegetation types.

Irrigation shall not be applied during windy conditions. Windy conditions are defined as a sustained wind of 8 mph or more; gusts where the difference between the ambient and the increased velocity is more than 4 miles per hour, or any conditions that may cause dispersal of revegetation and erosion control material or application to be difficult or inaccurate. The Contractor is responsible for providing certified instruments, or data from certified instruments, in case of a claim or conflict.

Irrigation water shall be applied with a low-pressure impact system and regularly maintained so that leakage is minimized. Irrigation will not produce rills, gullies or sheet flow. Irrigation shall be consist of above-ground temporary piping that is flexible and highly burst-resistant and low precipitation rate (< 2.5 gallons per minute [gpm], Yelomine ™ or approved equivalent. It will be capable of connecting to full circle heads each with a radius of 20 feet stream rotor or equivalent spray heads capable of delivering water evenly to the areas shown on the Plans. Above-ground irrigation shall be constructed in a manner that the reach of sprinklers shall overlap in order to cover the entire surface of the treated area. Visual inspection of the irrigation system shall be performed by the Contractor on a regular basis to confirm the constructed irrigation system functions in accordance with these Special Provisions. Above-ground temporary irrigation systems shall be inspected before each irrigation cycle. The Contractor must ensure that irrigation does not cause any soil erosion or displacement and that water penetration meets the requirements of these Special Provisions. A water meter shall be installed at each water supply tie-in to monitor and report the volume of water used to the local purveyor, which is expected to be the Tahoe City Public Utility District. The Contractor is responsible for obtaining a service connection permit and payment of all usage fees associated with the irrigation work. Alternate irrigation methods proposed by the Contractor shall be approved by the Engineer prior to commencement of irrigation activities.

Irrigation shall be used on all revegetation treatment areas if revegetation treatments are completed by August 15th. If this is not possible, irrigation shall only be performed at the direction of the Engineer. Irrigation shall be performed such that water is applied evenly throughout the treatment areas and shall penetrate to at least 8 inches below the ground surface within twelve (12) hours of irrigation, such that the surface soil is allowed to dry out while maintaining adequate moisture levels

at depth. Exact irrigation scheduling shall depend on air and soil temperatures, natural precipitation events and results of regular monitoring of soil moisture levels. A soil moisture meter shall be used to evaluate soil moisture levels at depths of 2 and 8 inches in each treatment area. Irrigation schedules shall be approved with the Engineer to ensure proper timing, frequency and duration. Irrigation may be required at a much lesser level, and shall be determined through regular inspections and monitoring of soil moisture levels by the Contractor. Above-ground irrigation shall take place early in the morning or late in the evening whenever possible in order to minimize water loss due to high air temperatures and wind.

10-2.16 REVEGETATION MAINTENANCE AND SURVIVAL GUARANTEE

Contractor shall guarantee revegetation for a period of two (2) full growing seasons after completed construction as follows. For the purpose of this Contract, a full growing season shall be one year starting October 16 of the planting year and ending October 15 of the next calendar year. The following success criteria will be evaluated at the end of each growing season.

A. Mulch Cover

Mulch shall cover the soil surface to a cover level of 98 percent (98%) in the first season following application. Mulch cover shall be determined by ocular estimate. Where mulch cover does not meet the 98 percent (98%) level, the Contractor shall reapply mulch to meet this standard.

B. Plant Cover

Plant cover in seeded areas shall attain a 20 percent (20%) cover level in the first season. Plant cover shall be determined by ocular estimate by county staff or contract inspector. Where mulch cover does not meet the 98 percent (98%) level, the Contractor shall reapply seed and re-irrigate so that the cover level shall meet this standard within sixty (60) days of re-treatment.

C. Plant Survival

Transplanted riparian vegetation shall attain a total survival rate of 75 percent (75%) in the second season. Where this survival rate is not achieved, a replant (replacement) ratio of two (2) sedge plugs for each non-surviving individual shall be used. No plants shall be replaced the first season.

D. Compaction

Soil shall remain uncompacted and in a relatively loose and friable condition. Soil compaction shall be measured using a cone penetrometer. Resistance to pressure shall not exceed 200 psi to a depth of 12 inches. Compaction shall be measured by county staff or contract inspector. Where excess compaction is encountered and is not the result of some human-caused disturbance such as vehicle or foot traffic, the Contractor shall mechanically decompact that area and retreat with appropriate revegetation treatment as directed by the Engineer.

E. Visible Signs of Erosion

Visible signs of erosion are a clear indicator of project failure. Where erosion occurs, further treatment may be required. Where the project Engineer determines that the cause of the erosion is due to improperly implemented specifications, the Contractor will be required to repair erosion damage on the project area and re-treat the project area per specifications.

F. Depth of Irrigation

Contractor shall irrigate in the years during and following construction as appropriate to meet the revegetation guarantee above. Irrigation shall be performed with enough water, at such times, and at such a rate that no erosion occurs and moisture from irrigation activities penetrates a minimum of 12 inches into the soil within 12 hours of irrigation.

10-2.17 MAINTENANCE REQUIREMENTS

Attention is drawn to the Permits located in Appendix A (Book 3 of 3) of these Special Provisions and the preliminary SWPPP located in Appendix B (Book 3 of 3) of these Special Provisions. All revegetated areas shall be maintained in accordance with these Special Provisions to ensure proper establishment of vegetation and so that there is no evidence of erosion, such as rills or gullies. The maintenance period begins on the date following the last installation. If at any time it is deemed that proper maintenance is not being performed, the countdown for the required maintenance period shall be stopped and not resumed until the project is compliant with the appropriate Special Provisions and proper maintenance is resumed.

Prior to the onset of work, the Contractor shall coordinate with the United States Forest Service Botanist to control the occurrence and spread of noxious and invasive weeds during project construction and maintenance. During the maintenance period, seeded areas will be kept free from noxious and invasive weeds at all times. The Engineer will direct the Contractor to identify noxious and invasive weeds and shall require immediate removal.

Additional maintenance may include reapplication of revegetation treatments. Supplemental maintenance treatments shall be required if revegetation efforts are unsatisfactory following completion of work as determined by the Engineer. The Owner must achieve the pre-disturbance native plant cover stated in the General Permit before the Notice of Termination (NOT) can be issued.

Upon completion of irrigation activities as determined by fulfillment of project permit requirements, the irrigation system shall be removed and disposed of in accordance with Section 7-1.13, Disposal of Materials Outside the Highway Right of Way, of the Standard Specifications and these Special Provisions, and disturbed areas restored in accordance with these Special Provisions.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to install, maintain, remove irrigation pipe, heads, taps, meters, valves, and other items required for the Irrigation south system complete and in place per Plan and restoration of disturbed areas shall be considered in the Contract lump sum price for Irrigation Reach 1X; and no additional compensation will be allowed.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to install, maintain, remove irrigation pipe, heads, taps, meters, valves, and other items required for the irrigation middle system complete and in place per Plan and restoration of disturbed areas shall be considered in the Contract lump sum price for Irrigation Reach 4X; and no additional compensation will be allowed.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to obtain a service connection permit from Tahoe City Public Utility District, pay fees required by Tahoe City Public Utility District associated with irrigation work, and compensate Tahoe City Public Utility District for water usage for irrigation in accordance with their terms shall be considered in the Contract prices for other Irrigation items, and no additional compensation will be allowed.

APPENDIX A: PERMITS

All required permits have not been received as of this date including those from Tahoe Regional Planning Agency, Lahontan, Fish and Game, and Army Corps of Engineers. However, permits are expected to be in place by May 1, 2014.

APPENDIX B:

STORM WATER POLLUTION PREVENTION PLAN

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Lake Forest Water Quality Improvement Project – Panorama
EIP# 01.01.01.37

Placer County
Department of Public Works

Legally Responsible Person [LRP]:

Kansas McGahan, PE
Senior Engineer
Placer County Department of Public Works
Tahoe Engineering Division
7717 North Lake Boulevard
Kings Beach, CA 96143
kmcgahan@placer.ca.gov

Tel 530 581-6217

SWPPP Prepared by:

Jennifer Hanson, CPESC, QSD
Wood Rodgers, Inc
3301 C Street, 100-B
Sacramento, CA, 95816
jhanson@woodrodgers.com
Tel 916-449-2204

SWPPP Preparation Date

August 2013

WDID#: XXXXXXXXX

Estimated Project Dates:

Start of Construction:	**May 2014**	Completion of Construction:	**October 2015**

Table of Contents

Figures

Appendices

I. Introduction and Certifications

A. Storm Water Pollution Prevention Plan (SWPPP) Objectives

This SWPPP is for the construction of Lake Forest Water Quality Improvement Project - Panorama and in compliance with the General Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit for Stormwater Discharges Associated with Construction Activity in the Lake Tahoe Hydrologic Unit, Counties of Alpine, El Dorado and Placer (Board Order No. R6T-2011-0019) (Permit) and is meant to:

- Identify pollutant sources including sediment sources that may affect the quality of storm water discharges associated with the construction activity.
- Identify non-storm water discharges.
- Identify, construct, implement, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non storm water discharges from the construction site.
- Identify all effluent discharge outfall locations, sampling and analysis strategy and protocols, and a sampling schedule for discharges from the identified outfalls for the project area.

