

May 02, 2024

Project: Sespe Creek Overflow Reconstruction-Planning, Desing & Compliance

Subject: Scope and Fee Proposal

Ventura County Transportation Commission (VCTC)  
751 E. Daily Dr., Suite 420  
Camarillo, CA 93010

Ms. Amanda Fagan,

RailPros is pleased to provide you the attached scope of work and fee for the amendment to continue providing support for Sespe Creek Overflow Reconstruction-Planning, Desing & Compliance in Fillmore, CA.

RailPros is proposing to provide the following services:

- Project management support, erosion countermeasure recommendations and design for long term and short term solutions, analysis of channel stability and effects to the railroad bridge and embankment, additional survey, geotechnical bore and supplemental geotechnical report, section 7 formal consultation support services, biological field survey, updates and modifications to biological report, regional general permit 63 support services, finalize permitting for bridge design repair with temporary protective (short term) structure

Optionally, at the City's request, RailPros can provide these services upon request (excluded herein):

- Additional proposed bridge spans, permitting for long term erosion countermeasure repairs to the bridge embankment and embankment further along the channel

RailPros proposes to complete this task order on a Time and materials, not-to-exceed amount of \$1,301,952.00 based on the Fee Breakdown attached. All work herein is limited to the Fee Breakdown attached. This proposal is valid for through year 2025. The schedule for this work begins retroactively from February 2024 through December 2025.

Sincerely,



Julina Corona  
Project Manager  
**RAILPROS, INC.**

Cc: Dan Davis, Nathan Ortega

## RailPros Amendment Scope of Work

On February 4<sup>th</sup> and 5<sup>th</sup> 2024, roughly 50 feet of scour behind the existing railroad abutment backwall of the Sespe Creek Overflow railroad bridge was noted. VCTC is requesting additional support services needed to complete the bridge design repair over the Sespe Creek Overflow that transpired from the washout in January 2023 and significantly worsened in February 2024. The bridge design repair from the first wash out was at 100% design complete when the recent washout occurred. Considering the emerging trend in events, the existing design repair alone will not protect the railroad tracks that extend beyond the bridge. The cause for continual erosion of the channel embankment should be studied to adequately combat against the risks to the railroad track infrastructure. RailPros and geomorphology expert subconsultant, Ayres, proposes to assess the channel stability to better understand the causes and effects of the creek embankment scour. The scope herein focuses on the design requirements necessary for identifying best short-term and long-term solutions for scour countermeasures and mitigation.

### Short-term Solution Approach

Ayres will evaluate the need for a temporary structure to protect against scour until a long-term plan is implemented. It is assumed the temporary structure will be feasible within the established permitting approach for the bridge repair design. If the characteristics of temporary structure recommended is not feasible or realistic within the limitations of our existing permit approach the temporary structure will not be permitted under this scope. In this case VCTC will have two options. The first option is VCTC can seek additional permitting services from RailPros or others once a detailed scope for the repairs is complete at which time it will be feasible to develop a permit approach for this work. The second option is that VCTC omits the temporary structure and RailPros and subconsultants provide guidance to VCTC on reactive measures to mitigate future impacts.

### Permanent/Semi-permanent Solution Approach

Ayres will assess the embankment scour and channel stability to provide recommendations for long-term mitigation and countermeasures against scour. Ayres' final design recommendations can vary significantly in location (anywhere along the channel) and vary in impacts. This scope excludes permitting services for long-term erosion repairs because not yet having Ayres' recommendations we lack the conceptual understanding to develop a scope for this effort.

### Emergency Repair (RGP 63) Services

Support services for an emergency repair of the washed-out embankment behind the abutment wall as of the February 2024 wash out will be provided through a Regional General Permit (RGP) 63 prepared by HDR (subconsultant). This will require coordination with VCTC and the County. RGP 63 is permitting for the new washed-out segment only and the bridge reconstruction will still require its own permitting. Part of the fee provided by HDR includes Section 7 formal consultation which is a recent permitting adjustment based on new information on the regulatory process. Alternatively, informal consultation would have been implemented but recent events have proven informal consultation to be dragged out by the regulating agency as there is no time limit to informal consultation. In contrast, formal consultation has a time limit. The emergency repair under RGP 63 is not a substitute for a temporary protective structure described in the short-term solution approach section. RailPros will evaluate with Ayres if a temporary structure is needed to protect the railroad temporarily until a permanent solution is established. A fee allowance has been designated for this support and it is assumed that the temporary solution will not impact our regulatory approach.

## Approach to Manage this Contract Amendment

In the last month RailPros and design discipline managers identified potential design requirements to complete the additional effort. The actual design requirements will be more defined as Ayres' studies and recommendations are developed. RailPros and subconsultants have developed a scope and request for a fee allowance for specified tasks knowing there will be further development of the scope at which time the fee can be broken down in more detail. This will occur once Ayres is onboarded and advances to design recommendations for the additional effort. We recommend our contract is set to a Not-To-Exceed Amount, Time and Material basis to expedite the amendment. RailPros will provide detailed progress report and look ahead progress for VCTC to closely manage the design contract and itemized scope and fee for Task 3.

## Schedule

The schedule for this project will be a living document. The schedule attached is an example to show the major activities at the start of the project and to demonstrate the general format. Once the scope is further developed by Ayres' findings and recommendations the project schedule will

include the complete schedule for the entire scope. Certain activities such as regulatory and third-party reviews are outside of our control and the duration of those activities can vary from estimates by several months. RailPros and HDR will work closely with regulatory agencies to anticipate the duration of the different regulatory milestones. Regulatory related activities will require various schedule changes along the course of this effort.

Significant milestones that will drive the schedule are yet to be determined. The schedule included is only intended to show approximate durations and precedence of the activities that are certain. Milestones such as the Amendment NTP, the bridge repair IFB release, and the emergency repair mobilization as part of the RGP 63 effort will all need to be incorporated into the schedule. A working session with VCTC is suggested to begin the skeleton layout of the schedule.

