EXHIBIT B

CONTRACT CHANGE ORDER #01
CONTRACT NO. PW 11-30593, CIP NO. 95192
FEDERAL AID NO. CML 5925 (121)

MODIFICATIONS TO PROJECT SPECIAL PROVISIONS

4-1.03 CONTRACTOR SUBMITTALS

- Contractor shall submit shop drawings for storm drain manholes, manhole rims and covers, drainage inlets, and drainage inlet frames and grates.

- Contractor shall submit shop drawings of the hardware connecting BP signs to the tubular steel railing.

- Contractor shall submit a Shoring and Excavation Plan in accordance with Section 7-1.01E, "Trench Safety," of the Standard Specifications, as it applies to work related to the sediment trap, storm drain manhole and/or concrete retaining wall in accordance with Section 10-1.26, "Shoring and Excavation Plan," of these Special Provisions.

- Contractor shall submit the stain manufacturer's product data and application instructions at least seven (7) days before beginning staining activities in accordance with Section 10-1.16, "Prepare and Stain Concrete Surfaces,"

5-1.32 UTILITIES

It is anticipated that the following utility facilities will be relocated during construction by Liberty Energy and Charter Communications as shown on Sheets P-3 and P-4 of the Plans.

Utility Company	Facility	Construction Stage	Working Days
Liberty Energy	Utility pole and guy anchor	BP STA 90+60	Contractor shall notify Liberty Energy twenty-four (24) hours advance that the site is ready for the relocation work to be performed. Contractor shall allow Liberty Energy two (2) working days to perform the relocation.
	Utility pole and guy anchor	BP STA 93+07	Contractor shall notify Liberty Energy twenty-four (24) hours advance that the site is ready for the relocation work to be performed. Contractor shall allow Liberty Energy two (2) working days to perform the relocation.

	Utility pole	BP STA 94+58	Contractor shall notify Liberty Energy twenty-four (24) hours advance that the site is ready for the relocation work to be performed. Contractor shall allow Liberty Energy two (2) working days to perform the relocation.
	Utility pole	BP STA 96+10	Contractor shall notify Liberty Energy twenty-four (24) hours advance that the site is ready for the relocation work to be performed. Contractor shall allow Liberty Energy two (2) working days to perform the relocation.
Charter Communications	Cable TV pedestal	BP STA 94+51	Contractor shall notify Charter Communications twenty-four (24) hours in advance that the site is ready for the relocation work to be performed. Contractor shall allow Charter Communications two (2) working days to perform the relocation.

Full compensation for working around said facilities, performing any necessary potholing and coordination of facility relocation shall be considered as included in the prices paid for the various contract items and no additional compensation will be allowed therefor.

5-1.36 STORAGE OF EQUIPMENT, MATERIALS, SUPPLIES, ETC.

Sheets EC-1, R-1, and T-1 of the Plans shows the following staging areas that Contractor may use for storage of equipment, materials, and supplies.

1) Approximately 2,320 SF on Sawmill Road, approximate SM STA 95+00.
2) Approximately 1,360 SF on Sawmill Road, approximate SM STA 96+40.
3) Approximately 10,860 SF on Sawmill Road, approximate SM STA 101+75 to 107+20.

5-1.41 COORDINATION WITH PROPERTY OWNERS

The following table lists information related to easements shown on the Plans.

PLAN SHEET	APN	PROPERTY OWNER	EASEMENT TYPE	DESCRIPTION OF WORK
P-1	033-180-35	Mikkelsen	drainage	drainage improvements
P-3	033-180-21	CTC	multi-use trail	bike path improvements
			drainage	drainage improvements
P-5	033-180-06	CTC	multi-use trail	bike path improvements
			drainage	drainage improvements

The Contractor shall make every effort to communicate with adjacent property owners and tenants to inform them of the required access for construction operations, and shall give forty-eight (48) hours' notice to the property owners and tenants when work is to be performed on their property. Contractor's attention is directed to the work on Sheet P-3 of the Plans, BP STA 91+30±, related to the removal of the trash enclosure and concrete slab.

5-1.53 CERTIFICATES OF COMPLIANCE

Certificates of Compliance are required for the following materials:

Stain manufacturer's product data and application instructions
Tubular Steel Railing
Concrete masonry unit blocks
Geogrid Mat

5-1.57 CONSTRUCTION STAKING

1. Remove and Replace AC Pavement (Sawmill Road, Sheet P-2 of the Plans) – Two sets of double offset stakes (four stakes total) will be set for vertical and horizontal control for initial grading at 50' intervals on tangents, on curves with radius greater than or equal to 1000', at 25' intervals on curves with a radius less than 1000', at the beginning and end of horizontal curves (BCs and ECs), at the beginning and end of significant vertical curves (BVCs and EVCs), at high points or low points as appropriate, and at the beginning and end of any transitions. One set of stakes each side of which the closer of the two will be marked with offsets, slopes and cut/fill for catch point, hinge point, edge of pavement, and centerline. The farther of the two will be for line only. Vertical control will reference finished grade elevations. Once the initial grading is complete, two sets of double offset stakes (four stakes total) will be set for vertical and horizontal control at 25' intervals, at the beginning and end of horizontal curves (BCs and ECs), at the beginning and end of significant vertical curves (BVCs and EVCs), at high points or low points as appropriate, and at the beginning and end of any transitions. One set of stakes each side of which the closer of the two will be marked with an offset and cut/fill to edge of pavement and the slope of the finished grade. The farther of the two will be for line only. Vertical control will reference finished grade elevations.

2. Retaining Wall – One set of offset stakes will be set 10' from the LOL (layout line) of the retaining wall at 50' intervals and at angle points. The stakes will be graded to the top of footing and top of wall elevations.

3. Drainage Inlets and Storm Drain Manholes – One set of double offset stakes (two stakes total) will be set for each structure. The stakes will be set sufficient for Contractor to determine location, orientation, and grade of each structure. Due to the nature of the design and to site conditions, the offset locations will be agreed upon by the Surveyor and Contractor at the pre-construction meeting. The closer of the offset stakes will be marked with grades to all Invert Elevations of pipes and structure (IEs) and to Grate (TG), as applicable. The farther offset will be for line only.

SECTION 9. DESCRIPTION OF WORK

The Work consists of but is not limited to the following: Construction of a Class 1 bike path, retaining wall, excavation and grading, clearing and grubbing, asphalt concrete paving, tree removal, installing culverts and drainage modifications, drainage channels, signing and striping, pavement markings, revegetation, dewatering, traffic control, and temporary erosion control. These improvements are proposed for construction along Sawmill Road from approximately 855 feet west of the Sawmill Road intersection to US Highway 50/State Route 89 to the intersection at US Highway 50/State Route 89.

SECTION 10. CONSTRUCTION DETAILS

10-1.00 DESCRIPTION OF CONTRACT ITEMS

ITEM – MOBILIZATION

Mobilization shall conform to the provisions of Sections 4-1.03, "Contractor Submittals," and 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions.

Mobilization shall include the obtaining of all bonds, insurance, and permits; moving onto the site of all equipment; and the furnishing and erecting of temporary buildings and other facilities required for the performance and completion of the Work. Mobilization shall also include the following items:

1) Providing on-site sanitary facilities.

2) Arranging for and setting up Contractor's storage area(s) in accordance with Section 5-1.36, "Storage of Equipment, Materials, Supplies, Etc.," and applicable permit conditions.

3) Posting all OSHA required notices and establishment of safety programs.

4) Posting of all Prevailing Wage Requirements.

5) Preparing and transmitting the Submittals outlined in Section 4-1.03, "Contractor Submittals."

6) Obtaining and Submitting Certificates of Compliance.

7) Steam cleaning excavating and loading equipment prior to mobilization on site and presenting receipts to Engineer.

8) Preparation of "As-Constructed Plans" as outlined in Section 4-1.03, "Contractor Submittals."

Contractor shall be entitled to progress payments in accordance with Public Contract Code Section 20104.50. In lieu of Section 11-1.02 items A through E of "Mobilization" of the Standard Specifications, the first monthly payment estimate will be prepared when Engineer determines that five percent (5%) of the contract amount, not including mobilization, has been completed. Subsequent monthly pay estimates shall be made on the same day of the month as the first monthly pay estimate. Work completed in place less than two (2) working days prior to the preparation of the monthly pay estimate shall not be eligible for payment until the following month's estimate. The third to last paragraph of Section 11, "Mobilization," of the Standard Specifications shall be amended to read: "The adjustment provisions in Section 4-1.03, "Changes" shall not apply to the contract lump sum item of mobilization."