B. SWPPP Implementation Schedule

This SWPPP is to be implemented during the construction of Lake Forest Water Quality Improvement Project - Panorama that will be constructed from May to October 2014 and from May to October 2015.

C. Permit Registration Documents

A Notice of Termination (NOT) shall be completed and submitted to the California Regional Water Quality Control Board – Lahontan Region (Lahontan Regional Board) when all construction activities have been completed, or when all portions of the site have been transferred to a new owner, or when the following conditions have been met:

- There is no potential for construction-related storm water pollution to occur.
- All elements of the SWPPP have been completed.
- Construction materials and waste have been disposed of properly.
- The site is in compliance with all local storm water management requirements.
- A post-construction storm water management plan is in place as described in this SWPPP.

Coverage under the Permit is nontransferable. Therefore, upon transfer of ownership (should it occur), the original Owner shall submit a NOT to the Lahontan Regional Board and the new Owner shall submit a Notice of Intent (NOI) to the Lahontan Regional Board to apply for coverage. Annual fees shall continue to be assessed until a NOT is filed and accepted by the Lahontan Regional Board. Photographs of the site, illustrating stabilized disturbed soil areas and the completion of construction activities, must accompany the NOT submittal.

D. Certification and Training Requirements

This SWPPP was prepared initially by Jennifer Hanson, CPESC from Wood Rodgers, a Qualified SWPPP Developer (QSD). All SWPPP Amendments will be prepared and signed by the project's functioning QSD. A Qualified SWPPP Practitioner (QSP) will be responsible for the implementation of the BMPs.

A QSD is required to have one of the following registrations or certifications, and appropriate experience, as required for:

- A California registered professional civil engineer
- A California registered professional geologist or engineering geologist
- A California registered landscape architect
- A professional hydrologist registered through the American Institute of Hydrology
- A Certified Professional in Erosion and Sediment Control (CPESC) ™ registered through Enviro Cert International, Inc;
- A Certified Professional in Storm Water Quality (CPSWQ) ™ registered through Enviro Cert International, Inc.
- A professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET)

A QSD shall have attended a State Regional Board-sponsored or -approved QSD training course and pass a required examination covering the course material.

Qualified SWPPP Developer

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name*:* **Lake Forest Erosion Control Project, Area B**

Project Number/ID: **WDID TBD**

"This Stormwater Pollution Prevention Plan and Attachments were prepared under my direction to meet the requirements of the Tahoe Construction General Permit (Order No. R6T-2011-0019). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below."

QSD Signature	*Date*
Jennifer Hanson *QSD Name*	*QSD Certificate Number*
Associate Engineer, Wood Rodgers, Inc. *Title and Affiliation*	916-449-2204 *Telephone Number*
jhanson@woodrodgers.com *Email*	

A **QSP** is a person responsible for non-storm water and storm water visual observations, sampling and analysis. A QSP shall be either a QSD or have one of the following certifications:

- A certified erosion, sediment and storm water inspector registered through Enviro Cert International, Inc.
- A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

A QSP shall have attended a State Regional Board sponsored or approved QSP training course and pass a required examination covering the course material.

As used in the Standard Specifications, and unless otherwise required by the context, the intent and meaning of the term "Engineer" refers to the Project Manager or other authorized representative of the Placer County

E. Contractor List

Per the Project's Special Provisions, the Contractor shall be responsible for implementing the requirements of the SWPPP and shall be responsible for updating the SWPPP and implementing the updated requirements, as necessary, through the life of the contract.

Contractor Signature	*Date*
Contractor Name	*Title and Affiliation*
Contractor's SWPPP Compliance Inspector	*Telephone Number*

Upon the award of the Lake Forest Erosion Control Project, Area B construction contract, the Contractor will provide a listing of all Contractors' suppliers and sub-Contractor's which will be on the Project Site at any time during the construction Project. The Contractor will provide the names, Contractor's license number, address, phone number and fax number for each of these entities. Additionally, the Contractor will provide a listing of all training related to this SWPPP that all Contractors, suppliers, and sub-contractor have received, and the dates of those training sessions and the training and certifications of the SWPPP Compliance Inspectors.

The Engineer will review the material submitted and include this information in the first amendment to the SWPPP. The first amendment to the SWPPP will be required prior to the start of construction.

F. Emergency contact person and 24-hour phone numbers

Owner and Engineer:

Placer County
Kansas McGahan
Senior Engineer
Placer County Department of Public Works
Tahoe Engineering Division
7717 North Lake Boulevard
Kings Beach, CA 96143
kmcgahan@placer.ca.gov
(530) 581-6217

Project QSD/QSP:

QSD: Jennifer Hanson, CPESC
Wood Rodgers, Inc.
3301 C Street, 100-B
Sacramento, CA, 95816
(916) 826-8715

QSP: TBD

Contractor and Contractor's

To be determined in May 2014
Contact information to be forwarded to Lahontan Regional Board upon award and execution of contract.

SWPPP Compliance Inspector:

To be determined in May 2014
Contact information to be forwarded to Lahontan Regional Board upon award and execution of contract.

Toxic Release:

Placer County Department of Environmental
North Lake Tahoe Office
775 North Lake Blvd, Suite 203
Tahoe City, CA

Pollutant Discharge Release:

Lahontan Regional Water Quality Control Board
Bob Larsen, Environmental Scientist
(530) 542-5400

Tahoe Regional Planning Agency
Bridget Cornell, Associate Planner
(775) 588-5218

Sewage Release:

Tahoe City Public Utility District
Matt Homolka
(530) 580-6042

G. SWPPP Availability and Public Records Access

The Contractor will be required to keep one copy of the final approved SWPPP and the General Permit on site at all times.

Members of the Lahontan Regional Board, Tahoe Regional Planning Agency (TRPA), and County Staff may request to see the SWPPP or inspection forms associated with the SWPPP at any time the Contractor is on site and the Contractor is responsible to provide it immediately.

Additionally, the SWPPP is considered a report that shall be available to the public under Section 308(b) of the Clean Water Act CWA. Upon request by members of the public, the Contractor shall make available for review a copy of the SWPPP directly to the requestor.

H. SWPPP Amendments

This SWPPP shall be amended for any of the following conditions:

- Whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- BMPs do not meet the objectives of reducing or eliminating pollutants in stormwater discharges;
- The Regional Board determines that a Permit violation has occurred, the SWPPP shall be amended and implemented with 14-calendar days after notification by the Regional Board;
- Annually, prior to the winter/rainy season to mitigate for spring thaw. The winter/rainy season is defined as October 15 – May 1;
- When there is a reduction or increase in total disturbed acreage; and
- When deemed necessary by an inspector, the LRP, or the QSD.

This SWPPP was prepared by the QSD for the County. If the QSP or Contractor wishes to make changes to the SWPPP, then the QSP shall submit an amended SWPPP to the QSD detailing any and all proposed changes to this SWPPP (including sampling plan). The SWPPP Amendment Form is contained in Appendix A.

To facilitate the QSD and LRP review of any SWPPP amendments requested by the Contractor, it is recommended that the Contractor obtain access to the California Stormwater Quality Association (CASQA) online (www.casqa.org) Construction BMP Handbooks Portal, and provide details of the proposed amendment that are consistent with specific BMP factsheets available from CASQA. CASQA's BMP factsheets provide information on suitable applications, limitations, implementation, costs, inspection and maintenance for the specific BMPs. The QSP shall provide the revised SWPPP to the QSD a maximum of ten days of the contract award date and before construction activities begin.

Whenever an amendment is required to this SWPPP, by the QSP's request or any other agency, the amendment will be prepared by the QSD. The QSP shall consult with the QSD when there are minor changes, to determine whether the minor changes can be designated by the QSD to be field determined and not trigger a requirement for the QSD to amend the SWPPP. In the event the amendment is at the request of another entity besides the QSD, the entity requesting the amendment shall provide the necessary information so the QSD can properly process the amendment and the QSP can properly implement the requested changes.

The following items shall be included in each amendment:

- **Cover Page** - Similar in format to the main SWPPP including the project name, amendment number, project WDID #, and submittal date;

- **Certification Forms -** Similar in format to the main SWPPP showing approval from QSD, QSP, and LRP;

- **Introduction -** Include a brief description of and reasoning for the requested changes;

- **Amendment Details** - Include the following: a detailed explanation and reasoning of the proposed amendments; provide original BMP proposed, if any; the location of proposed change; the name of who requested the amendment; and the name of who is drafting the amendment.