## Task 1: Project Management, Administration and Quality

This task consists of supporting VCTC project manager with staff reports, project progress/update reports and meetings, stakeholder coordination and meetings. The Project Manager (PM) will manage design disciplines and subconsultants closely. Weekly coordination during active periods of productivity is estimated. Various interdisciplinary meetings will be necessary for coordination. The PM will assist at least 1 in person meeting with the Commission (assume a full workday to include travel). RailPros will support VCTC in preparation of meetings with stakeholders. The project manager will develop a schedule to be actively tracked and updated and updates to be submitted on a bi-monthly period or as significant external or internal factors impact the schedule. The project manager will be assisted by a deputy project manager to support timely delivery of updates to the schedule, the progress updates, and administration of the project.

VCTC Coordination and Updates: channel stability analysis initiation meeting, Updates

- on findings and recommendations, review meeting of additional hydraulics report, RGP 63 (4) meetings and coordination with VCTC, Army Corp, Regional Water Quality Control Board and County
- Stakeholder coordination (6 virtual meetings): Coordination with Watershed District, County and Sierra Northern

- Internal Coordination (10 virtual meetings): interdisciplinary meetings to coordinate RGP 63 repair plan, coordination with surveying coordination for field work, meetings with
- Ayres workshops for hydraulics and supplemental design concept and design
- Project Administration: Project amendment set up and annual project setup renewal/upkeep, invoicing, progress updates
- Construction Management (CM) Coordination: Address constructability comments, coordinate with CM for emergency repair work, coordinate with CM in preparation for mobilization and schedule
- Project Schedule: Baseline schedule within 2 weeks of NTP for Amendment, bi-monthly updates to schedule
- Quality Control and Quality Assurance: All engineering documents and submittals adhere to the RailPros Quality Procedures to review and make necessary corrections for all engineering documents. Each submittal needs to allow ample time for Quality Control to take place and for the Quality Manager to perform a final review.

### **Assumptions**

The project duration is approximated and used to estimate the project management cost. The project duration is approximated for 22 months (Feb 2024-Dec 2025) and assuming only 16 of those months being months of productivity, requiring an average of 8 hours per week of the project manager and 4 hours for the deputy PM for schedule updates, delegation, review of submittals, project reporting, meeting minutes, subconsultant coordination.

### **Deliverables**

Monthly Progress Updates and invoicing, bi-monthly schedule updates

## **Task 2: Design Support for RGP 63 Permitting**

RailPros will support the environmental discipline (HDR Subconsultant) in the preparation for the Regional General Permit 63 application for the restoration of the track embankment due to February 2024 wash out. It is assumed at least one consultation meeting with Army Corp will be attended by RailPros. RailPros will coordinate with the County to verify VCTC's permit is consistent in language to the County's emergency permit to demonstrate VCTC and the County are a unified front. RailPros will provide a project file to be used by HDR for demonstration of the embankment restoration in reference to the mean high-water mark and existing condition.

### **Emergency Oversight**

RailPros will conduct drone photography before and after the emergency repair and field oversight during the restoration. Oversight will be provided, and a daily report will be prepared for each field oversight day. RailPros will develop quantities for the earthwork, volumes, and areas. Photographs will be provided by RailPros.

### **Deliverables**

Drone photography, quantities, exhibit of project limits

### **Assumptions**

- Survey prior and after an emergency repair is not always feasible or required. It is not included in the scope. RSE's scope only includes one survey occurrence for the February 2024 washed out track embankment segment.

- The repair is estimated to take no more than 10 days.
- All stockyards and work will take place in the railroad right of way.
- VCTC will coordinate with Sierra Northern to have their field forces mobilize to address this emergency work.
- Delivery of fill material and its quantities and cost estimate will be provided by Others
- Procurement and testing of fill material to be performed by Others
- Any circumstances contrary to these assumptions are not included in this scope.

### **Task 3: Structural Calculation and Design Support**

This is an allowance for structural calculation support, calculation review and drafting support to supplement Ayres' supplemental construction documents. Ayres will evaluate the need for permanent countermeasure and mitigation solutions and need for temporary structure to protect the railroad embankment until the permanent solutions are established. Both efforts will likely require structural support. If this support is not needed, this allowance will not be utilized.

#### **Assumptions**

- In anticipation of performing work under this task RailPros will provide a detailed scope with associated fee breakdown.
- The structures discipline team will participate in general update meetings and project correspondence.
- Interdisciplinary meetings (4) and stakeholder meetings (4).
- There will be no bridge design changes to the existing structural drawing sheets in the 100% design plans. If any changes, small or large, are required to the existing 100% structural drawing sheets a complete redesign will be needed for structural calculations and drawings which is not included as part of this scope.
- This task is an allowance and dependent on the temporary and permanent solutions proposed by Ayres

### **Task 4: Track and Civil Design and Specification**

Track and civil design effort is needed to address constructability comments, perform track design of the additionally scoured section, incorporate new survey data into the supplemental construction documentation. The original assumption of existing rail being reusable is no longer valid and therefore the effort for track services was underestimated. Reusing the rail is a safety risk for rail operations without testing of the rail for stress induced flaws and it is recommended the track be replaced. In addition, the existing track doesn't match Metrolink Standard Specifications therefore project specific specifications will be provided.

General: RailPros will oversee the integration of survey data and utilities on the supplemental drawings and documentation.

Internal coordination: and for data transfer to drawings with support of RailPros civil team (5 virtual meetings)

#### **Deliverables**

The additional effort may be in the form of an update to the design drawings or as supplemental documentation.

## Task 5: DSDC Support

It is assumed as-builts will require minimal field changes markups to the design drawings and that the contractor will provide mark-ups of the field changes to be incorporated in the as-builts. A brief training course on Best Management Practices for this project will be provided for all field personnel. We anticipate one punchlist job walk will be needed and will be represented by one staff from design.