Payment for Mobilization Item as specified above will be made at the lump sum price bid, with no additional compensation therefor. In lieu of Section 11-1.02, "Payment," of the Standard Specifications, one partial payment of 50% of the bid price will be made upon completion of 50% of the mobilization of equipment on site and completion of items 1-7 above. The final payment of the remainder of the mobilization bid will be after satisfactory completion of the final project punch list and submittal of item 8 above. Satisfactory work completion for the partial or final payment will be determined by Engineer.

ITEM – TRAFFIC CONTROL

Work under this Item shall include all flaggers, temporary signs, lights, barricades, communication devices, and other devices required for the direction of local traffic through or around the work during construction. Contractor shall furnish all sign panels, posts, hardware, and all barricades and shall erect, maintain and remove all construction area signs, necessary for construction of project improvements, as specified in the Plans and these Special Provisions.

Traffic Control Requirements will be strictly enforced. Violation of these requirements is justification for Engineer to stop work until these requirements are met.

Contractor is notified that work along U.S. Highway 50 may be in progress concurrently with construction for this project. Coordination regarding traffic controls may be required with Caltrans and its Contractor.

Attention is directed to Section 10-1.03, “Maintaining Traffic,” and Section 10-1.04, “Traffic Control Plan,” of these Special Provisions.

In lieu of Section 12-2.02, “Flagging Costs,” of the Standard Specifications, the full cost of any flagging necessary shall be borne by Contractor.

Payment for Traffic Control Item as specified above shall be made at the lump sum price bid, with no additional compensation therefor. Partial payments for traffic control will be made based on the percentage of work requiring traffic control completed as determined by Engineer.

ITEM – SWEEPING

Work under this Item shall consist of furnishing all labor, tools, materials, and equipment necessary to sweep the project site and dispose of the swept materials. Tracking of sediment onto public streets shall be minimized by a combination of road sweeping and use of tire wash areas designated on the Plans during soil hauling operations, during equipment transporting from one work area to another, and as necessary to keep the streets clear of soil and debris. Tracking control applies to streets within the project area as well as streets adjacent to the project area that have the potential to be impacted by tracking from the project construction.

Contractor shall provide sweeping equipment that conforms to the following minimum requirements:

- The sweeper shall be a chassis-mounted vehicle capable of vacuuming the roadways such that the swept material is placed into a hopper, from which the swept material can be removed and disposed of. **Broom sweepers that are attachments to other equipment are not acceptable sweepers.**

Affected streets shall be swept a minimum of **three (3) times daily** (e.g. mid-morning, mid-afternoon, and at the end of the day) during soil hauling operations, during equipment transporting from one work area to another, and as necessary to keep the streets clear of soil and debris. The swept material shall be disposed of in accordance with Section 10-1.10C.6, “Excavation and Grading,” of these Special Provisions.

Attention is directed to Section 5-1.55, “Dust and Tracking Control,” of these Special Provisions.

Sweeping is a temporary erosion control measure or BMP. A fine of $100/day will be levied against Contractor for each day Contractor delays in responding to Engineer’s request to implement this temporary erosion control measure.

Payment for Sweeping Item shall be based on the per day price bid and on performing the sweeping operations as specified above.

ITEM – TRENCH AND EXCAVATION SAFETY

Work under this Item shall consist of furnishing all labor, tools, equipment, and materials necessary to install sheeting, shoring and bracing, sloping the sides of trenches/excavations, or equivalent method for trenches/excavations five feet and greater in accordance with the Plans, the Standard Specifications, and these Special Provisions.

Attention is directed to Section 10-1.10, “Excavation and Grading,” and Section 10-1.26, “Shoring and Excavation Plan,” of these Special Provisions. If Section 10-1.26, “Shoring and Excavation Plan,” requires shoring and bracing the excavation in lieu of sloping the sides of the excavation and Contractor doesn’t comply, no payment will be made under this Item.

Payment for Trench and Excavation Safety Item shall be based on the lump sum price bid as specified above. Engineer has the discretion to reduce payments for this Item where the need for trench and excavation protection is indicated on the Plans but not required in the field.

ITEM – INSTALL AND MAINTAIN TIRE WASH AREA (ON PAVEMENT)

Work under this Item shall consist of furnishing all labor, tools, equipment and material necessary to install, maintain, remove, and dispose of the tire wash area on pavement in accordance with the Plans, Standard

Specifications, and these Special Provisions. Work under this Item includes furnishing, installing, maintaining, removing and disposing of gravel bags or gravel-filled rolls and the Class 1 Type A permeable rock filter.

Attention is directed to Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)." Attention is directed to Section 5-1.55, "Dust and Tracking Control," of these Special Provisions regarding payment for the actual washing of tires.

The Tire Wash Area is a temporary erosion control device or BMP. A fine of $100/day will be levied against Contractor for each day Contractor delays in responding to Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices.

Payment for Install and Maintain Tire Wash Area (On Pavement) Item shall be based on the unit price bid and on the number of tire wash areas installed and maintained as specified above. Progress payments for this Item will be a maximum of 50% of the unit cost bid multiplied by the number of tire wash areas installed off pavement during the pay period as determined by Engineer and/or required by TRPA's Compliance Division. Payment for the maintenance, removal, and disposal of all tire wash areas off pavement will be made in the Final Pay Estimate providing that satisfactory maintenance was performed throughout the duration of the project and removal was completed as specified.

ITEM – EXISTING SIGN REMOVAL AND RELOCATION

Work under this Item shall consist of furnishing all labor, tools, equipment and materials necessary for the removal and relocation of existing roadway signs per County Design Standard Plan 105A and/or 105B in Appendix C of these Special Provisions. Signs to be removed and relocated will be marked by Engineer.

Unless temporary signing acceptable to Engineer is installed or sign removal occurs during the closure of Sawmill Road, each roadway sign shall be installed at the new location on the same day the sign is removed from its original location. If Engineer determines that a sign post is damaged, Contractor shall repair or replace the post. Such costs shall be included in this Item.

The backs of all signs shall be cleaned, sanded and primed, then painted with the following TRPA approved color: Federal Standard 595 Color FS 30059, or approved equal.

The costs associated with the removal and relocation of the stop ahead symbol sign and post shown on Sheets P-4 and SS-1 of the Plans shall be included in the unit price bid for this Item. The costs associated with the removal of the bicycle warning and distance signs and post shown on Sheets P-4 and SS-1 of the Plans shall be counted as one sign and shall be included in the unit price bid for this Item. These signs will remain the property of the County.

The costs associated with the removal of the bike route sign and post and the removal and reinstallation of the arrow sign shown on Sheets P-5 and SS-1 of the Plans shall also be included in the unit price bid for this Item. Contractor is responsible for ensuring that the existing signs to be salvaged and reused are free from damage. Should damage to a sign occur, contractor shall be responsible for its replacement with no additional compensation.

Payment for Existing Sign Removal and Relocation Item shall be based on the unit price bid and on the number of roadside signs removed and relocated as specified above.

ITEM – REMOVE EXISTING PIPE

Work under this Item shall consist of furnishing all labor, tools, materials, and equipment necessary to remove existing culverts that are not within excavations required to perform the various improvements but are noted on the Plans for removal in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item includes clearing and grubbing or sawcutting, excavation, disposal of excess material, shoring and bracing, or sloping the sides of the excavation for trenches less than five feet deep, removal and disposal of culvert, backfilling and compacting. The width of the trench for removal of the culvert shall be sufficient to allow for proper compaction of the backfill.

The trench shall be backfilled with native material.

The costs associated with shoring and bracing, or sloping the sides of the excavation in the trenches deeper than five feet are included in the "Trench and Excavation Safety" item.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.03, "Maintaining Traffic," and Section 10-1.04, "Traffic Control Plan," of these Special Provisions.

Payment for Remove Existing Pipe Item shall be based on the unit price bid and on the number of linear feet of culvert or drain removed as specified above.

ITEMS – 18" CMP (OUT OF PAVEMENT) AND 36" CMP (OUT OF PAVEMENT)

Work under these Items shall consist of furnishing all labor, tools, equipment and materials necessary to construct CMP culverts beyond the edge of pavement or under the bike path in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under these Items includes clearing and grubbing, excavation, salvaging soil, disposal of excess material, scarifying and compacting subgrade, shoring, bracing, or sloping of the sides of the excavation for trenches less than five feet deep, furnishing and laying pipe, elbows, couplings, and bends, furnishing, placing, and compacting bedding, backfilling and compaction, mixing soil and humus, placing and compacting topsoil mix, and removal and disposal of existing culverts where noted on the Plans. Where applicable, topsoil mix shall be mounded over the top of the pipe as shown on the pipe trench detail on Plan Sheet D-2. The costs associated with the removal and disposal of sediment accumulated in the culverts during construction shall also be included in the unit price bid for these Items. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

Cover over the pipes shall be a minimum of 12 inches where cover is defined as the distance from finished grade elevation of the backfilled pipe trench to the top of the pipe. Where pipe is installed under AC paving (e.g., the bike path), but designated as being out of pavement, cover is the distance from the finished surface of the proposed AC paving to the top of the pipe. In these locations, slurry cement backfill shall be used in conformance with Section 10-1.19, "Concrete Structures," of these Special Provisions where the cover over the pipe is less than 18 inches. The costs associated with slurry cement backfill shall be included in the unit price bid for CMP out of pavement.