- **Amendment Log -** List previous amendments to the SWPPP and corresponding dates. Include the current request. Utilize the log already included as part of the main SWPPP.

The Regional Board may require SWPPP amendments be submitted for review and may require modifications. Unless otherwise requested by the Regional Board, most SWPPP amendments will be made available for review on the SMARTS website and on-site and the Regional Board may contact the LRP with comments or concerns.

If an amendment includes any material change or proposed change in the character, location, or volume of the discharge, a report will be filed with the Regional Board at least 30 days in advance of implementation of any such proposal. The report will include, but not be limited to, all significant new soil disturbances, all proposed expansion of development, and increase in impervious surface coverage, or any change in drainage characteristics at the project site. Once approved, the amendment will become a part of this SWPPP.

A copy of each approved amendment made will be attached to this SWPPP for any future inspector or public review.

The QSP will be required to follow the most recent SWPPP version until the amended SWPPP is reviewed and approved by the QSD and the Regional Board.

II. Project Information

A. Project Description, site address and driving directions

The project area is located in Placer County, California, on the north shore of Lake Tahoe between the communities of Tahoe City and Kings Beach. The project area covers approximately 173 acres and is roughly encompassed by State Route (SR) 28 to the north, Lake Tahoe to the south, Lakewood Lane to the east, and SR 28 to the west (Figure 1). The project area appears on the Kings Beach, California/Nevada (1992) United States Geological Survey (USGS) 7.5-minute quadrangle. It is located in Section 32 of Township 16 North, Range 17 East, and Sections 4 and 5 of Township 15 North, Range 17 East, of the Mt. Diablo Meridian.

The project area includes multi-family and single family residential land uses, commercial/industrial businesses along Lake Forest Road, Skylandia Park, and Lake Forest Beach. The proposed design consists of water quality improvements and Stream Environment Zone (SEZ) restoration.

The project includes the restoration of two stream reaches, one in Skylandia Park and one west of Bristlecone Street. The constructed stream channels will consist of non-rigid margins. Stream banks will be constructed using biodegradable erosion control materials and long-term stability will be provided by riparian vegetation. Such stream banks are considered deformable and may slowly adjust over time.

A full growing season or more will be required to establish adequate streamside herbaceous vegetation prior to the redirection of flow into newly constructed channels. Salvage of existing vegetation, where deemed appropriate, will be incorporated into the stream restoration. Irrigation will be required to adequately establish vegetation during the first growing season, especially along reaches that carry only ephemeral flow. Revegetation will not only provide stability against flowing water (both in-stream and overland flow), it will also improve water quality (filtering nutrients and sediment), provide a mosaic of wildlife forage and cover, and improve aesthetic values.

The water quality and erosion control improvements consist of improved culvert conveyance (lessening overflow onto roadways), water quality treatment facilities, drop inlets and sediment cans with sumps, channel improvements, roadway repaving, curb and gutter, and shoulder rehabilitation.

Recreational improvements will include the installation of boardwalks to the west of Bristlecone Street and in Skylandia Park from the parking lot at the corner of Lake Forest Road and Aspen Street, south to the main portion of Skylandia Park. These boardwalks will enhance water quality by keeping people and pets away from the reconstructed stream reaches and will also improve existing trail access.

B. WDID Number

The project has coverage under the General Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit for Stormwater Discharges Associated with Construction Activity in the Lake Tahoe Hydrologic Unit, Counties of Alpine, El Dorado and Placer (Board Order No. R6T-2011-0019) (Permit) and has been issued the following WDID #XXXXXXXX.

C. Construction Schedule

Upon the selection of a Contractor, a detailed construction schedule will be provided and included in this SWPPP as an amendment. Thus, the following schedule is a broad overview of the proposed construction activities and all proposed changes and schedule details will be provided by the Contractor and shown in the first amendment to the SWPPP prior to construction.

The Contractor will be responsible for meeting all the requirements of this SWPPP, and TRPA and the Lahontan Regional Board regulations. In the event fines are levied by these agencies, either to the City or Contractor, the Contractor shall be solely responsible for all costs associated with these fines and shall halt all construction activities that are not related to SWPPP compliance until such time the County has given permission to continue normal construction activities. In the event the Lahontan Regional Board or TRPA issues a stop work order the Contractor will not be granted any additional working days, and the working days during which no work is performed will be counted as Contract working days, though the Contractor is unable to work due to the stop work order. The QSP shall inspect the progress of the work to ensure the project is stable prior to October 1st of each year.

The following is the preliminary construction schedule for the Project:

Date	Construction Activity
October 2013	Completed Contract Documents
November 2013	Advertise Bids
November 2013	Bid Opening
December 2013	Bid Award
April 2014	Pre-Construction Meeting
May 15, 2014 to October 15, 2014	Season 1 Construction Activities
May 15, 2015 to October 15, 2015	Season 2 Construction Activities
October 15 2015	Final Stabilization

D. Potential Construction Site Pollutants of Concern and Sources

The pollutants of concern that have a potential to be discharged during the construction of Lake Forest Water Quality Improvement Project - Panorama include:

- Fine Sediment Particles
- Nitrogen,
- Phosphorus
- Iron
- Large Grain Sediment Particles
- Trash
- Asphalt Related Products
- Concrete Liquid Residues
- Grease and Oil.

The activities will be used during construction and have a possibility of polluting storm water with one or more of the above pollutants. Each of these activities and materials presented below will employ the Best Management Practices (BMPs) identified in Section III in accordance with the Permit, manufacturer's recommendations, the Project Plans, and Project Specifications. In addition, the Contractor is expected to deploy practices sufficient to achieve compliance with the Permit even if a specific BMP is not included or recommended by this SWPPP. The SWPPP is a living document and at all times BMPs shall be deployed as necessary to prevent the discharge of pollutant storm water runoff.

Upon the award of the construction contract, the Contractor shall provide a SWPPP amendment identifying any additional activities or materials that have the potential to pollute storm water and that have not been listed in this section and the associated BMPs that will be deployed. Additionally, should the Contractor wish to use a different BMP other than an item listed in this SWPPP, the Contractor shall submit a revised BMP Plan with a written explanation for the revision. The Engineer will review the material submitted and add any needed supplemental information.

Activity 1: Construction Staging & Access

Prior to the start of construction the Contractor shall identify and establish all staging areas. The staging areas that are located within the project area are subject to approval by the County. Appropriate BMPs, as identified in Section III, shall be implemented at the staging area prior to equipment or material mobilization. The Contractor shall identify the proposed staging areas and proposed BMPs in the initial SWPPP amendment. If trees or vegetation that are to be preserved during the course of the project are located within a staging area, the Contractor shall place protective construction fencing around the vegetation prior to the start of any construction activity at the staging area.

Upon the completion of construction, the Contractor will be responsible for restoring the staging area to natural conditions. If the staging area will be graded, the Contractor shall salvage the top soil (top six inches of soil) and replace the topsoil during the restoration of the staging area upon the completion of construction. The topsoil shall be stockpiled and protected in a manner (with both a perimeter control and erosion control) that does not allow the discharge of sediment.

The staging area shall be completely stabilized prior to October 1st of each year. The QSP shall inspect the area to ensure the stabilization.

Should additional staging areas be needed a SWPPP amendment will be required to be developed and submitted to the County for review and approval. No equipment or materials shall be staged, stored, or stockpiled outside of these approved staging areas. Only equipment

necessary for the completion of work within the limits of disturbance shall be located within the staging areas or within the project area.

All construction vehicles shall enter onto disturbed soil areas through a stabilized construction entrance that shall be designated on the project's BMP mapping. Trucks accessing the site must remain on paved roads and designated access and staging areas.

All staging and site access areas shall have temporary BMPs installed and approved by the County. The BMPs to be used are as shown on the BMP Plans included in Appendix B. Additional temporary BMPs may be required to address the discharge of pollutants from staging areas or from construction site access points.

Activity 2: Disturbance

The Contractor will perform the contract work with the least amount of ground disturbance as possible (outside the areas that require ground disturbance). Any disturbed soil areas that are being actively used for construction for fourteen days or more shall be stabilized upon the 15th day. Areas of preserved vegetation shall be clearly identified on the BMP Plans and protected with construction fencing. The limits of disturbance are delineated on the BMP Plans included in Appendix B.

Employee vehicle parking will occur within the staging area. All areas disturbed during construction shall be stabilized upon the completion of construction. No work shall be allowed beyond the designated limits unless previously approved by the County.

The Contractor shall fence off the required limits of construction/disturbance with high visibility construction limit fencing as outlined in the project Plans and as described in the Standard Specifications. Work shall only occur within the areas that are fenced off. SEZ areas adjacent to construction activity shall be protected from construction pollutants by the Contractor through the use of BMPs, and all disturbed areas shall be stabilized by the Contractor to the satisfaction of the County. BMP details are depicted on the BMP Plans in Appendix B and in on the BMP Cut Sheets in Appendix D.