## RailPros Fee Excluding Subconsultants

See pdf page 6 for the complete Amendment Fee Allowance. The table below is RailPros' fee excluding subconsultants support. A detailed scope and fee is attached.

Disclosure:

- Design and permitting an additional span is not part of this scope.
- No watershed permitting is anticipated for the design effort under this scope.
- Regulatory permitting for the mitigation and countermeasure design is not included in this scope.

The items disclosed above and work noted as being performed by Others are not included in this fee.

No.	RailPros Tasks (Excluding Subconsultants)	Fee Allowance
1	Project Management and Administration	\$135,000.00
2	Permit and Field Services for Emergency Embankment Restoration (RGP 63)	\$40,000.00
3	Structural Calculation Review/Design support (allowance)	\$100,000.00
4	Supplemental Design for <i>Track and Civil Design and Specifications</i>	\$72,000.00
5	DSDC	\$90,000.00

**\$437,000.00**

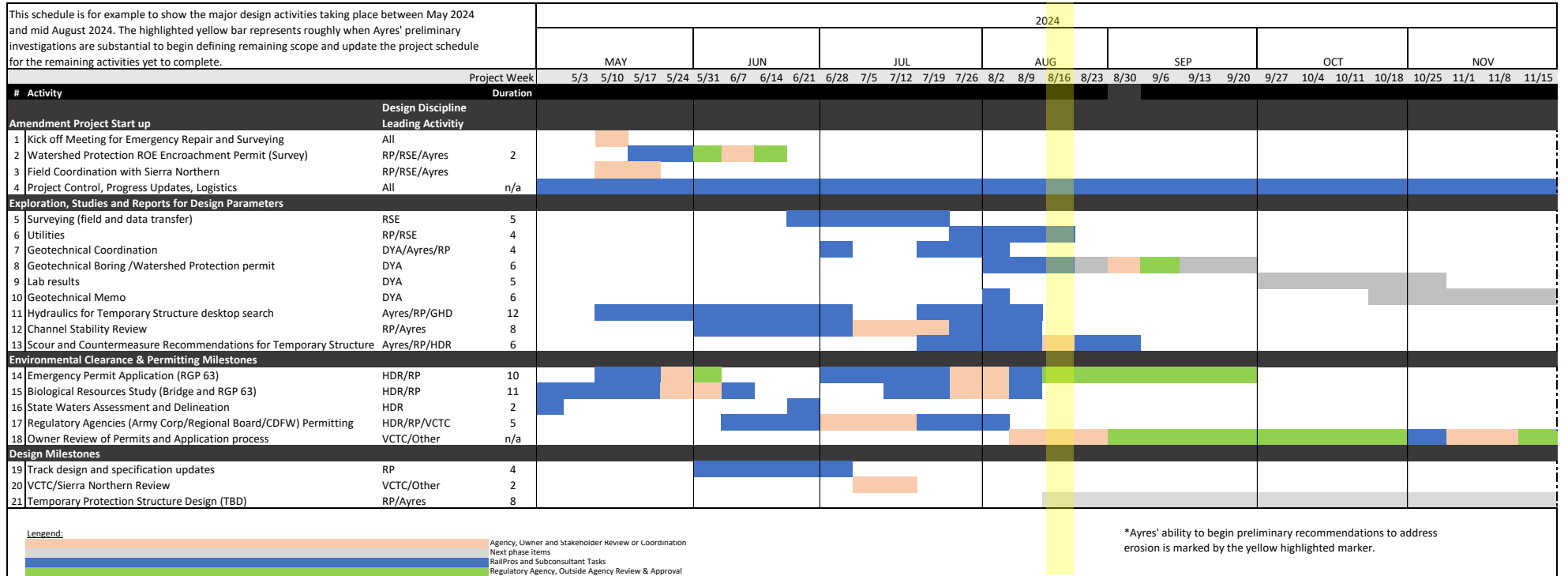


**RailPros, Inc. - Estimate**  
**VCTC Sespe Creek Bridge Washout, Santa Paula Branch Line MP 423.44**  
 Amendment Request by Discipline



No.	Task	Deliverables	Prime (RailPros) Subtotal	Ayres	HDR Total Cost	Diaz*Yourman Total Cost	RSE Total Cost	GHD Total Cost	Budget Amendment Request
1	Project Management, Administration and Quality	Project Progress Updates and Schedules	\$135,000.00						\$135,000.00
2	Design Support for RGP 63 Permitting	Quantities, Field Oversight, Drone photography, exhibit (*for application and post reporting)	\$40,000.00						\$40,000.00
3	Structural Calculation/Design support (allowance)	Supplemental construction documents, calculations	\$100,000.00						\$100,000.00
4	Supplemental Design for <i>Track and Civil Design and Specifications</i>	Track and civil design supplemental drawings	\$72,000.00						\$72,000.00
5	DSDC	Asbuilts	\$90,000.00						\$90,000.00
6	Surveying	Survey control points					\$57,254.00		\$57,254.00
7	Hydraulics QC/QA	Review comments						\$11,078.00	\$11,078.00
8	Hydraulics/Geomorphology	Hydraulic report, recommendations, supplemental design drawings		\$217,120.00					\$217,120.00
9	Temporary Protection Structure	5 sheets of supplemental construction documents (stamped by Ayres)		\$140,000.00					\$140,000.00
10	Geotechnical	Geotechnical supplemental report				\$290,000.00			\$290,000.00
11	Bridge Repair- Environmental and Regulatory Compliance	Section 7 consultation, final biological report, updated jurisdictional delineation, permitting for bridge design only (excluding future structures as part of the future supplemental design) Completed: Cultural Study, CEQA			\$129,500.00				\$129,500.00
12	Bridge Embankment Repair- RGP 63 Application and Consultation	RGP 63 Application			\$20,000.00				\$20,000.00

Effort for Additional Scope: **\$1,301,952.00**





April 23, 2024

RailPros

Attn: Julina Corona, PE

Re: Sespe Creek Railroad Bridge: Ayres Associates Scope and Fee Proposals

Dear Julina:

We appreciate you reaching out to us about this project. I've attached two scope and fee proposals for the work. The first attachment is aimed at providing a long-term solution to reduce the risk of stream instability damaging the railroad crossing. The second attachment is aimed at providing a temporary solution to protect the newly repaired crossing in the interim period before the long-term solution can be implemented. As you have explained to me, the project owner wants to repair the bridge damage from the 2023 and 2024 flooding with a design that is resilient with respect to scour and stream instability.