Contractor is responsible for the protection of the existing utilities in the performance of the work described herein. The costs associated with providing such protection shall be included in the unit price bid for CMP out of pavement.

The costs associated with the removal and disposal of rock from the existing rock dissipator on Plan Sheet P-5 shall be included in the Item "18" CMP (out of pavement)."

Attention is directed to Section 10-1.03, "Maintaining Traffic," Section 10-1.04, "Traffic Control Plan," Section 10-1.10, "Excavation and Grading," Section 10-1.17, "Culvert and CMP Structures," Section 10-1.26, "Shoring and Excavation Plan," and Items "Install and Maintain Filter Fence," "Install and Maintain Tree Protection and Construction Limit Fence," "Humus for Topsoil Mix," "Mulch and Mulch Application," and "Tackifier and Tackifier Application," of these Special Provisions. Attention is also directed to Items "Dewatering Area 7," "Dewatering Area 8," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 18" CMP (out of pavement) and 36″ CMP (out of pavement) Items shall be based on the unit price bid and on the number of linear feet of CMP constructed as specified above.

ITEMS – 12" HDPE (IN PAVEMENT) AND 24" HDPE (IN PAVEMENT)

Work under these Items shall consist of furnishing all labor, tools, equipment and materials necessary to construct HDPE culverts in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under these Items includes sawcutting, excavation, salvaging soil, disposal of excess material, scarifying and compacting subgrade, shoring, bracing, or sloping of the sides of the excavation for trenches less than five feet deep, furnishing and laying pipe, elbows, couplings, and bends, furnishing, placing, and compacting bedding, if applicable; backfilling and compaction, if applicable; furnishing, placing,

and compacting aggregate base or furnishing and placing slurry cement, asphalt concrete removal, disposal, and replacement, and removal and disposal of existing culverts where noted on the Plans. The costs associated with the removal and disposal of sediment accumulated in the culverts during construction shall also be included in the unit price bid for these Items. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

Cover is the distance from the finished surface of the proposed AC paving to the top of the pipe. Slurry cement backfill shall be used in conformance with Section 10-1.19, "Concrete Structures," of these Special Provisions where the cover over the pipe is less than 18 inches. Attention is directed to Section 10-1.10, "Excavation and Grading", of these Special Provisions for backfill and compaction requirements where cover is greater than or equal to 18 inches.

The new AC section shall be 3 inches of compacted AC over 8 inches compacted aggregate base at all locations under these Items. Cold AC mix shall be placed, compacted, and maintained over the pipe trench and shall be placed and compacted immediately after the backfill compaction is complete or the slurry cement has set. The costs associated with furnishing, placing, compacting, and maintaining cold AC mix shall be included in the unit price bid for HDPE in pavement.

Compensation for slurry cement backfill, where applicable, shall be included in the unit price bid for HDPE in pavement.

Contractor is responsible for the protection of the existing utilities in the performance of the work described herein. The costs associated with providing such protection shall be included in the unit price bid for HDPE in pavement.

Attention is directed to Section 10-1.03, "Maintaining Traffic," Section 10-1.04, "Traffic Control Plan," Section 10-1.10, "Excavation and Grading," Section 10-1.12, "Aggregate Base, Class 2," Section 10-1.14 "Asphaltic Emulsion (Paint Binder)," Section 10-1.15 "Asphalt Concrete," Section 10-1.17, "Culvert, CMP Structures, Perforated Pipe, and Drain Basin, and Drain Basin," Section 10-1.19, "Concrete Structures," and Section 10-1.26, "Shoring and Excavation Plan," of these Special Provisions. Attention is also directed to Items "Dewatering Area 7," "Dewatering Area 8," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 12" HDPE (in pavement) and 24" HDPE (in pavement) Items shall be based on the unit price bid and on the number of linear feet of HDPE constructed as specified above.

ITEMS – 12" HDPE (OUT OF PAVEMENT) AND 24" HDPE (OUT OF PAVEMENT)

Work under these Items shall consist of furnishing all labor, tools, equipment and materials necessary to construct HDPE culverts beyond the edge of pavement, under R&R AC pavement, or under the bike path in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under these Items includes clearing and grubbing, excavation, salvaging soil, disposal of excess material, scarifying and compacting subgrade, shoring, bracing, or sloping of the sides of the excavation for trenches less than five feet deep, furnishing and laying pipe, elbows, couplings, and bends, furnishing, placing, and compacting bedding, backfilling and compaction, mixing soil and humus, placing and compacting topsoil mix, and removal and disposal of existing culverts where noted on the Plans. Where applicable, topsoil mix shall be mounded over the top of the pipe as shown on the pipe trench detail on Plan Sheet D-2. The costs associated with the removal and disposal of sediment accumulated in the culverts during construction shall also be included in the unit price bid for these Items. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

Cover over the pipes shall be a minimum of 12 inches where cover is defined as the distance from finished grade elevation of the backfilled pipe trench to the top of the pipe. Where pipe is installed under AC paving (e.g., the bike path, R&R AC pavement), but designated as being out of pavement, cover is the distance from the finished surface of the proposed AC paving to the top of the pipe. In these locations, slurry cement backfill shall be used in conformance with Section 10-1.19, "Concrete Structures," of these Special

Provisions where the cover over the pipe is less than 18 inches. The costs associated with slurry cement backfill shall be included in the unit price bid for HDPE out of pavement.

Contractor is responsible for the protection of the existing utilities in the performance of the work described herein. The costs associated with providing such protection shall be included in the unit price bid for HDPE out of pavement.

Attention is directed to Section 10-1.03, "Maintaining Traffic," Section 10-1.04, "Traffic Control Plan," Section 10-1.10, "Excavation and Grading," Section 10-1.17, "Culvert and CMP Structures," Section 10-1.26, "Shoring and Excavation Plan," and Items "Install and Maintain Filter Fence," "Install and Maintain Tree Protection and Construction Limit Fence," "Humus for Topsoil Mix," "Mulch and Mulch Application," and "Tackifier and Tackifier Application" of these Special Provisions. Attention is also directed to Items "Dewatering Area 7," "Dewatering Area 8," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 12″ HDPE (out of pavement) and 24" HDPE (out of pavement) Items shall be based on the unit prices bid and on the number of linear feet of HDPE constructed as specified above.

ITEM – MODIFY EXISTING 36" DOUBLE SEDIMENT TRAP

Work under this Item shall consist of furnishing all labor, tools, equipment and materials necessary to modify the existing double sediment trap (ST) shown on Sheet P-5 of the Plans in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this Item includes sawcutting, excavation, disposal of excess material, removal and disposal of asphalt concrete and aggregate base, removal and disposal of existing 36" checkered plate lids, cutting the rims of the STs to accommodate the proposed elevations shown on the Plans, furnishing and installing manhole frames, covers, and grade rings (if applicable), furnishing and welding galvanized steel plate over the existing ST window, cutting the west ST and connecting 18" CMP to the ST with a concrete collar, backfilling and compacting with native material. The costs associated with the removal and disposal of sediment and stormwater accumulated in the traps during construction shall also be included in the unit price bid for this Item. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

Contractor shall apply grout to the interior of the ST rim, grade rings, and manhole frame to provide a smooth transition. The steel plate over the window shall be welded on the exterior of the ST.

The manhole frames shall have a clear opening of 24 to 30 inches and an overall base or flange dimension wide enough to straddle or exceed the 36 inch ST rim dimension. The covers shall be solid with pickholes and have a diamond or other low profile pattern suitable for bicycle traffic. A flat smooth surface shall not be accepted. Frames and covers that meet these requirements are manufactured by Alhambra Foundry Company, Ltd. (model A-1252) and Neenah Foundry (model R-1682). Contractor shall submit shop drawings for either of these models or an equal to Engineer within five (5) working days of the Notice to Proceed for review.

Galvanized areas damaged during cutting, welding, or handling shall be repaired with suitable corrosion resistant coating approved by Engineer (see Section 5-1.53, "Certificates of Compliance").