Methods of construction will largely be left up to the Contractor to complete the work in the most efficient manner possible according to the requirements set forth in the Plans and Specifications. The Contractor will be required to attend pre-construction and progress meetings where scheduled; construction issues and BMP maintenance will be discussed.

The Contractor shall not exceed 100 feet of open utility trench in one day. The trench shall be covered upon the close of each day, either permanently or temporarily. All excavated soils encountered during construction shall be placed into a dump truck and hauled to materials storage area. The stockpiling of backfill in the roadway is not allowed.

Activity 3: Waste Management and Vehicle/Equipment Cleaning

BMPs shall be implemented on site prior to the storage or use of any materials or vehicles on site. Materials, equipment, or vehicles that may come in contact with storm water shall be located away from drainage facilities and watercourses. Wash waters shall not be discharged to off of the site, into drainage facilities, SEZs, or watercourses. All construction vehicles/equipment that enter and leave the construction site shall be cleaned off site. When onsite cleaning of vehicles or equipment is necessary, the Contractor shall obtain approval from the County prior to any such activity. The Contractor shall submit proposed locations and

mechanisms for disposal of waste, including sanitary waste, generated as a result of construction related activities. Such proposed alternatives shall also describe equipment storage, cleaning and maintenance areas and activities; points of ingress and egress to the construction site; material loading, unloading, and storage practices and locations for construction materials, building materials and waste materials.

Activity 4: Clear Water Diversion

Prior to the start of construction the contractor shall submit a clear water diversion and associate dewatering plan with the initial SWPPP amendment. The Clear Water Diversion Plan is subject to approval by the County, see Appendix C.

It may be necessary from time to time to dewater a diversion area. If dewatering is necessary, the Contractor shall develop a location specific dewatering plan which shall include appropriate filtration BMPs. All dewatering plans will be subject to review and approval by the County and the Regional Board and shall be amended into this SWPPP. The Contractor shall be responsible for implementing appropriate BMPs during all diversion and dewatering activities to eliminate the potential for the discharge of sediment or any other type of polluted discharge. Specific BMPs are described in Section III of this SWPPP.

Upon completion of construction activities within the diversion areas, the Contractor shall remove the diversion and ensure the area is restored to its approved condition. The Contractor shall notify the County prior to the removal of the diversion and conduct the activity in accordance with all applicable regulations and permits. The Contractor may be required to conduct turbidity sampling during diversion removal activities.

Activity 5: Paving, Sidewalk, Curb, and Drainage System Construction

Part of the proposed improvements include: repaving of existing streets, construction of drainage system features (such as new culverts, the extension of existing culverts, drain inlets, etc.). It is anticipated that drainage system improvements will be completed during the first construction season and paving activities will be completed during the second construction season.

During both activities the Contractor shall implement appropriate BMPs and handle all materials and waste properly. It will be important to have adequate concrete washout facilities and to dispose of concrete liquid waste in an appropriate manner. Section III of this SWPPP identifies a suite of BMPs that shall be considered and implemented as appropriate during this activity.

Activity 6: Revegetation and Stabilization

Revegetation and irrigation tasks specific to the project are described in Section 10-2.00 of the Special Provisions. All revegetation and irrigation measures shall be applied in accordance with the requirements shown on these Plans and as described in the Standard Specifications and Section 10-2.00 of the Special Provisions. The Engineer will approve the quantity and duration of applications as described in Section 10-2.00 of the Special Provisions.

It is anticipated that major revegetation efforts will be primarily completed during the first construction season to allow for the establishment of the new vegetation. During vegetation efforts it will be important for the Contractor to carefully plan out the handling and storage of materials such as topsoil, herbicides and fertilizers. All construction material shall be stored in approved staging areas prior to installation, or used directly in construction without storage or stockpiling. All stockpiles of erodible or hazardous area shall be placed in areas that are not

subject to run-on and shall be protected with both a perimeter control (such as a silt fence or fiber roll) and erosion control.

All revegetation work will be conducted by a licensed Landscape Contractor (C-27) and overseen by the Revegetation Specialist (RS). Revegetation work will consist of all site preparation associated with the revegetation treatments including soil amendments, application of soil inoculants, seeding, and mulching with tackifier. Irrigation water will be applied with a low-pressure impact system. Watering will not produce rills, gullies, or sheet flow. The RS will approve quantity and duration of applications. All revegetation and irrigation measures will be applied in accordance to the plans, as directed by the RS, and as described in the Project Specifications.

Revegetation and erosion control materials shall not be applied during windy conditions. Windy conditions are defined as a sustained wind of 8 mph or more; gusts where the difference between the ambient and the increased velocity is more than 4 mph; or any conditions that may cause dispersal of revegetation and erosion control material difficult or inaccurate. The Contractor is responsible for providing certified instruments, or data from certified instruments, in case of a claim or conflict.

All revegetated areas are to be maintained according to the Section 10-2.01 of the Special Provisions to insure proper establishment of vegetation and so that there is no evidence of erosion, such as rills or gullies. The maintenance period begins on the date following the last installation. If at any time it is deemed that proper maintenance is not being performed, the countdown for required maintenance period will be stopped and not resumed until the Project is brought up to the specifications and proper maintenance is resumed. During the maintenance period, seeded areas will be kept free from noxious and invasive weeds at all times. Additional maintenance may include re-application of seed, mulches, and tackifiers. Supplemental maintenance treatments will be required if revegetation efforts are unsatisfactory following completion of work as determined by the RS. This re-application will be at the Contractor's expense. The owner must achieve 70% cover of desirable plant species before the NOT can be issued.

Prior to the onset of work, the Contractor shall coordinate with the USFS Botanist to control the occurrence and spread of noxious and invasive weeds during project construction and maintenance. During the maintenance period, seeded areas will be kept free from noxious and invasive weeds at all times. The Engineer will direct the Contractor to identify noxious and invasive weeds and shall require immediate removal.

III.Best Management Practices

A. Site Management

During construction, the Contractor shall implement BMPs as required throughout the Plans, Standard Specifications, Section 10 of the Special Provisions, and project permits, to prevent off site transport of contaminants and pollutants. A pre-grading conference will be conducted with TRPA and the Lahontan Regional Board. The Engineer will inspect the construction project to ensure compliance with the SWPPP and confirm BMPs are installed and functioning properly. The construction site and staging areas will receive a more critical level of review before, during, and after storm events. The Contractor shall install BMPs to contain and control pollutants within the Project and designated staging areas prior to pre-grade and throughout construction. BMP applications will be consistent with the following list, and is more detailed the BMP Plan located in Appendix B, in the Project Plans and within the Project Special Provisions.

The products necessary for construction and that are expected to be used which could result in potential pollution discharge along with their proposed containment strategies are listed below. Upon the award of the construction contract, the Contractor shall provide the Engineer with a listing of any alternative activities or materials that could pollute storm water which the Contractor proposes to be used or employed in association with the Project that have not been listed in this section. The Contractor shall additionally list the associated proposed BMPs and prepare a plan to be used for each of the materials or activities that may pollute storm water which have not been listed in this section. Additionally, should the Contractor wish to use a different BMP other than an item listed in this section, the Contractor shall submit to the Engineer a revised BMP list with a written explanation for the revision. The Engineer will review the material submitted and add any needed supplemental information. This revision shall be included in the first amendment to the SWPPP prior to the start of construction.

Material 1: Asphalt, Concrete

Asphalt and concrete material brought on site shall be used immediately; no storage shall be allowed outside designated storage areas unless approved by the County. Asphalt products stored within the staging areas shall be protected in a manner that the material does not come into contact with precipitation or storm water runoff or run-on. Vehicles shall follow approved routes to and from the site. Excess concrete and concrete washout slurries shall be placed in a concrete washout for drying and shall be disposed of according to all applicable laws and regulations.

Material 2: Rock, Aggregate Base

All rock and base material described in the Special Provisions and the Standard Specifications shall be stored in approved staging areas. A perimeter control (silt fence or fiber roll) shall be installed around the stockpile and the stockpile shall be covered prior to and during precipitation events. Material stockpile management is described in other sections of this SWPPP.

Material 3: Concrete Residuals and Washout Wastes

This project includes placement of concrete for curb and gutter, curb barriers, and shoulder stabilization. Potential pollutant discharges will be related to rinse water and residual concrete (Portland cement, aggregates, admixture, and water). Concrete pours will not be conducted during or immediately prior to rainfall events.