As we discussed, the anticipated railroad bridge construction is summer of 2024. While the work included in these two scopes could potentially be done concurrently, the work for the temporary solution would be the higher priority in the short term. These two scopes could potentially be pursued independently of each other. For example, the client may elect not to move forward with the temporary solution for the 2024 construction window, and instead focus on the long-term mitigation.

The Ayres Associates Stream and Stormwater team have decades of experience in stream stability assessment, scour evaluation, and designing resilient solutions to stream instability problems. We are the authors of the Federal Highway Administration's major reference documents and guidance manuals relevant to scour and stream stability:

- HEC-18 *Evaluating Scour at Bridges*
- HEC-20 *Stream Stability at Highway Structures*
- HEC-23 *Design of Bridge Scour and Stream Instability Countermeasures*
- HDS-7 *Hydraulic Design of Safe Bridges*
- FHWA *Two-Dimensional Hydraulic Modeling for Highways in the River Environment*

Our engineers are also the instructors for the following FHWA/National Highway Institute training courses:

- Scour and Stream Stability at Highway Structures
- Scour Countermeasure Design
- Hydraulic Design of Safe Bridges
- One-Dimensional Modeling of River Encroachments with HEC-RAS
- Two-Dimensional Hydraulic Modeling of Rivers at Highway Encroachments
- Culvert Design
- Urban Drainage Design

We have performed scour and stream stability analysis and countermeasure design for many hundreds of bridges throughout the United States. Our team is currently performing stream stability-related work for projects in Colorado, North Dakota, Montana, Idaho, Mississippi and South Carolina. We recently

provided expert witness services for cases involving railroad bridge scour failures in Ohio and Louisiana. We also have extensive recent experience with wildfire-affected watersheds and streams.

I would be happy to answer any questions you may have about our scope and fee proposals, our specific team members proposed for this work or about our qualifications to perform this work.

Sincerely,



Ayres Associates Inc.

John H. Hunt  
National Practice Leader-Transportation Hydraulics  
Cell: 970.219.4570  
HuntJ@AyresAssociates.com

# **Sespe Creek Railroad Bridge Scour and Stream Stability Analysis and Long-Term Mitigation Design Ayres Associates Proposed Scope of Work and Fee Estimate**

## **Introduction**

RailPros has asked Ayres to prepare a proposed scope of work and fee estimate for the above referenced analysis and design. This proposal is aimed at providing a long-term solution to reduce the risk of stream instability damaging the railroad crossing, with the understanding that Ayres' findings and design will not be implemented in the 2024 construction window, but in 2025 or later. We envision six main tasks for our work, as follows:

## **Task 1 Project Management**

This task includes the work of our team and Project Manager to coordinate internally and with our RailPros point of contact, and to administer the contract between Ayres and RailPros. We've broken this task down into:

- 1.1 Internal Kickoff Meeting (Ayres team)
- 1.2 Regular internal project team meetings
- 1.3 Monthly invoices and progress reports (we assume four total)
- 1.4 Ongoing project coordination and communication with Rail Pros
- 1.5 Virtual client meetings after key deliverables (Level One, Level Two, Preliminary Design)

## **Task 2 Data Collection and Client Coordination**

Under this task we'll gather the information we need to conduct a thorough study.

- 2.1 Desktop reconnaissance and site-specific historic review
  - Review engineering work completed to by others to date (H&H modeling and report, Geotech, Design drawings)
  - Find, download and evaluate terrain data if available
  - Flood history
  - Gage records
  - Caltrans bridge inspections along reach (if available)
  - Past studies and reports relevant to the watershed
  - Alluvial fan case studies in region
- 2.2 Field reconnaissance and client onsite meeting
  - Two Ayres staff site visit (travel time plus 1 day on site)
  - Client meeting
  - Agency meetings with Ventura County Watershed Protection District or others
  - Post processing of field data in our office

### Task 3 Level One Geomorphic Assessment

Under this task we'll perform a qualitative geomorphic assessment of the Sespe Creek channel in the reach of interest for the project. We will follow the Level 1 methods explained in the FHWA document HEC-20 *Stream Stability at Highway Structures, 4<sup>th</sup> Edition*, which was authored by our project team members. Break down of this task is as follows:

- 3.1 Vertical stability study (historic data, equilibrium slope, trends analysis)
- 3.2 Lateral stability study (historic aerial photos; erosion hazard studies; longitudinal stream power plots)
- 3.3 Identify three stability mitigation concept alternatives
- 3.4 Prepare *Level One Assessment Memorandum*

### Task 4 Level Two Analysis

Under this task, we will perform detailed two-dimensional (2D) hydraulic modeling of existing conditions and proposed conditions under three different mitigation design alternatives for the long-term solution. If we find it to be beneficial we will incorporate sediment transport into the 2D modeling to aid in evaluating the channel stability benefits of the alternatives. Informed by the findings of the 2D modeling, and in consultation with the RailPros and the owner, we will identify the preferred alternative.

We will also calculate the scour potential at the railroad bridge piers and abutments. To make sure the mitigation features are themselves resilient, we will calculate the scour potential at these features and design them to resist or accommodate the scour. In our work we will follow the recommendations of FHWA HEC-18 *Evaluating Scour at Bridges* and HEC-23 *Design of Bridge Scour and Stream Stability Countermeasures* (both of which were authored by our team members).