The costs associated with the removal and disposal of the existing rock dissipator shall be included in the Item "18" CMP (out of pavement)."

Attention is directed to Section 4-1.03 "Contractor Submittals," Section 10-1.10, "Excavation and Grading," Section 10-1.03, "Maintaining Traffic," Section 10-1.04, "Traffic Control Plan," Section 10-1.17, "Culvert and CMP Structures," and Section 10-1.19, "Concrete Structures," of these Special Provisions.

Payment for Modify Existing 36" Double ST Item shall be based on the unit price bid and on the number of double STs modified as specified above.

ITEM – 48" STORM DRAIN MANHOLE

Work under this Item shall consist of furnishing all labor, tools, equipment and materials necessary to install the precast concrete manholes in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under this Item includes sawcut, removal, disposal of existing AC, excavation, salvaging soil, disposal of excess material, furnishing, placing, and compacting Class 1 Type A permeable material, furnishing and installing precast concrete base, grouting of base to manhole walls, backfill and compaction or slurry cement, furnishing and installing concrete barrel sections, furnishing and installing eccentric cone section, rings, steps, frame and cover; sealing joints between barrel and eccentric cone sections, connecting pipes to manhole walls with concrete collars, furnishing and placing 3 inch compacted AC over 8 inch compacted aggregate base where applicable. There shall be no cold joint between the barrel and base. A grooved ring shall be cast into the base to accept the barrel. The costs associated with the removal and disposal of sediment and stormwater accumulated in the manholes during construction shall also be included in the unit price bid for this Item. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

The frames and covers shall be shall be as shown on Sheet D-2. The steps shall be in accordance with OSHA requirements.

Attention is directed to the items related to the installation of new pipe in pavement and new pipe out of pavement for pipe under the R&R AC pavement area. At the locations where pipe trenches are to be backfilled with slurry cement, the backfill for the associated manhole shall be slurry cement. Slurry cement backfill shall conform to Section 10-1.19 of these Special Provisions. The new AC (3 inch compacted thickness) shall be placed and compacted over the manhole immediately after the slurry cement has set. Alternatively, the Contractor may temporarily extend slurry cement to the finished road surface, delaying the placement and compaction of new AC. Where this option is implemented, the Contractor shall remove and dispose of the necessary thickness of slurry cement needed for the placement of the new AC pavement. At locations where the pipe trenches are to be backfilled with native material up to the new AC section consisting of 3 inches of compacted AC over 8 inches compacted aggregate base, the same backfill and AC section shall apply to the associated manhole: The new AC shall be placed and compacted over the pipe trench immediately after the backfill and aggregate base compaction is complete.

The Contractor is responsible for the protection of the existing utilities in the performance of the work described herein. The costs associated with providing this protection shall be included in the unit price bid for this Item.

The Contractor shall submit shop drawings for the precast manhole components to the Engineer within 5 working days of Notice to Proceed for review.

The costs associated with shoring, bracing, or laying back the sides of excavations greater than or equal to five feet shall be included in the "Trench and Excavation Safety" Item. Attention is directed to Section 10-1.26, "Shoring and Excavation Plan," for submittal requirements for safety and a description of the conditions under which sloping the sides of the excavation will be allowed in lieu of shoring and/or bracing.

Attention is directed to Section 4-1.03 "Contractor Submittals," Section 10-1.03 "Maintaining Traffic," Section 10-1.10 "Excavation and Grading," Section 10-1.19 "Concrete Structures," and Section 10-1.26 "Shoring and Excavation Plan," of these Special Provisions. Attention is also directed to Items "Dewatering Area 7," Dewatering Area 8," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 48" Storm Drain Manhole Item shall be based on the unit price bid and the number of storm drain manholes installed as specified above.

ITEM – DRAINAGE INLET

Work under this Item shall consist of furnishing all labor, tools, equipment, and materials necessary to construct drainage inlets in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this Item includes sawcutting, removal and disposal of existing AC pavement,

excavation, salvaging soil, disposal of excess materials, shoring, bracing, or sloping of the sides of the excavation for trenches less than five feet deep, backfill, compaction, concrete and its forming and placement, furnishing and installation of reinforcing steel, frame, chain, and grate, drain holes, connection to culvert system with concrete collars, and installation of Class 1 Type B permeable material. Backfill shall be native and compacted in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. The costs associated with the removal and disposal of sediment accumulated in the drainage inlets during construction shall be included in the unit price bid for this item. Disposal of sediment shall be in accordance with Section 10-1.10 of these Special Provisions. Sediment shall be removed just prior to demobilization.

The costs associated with furnishing all labor, tools, equipment and materials necessary to construct the AC pavement section between the grate and the sawcut limits up to three feet (i.e. tie-in pavement) between the drainage inlet and existing pavement shall be included in the unit price bid for this Item. The tie-in pavement section shall consist of 3 inches of compacted AC over 8 inches of compacted aggregate base. AC pavement section replacement beyond the three feet where shown on the Plans or where directed by the Engineer shall be paid for under the R&R AC Pavement or Misc AC Paving Items.

The costs associated with placing and compacting 8 inches of compacted aggregate base shouldering adjacent to the drainage inlet and edge of roadway pavement shall be included in the unit price bid for this Item.

It is the Contractor's responsibility to verify the top of grate (TG) elevation shown on the Plans at the drainage inlet prior to excavation for the drainage inlet installation and to notify the Engineer if any discrepancies are discovered. Contractor is also responsible for the protection of the existing utilities in the performance of work described herein. The costs associated with providing such protection shall be included in the unit price bid for this Item.

The costs associated with shoring, bracing, or laying back the sides of excavations greater than or equal to five feet shall be included in the "Trench and Excavation Safety" Item. Attention is directed to Section 10-1.26, "Shoring and Excavation Plan," for submittal requirements for safety and a description of the conditions under which sloping the sides of the excavation will be allowed in lieu of shoring and/or bracing. Contractor shall submit a Shoring and Excavation Plan to the Engineer within five (5) working days before commencing the excavation for the culvert(s) connecting to the drainage inlets.

The Contractor shall submit shop drawings of each inlet shown on the Plans at least five (5) working days before the start of the excavation for the drainage inlets for Engineer's approval. A precast unit with cast-in-place top section (2.0' deep minimum measured from the top of grate) to receive grate and frame will be an acceptable alternative to cast-in-place drainage inlets. Drainage inlets that are entirely precast will not be acceptable. Reinforcing steel in the drainage inlet walls of the precast section shall extend into the cast-in-place section in the same manner as if it were entirely precast. The drainage inlets at SM Station 101+88.73 and BP Station 94+56.44 shall be entirely cast in place.

The grates shall be of an approved "bicycle-proof" type as shown in the Standard Plans. The grates and frames shall be steel and painted black.

Attention is directed to Section 4-1.03 "Contractor Submittals," Section 10-1.03 "Maintaining Traffic," Section 10-1.10 "Excavation and Grading," Section 10-1.17, "Culvert and CMP Structures," Section 10-1.19 "Concrete Structures," and Section 10-1.26 "Shoring and Excavation Plan," of these Special Provisions. Attention is also directed to Items "Dewatering Area 7," Dewatering Area 8," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for Drainage Inlet Item shall be based on the unit price bid and the number of drainage inlets installed as specified above.

ITEM – WILLOW CLUMP SALVAGE AND TRANSPLANT

Work under this Item shall consist of furnishing all labor, tools, materials, and equipment necessary to salvage and transplant willows in accordance with the Plans and these Special Provisions. Work under this

Item includes trimming the willow branches, removing willow clumps, transplanting the willow clumps, and backfilling the void created by the removal with native material and compacting the backfill. Locations for transplanted willow clumps are shown on the Plans. Final locations are to be determined by the Engineer.

Attention is directed to Section 10-1.06, "Willow Clump Salvage and Transplant," Section 10-1.07, "Clearing and Grubbing", and Section 10-1.10, "Excavating and Grading" of these Special Provisions. Attention is also directed to the Dewatering Items, Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for Willow Clump Salvage and Transplant Item shall be based on the unit price bid and on the number of willow clumps salvaged and transplanted as specified above.

ITEM – BIKE PATH SIGNS

Work under this Item shall consist of furnishing all labor, tools, equipment and materials necessary to install bike path and related signs in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this Item includes furnishing and installing signs and posts and, where applicable, furnishing and installing bolts, bands, brackets, U clamps and other hardware required to securely attach signs to the tubular steel rail above the Caltrans Type 5 concrete retaining wall. Hardware shall be stainless steel and be of a commercial or industrial grade. Bolts shall be theft proof. The bracket attached to the tubular steel railing shall be installed in such a manner that no scratches or other damage occurs to the powder coat finish of the railing.