A portable concrete washout used or a below grade concrete washout facility shall be constructed according to the detail on the Plans and maintained. All excess concrete and concrete washout slurries shall be discharged to the washout facility for drying. The washout shall be constructed to provide more than sufficient volume to contain concrete washout wastes and waste collected from concrete saw cutting operations. Site BMPs shall be installed within and around concrete washout areas. Concrete waste solids/liquids shall be removed and disposed per all applicable laws and regulations.

Material 4: Sanitary waste

Portable toilets shall be located and maintained at the Contractor's staging area for the duration of the project. Weekly maintenance shall be provided and wastes shall be disposed off-site. The toilets shall be located away from concentrated flow paths and traffic flows and 10 feet away from any drainage course or drain inlet.

Material 5: Leaks from Construction Equipment (Oil, Gas, Hydraulic fluid, etc,)

Construction equipment shall be stored at the approved staging area. All equipment shall be inspected regularly and maintained to prevent oil or fluids leaks. The Contractor will use drip pans or other secondary containment. If a leak occurs, the Contractor shall follow the methods described in the Spill Response in this SWPPP.

Relevant portions of the BMP Standard Specifications are attached to this SWPPP in Appendix D and are called out below where applicable.

1. The construction of Lake Forest Water Quality Improvement Project - Panorama requires work within a waterway in two locations. Extreme care must be taken when carrying out this work. The plan calls for the installation of a clear water diversion at both locations. The water filled berm will be installed prior to the installation of a 24" pipe diversion pipe new storm drain outfall and removal of the existing outfall.

2. The Contractor will maintain dewatering equipment and material to be used in conjunction with the installation of the diversion or any associated dewatering to be performed during the Project in accordance with this SWPPP and the project's plans.

3. The Contractor will store construction equipment at the staging areas described in the previous sections of this SWPPP at the end of each work day or in another location as approved by the Engineer. Additionally, the Contractor will divert concentrated runoff around equipment, vehicles, and materials staging areas. No material shall be washed into a natural or constructed storm drain system. Applicable BMP standard specifications in Appendix D include:

    - WM-5, Solid Waste Management;
    - WM-6, Hazardous Waste Management;
    - WM-8, Concrete Waste Management;
    - WM-9, Sanitary/Septic Waste Management;
    - NS-8, Vehicle and Equipment Cleaning;
    - NS-9, Vehicle and Equipment Fueling;
    - NS-10, Vehicle and Equipment Maintenance.

4. The concrete washout must prevent the discharge of concrete liquid and solid wastes on to the ground, into storm drains and natural or constructed drainages. The concrete washout should be clearly marked and placed within the staging area. Applicable BMP standard specifications in Appendix D include:

    - WM-8, Concrete Waste Management;

5. Paved areas within the Project Area will be swept a minimum of weekly (at the end of the work week) with a PM 10 efficient vacuum street sweeper. In the event the Contractor's operations cause construction debris, sediment, dust, sand, etc. to accumulate on any street beyond what is acceptable to the Engineer, TRPA, or Lahontan Regional Board, the Contractor will sweep these streets as directed by the Engineer, TRPA, or Lahontan Regional Board. Additionally, the Contractor will sweep streets prior to potential storm events, at the direction of the Engineer, to prevent runoff of construction debris and sediment. Applicable BMP standard specifications in Appendix D include:

    - SE-7, Street Sweeping and Vacuuming;
    - WE-1, Wind Erosion Control

    Road sweeping and vacuuming will occur during soil hauling, and as necessary, to keep street surfaces clear of soil and debris. Washing of sediment tracked onto streets into storm drains will not occur.

6. The Contractor shall minimize the amount of construction materials (either to be off-hauled or for future use) stored on site. Materials shall be stored in a manner that limits exposure to precipitation and controls storm water runoff. Soil materials stock piled at the site must be covered in accordance with the Standard Specifications at the end of each work day. Applicable BMP standard specifications in Appendix D include:

    - WM-1, Material Delivery and Storage;
    - WM-2, Material Use;
    - WM-3, Stockpile Management;
    - NS-12, Concrete Curing;

    Prior to forecasted storm events, polyethylene covers will be placed over exposed soil stockpile materials and anchored.

7. The Contractor will designate areas of the site for delivery and removal of construction materials. Construction materials will not be stored beyond the silt barrier protecting the construction staging areas. Applicable BMP standard specifications in Appendix D include:

    - WM-1, Material and Delivery Storage.

8. The Contractor will store materials in a manner that limits exposure to precipitation and controls storm water runoff.

9. The Contractor will provide pallets or secondary containment areas for chemicals, drums, or bagged materials. Should material spills occur; materials and/or contaminants will be cleaned from the Project Site and recycled or disposed of to the satisfaction of the Lahontan Regional Board. Further information regarding spills is available in the Spill

Response section of this SWPPP. Applicable BMP standard specifications in Appendix D include:

- WM-4, Spill Prevention and Control;
- WM-5, Solid Waste Management;
- WM-6, Hazardous Waste Management;
- WM-7, Contaminated Soil Management
- WM-8, Concrete Waste Management;
- WM-9, Sanitary/Septic Waste Management;
- NS-12, Concrete Curing.

10. Waste dumpsters, if used, will be covered with an attached lid or plastic sheeting at the end of each work day and during storm events. All lids and sheeting will be carefully secured to withstand weather conditions. Applicable BMP standard specifications in Appendix D include:

    - WM-1, Material Delivery and Storage;
    - WM-2, Material Use;
    - WM-3, Stockpile Management;
    - WM-4, Spill Prevention and Control;
    - WM-5, Solid Waste Management;
    - WM-6, Hazardous Waste Management;
    - WM-7, Contaminated Soil Management
    - WM-8, Concrete Waste Management;
    - WM-9, Sanitary/Septic Waste Management;
    - NS-8, Vehicle and Equipment Cleaning;
    - NS-9, Vehicle and Equipment Fueling;
    - NS-10, Vehicle and Equipment Maintenance.

11. The Contractor will train/instruct onsite construction personnel in spill prevention practices and provide spill containment materials near all staging areas. All Contractors are responsible for familiarizing their personnel with the information contained in the SWPPP. Further information regarding spills is available in the Spill Response section of this SWPPP.

12. The Contractor will separate wastes and recycle or dispose of in compliance with regulation.

13. The Contractor will have a specific action plan for inclement weather. If any inclement weather is forecast, the Contractor will inform the Engineer daily of the currently disturbed project sites and follow the Rain Event Action Plan and Visual Monitoring Template.

14. The Contractor will store extra BMP materials such as silt fence, pine needle wattles, and gravel bags on site for use during major storm events or accidental water and sewer line utility breaks.

15. Portable toilets shall be located and maintained at the Contractor's staging area for the duration of the project. Weekly maintenance shall be provided and wastes shall be disposed off-site. The toilets shall be located away from concentrated flow paths and traffic flows.

16. The Contractor shall permanently stabilize all disturbed areas by October 15, 2012. The Contractor must gain approval of the Engineer for any proposed temporary winterized stabilization of disturbed areas.

17. The following controls or BMPs will be implemented to minimize the potential for releases or spills of pollutants during the operation of construction equipment:

- The Contractor will maintain all construction equipment to prevent oil or fluid leaks.
- The Contractor will use drip pans or other secondary containment measures beneath vehicles during storage.
- The Contractor will regularly inspect all equipment and vehicles for fluid leaks.
- The Contractor will place wastes (i.e. grease, oil, oil filters, antifreeze, cleaning solutions, batteries, hydraulic fluids, transmission fluids, etc.) in proper containers, store the containers in designated storage areas, and ultimately recycle the materials.

B. Sediment and Erosion/Stabilization Control

During construction, the Contractor shall implement pollution control practices and BMPs as required throughout the Plans, Standard Specifications, the Special Provisions, and project permits, to prevent off site transport of sediment. A pre-grading conference will be conducted with TRPA and the Lahontan Regional Board. The Engineer will be inspecting the construction project to ensure compliance with the SWPPP and confirm BMPs are installed and functioning properly. The construction site and staging areas will receive a more critical level of review before, during, and after storm events. The Contractor will be directed to install BMPs to contain sediment within the Project Limits of disturbance and designated staging areas prior to pre-grade and throughout construction. Pollution control and BMP applications will be consistent with the following list, and is more detailed on the BMP Map, and within the Project Special Provisions.

Relevant portions of the BMP Standard Specifications are attached to this SWPPP are called out below where applicable.