- 4.1 SRH-2D Hydraulic and sediment transport modeling
  - Existing conditions
  - Proposed conditions three mitigation alternatives
- 4.2 Identify preferred alternative
- 4.3 Scour Evaluation for preferred alternative
  - Bridge pier and abutment scour
  - Scour potential for channel stability mitigation features for the long-term solution (preferred alternative only)
- 4.4 Prepare *Level Two Analysis Report*

### Task 5 Long-Term Stability Mitigation Design

Ayres will prepare design drawings and other information needed for RailPros to add the long-term stability mitigation features to the construction documents. We will support RailPros in their development of the Opinion of Probable Cost, but assume they will lead that effort as they will be much more familiar with local unit costs and contractor availability. Our break down of this task is:

- 5.1 Prepare preliminary design drawings for preferred alternative
  - Plan view
  - Details
- 5.2 Revise and finalize design drawings per client review (assume only one round of review)

- 5.3 Prepare quantity estimates
- 5.4 Support RailPros in developing Engineer's Opinion of Probable Cost
- 5.5 Prepare special provisions for mitigation design features if necessary
- 5.6 Final round of 2D modeling to verify final design
- 5.7 Provide data to RailPros in support of floodplain permitting

## **Task 6 Design Services During Construction**

Ayres will support RailPros staff in responding to contractor information requests, RFIs, etc. as needed for the long-term solution.

- 6.1 Support RailPros staff in responding to contractor information requests and RFIs as needed.

## **Assumptions and Exclusions**

Our scope and fee incorporates certain assumptions and exclusions, some of which are listed here:

- Survey services are excluded from Ayres' scope. Ayres can provide aerial mapping (lidar) services for additional fee if needed to obtain the required terrain data.
- SUE services or other utility locating services are excluded from Ayres' scope.
- Geotechnical services are excluded from Ayres' scope. Ayres does not provide geotechnical services.
- FEMA Letters of Map Change (CLOMRs or LOMRs) are excluded from Ayres scope but can be added to our scope if needed for additional fee.
- Floodplain permit applications are excluded from Ayres scope, however we will provide technical data as required to support RailPros or others in this work.
- Ayres' responsibility for project design will apply only to the channel mitigation features added as a result of our study.
- Hydrologic analysis to determine the design discharge is excluded from Ayres scope and we assume it has already been determined or will be provided by others. This service can be added to Ayres scope for additional fee.
- Apart from providing quantities and other support, the Opinion of Probable Cost for the stability is excluded from Ayres scope, because we assume others are in a better position to estimate local unit costs and anticipate local contractor's ability to construct various features.
- We assume that RailPros will provide CADD drawing sheet layouts, borders, collars, drawing standards, fonts, etc. for Ayres to prepare our drawings.
- Our fee estimate accommodates only one round of comment review on our design drawings. Additional rounds of review can be accommodated for additional fee.
- For Task 6 Design Services During Construction, our work will be on an as needed basis, and will be limited to no more than \$15,500 worth of work unless additional fees are added to this task.

## Fee Estimate

Our fee estimate for this work is **\$217,120** broken down by task as follows:

		Project Fee	Directs	Other Services	Labor	Total Hours
	<b>Sespe Creek RR Bridge</b>	<b>\$217,120</b>	<b>\$3,257</b>	<b>\$0</b>	<b>\$213,863</b>	<b>1340</b>
Task 1	Project Management	\$22,606	\$0	\$0	\$22,606	136
Task 2	Data Collection and Client Coordination	\$18,009	\$3,257	\$0	\$14,752	96
Task 3	Level One Geomorphic Assessment	\$34,412	\$0	\$0	\$34,412	206
Task 4	Level Two Analysis	\$66,349	\$0	\$0	\$66,349	402
Task 5	Stability Mitigation Design	\$60,268	\$0	\$0	\$60,268	398
Task 6	Design Services During Construction	\$15,476	\$0	\$0	\$15,476	102

# **Sespe Creek Railroad Bridge Temporary Scour and Stream Instability Protection of Repaired Crossing Ayes Associates Proposed Scope of Work and Fee Estimate**

## **Introduction**

In March of 2024, Ayres submitted a proposed scope of work and fee estimate for Scour and Stream Stability Analysis and Long-Term Mitigation Design. That proposal was aimed at providing a long-term solution to reduce the risk of stream instability damaging the railroad crossing, with the understanding that Ayres' findings and design would not be implemented in the 2024 construction window but in 2025 or later. The railroad owner, VCTC, is considering proceeding with construction of the railroad bridge repairs during the 2024 construction window. RailPros has asked Ayres to prepare a proposed scope of work and fee estimate, additional to the original proposal, to identify a temporary solution to protect the newly repaired crossing in the interim period before the long-term solution can be implemented.

## **Task 1 Project Management**

This task includes the work of our team and Project Manager to coordinate internally and with our RailPros point of contact, and to administer the contract between Ayres and RailPros. We've broken this task down into:

- 1.1 Internal Kickoff Meeting (this was identified in the long-term proposal and no cost is added in this proposal)
- 1.2 Regular internal project team meetings (we're adding two beyond those identified in the long-term proposal)
- 1.3 Monthly invoices and progress reports (we're adding two beyond those identified in the long-term proposal)
- 1.4 Ongoing project coordination and communication with Rail Pros
- 1.5 Virtual client meetings after key deliverables (Level One, Level Two, Temp Solution Design)

## **Task 2 Data Collection and Client Coordination**

Under this task we'll gather the information we need to conduct a thorough study specifically for the design of the temporary solution.