Metal posts shall be the following TRPA approved color: Federal Standard 595 Color FS 30059, or approved equal. The backs of all signs shall be cleaned, sanded and primed, then painted with the following TRPA approved color: Federal Standard 595 Color FS 30059, or approved equal.

The costs associated with the removal of the bike route sign and post shown on Sheets P-5 and SS-1 of the Plans shall be included in the unit price bid for Item "Existing Sign Removal and Relocation." Signs removed but not designated for use elsewhere within the Project area remain the property of the County. The costs associated with the removal, storage, and reinstallation of existing bike path signs shall be included in the unit price bid for Item "Existing Sign Removal and Relocation." The costs associated with the removal and/or relocation of existing roadway signs shall be included in the unit price bid for Item "Existing Sign Removal and Relocation."

Attention is directed to Section 4-1.03 "Contractor Submittals," of these Special Provisions.

Payment for Bike Path Signs Item shall be based on the unit price bid for each type of sign and on the number of signs installed as specified above.

ITEM – CONCRETE ENCASEMENT

Work under this Item shall consist of furnishing all labor, tools, materials, and equipment necessary to install a concrete encasement as shown on the Plans in accordance with the Plans, the Standard Specifications, and these Special Provisions.

Encasement locations shall be where noted on the Plans and where directed in the field by the Engineer. Where directed in the field, encasement limits shall be similar to that described above.

Concrete for the encasement shall have a minimum of 282 pounds of cement (three-sack mix minimum).

Payment for Concrete Encasement Item shall be based on the unit price bid and on the number of concrete encasements installed as specified above.

ITEM – IMPORT FILL

Work under this Item shall consist of furnishing all labor, tools, materials, and equipment necessary to furnish import fill to complete the various items of work as required by the Plans, the Standard Specifications, and these Special Provisions. Work under this Item includes furnishing, placement, and compaction of an estimated 100 cubic yards of import fill.

The quantity of this Item listed in the bid schedule represents no actual estimate, is nominal only, and may be increased, decreased, or reduced to zero.

Attention is directed to Section 10-1.10 "Excavating and Grading," of these Special Provisions.

Payment for the Import Fill Item shall be based on the unit price bid and on the number of cubic yards of import fill brought to the site, placed and compacted. Measurement for payment shall be based on the load tickets subject to verification of the quantity contained within a single truck load.

ITEM – CONCRETE REMOVAL

Work under this Item shall consist of furnishing all labor, tools, equipment and materials necessary to remove the existing concrete as shown on Sheet P-3 of the Plans in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this Item includes sawcutting, removal of existing concrete, disposal of concrete that is removed, placing and compacting native material in the resulting void outside the limits of the bike path.

Attention is directed to Section 10-1.10, "Excavation and Grading," of these Special Provisions.

Payment for Concrete Removal Item shall be based on the unit price bid and on the number of square feet of concrete removed as specified above.

ITEM –RETAINING WALL

Work under this Item shall consist of furnishing all labor, tools, materials, and equipment necessary to construct the retaining wall system as shown on the retaining wall design in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under these Items includes clearing and grubbing, excavation, salvaging soil, disposal of excess material, sawcut, removal and disposal of approximately 18'-4" of existing concrete retaining wall to the depths shown on the Plans, grinding smooth a portion of the remaining concrete, cutting, removal, and disposal of approximately 13'-9" of existing tubular steel railing, scarifying and compaction of subgrade, furnishing and placing concrete including footings and keys, its forming, providing for utility openings, rounding the concrete at culverts, weep holes, drains, waterstops, pervious backfill, backfill, imported backfill, structure backfill, and compaction, expanded polystyrene with hardboard adjacent to the existing concrete retaining wall. The retaining wall shall be constructed in accordance with the Plans, these Special Provisions, Section 51, "Concrete Structures," of the Standard Specifications and Standard Plans.

Contractor's attention is directed to the limited area for construction along the County right-of-way fronting APN 33-180-04. If scaffolding is erected for this project, Contractor shall submit a scaffolding plan for scaffolding systems in conformance with Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications, except that this plan shall be submitted to Engineer within five (5) working days prior to any proposed work requiring scaffolding. The Scaffolding Plan shall include, at a minimum, descriptions, locations, and types of scaffolding to be used and methods and equipment for erecting, moving, and removing scaffolding. The costs associated with scaffolding and the Scaffolding Plan shall be included in the unit price bid for this Item.

The costs associated with cutting the existing rebar flush following removal of the existing concrete retaining wall and furnishing and placing slurry to bike path or miscellaneous AC paving subgrade shall be included in the unit price bid for this Item.

The costs associated with the tubular steel railing are included in the Item "Tubular Steel Railing."

Concrete and reinforcing steel shall be in accordance with Section 10-1.19, "Concrete Structures," of these Special Provisions.

Attention is directed to Section 4-1.03 "Contractor Submittals," Section 10-1.10, "Excavation and Grading," Section 10-1.16, "Prepare and Stain Concrete Surfaces," Section 10-1.23, "Rolled Erosion Control Product, Turf Reinforcement Mat, Filter Fabric, and Geotextile Fabric," and Section 10-1.26, "Shoring and Excavation Plan," of these Special Provisions. Attention is also directed to Item "Dewatering Area 8," Section 10-1.20,

"Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for Retaining Wall Item shall be made at the lump sum price bid, with no additional compensation therefor.

ITEM – TUBULAR STEEL RAILING

Work under this Item shall consist of furnishing all labor, tools, materials, and equipment necessary to construct the tubular steel railing in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this Item includes furnishing all materials and labor necessary for installing the tubular steel railing on the retaining wall.

Tubular steel railing shall conform to the provisions in Section 83, "Railings and Barriers," of the Standard Specifications and be constructed in accordance with the details shown on Sheet RW-2 of the Plans. The tubular steel shall be hot-dipped galvanized with a powder coat rust-colored finish that matches the existing rail at the intersection of Sawmill Road and U.S. Highway 50.

The costs associated with furnishing, installing, and welding a tubular steel post to the existing tubular steel railing and repairing any damaged surfaces shall be included in the unit price bid for this Item.

The Contractor shall submit shop drawings of the tubular steel railing including details of the railing, installation, hardware, and powder coat color sample at least five (5) working days before the start of fabrication for Engineer's approval.

Attention is directed to Section 4-1.03 "Contractor Submittals," Section 10-1.11, Welding," and Section 10-1.19, "Concrete Structures," of these Special Provisions.

Payment for Tubular Steel Railing Item shall be based on the unit price bid and on the linear feet of tubular steel railing installed as specified above.

ITEM – R&R AC PAVEMENT

Work under this Item shall consist of furnishing all labor, tools, equipment and materials necessary to construct the asphalt concrete (AC) pavement on Sawmill Road in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this Item includes sawcutting, AC removal and disposal, clearing and grubbing, excavation, disposal of excess material, scarifying and compaction of subgrade to a depth of 6", placement and compaction of fill, furnishing, placing, and compacting aggregate base including shoulders (8" compacted thickness), furnishing, placing, and compacting asphalt concrete (3" compacted thickness), furnishing and placing paint binder (tack coat), mixing soil and humus, placing and compacting topsoil mix beyond the AB shoulder, on the slope, and on disturbed areas around the perimeter of the new AC section but within the construction area limits.

The costs associated with benching the existing fill slope, as shown on Sheets P-2 and D-2 of the Plans, placing woven geotextile fabric and placing and compacting fill shall be included in the unit price bid for this Item.

Attention is directed to Section 10-1.01, "Order of Work," Section 10-1.10, "Excavation and Grading," Section 10-1.12, "Aggregate Base, Class 2," Section 10-1.14, "Asphaltic Emulsion (Paint Binder)," Section 10-1.15, "Asphalt Concrete," and Section 10-1.23, "Rolled Erosion Control Product, Turf Reinforcement Mat, Filter Fabric, and Geotextile Fabric," of these Special Provisions.

Payment for R&R AC Pavement Item shall be based on the unit price bid and on the number of square feet of AC pavement installed as specified above.

ITEM – R&R AC DRIVEWAY

Work under this Item shall consist of furnishing all labor, tools, equipment and materials necessary to remove and replace AC paving at driveways in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this Item includes sawcutting, AC removal and disposal, clearing and

grubbing, excavation, placement and compaction of fill, disposal of excess material, scarifying and compaction of subgrade, furnishing, placing and compacting 6" thickness of aggregate base, furnishing, placing, and compaction of AC (3" compacted thickness), furnishing and placing paint binder (tack coat), and furnishing, placing, and compacting 6" thickness of aggregate base shoulder. Width of aggregate base shoulder shall be a minimum of 1 foot and a maximum of 2 feet. AC paving shall be sloped to prevent ponding or trapping water and to maintain a smooth transition at the bike path.