1. The Contractor will install and maintain silt fence or coir logs where storm water could flow from the Project Site, as shown on the BMP Map in Appendix B and the Erosion Control Sheets included in the Project Plans or as directed by the Engineer. Applicable general BMP information in Appendix D includes:

    - EC-5, Soil Binders;;
    - SE-1, Silt Fence;
    - SE-5, Fiber Rolls - Weighted fiber rolls will be used as sediment control;
    - SE-6, Gravel Bag Berm

2. The Contractor will install and maintain inlet protection at all functioning existing and constructed drainage inlets. The protection will include gravel bags for inlets on paved surfaces and sediment logs on natural surfaces with filter fabric placed between the grate and inlet as shown on Figure 2 of the SWPPP and the EC Sheets in the Plans. Applicable BMP standard specifications in Appendix D include:

    - SE-6, Gravel Bag Berm
    - SE-5, Fiber Rolls
    - EC-7, Geotextiles and Mats

3. The Contractor will install and maintain tree and vegetation protection, as shown on Sheet EC-1 through EC-7 of the Project Plans. Applicable general BMP information in Appendix D includes:

    - EC-2, Preservation of Existing Vegetation

    Existing vegetation requires protection using orange-colored mesh fencing. Fencing to be placed on ground at the drip line of trees. No activity or storage of materials should be done inside the drip line fencing.

4. The Contractor will install and maintain tracking control devices from all staging areas. Tracking control at a minimum will consist of installation of a temporary gravel construction entrance/exit as shown on sheet EC-7 of the Project Plans and described in the Project Specifications. All vehicular access in and out of the staging areas will utilize the tracking control. Applicable BMP standard specifications in Appendix D include:

    - TC-1, Stabilized Construction Entrance/Exit;
    - TC-3, Entrance/Outlet Tire Wash

5. The Contractor shall control runoff to the greatest extent possible to minimize soil erosion and offsite discharge.

6. The Contractor shall direct run-on from offsite way from all disturbed areas to the maximum extent possible.

7. The Contractor shall control the amount of soil exposed to erosion at any particular time during the construction activity and shall control soil compaction as practicable.

8. The Contractor shall implement temporary sediment and erosion controls on disturbed soil areas (DSAs) prior to the onset of precipitation events.

9. The Contractor will sprinkle water on earth, pulverized material, and disturbed ground surfaces as necessary to minimize wind-blown dust. Water used for dust control may be obtained from treated water leaving the de-watering treatment system and will have turbidity less than 200 NTU (in compliance with land Numerical Effluent Limits). See Appendix D for more information regarding use of treated waters for dust control.

C. Non-Stormwater and Material Management

The Contractor, along with the Engineer, shall identify areas of non-storm water runoff (night-time over-irrigation, broken sprinklers, etc) from properties adjacent to the Project Area and the Staging Areas. If areas of non-storm water run-on are identified, BMPs should be installed to protect against Project-related discharge of sediment or other materials due to these flows. If non-storm water discharge is persistent problem from a particular property or properties, the Engineer should report the water abuse to the County.

Material shall be stored as described in Section III A and B above and protected from wind and precipitation.

D. Dewatering and Diversions Plan Narrative

The Project will require most likely require dewatering during the implementation of the clear water diversions. The Contractor shall submit a revised dewatering and diversion plan to the County for distribution to and approval by the Lahontan Regional Board and TRPA 30 days prior to the initiation of activities that would require dewatering or diversion, and in accordance with the Special Provisions. The updated plan will become an amendment to the SWPPP for this project. Although the dewatering and diversion activities may take place at different times in the construction sequence, the Contractor shall submit the dewatering and diversion plans simultaneously.

The dewatering plan shall include the Contractor's methodology for dewatering including but not limited to: the potential locations for dewatering, number and size of pumping units, power source for pumping units, size and material for pipes, materials for damming, well point design if required, piping point of discharge, fuel storage locations (if applicable), location of stilling basin, dirt bag or baker tanks, design flow rates, alternative treatment methods (advanced filtration, flocculation, electro-coagulation, etc.) and final method and location for disposal of treated groundwater. The Contractor shall include in the submittal manufacture's specifications on impermeable and filter barriers as described in Control of Water Section of the project specifications.

Dewatering and ponded water management also applies to areas where storm water has collected in low spots, trenches or other depressions where water needs to be removed to proceed with construction activities and/or for vector control. Below are the sediment removal options that will be considered during dewatering activities. In all cases, Option 1 (Reuse of Water) will be the first option considered. If Option 1 is determined infeasible, due to site saturation, the remaining options (described below) will be considered. Dewatering BMP selection is an iterative process, thus if one type of BMP is not efficiently removing sediment, another sediment removal option from this plan will be considered and implemented. When a specific dewatering method is implemented, the site's SWPPP will be amended to identify which option will be utilized and will describe the specifics of the sediment removal operation (i.e., pump size, type of filter used, specific location of sediment removal device, etc…). The dewatering plan may encompass one or a combination of the sediment removal options identified below. If a sediment removal BMP is utilized that is not identified below or in another section of this document, this SWPPP will be amended to describe the alternative sediment removal method. Please refer to BMP Standard Specifications located in Appendix D for specific requirements for each sediment removal option identified below.

Storm water runoff generated from land disturbing activities should be infiltrated to the greatest extent possible. Runoff that is allowed to discharge off the project boundaries must meet the effluent limitations defined by the permits.

Option 1: Reuse Accumulated Storm Water

Reuse water for dust control. Whenever possible the first option for dewatering will be to reuse accumulated storm water runoff for dust control.

Option 2: Gravity Bag Filters

Gravity bag filters are rectangular or square woven bags made of geotextile fabrics that remove sediment. Water is pumped into the bag and allowed to seep through the bottom and side of the bags. Sediment is captured within the bag. Gravity bag filters may be used in conjunction

with other sediment removal devices. If sediment escapes the bag, hay bales, filter fabric, gravel bags or fiber rolls may be placed around the bag to increase sediment removal efficiency.

Option 3: Sediment Traps

Sediment traps shall be constructed by excavation or the construction of an earthen embankment. Sediment traps shall be used only in areas where the size of the drainage area discharging into any specific trap can be limited to less than five acres. Trap outlets shall have energy dissipation installed if there is a potential for erosion to occur. Trap bottoms shall be stabilized with channel liner, blanket or plastic if the bottom of the trap is eroding. A gravel bag u-shaped sediment trap shall be placed around the outlet if required for outlet protection. If additional sediment removal is required, sediment control BMPs such as hay bales, silt fences, or gravel bag check dams shall be installed upstream or downstream of the trap to increase sediment removal efficiency.

Option 4: Weir Tank or Dewatering Tank Treatments

Weir tanks may be utilized to remove sediment during dewatering operations. Dewatering tanks may have a media filter installed in one or more chambers to pre-treat water prior to discharging through filter fabric to increase sediment removal efficiency. Tanks shall be configured to maximize settling time. To accommodate large flows, multiple tanks may be used in series. If needed, tanks can be used in conjunction with sediment traps or sediment basins to increase sediment removal efficiency. Tank outlets shall be fitted with a filter that is sized appropriately to remove the specific size and type of sediments present in storm water runoff.

Option 5: Cartridge or Canister Filters

Cartridge or canister filters may be utilized to remove sediment from storm water discharges associated with dewatering activities. There are a variety of types of cartridges or canisters that may be utilized. The type of cartridges or canisters utilized shall be appropriate for the type and size of sediment to be removed. If cartridge or canister filters are not adequately removing sediment they shall be used in conjunction with another sediment removal BMP.

Option 6: Active Treatment System Plan Narrative (Requires Regional Board Approval)

Due to costs, maintenance, monitoring, and training requirements, an Active Treatment System (ATS) is not expected to be used or needed on this project. If the Contractor proposes to use an ATS, the Contractor shall submit a revised Active Treatment System Plan to the County for approval and for distribution to and acceptance by the Lahontan Regional Board 30 days prior to the initiation of activities that would require use of the ATS. If proposed for use, an ATS shall comply with all requirements of the Tahoe Construction General Permit.

E. Post-Construction Stormwater Management

This project is to be constructed in order to improve the water quality of the storm water discharge to Lake Tahoe from the Lake Forest area. Although it is not intended to improve drainage of the area, drainage will be improved by more efficient collection and infiltration of runoff. Construction of the project will enhance infiltration with a series of facilities: pervious pavement, infiltrating inlets, perforated HDPE, infiltrating manholes and infiltrating sediment traps. The storm water that is collected by the storm drain and not infiltrated will be treated with a pre-treatment vault to remove large-grained sediment and with a media filtration system to filter FSP to the maximum extent practicable.

Post construction, the County will be responsible for maintaining all drainage structures that are installed as part of this Project as well as all related structures in the area once the construction is complete. The County will clean the installed drop inlets on an annual basis and will maintain all infiltration and storm drain facilities as needed. The pervious pavement will be maintained on an annual basis.

F. Schedule for BMP Implementation

The BMPs will be installed prior to commencement of construction. The Contractor shall produce a schedule of BMP implementation upon finalization of an itemized construction schedule. This shall be approved by the Engineer and QSP.

G. BMP and Disturbed Soil Area (DSA) maps

Please see Appendix B for the BMP Plan.