- 2.1 Desktop reconnaissance and site-specific historic review. Most of this scope was identified in the long-term proposal with no added cost in this proposal. Exceptions are:
  - Coordinate with survey then incorporate their data into terrain surface for design.
- 2.2 Field reconnaissance and client onsite meeting (additional to that identified in long-term proposal)
  - Two Ayres staff site visit (travel time plus 1 day on site)
  - Client meeting
  - Post processing of field data in our office

### Task 3 Level One Geomorphic Assessment

Under this task we'll perform a qualitative geomorphic assessment of the Sespe Creek channel in the reach of interest specifically for the temporary solution. We will follow the Level 1 methods explained in the FHWA document HEC-20 *Stream Stability at Highway Structures, 4<sup>th</sup> Edition*, which was authored by our project team members. Break down of this task is as follows:

- 3.1 Vertical stability in the footprint and vicinity of the temporary solution.
- 3.2 Lateral instability that could affect the footprint and vicinity of the temporary solution.
- 3.3 Identify temporary solution concept
- 3.4 Prepare *Level One Assessment Memorandum* specifically for temporary solution

### Task 4 Level Two Analysis

Under this task, we will perform detailed two-dimensional (2D) hydraulic modeling of existing conditions to support design of the temporary solution. We will include a range of flood events in the modeling, from very frequent (e.g. 2-year flood) to severe (e.g. 100-year flood).

We will also calculate the scour potential at the railroad bridge piers and abutments in support of the design of the temporary solution. We will calculate the scour potential at the temporary solution features and design them to resist or accommodate the scour to the extent practicable and feasible. In our work we will follow the recommendations of FHWA HEC-18 *Evaluating Scour at Bridges* and HEC-23 *Design of Bridge Scour and Stream Stability Countermeasures* (both of which were authored by our team members).

- 4.1 SRH-2D Hydraulic modeling of existing conditions.
- 4.2 Identify preferred alternative
- 4.3 Scour Evaluation for preferred alternative
  - Bridge pier and abutment scour
  - Scour potential for channel stability mitigation features (preferred alternative only)
- 4.4 Prepare *Level Two Analysis Report* (specifically for Temporary Solution)

### Task 5 Temporary Solution Design

Ayres will prepare sketches and other information needed for RailPros to prepare construction drawings of the temporary solution. We will support RailPros in their development of the Opinion of Probable Cost, but assume they will lead that effort as they will be much more familiar with local unit costs and contractor availability. Our break down of this task is:

- 5.1 Prepare sketches of temporary solution for review by team
  - Plan view
  - Details
- 5.2 Revise and finalize sketches drawings per client review (assume only one round of review)
- 5.3 Prepare quantity estimates for temporary solution
- 5.4 Support RailPros in developing Engineer's Opinion of Probable Cost for temporary solution
- 5.5 Prepare special provisions for temporary solution if necessary
- 5.6 Final round of 2D modeling to verify design of temporary solution
- 5.7 Provide data to RailPros in support of floodplain permitting



## Task 6 Design Services During Construction

Ayres will support RailPros staff in responding to contractor information requests, RFIs, etc. as needed.

6.1 Support RailPros staff in responding to contractor information requests and RFIs as needed.

## Assumptions and Exclusions

Our scope and fee incorporates certain assumptions and exclusions, some of which are listed here:

- Survey services are excluded from Ayres’ scope. Ayres can provide aerial mapping (lidar) services for additional fee if needed to obtain the required terrain data.
- SUE services or other utility locating services are excluded from Ayres’ scope.
- Geotechnical services are excluded from Ayres’ scope. Ayres does not provide geotechnical services.
- FEMA Letters of Map Change (CLOMRs or LOMRs) are excluded from Ayres scope but can be added to our scope if needed for additional fee.
- Floodplain permit applications are excluded from Ayres scope, however we will provide technical data as required to support RailPros or others in this work.
- Ayres’ responsibility for project design will apply only to the temporary solution features added as a result of our study.
- Hydrologic analysis to determine the design discharge is excluded from Ayres scope and we assume it has already been determined or will be provided by others. This service can be added to Ayres scope for additional fee.
- Apart from providing quantities and other support, the Opinion of Probable Cost for the stability is excluded from Ayres scope, because we assume others are in a better position to estimate local unit costs and anticipate local contractor’s ability to construct various features.
- We assume that RailPros will prepare the construction drawings of the temporary solution following guidance from Ayres design sketches and in consultation with Ayres engineers.
- Our fee estimate accommodates only one round of comment review on our sketches for the temporary solution. Additional rounds of review can be accommodated for additional fee.
- For Task 6 Design Services During Construction, our work will be on an as needed basis, and will be limited to no more than \$10,212 worth of work unless additional fees are added to this task.

## Fee Estimate

Our fee estimate for this work is **\$140,000** broken down by task as follows:

	Project Fee	Directs	Other Services	Labor	Total Hours
<b>Temporary Solution Sespe Creek RR Bridge</b>	<b>\$140,000</b>	<b>\$3,265</b>	<b>\$0</b>	<b>\$136,735</b>	<b>851</b>
Task 1 Project Management	\$15,067	\$0	\$0	\$15,067	92
Task 2 Data Collection and Client Coordination	\$12,188	\$3,265	\$0	\$8,923	59
Task 3 Level One Geomorphic Assessment	\$21,568	\$0	\$0	\$21,568	129
Task 4 Level Two Analysis	\$36,614	\$0	\$0	\$36,614	226
Task 5 Temporary Solution Design	\$44,352	\$0	\$0	\$44,352	283
Task 6 Design Services During Construction of Temporary Solution	\$10,212	\$0	\$0	\$10,212	62



November 14, 2023  
Updated: May 2, 2024

Via email only: [julina.corona@railpros.com](mailto:julina.corona@railpros.com)

Julina R. Corona, P.E.  
Project Manager  
811 Wilshire Blvd, Suite 1820  
Los Angeles, CA 90017

**Re: Request for Purchase Order: Sespe Creek Bridge Replacement, Fillmore, California**

Dear Julina,

HDR is pleased to provide Environmental services for the Emergency Replacement Permitting of the VCTC Sespe Creek.