The costs associated with AC removal and AC paving where the bike path crosses the driveways at BP Stations 90+90±, 91+90±, 92+60±, and 93+20± shall be included in the Item "Class 1 Bike Path."

Attention is directed to Section 10-1.01, "Order of Work," Section 10-1.10, "Excavation and Grading," Section 10-1.12, "Aggregate Base, Class 2," Section 10-1.14,"Asphaltic Emulsion (Paint Binder)," and Section 10-1.15, "Asphalt Concrete," of these Special Provisions.

Payment for R&R AC Driveway Item shall be based on the unit price bid and on the number of square feet of AC paving installed as specified above.

ITEMS – DEWATERING AREA 7 AND DEWATERING AREA 8

Work under these Items shall consist of furnishing all labor, tools, equipment, and materials necessary to dewater the following excavation and backfill locations:

- **Dewatering Area 7** Plan Sheets P-1, P-4, approximately between SM Stations 101+80± and 104+75± – Sediment trap, culvert removal, culvert installation, storm drain manholes, drainage inlets.

- **Dewatering Area 8** Plan Sheets P-1, P-5, RW-1, approximately between BP Stations 93+62± and 99+12± – Retaining wall (with footing), rock-lined channel, drainage inlets, culvert installation, rock dissipators, fill.

Dewatering shall result in conditions that allow the required compaction to be achieved and shall prevent sediment-laden water that exceeds the effluent discharge limits from entering the drainage ways within the project area.

It is anticipated that these areas may exhibit wet conditions. Discussions between Contractor and Engineer will determine if dewatering is necessary. If it is decided that dewatering at a particular location is unnecessary, no payment for this Item will be made. If it is decided that dewatering is unnecessary at each of these locations, no payment for these Items will be made.

Contractor's attention is directed to Section 4-1.03, "Contractor Submittals," Section 5-1.27 "Lake, Stream, and Air Pollution", Section 10-1.01, "Order of Work," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions.

Payment for Dewatering Area 7 and Dewatering Area 8 Items shall be based on the unit price bid and on the number of locations dewatered as specified above.

10-1.01 ORDER OF WORK

Contractor shall implement the following sequence of work for the project:

- All work from SM Station 100+76.69 LT east to Highway 50 and SM Station 101+74.00 RT east to Highway 50, as shown on Plan Sheets P-1, P-2, P-3, P-4, P-5, and RW-1 must be completed by October 31, 2015.
- Unless winterization is implemented, all bike path, roadway, and driveway AC paving must be complete by October 31, 2015.

10-1.06 WILLOW CLUMP SALVAGE AND TRANSPLANT

The Engineer has delineated the following location for salvaging and transplanting willows:

1) Sheet P-1 of the Plans -- One willow clump shall be salvaged from APN 33-180-06 and shall be transplanted near the outlet of the proposed rock-lined channel, or as directed by the Engineer.

The following detailed procedure shall be followed in salvaging and transplanting willows:

The term “willow” used above includes all branches, leaves, and the entire root ball and soil attached and shall be referred to in this procedure as a “willow clump”. Transplanting of willow clumps shall occur immediately after removal or later that day. The Contractor’s grading for the construction of the areas where the willow clumps will be transplanted shall progress such that the willows to be removed and transplanted can be replanted immediately after removal without interfering with the final grading in the areas of replanted willow clumps. The equipment access specified in the bid items in the areas where the willows will be salvaged and transplanted shall apply for removal and transplanting of willows in these areas.

1) For those willows that will be transplanted immediately:

   a) The Contractor shall trim the willows to a height of two feet. The trimmings shall be disposed of.

   b) Planting holes shall not be prepared more than two hours prior to willow removal. The Contractor shall excavate an area large enough to receive the willow root ball to a depth of 12” below the root zone, shall loosen soils in the bottom and along the sides of the hole, and moisten soils to the rooting depth.

   c) The Contractor shall remove each willow clump using an 18” minimum bucket. The removal shall include the willows and root ball with soil attached. The void created by the removal shall be backfilled with native material and the backfill shall be compacted.

   d) The Contractor shall place the willow clump in the excavated area to receive the willow root ball such that the top of the root ball is 1” to 2” below the existing grade; backfill with the moist excavated soil; tamp soil firmly in place such that the backfill matches the surrounding grade and no voids exist around the root ball.

   e) Contractor shall then irrigate the transplanted willow clump once thoroughly. The County will assume responsibility for additional irrigation.

2) For those willows to be transplanted later:

   a) The Contractor shall trim the willows to a height of two feet.

   b) The Contractor shall remove each willow clump using an 18” minimum bucket. The removal shall include the willows and root ball with soil attached. The void created by the removal shall be backfilled with native material and the backfill shall be compacted.

   c) The Contractor shall wrap the root ball in burlap and tie the burlap to the willow at the top of the roots.

   d) The Contractor shall transport the willow clump and store it in the shade next to the area where it will be transplanted.

   e) When it is time to transplant the willow clumps, but no later than two hours after removing willow clump from storage, the Contractor shall excavate an area large enough to receive the willow root ball, wet the excavated area to a depth of 12” below the root zone, shall loosen soils in the bottom and along the sides of the hole, and moisten soils to the rooting depth. The Contractor shall place the willow clump in the excavated area to receive the willow root ball such that the top of the root ball is 1” to 2” below the existing grade; backfill with the moist excavated soil; tamp soil firmly in place such that the backfill matches the surrounding grade and no voids exist around the root ball. Contractor shall then irrigate the transplanted willow clump once thoroughly. The County will assume responsibility for additional irrigation. If the willow transplant cannot be completed by the end of the day, the Contractor shall the delay the transplant, irrigate the root ball, and leave it in the

shade where it had been stored. Transplanting shall then be accomplished as the first item of work the following day. In any case, the transplanting shall be scheduled such that any delay in completing the operation in one day will not result in postponing the transplant until after a weekend or holiday.

Contractor's attention is directed to Section 10-1.07, "Clearing and Grubbing," and Section 10-1.10, "Excavation and Grading," of these Special Provisions.

10-1.10 EXCAVATION AND GRADING

EARTHWORK SUMMARY BY IMPROVEMENT

ALL VOLUMES ARE IN CY	CUT	FILL	SALVAGED SOIL	HUMUS FOR TOPSOIL MIX	TOPSOIL MIX	MULCH
Pipes (pipe and class 1 type A trench mat'l displacement, pipe removal backfill), Concrete Encasement	93	2				
Rock Dissipators, RSP	17			3	12	6
Bike Path	117	66		2.5	10	5
Retaining Wall, Structure Backfill	214	267		4	16	8
R&R AC Driveway, R&R AC Pavement	25	283				
Concrete Removal		1				
Rock-Lined Channels	22	8	*35	2.5	9	5
Sediment Trap, DIs, SDMHs	33					
Stump Removal		35				
TOTALS	**521**	**662**	***35**	**12**	**47**	**24**

* Quantity of soil salvage shown on the Plans reflects amount available per sheet from various excavation locations. Quantity of salvaged soil shown in the Earthwork Summary reflects that amount required for the 3:1 ratio for topsoil mix. The only source shown in the Summary is RLC excavation, however, any of the other locations shown on the plans are acceptable as long as the required quantity is met.

Unless covered under a separate Item, importing of material or disposal of excess material shall be included in Contractor's bid for the various items of work and no additional compensation will be made therefor.

Any material excavated on site shall be used for fill or backfill and shall contain less than 2% by volume nondecomposed organic material and material no larger than 1 1/2″ in the largest dimension.

10-1.13 ARCHITECTURAL SURFACE (TEXTURED CONCRETE)

Architectural texture for concrete surfaces shall conform to the detail shown on the Plans, the provisions in Section 51, "Concrete Structures," of the Standard Specifications, and these Special Provisions.

Architectural textures listed below are required at concrete surfaces shown on the plans:

1. Dry Stack Rock Texture

The dry stack rock architectural texture shall be a texture simulating the appearance of a dry stack rock pattern and shall be a formed relief constructed to the dimensions and shapes shown on the Plans. The pattern shall follow a horizontal line and not follow the grade of the road. Corners at the intersection of plane surfaces shall be sharp and crisp without easing or rounding. A Class 1 surface finish shall be applied to the architectural texture.

Test Panel

See Section 10-1.16, "Prepare and Stain Concrete Surfaces," of these Special Provisions for test panel requirements.