IV. BMP Inspection, Maintenance, and Rain Event Action Plans

A. BMP Inspection and Maintenance

Inspection Frequency

For BMPs to function properly, ongoing inspection, maintenance, and repair need to be completed. BMP implementation is an iterative process that requires routine inspections of all BMPs. During non-construction periods, inspections shall be conducted as follows:

- Prior to a forecasted storm.
- After a rain event that causes run off from the site.
- At 24-hour intervals during extended rain events.
- Once per month during the winter or inactive period (See V.B.1)
- Weekly during construction activities.

Additionally, the Engineer will make inspections of the entire project area and direct the Contractor to take appropriate corrective actions when needed.

All disturbed areas of the site; areas for material storage; locations where vehicles enter or exit the site; and all soil stabilization and sediment controls that are identified as part of the Plans shall be inspected. Problem areas shall be documented, control measures identified, fixes, or maintenance completed immediately. The maintenance and repair shall be completed by trained personnel of the Contractor (or subcontractor) identified by the Contractor at the beginning of the Contract. The personnel shall be trained on the specific BMPs of the project. This effort shall continue throughout the duration of construction until all disturbed soil areas are stabilized in accordance with permit requirements and/or permanent measures are in place and performing adequately.

Site Inspection Requirements

The Contractor shall be responsible for ensuring that all required inspections, compliance certifications, non-compliance reporting, and monitoring of records are carried out in accordance with the Permit.

Soil stabilization and sediment control BMPs are susceptible to failure if the BMPs are not inspected, maintained, and repaired on a regular basis. The table below identifies specific maintenance and repair measures for soil stabilization and sediment control BMPs for consideration during inspection, to reduce the potential for a failure to occur.

Soil Stabilization and Sediment Control Inspection Requirements

BMP Measures	Maintenance/Repair Measures
Soil Stabilization Techniques	Re-grade and reapply revegetation components; fix rills; control overland flow to prevent source of problem areas.
Silt Fences	Replace torn sections, remove accumulated sediment, and make sure silt fence is keyed in.
Pine Needle Wattles	Replace as needed, ensure they are keyed in, fix any rills forming under BMP, and ensure BMP is installed along the contour.

Note: Repair measures identified above are only recommendations. Specific maintenance requirements for any one BMP shall be determined in the field.

B. Rain Event Action Plan

For the duration of construction activities a Rain Event Action Plan (REAP) shall be developed by the QSP no later than 24 hours prior to any anticipated precipitation event. An anticipated precipitation event is any weather pattern that is forecast to have a 30 percent or greater chance of producing precipitation as rainfall in the project area. During periods when a precipitation event is anticipated, the weather conditions will be monitored by the contractor throughout the day and prepare and implement a REAP when the chance of precipitation becomes 30 percent or greater, or when visual observations indicate imminent precipitation. For each day of construction operations a printed copy of the forecast information from the National Weather Service Forecast Office shall be obtained by the QSP and kept with the SWPPP monitoring records. These forecasts can be located by entering the project area zip code (96150) at the following website: http://www.srh.noaa.gov/forecast.

The REAP shall be available onsite and the QSP shall begin to implement the REAP prior to the onset of any precipitation event. The REAP must be checked and updated on a daily basis for storms expected to last over a period of several days.

The REAP shall be developed until the permit coverage is terminated by the Lahontan Regional Board. A REAP template is attached in Appendix F.

The REAP shall include, at minimum:

- QSP Name and contact number;
- The date(s) rain is predicted to occur, and predicted chance of rain;
- A description of all DSAs, material storage areas, stockpiles, vehicle and equipment storage and maintenance areas, and waste management areas. These areas must be cross-referenced to BMP plans by sheet or page number;
- For each area described above, list specific items to review and actions to perform prior to the rain event;
- A certification by the QSP that the REAP will be carried out as required by this permit; and
- A printout of the NWS weather forecast.

V. Construction Site Monitoring and Reporting Plan (CSMRP)

A. Purpose

The purpose of the CSMRP is to specify monitoring and reporting requirements in order to comply with Title 40 of the Code of Federal Regulations at section 122.48 (40 CFR 122.48). The monitoring and reporting that will be done during the construction of the Project shall at a minimum satisfy the following:

- Demonstrate that the site is in compliance with the discharge prohibitions and applicable effluent limitations.
- Determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.
- Determine whether immediate corrective actions, additional BMPs, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.
- Determine whether BMPs included in the SWPPP/REAP are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.
- Demonstrate that appropriate sample collection, handling, and analyses procedures are implemented.

B. Visual Monitoring (Inspections)

Visual inspections of the Project must be completed as follows:

1. During the active construction season (defined as May 1 through October 15 for purposes of this Project) an inspection of the construction site shall be made at the end of each work day. Active construction activities are not expected to extend beyond October 15. However, if unforeseen complications necessitate an extension of construction activity, the Contractor working (under an approved variance) during the period from October 16 through April 30 of the following year shall also conduct inspections on a daily basis. During the winter or inactive period (defined as October 16 through April 30 for purposes of this permit), the QSP must conduct inspections at least once per month during daylight hours.

2. During both active and inactive periods, a construction site inspection shall also be performed within 24 hours prior to an anticipated precipitation event (chance of precipitation is forecasted at 30 percent or greater), daily during extended storm events, and within 24 hours after actual storm events. This requirement does not apply during snow events. If the Contractor cannot complete an inspection within the specified time frames, the reason for the delay shall be recorded in writing and maintained with the next inspection report.

3. Inspections shall be performed periodically from the commencement of construction activities until termination of the Project. The purpose of the inspections is to discover potential water quality problems at the construction site so the Contractor can implement corrective measures immediately. The inspections will also be used to document compliance with the conditions of the General Permit and the SWPPP and to evaluate the effectiveness of the SWPPP and the REAP.

4. Visual observations must be made at all designated effluent outfalls and other locations where storm water may discharge from the project boundaries to surface waters or

municipal storm sewer systems. Inspections shall be conducted to identify and report the compliance status for following items, as a minimum:

a. Damage to containment dikes or erosion control fencing.
b. Improperly installed or ineffective erosion control fencing.
c. Unauthorized vehicle access, or vehicle access into designated non-construction areas not subject to disturbance.
d. Boundary fence damage or removal.
e. Disturbed areas with inadequate erosion prevention and sediment control protection.
f. Evidence of any sediment leakage through erosion control fencing or containment dikes.
g. Soil piles and other earthen materials which are unprotected or located in a drainage way.
h. Spilled and improperly stored chemicals, paint, fuel, oil, solvents, sealants, etc.
i. Upstream runoff diversion structures (are in place and operational).
j. Any evidence of sediment tracking from construction equipment.
k. Any signs of soil erosion or deposition down gradient from runoff discharges.
l. Sediment accumulation within onsite storm water drainage control facilities, and facilities in need of maintenance to ensure effectiveness.
m. Any evidence of non-storm water discharges from the project site. The inspection report shall note whether any such discharges are authorized, or are illicit and not authorized. If authorized, the condition of the applicable BMPs must be indicated.
n. Any observed impacts to the Lake Tahoe from the Project.

5. All inspections shall be recorded and maintained on the construction site inspection form. Inspection forms shall be maintained and made available to the Lahontan Regional Board, or designated representative, upon request. At a minimum the following information shall be recorded:

a. Weather conditions at the time of the inspection, including presence or absence of precipitation, estimated time of beginning of storm event, duration of storm event, time elapsed since last storm event, and approximate amount of rainfall in inches.
b. Site information, including stage of construction, activities completed, and approximate area of the site exposed to storm water runoff.
c. A description of BMPs evaluated (i.e., erosion controls, sediment controls, chemical and waste controls, and non-storm water controls) including the locations and any deficiencies noted.
d. Observations of any storm water containment areas to detect leaks and ensure maintenance of adequate freeboard.
e. A description of any non-storm water discharges and spills/leaks observed.
f. Observations at all relevant discharge points and downstream locations in the receiving water, including the presence or absence of floating and suspended materials, sheens, discolorations, turbidity, and odors.
g. Any corrective actions required, including any necessary changes to the SWPPP or REAP and the associated implementation dates.
h. Photographs taken during the inspection, if any.
i. Inspector’s name, title, and signature.
j. A space shall be provided to record follow up corrective actions that have been completed in response to the inspection report. A summary of the completed corrective actions shall be recorded in this space with the date of completion.

C. Water Quality Sampling and Analysis

Discharge Monitoring Locations

1. The QSP or appropriately trained designee shall perform sampling and analysis of storm water and non-storm water discharges to characterize discharges associated with construction activity from the entire Project disturbed area.

2. Effluent samples shall be collected, at a minimum, at all designated discharge points where storm water and authorized non-storm water is discharged offsite.

3. The QSP or designee shall ensure that effluent samples are representative of the discharge in each drainage area based on visual observation of the water and upstream conditions.