### **SCOPE OF SERVICE**

This bridge traverses Sespe Creek in Ventura County, California. Given our preliminary understanding of the access, and bridge type of bridge piers, the proposed work area will result in the need for a U.S. Army Corps of Engineers Section 404 permit (404); a Regional Water Quality Control Board 401 of the Clean Water Act and Porter Cologne (401/WDR); and California Department of Fish and Wildlife's Lake and Streambed Alteration Agreement (LSAA). Further, the proposed project traverses environmentally sensitive areas known to support Federal and State listed species. However, the extent of potential impacts to these resources will be largely dictated by the project design and the construction timing, staging, and methods. Because of these design uncertainties, our environmental compliance approach is flexible depending on several factors including, but not limited to; the result of the general technical studies, the extent to which the project will encroach on or use adjacent habitats, the ability of the project design to accommodate avoidance and minimization options, and the quantity of impacts to jurisdictional Waters of the US/ Waters of the State.

We recognize the urgency of the project, and our approach will be streamlined and flexible. Our approach commences with technical studies early, and then to coordinate with RailPros and VCTC to appropriately represent the project to regulatory agencies, tribes, and stakeholders. Our multi-disciplinary environmental team will integrate practicable avoidance and minimization measures into the design. This avoidance and minimization strategy is one of the central tenants of National Environmental Policy Act (NEPA), the California Environmental Policy Act (CEQA), and regulatory permitting. We anticipate that VCTC will be the CEQA agency, and due to the emergent nature of the project; we anticipate VCTC will utilize a Categorical Exemption for CEQA. Further we assume the project will be eligible for a Nationwide or Regional General Section 404 Permit, and the NEPA compliance has been completed for these permits at a Headquarters or District level.

The remaining environmental scope of work includes preparing, submitting, and coordinating permit approvals for the repair/replacement of the damaged bridge over Sespe Creek. Although the Los Angeles Corps District has a Regional General Permit #63 for Emergencies, the criterion for that permit may not be conducive to the timelines associated with the proposed construction schedule. Therefore, we anticipate this project will fall under the Nationwide Permit #3 for Repair and Rehabilitation of existing structures and includes emergency work. Based on our preliminary desktop review, we believe the above listed permits (404, 401/WDR, and LSAA), technical studies, and 30% design will be required to prepare a complete application or these permits. All plans and project information will need to be provided in the application (A list of required engineering drawings will be provided by RailPros).

**Environmental Scope of Work:**

The following scope of work includes the remaining tasks to be completed by HDR. Completed Tasks are not included in this scope, and the incomplete tasks previously identified have not changed. The additional scope is based on a change in agency policy as well as additional damage resulting from the December 2023 storms.

- 1 Project Management: This task includes initial project set-up and close-out, Hazard Assessment and Safe Action Plan development (HASAP), file management, accounting, scheduling activities and resources, and quality assurance/quality control implementation and tracking.
- 2 Biological Resources Study: Five listed species are identified as occurring within 3 miles of the site. Additionally, numerous Species of Special Concern have been documented as occurring on or near the site. Although, the Site is not located within Designated Critical Habitat, it is approximately one mile upstream from Designated Critical Habitat. This Task includes:
  - a. Identify the presence of suitable habitat/resources for sensitive resources.
  - b. Prepare Biological Resources Assessment, including field work traversing of the entire area of potential effect. Due to additional storm damage, and the original field work being conducted in excess of one year ago, a new site visit is required.
  - c. Identify Potential Mitigation and or Mitigation Lands or HCP participation opportunities.
  - d. Identify and Prepare Habitat Mitigation and Monitoring Plan (reasonable and prudent measures)
- 3 Waters of the U.S./ State Waters Assessment and Delineation: A Clean Water Act Jurisdictional Delineation for both permanent and temporary impacts for all aspects of the project including work areas, access, and structure impacts. Limits of Waters of the US/ Waters of the State will be identified, characterized, and quantified.
- 4 Permitting: Preparing submitting the regulatory permit applications for the 404, 401/WDR, and LSAA.
  - a We will work in conjunction with VCTC to develop the regulatory permit applications, and to identify appropriate mitigation in these applications, that will mitigate the impacts to environmental resources.
  - b. Conduct up to two site visits with regulatory agencies if requested.
  - c. Have regular communication with both the internal team (design engineering, environmental team, VCTC) and external stakeholders (regulatory agencies and tribes). The environmental project manager will coordinate with both of these groups to collaborate on defining the project and designs that prioritize avoidance and minimization of impacts. The goal of this coordination is to expedite the design through permitting as well as coordination with agencies and tribes to identify and manage risks. There are two elements to this task:
    1. Development of a Project Description
    2. 30% Design for the Bridge
    3. Dewatering Plan
  - d Sespe Creek is a historic southern steelhead run water, and the site is located in designated critical habitat. Although the proposed project proposes to avoid working in the channel during potential run season. The USFWS and USACE will likely need to consult regarding the proposed project's potential to adversely modify designated critical habitat. This consultation is between federal agencies and the permittee is not an active participant in the consultation.
    - i. The following is the estimated scope for that consultation. All the cost increases are due to the Corps' requirement to formally consult with the USFWS. This consultation will require a very high level of agency coordination, the development of the Federal BA (Biological Assessment) from which they develop the take authorization (Biological Opinion), and the development of mitigation measures (Reasonable and Prudent Measures).
    - ii. There will be some rework and added effort to complete the biological report. In addition, the biologist will need to perform a new field survey for the jurisdictional delineation as the project area has changed due to the 2023-2024 storms.
    - iii. Agency Coordination/ Client Liaison.
    - iv. Prepare USFWS Environmental Assessment.
    - v. Identify appropriate mitigation and prepare the Proposed Restoration and Mitigation Plan
- 5 RG63 Emergency Permitting for Abutment Damage.
  - a. VCTC has requested emergency permitting for immediate shoring of the abutment damage occurring in the 2023-2024 storms. This short-term permitting can be completed through the Regional General Permit 63. This preparation and processing of the RG63 is being proposed as a Not to exceed Time and Material task.