Form Liners

Form liners shall be used for textured concrete surfaces and shall be installed in conformance with the manufacturer's recommendations, unless other methods of forming textured concrete surfaces are approved by the Engineer. Form liners shall be manufactured from an elastomeric material by a manufacturer of commercially available concrete form liners. Form liners shall leave crisp, sharp definition of the architectural surface. Recurring textural configurations exhibited by repeating, recognizable shadow patterns shall be prevented by proper casting of form liner patterns. Textured concrete surfaces with such recurring textural configurations shall be reworked to remove such patterns as approved by the Engineer or the concrete shall be replaced.

Form liners shall have the following properties:

Property	Test	Requirement
Shore A hardness	ASTM D 2240	50–90
Tensile strength	ASTM D 412	1,000 psi min

Cuts and tears in form liners shall be sealed and repaired in conformance with the manufacturer's recommendations. Form liners that are delaminated from the form shall not be used. Form liners with deformations to the manufactured surface caused by improper storage practices or any other reason shall not be used.

Form liners shall extend the full length of texturing with transverse joints at 8 foot minimum spacing. Small pieces of form liners shall not be used. Grooves shall be aligned straight and true. Grooves shall match at joints between form liners. Joints in the direction of grooves in grooved patterns shall be located only in the depressed portion of the textured concrete. Adjoining liners shall be butted together without distortion, open cracks, or offsets at the joints. Joints between liners shall be cleaned before each use to remove any mortar in the joint.

Adhesives shall be compatible with the form liner material and with concrete. Adhesives shall be approved by the liner manufacturer. Adhesives shall not cause swelling of the liner material.

Releasing Form Liners

Products and application procedures for form release agents shall be approved by the form liner manufacturer. Release agents shall not cause swelling of the liner material or delamination from the forms. Release agents shall not stain the concrete or react with the liner material. For reliefs simulating fractured concrete or wood grain surfaces the application method shall include the scrubbing method using a natural bristle scrub brush in the direction of grooves or grain. The release agent shall coat the liner with a thin film. Following application of form release agent, the liner surfaces shall be cleaned of excess amounts of agent using compressed air. Buildup of form release agent caused by the reuse of a liner shall be removed at least every 5 uses.

Form liners shall release without leaving particles or pieces of liner material on the concrete and without

pulling or breaking concrete from the textured surface. The concrete surfaces exposed by removing forms shall be protected from damage.

Curing

Concrete surfaces with architectural texture shall be cured only by the forms-in-place or water methods. Seals and curing compounds shall not be used.

Full compensation for architectural texture is included in the contract lump sum price paid for Item "Retaining Wall" and no separate payment shall be made therefor.

10-1.16 PREPARE AND STAIN CONCRETE

This work consists of preparing and staining concrete surfaces, where shown on the plans, and in conformance with these Special Provisions. Attention is directed to Section 10-1.13, "Architectural Surface (Textured Concrete)" of these Special Provisions.

Submit stain manufacturer's product data and application instructions at least seven (7) days before beginning staining activities. Stain shall:

1. Be a water-based solution of inorganic metallic salts,
2. Contain dilute acid that penetrates and etches the concrete surface,
3. Be a commercial quality product designed specifically for exterior applications,
4. Produce abrasion-resistant color deposits,
5. Be UV-stable and suitable for exposure to moisture conditions.

The stain shall be applied such that the color of the coated concrete dry stack rock units demonstrate multiple color variations and shade character closely resembling the granite masonry rock barrier at the Echo Summit Sidehill Viaduct (Bridge No. 25-044) at post mile 67.3 on US Highway 50, including colors that are apparent from aging, such as staining from oxidation and rusting. The staining subcontractor shall have experience in staining concrete surfaces to simulate the appearance of natural rock formations or stone masonry and have successfully completed at least three (3) projects in the past five (5) years involving staining of concrete surfaces similar to that described for this project.

Coloring for the dry stack rock textured concrete shall include a base color, a minimum of two applied colors, colors for shadowing and rusting, and a sealer. The stains and sealer shall be from the same manufacturer. Sealer shall be compatible with the stain and concrete surface, be clear and colorless, and have a matte finish when dry.

Test Panel

A test panel shall be successfully completed before beginning work on the dry stack rock texture or staining concrete. The test panel shall be:

1. Constructed at an authorized location,
2. At least 4 x 4 feet by 5 inches deep,
3. Constructed and finished using the personnel, materials, equipment, and methods to be used in the work,
4. Accessible for viewing,
5. Displayed in an upright position near the work,
6. Approved before starting the staining work.

The Engineer may request that additional test panels be constructed until the specified finish, texture, and color are attained. The test panel approved by the Engineer shall be used as the standard of comparison for determining acceptability of dry stack rock texture and staining of the concrete surfaces. Dispose of the test panels after the staining work is complete. Notify the Engineer before disposing of the test panels.

Surface Preparation

Seal joints between concrete surfaces to be stained and any adjacent metal with joint sealing compound

before applying the stain. Test surfaces for acceptance of the stain before application. Clean surfaces that resist accepting the stain and retest until passing.

Apply the stain in accordance with the manufacturer's instructions. Before staining, the concrete surface shall be:

1. At least 28 days old,
2. Prepared under SSPC-SP 13/NACE no. 6,
3. Thoroughly dry.

Staining Concrete

The coatings shall be applied per the manufacturer's recommendations and in conformance with the requirements of SSPC-PA 7. Any damaged areas shall be repaired in the same manner as the original surface preparation and stain application.

Apply the stain uniformly to avoid excessive rundown. Work the stain into the concrete using a nylon bristle brush in a circular motion. After the last coat of stain has dried, rinse stained surfaces with water and wet scrub with a stiff bristle nylon brush until the rinse water runs clear. Collect all rinse water.

Protect adjacent surfaces during staining.

Thoroughly cure each application of the stain and correct skips, holidays, thin areas, or other deficiencies before the next application. Drips, puddles, or other irregularities must be worked into the concrete surface.

Before sealing the stained concrete surface, the surface shall be exposed to sunlight for at least 7 days after staining. Following the minimum prescribed exposure to sunlight, the surface shall be prepared and sealer applied in accordance with the manufacturer's instructions. Sealer shall be applied uniformly with at least 2 coats or as directed by the manufacturer.

Full compensation for preparing, staining, and sealing concrete surfaces shall be included in the contract lump sum price paid for Item "Retaining Wall" and no separate payment shall be made therefor.

10-1.17 CULVERT AND CMP STRUCTURES

Culvert pipe shall be high-density polyethylene pipe (HDPE) or corrugated metal pipe (CMP) as specified on the Plans. All culverts shall have soil tight gasketed joints.

CMP

Corrugated metal pipe shall be steel and conform to the requirements of Section 66, "Corrugated Metal Pipe," of the Standard Specifications, and these Special Provisions. CMP structures shall be corrugated galvanized steel pipe. Galvanizing shall conform to Section 75-1.05, "Galvanizing," of the Standard Specifications. For CMP culvert the maximum allowable deflection at a joint shall be 5 degrees.

All exposed surfaces of the CMP structures and exposed surfaces of the flared end sections shall be painted with the following TRPA approved color: Federal Standard 595 Color FS 30059, or approved equal. Painting and its preparation shall conform to Section 59-3, "Painting Galvanized Surfaces," of the Standard Specifications. The CMP structures shall be painted in the field, however, the covers and flared end sections may be painted during the prefabrication process. Any painted surface that is damaged shall be sanded and repainted.

Corrugated Metal Pipe (CMP) shall have the following minimum thickness:

STEEL THICKNESS FOR CORRUGATED METAL PIPE	
Diameter of pipe, inches	Steel Gauge thickness, minimum
6	16 gauge (0.064″)
12	14 gauge (0.079″)

18	14 gauge (0.079″)
24	14 gauge (0.079″)
30	14 gauge (0.079″)
36	12 gauge (0.108″)
48	12 gauge (0.108″)

HDPE

HDPE pipe shall conform to AASHTO M294, "Standard Specification for Corrugated Polyethylene Pipe 305 to 915 mm (12″ to 36″) Diameter" and Section 64, "Plastic Pipe," of the Standard Specifications. If there are any discrepancies between these Standard Specifications and the Special Provisions, the Special Provisions shall prevail. HDPE pipe shall be Type S. The pipe and fittings shall be made of virgin PE compounds conforming to the requirements of Cell Classification 335420C for 12" and 24" diameter, as defined and described in ASTM D3350. Pipe and fittings shall be installed in accordance with ASTM D-2321 and these Special Provisions.