4. The QSP or designee shall monitor and report site run-on from surrounding areas, such as private properties, if there is a reason to believe run-on may contribute to an effluent limit exceedance.

5. If an ATS is deployed on the Project, the Contractor's appropriately trained designee shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.

6. Discharge point monitoring locations are shown in Figure 2 of the SWPPP and on the EC sheets of the Plans. These sites may be updated if disturbed soil areas change during the course of the project.

Sampling Requirements

Storm Water Effluent Discharges

1. During the active construction season (defined as May 1 through October 15 for purposes of this General Permit), the QSP or designee shall collect one grab sample from each discharge point where storm water is discharged off the project boundaries and/or to surface waters. A minimum of three samples must be collected for each day that storm water is discharged offsite. Since there are fewer than three discharge points present within the Project, at least three samples shall be collected from the discharge location(s). If the Contractor is working under an approved variance during the period from October 16 through April 30 of the following year, the QSP or designee shall collect samples in accordance with the protocols described above.

2. During the period from October 16 through April 30 of the year(s) following construction activity, the QSP or designee must collect a representative sample from each designated discharge sampling point during a minimum of two storm events that produce a discharge off the project boundaries. Sampling is only required for one day during each storm event. A minimum of three samples for each day sampling is conducted is required.

3. Samples shall be analyzed onsite for turbidity using portable field instruments calibrated in accordance with manufacturer specifications. If there is a visible oily sheen at any discharge point, a sample shall be collected and analyzed for grease and oil. Samples shall be collected and analyzed, consistent with Table C-1.

Table C-1. Monitoring Requirements (May 1 through October 15)*

Parameter	Units	Test Method	Minimum Detection Limit	Frequency
Turbidity	NTU	1	1 NTU	2
pH	SU	1	0.2 pH	4
Grease and Oil	mg/L	EPA 1664 w/silica gel treatment (SGT)	2 mg/L	3
Non-visible Pollutants		4	4	4

Notes:
1 - Shall be field tested with a calibrated portable instrument.
2 - **Effluent**-Minimum of three samples per day storm water is discharged - All designated locations must be sampled.
3 - **Effluent** - When visible sheen is observed at discharge point.
4 - The units, test method, and minimum detection limit shall be identified in the discharger's CSMRP for each nonvisible pollutant identified by the discharger. Analytical methods shall be in accordance with 40 CFR Part 136. Monitoring for non-visible pollutants shall be conducted as specified in section V.C.2 of this MRP.

Non-visible Pollutants in Effluent

There are potential non-visible pollutants that may contaminate storm water or non-storm water discharged from the Project Site including acids and bases, solvents, lubricants, fertilizers; concrete, and soil amendments (such as gypsum). If a breach, malfunction, leakage, or spill is identified that has the potential to result in the discharge of a non-visible pollutant, the QSP or designee shall perform sampling for the specific non-visible pollutants at the discharge points corresponding to the applicable drainage area. This includes sampling for pH using a portable field meter when runoff has come into contact with uncured concrete or other materials that could affect the pH of effluent. The QSP or designee shall also collect and analyze a sample of storm water runoff that has not come into contact with the pollutants of concern for comparison with the non-visible pollutant discharge sample. Analyses may include, but are not limited to, indicator parameters such as volatile organic compounds, semi-volatile organic compounds, metals, salts and nutrients such as nitrogen and phosphorus, and other analyses as appropriate. Table C2 in Appendix E includes the possible non-visible pollutants that could be generated by the project, an associated appropriate indicator, analytical methods, detection limits, sampling procedures, and sampling preservation. For protection of receiving waters the pH of effluent samples should not fall outside of the range of 6.0 to 9.0. This range is set as a numeric action level (NAL). If the pH of effluent is outside of the NAL, the discharger must investigate the cause of the excursion and implement appropriate corrective measures. If the pH levels are determined to be from natural causes, the discharger must provide data (e.g., from run-on) to demonstrate this condition.

D. Watershed Monitoring Option

Watershed monitoring is not required for Lake Forest Water Quality Improvement Project - Panorama.

E. Quality Assurance and Quality Control

1. Samples and measurements shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified in the Figure 2 and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Discharge locations may be updated as necessary if certain phases or project segments are completed and permanently stabilized.

The updated sampling locations must be maintained in the SWPPP and made available to Lahontan Regional Board staff upon request

2. With the exception of field analysis conducted by dischargers or turbidity and pH, all laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports. Dischargers may conduct their own field analysis of turbidity and pH if the discharger has sufficient capability (qualified trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

3. All monitoring instruments and devices used by the QSP or designee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

4. The QSP or designee shall ensure that all sampling and sample preservation are in accordance with the current edition of “Standard Methods for the Examination of Water and Wastewater” (American Public Health Associate).

5. All sample analyses shall be conducted according to test procedures specified in 40 CFR Part 136, or otherwise stated within this Monitoring and Reporting Program.

6. Monitoring results, including non-compliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

7. All inspection and sampling activities at the project location shall be performed or supervised by a QSP representing the City. The QSP may delegate any or all these activities to an employee appropriately trained to do the task(s).

8. The QSP and Contractor are not required to conduct visual inspections or physically collect samples outside of daylight hours, or when conditions exists that would be dangerous to personnel. Winter period (October 16 through April 30) monitoring requirements are also waived if worker safety would be compromised. An explanation of the missed monitoring requirements due to these exceptions shall be recorded in writing and provided to Lahontan Regional Board with the Annual Report.

F. Reporting Requirements and Records Retention

1. All data and reports will be submitted through the SMARTS and be certified by the LRP or an approved signatory.

2. All turbidity and pH analytical results collected from field instruments will be reported within five days after storm event conclusion. All other results determined by an analytical laboratory will be submitted within five days of receipt of the results from the laboratory.
3. The QSP will report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

4. The Discharger will report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- Sample results less than the reporting limit (RL), but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.
- For the purposes of data collection, the laboratory will write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

5. The QSP should instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time should the analytical data derived from extrapolation beyond the lowest point of the calibration curve be used.

G. Non-Compliance Reporting

The QSP shall immediately notify the Lahontan Regional Board orally within 24 hours whenever an adverse condition occurs as a result of a discharge. An adverse condition includes, but is not limited to, a violation or threatened violation of the conditions of this General Permit, significant spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance pursuant to Section 13267(b) of the California Water Code, a written notification of the adverse condition shall be submitted to the Lahontan Regional Board within five (5) business days of occurrence. The written notification shall identify the adverse conditions, describe the actions necessary to remedy the condition and/or the actions implemented to abate the problem from continuing, and specify a timetable, subject to the modifications of the Lahontan Regional Board, for remedial actions.

In the event that sampling results exceed any applicable Numerical Effluent Limitation (NEL), the QSP shall orally notify the Lahontan Regional Board within 24 hours after the NEL exceedance has been identified and electronically submit all storm event sampling results through the SMARTS within five (5) business days after the NEL exceedance has been identified. For turbidity, the NEL is 20 NTUs, and compliance is determined by whether the average of the measurements that represent a calendar day or 24-hour period exceeds 20 NTUs.

H. Annual Report

On or before November 30 of 2011, the QSP will prepare and electronically submit through the SMARTS an Annual Report for the period of October 16 of the previous year through October 15 of the current year. The SMARTS reporting module requests the following information:

1. The project name and location.
2. Any significant problem(s) which occurred during project construction and remedial measures planned or implemented.
3. A summary and evaluation of all sampling and analysis results, including copies of laboratory reports and rain gauge measurements, from monitoring activities conducted pursuant to section IV of this CSMRP.

4. A certified statement indicating whether or not the site has been winterized in accordance with BMPs for erosion prevention and sediment control.
5. Documentation of required QSP certifications and personnel training. Personnel training records shall be maintained on site and include, at a minimum, signed attendance sheets and agendas from pre-construction meetings covering SWPPP requirements. Additional information or training may be recorded as appropriate. The intent of this requirement is to ensure that all construction personnel are educated on their responsibilities for controlling pollutants in storm water discharges.
6. A certified statement indicating whether or not the project site is in compliance with the conditions of the general permit and the SWPPP. This certification shall be signed by a QSP. This certification should be based upon site inspections required in section III of this CSMRP.

I. Final Report

Following completion of project construction, the QSP or other certified project proponent shall prepare and electronically submit through the SMARTS a final report containing the information required under the Annual Report as well as the following information:

1. Details of any modification of the construction plans for the proposed storm water collection treatment, or disposal facilities or restoration work.
2. Details on any change in the amount of impervious coverage for the project site.
3. Records of all inspections (including the inspection log book), compliance certificates, monitoring reports, and noncompliance reporting must be maintained by the project proponent for a period of at least three years.
4. The final monitoring report shall be certified by the LRP, or the approved signatory of the LRP, and submitted within 30 days of project completion.