The pipe and fittings shall be free of foreign inclusion and visible defects. Holes of any kind in the corrugations or sidewalls shall be considered unacceptable. The ends of the pipe shall be cut squarely and cleanly so as not to adversely affect joining.

The maximum allowable deflection at a joint is 5 degrees.

General

Pipes shall be laid to the lines and grades shown on the Plans and established by Engineer. The subgrade on which the culverts will be placed shall be finish graded with the use of a string line or other similar method to assure the culverts are set on smooth, straight grades consistent with the slopes and elevations shown on the Plans with no deviations along the length of pipe. Compaction of bedding and backfill shall conform to Section 10-1.10, "Excavation and Grading," of these Special Provisions.

Attachment of culverts to sediment traps, to drainage inlets, and to storm drain manholes shall conform to the details shown on the Plans. Field fabrication and prefabrication requirements for sediment traps, drainage inlets, and storm drain manholes, and their attachments shall be as specified in the respective contract items. Welded joints that damage galvanizing shall be repaired with a corrosion resistant coating.

Contractor's method of operation for culvert installation conform to the requirements of the Traffic Control Plan and as outlined in Section 10-1.03, "Maintaining Traffic," and Section 10-1.04, "Traffic Control Plan," of these Special Provisions.

The interior of the pipeline shall be cleaned as the work progresses.

10-1.19 CONCRETE STRUCTURES

Portland cement concrete structures shall conform to the provisions in Section 51, "Concrete Structures," and/or Section 73, "Concrete Curbs and Sidewalks," of the Standard Specifications and these Special Provisions. Portland cement concrete shall conform to Section 90, "Portland Cement Concrete," of the Standard Specifications, except as noted herein.

Reinforcement shall conform to the details shown on the Plans, the Standard Plans, these Special Provisions, Section 52, "Reinforcement," of the Standard Specifications and shall conform to the requirements of ASTM Designation A615 Grade 60.

Portland cement shall be Type II with no mineral admixtures.

Contractor shall supply concrete mix designs for all items of work requiring concrete within fifteen (15) working days of the receipt of the Notice to Proceed and at least five (5) working days prior to the start of the concrete work associated with these items.

Portland cement concrete for drainage inlets shall have a compressive strength of a minimum of 3600 psi at

28 days. The ninth bulleted item of Section 90-1.01, “Description,” of the Standard Specifications shall not apply. Engineer will take a set of cylinders (5) for each 100 cubic yards of concrete or for a day's pour whichever comes first. Compressive strength tests at 7 days and at 28 days shall be performed on the cylinders at County's expense.

An air-entraining agent 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 4-7% in the freshly mixed concrete. Air Content will be tested by and at the discretion of Engineer at County’s expense.

Slump tests shall be performed by Engineer at Engineer’s discretion and at County’s expense. Slump for Portland cement concrete shall be no more than 2 inches nor less than 1 inch. Slump for grout shall be 3 inches.

A mechanical power driven internal vibrator shall be used for concrete consolidation.

Aggregate for the architectural textured concrete surface shall comply with the gradation table for fine aggregate in Section 90-3.03. Except for areas to receive architectural texture, retaining wall finish shall be in accordance with Section 51-1.18B, “Class 1 Surface Finish,” of the Standard Specifications. Attention is directed to Section 10-1.13, “Architectural Surface (Textured Concrete),” for curing concrete surfaces with architectural texture.

Expansion joints, joint seal, and weep holes shall conform to the provisions in Section 51 “Concrete Structures” of the Standard Specifications and placed in accordance with the Plans and Standard Plan B0-3.

Concrete for sediment trap bases, concrete collars, and roadside sign posts, shall be minor concrete as defined in Section 51, “Concrete Structures,” of the Standard Specifications and shall have not less than 548 pounds of cement per cubic yard. Sediment trap bases shall be precast. Grout shall be a six-sack mix with not less than 590 pounds of Portland cement per cubic yard.

Slurry cement backfill shall conform to the provisions of Section 19-3.062, “Slurry Cement Backfill,” of the Standard Specifications, except that the mix shall contain 282 pounds of cement (i.e. 3-sack mix). Backfilling over or placing any material over slurry cement backfill shall not commence until four (4) hours after the slurry cement backfill has been placed.

10-1.23 ROLLED EROSION CONTROL PRODUCT, TURF REINFORCEMENT MAT, FILTER FABRIC, AND GEOTEXTILE FABRIC

This section applies to the rolled erosion control product, turf reinforcement mat, filter fabric, and geotextile fabric specified for the various rock-lined structures, filter fencing, concrete wash, and soil in pipe installations shown on the Plans. The table below outlines the acceptable products for each of the aforementioned applications.

	APPLICATION	**PRODUCT**
ROLLED EROSION CONTROL PRODUCT	Under rock slope protection.	C125 as manufactured by North American Green or Landlok C2 as manufactured by Propex, or approved equal.
TURF REINFORCEMENT MAT	Under rock-lined channels and rock dissipators.	P300 as manufactured by North American Green or Landlok TRM 450 as manufactured by Propex, or approved equal.
FILTER FABRIC (woven)	Filter fence material and concrete wash liner.	Geotex 2130 as manufactured by Propex or 100X as manufactured by Mirafi, or approved equal.
GEOTEXTILE FABRIC (woven)	Between the Class 1 Type A permeable material and native backfill in pipe trenches and ST installations.	Geotex 200ST as manufactured by Propex, Mirafi 500x as manufactured by Mirafi, or approved equal.

	On excavated bench under fill slope.	Geotex 2x2HF as manufactured by Propex, Mirafi HP270 as manufactured by Mirafi, or approved equal.

The fabric shall be furnished in protective covers capable of protecting the fabric from ultraviolet rays and water.

Contractor's attention is directed to Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Plan (SWPPP)," of these Special Provisions for the filter fabric requirements associated with temporary erosion control measures.

Full compensation for furnishing and installing rolled erosion control product, turf reinforcement mat, filter fabric, and geotextile fabric as shown on the Plans and as specified in these Special Provisions shall be considered as included in the various items of work, and no additional compensation shall be made therefor.

10-1.26 SHORING AND EXCAVATION PLAN

Attention is directed to Sections 5-1.02A, "Excavation Safety Plans," and 7-1.01E, "Trench Safety," of the Standard Specifications and OSHA 29 CFR Part 1926 Construction Industry Regulations and these Special Provisions.

Contractor shall provide a safe means of egress in trenches/excavations five (5) feet deep and greater by the use of sheeting, shoring and bracing, sloping the sides of the trenches/excavations, or equivalent method.

Contractor shall submit a detailed plan showing the design of the sheeting, shoring and bracing, or equivalent method which Contractor proposes to use during construction to Engineer in accordance with Section 5-1.02A, "Excavation Safety Plans," of the Standard Specifications, except that this plan shall be submitted to Engineer within five (5) working days prior to any proposed work requiring protection. No excavation or trenching requiring protection shall commence until the "Shoring and Excavation Plan" is acknowledged by Engineer.

Nothing in this provision shall be construed to impose tort liability on County or any of its employees.

If the Engineer determines that resources sufficient to bring the Contractor in compliance with this section "Shoring and Excavation Plan" have not been allocated, Engineer may redirect any and all of the Contractor's resources available at the project site toward this effort. In the event that Engineer redirects resources due to Contractor's non-compliance with the provisions of this section, "Shoring and Excavation Plan", the County will not be responsible for any delays to the Contractor's schedule resulting from the reallocation, and no compensation shall be made therefor.

The following excavations require the use of sheeting, shoring and bracing, or equivalent method rather than sloping the sides of the excavation:

SHEET	STRUCTURE DESCRIPTION	APPROX. STATION
P-1	48" Sediment Trap	SM Station 101+81 LT
	48" Storm Drain Manhole	SM Station 101+95 RT

For all other trenches/excavations, unless sloping the sides of the trench/excavation causes no disturbance to the existing adjacent slopes and vegetation and does not extend beyond County right-of-way and/or the construction limit fence, Contractor shall shore or brace the trenches/excavations.

The costs associated with installing sheeting, shoring and bracing, sloping the sides of the trenches/ excavations or equivalent method for trenches/excavations five feet deep and greater shall be paid for in accordance with the lump sum price bid for Item "Trench and Excavation Safety" and no additional compensation will be made. If utilized, the costs associated with scaffolding at the retaining wall shall be paid for in accordance with the lump sum price bid for Item "Retaining Wall" and no additional compensation shall be made. Contractor's attention is directed to Section 5-1.50, "Local, State, and Federal Agencies'

Conditions of Approval and Permits," of these Special Provisions regarding permitting and Section 10-1.22, "Disturbance and Revegetation," of these Special Provisions regarding violation of the above requirements such that disturbance results.