**Assumptions:**

- The project design engineering team will progress from 0-30-60-90-100% design with consideration of environmental constraints at the beginning and throughout the design. This process needs to begin early so that the avoidance and mitigation of impacts can be coordinated as part of the design parameters.
- Land Acquisition/Encroachment: A cursory review of parcel ownership indicates the little potential for land acquisitions and/or Encroachments. Therefore, this proposal does not include encroachment or acquisition processing.
- The CEQA has been processed as a Statutory Exemption, a Mitigated Negative Declaration or an EIR will not be required.
- Biological Surveys are valid for one year. However, if the permitting is in process when they expire, they are generally accepted to complete the permit process.
- No focused presence absence surveys for listed species are included in this proposal.
- The avoidance and minimization approach will result in reduced impacts, however unavoidable impacts and mitigation are likely. Mitigation site analysis and plan development is not included in the level of effort or fee estimate. After the project is better defined and preliminary design is completed, mitigation will need to be determined and scoped as a contract amendment.
- Additional permits may be required based on actions and agency discussions; additional permits can be added at a later date due to advancements in information, the design, or at the discretion of VCTC.
- Land encroachments and/or acquisition from federal, state, or local agencies, and/or private parties are not part of the current scope or budget.
- RailPros team will complete the Stormwater Pollution Prevention Plan (SWPPP) with construction Best Management Plans (BMPs), or provide the required BMP information to complete the Permit Applications.
- Filing/Permit fees are not included in estimate. Permit fees are based on level of permit classification and level of impact, these details will not be known until design is progressed.
- Cultural
  - A record search will be conducted, and the results will be summarized in a brief memorandum. The fee for California is estimated at \$1,000.
  - Assumed no MOA Required with SHPO.
  - Assumed the project is not likely to adversely affect a cultural resource.
  - The bridge will be assessed NRHP for eligibility.
  - No subsurface archeological testing is required.
- Based on our assumption that no ND/MND/EIR is required. Hosting a public hearing or formal public meeting is not included or expected as part of this project. If necessary, this work can be added by amendment.
- Design Engineering firm will complete H&H as required for regulatory permitting.
- Assumes 6 field days total for all disciplines.

RailPros  
Proposal for Environmental Services  
Sespe Creek Bridge Replacement  
November 14, 2023 (Updated 05/02/2024)

## Cost Summary:

### Original Tasks Remaining, and New Tasks Requested

TASK	HDR Budget
<b>TASK 1.0 - PROJECT MANAGEMENT</b>	<b>\$7,000.00</b>
<b>TASK 2.0 – Biological Study</b>	<b>\$10,000.00</b>
<del>TASK 3.0 – Cultural Study (completed)</del>	<del>\$0</del>
<b>TASK 3.0 – State and Federal Waters Delineation</b>	<b>\$9,000.00</b>
<del>TASK 5 – CEQA (completed)</del>	<del>\$0</del>
<b>TASK 4 – Permitting and Section 7 Consultation</b> 404/401/LSAA Southern Steelhead CH Consultation	<b>\$95,500.00</b>
<b>TASK 4 – RG63 for 2023-2024 Abutment Damage</b>	<b>\$20,000.00</b>
<b>DIRECTS</b>	
<b>DIRECTS: Includes field ODCs/ 106 Records Search.</b>	<b>\$8,000.00</b>
<b>TOTAL</b>	<b>\$149,500.00</b>

If you have any questions or request clarification, please contact Lisa Patterson at (909) 838-1333 or Lisa.Patterson@hdrinc.com.

Sincerely,  
HDR Engineering, Inc.



Lisa Patterson  
National Freight Rail Environmental Lead/  
SME Regulatory Permitting

DYA Geotechnical Support Services Allowance Budget Breakdown

**Table 1 – ASSUMED BUDGET ALLOWANCE**

TASK		SCOPE	ASSUMED BUDGET ALLOWANCE
1	Data Review	Additional data review	\$5,000
2	Permitting and Utility Clearance	Assume right-of-way encroachment permits are made available at no cost to DYA. Mark borings and call USA.	\$15,000
3	Subsurface Exploration	Drill 2 borings in the creek bed. Collect three grab samples in the creek bed.	\$180,000
4	Laboratory Testing	Perform as needed lab tests for soil classification and strength characterization.	\$15,000
5	Analysis and Reporting	Provide additional analysis and reporting.	\$55,000
6	Meetings and Consultation	As-needed meetings and consultation.	\$10,000
7	Plan and Specification Review	Provide one round of plan and specification review and comment. DYA will not generate plans or write specifications.	\$10,000
<b>TOTAL</b>			<b>\$290,000</b>
Note: * Time to complete after receipt of written notice to proceed or site access is granted, whichever is later.			

March 25, 2024

Julina Corona  
RailPros  
15265 Alton Pkwy, Suite 140  
Irvine, CA 92618

**Sespe Creek Overflow Railroad Bridge Hydraulic Analysis at Fillmore, CA – Amendment No. 2 Request For Additional Fee**

Julina:

This letter proposal is being submitted based on additional requested out of scope services required to complete the project. The project site experienced substantial stream bank erosion in February 2024 that created different site conditions than previously assumed. Specifically, material has now eroded away behind the previously exposed bridge abutment. It is understood that RailPros has contracted with another consultant, Ayers Associates, to provide additional analysis and geomorphology assessment and recommendations. GHD is prepared to release our HEC-RAS model to RailPros for distribution to Ayers Associates.

**Tasks:**

**1. Project Management**

This task includes the labor to provide ongoing invoicing and project controls for the additional work covered under this amendment.

**Proposed Effort:** 5 hours

**Deliverables:** none

**2. Meetings**

We have assumed six, 1-hour meetings for two staff to coordinate with the project team regarding the hydraulic assumptions and final report review. If additional meetings are required, additional budget will be required.

**Proposed Effort:** 12 hours

**Deliverable:** none

**3. Peer Review**

This task includes the labor to respond to questions and provide comments regarding the updated hydraulic analysis to be performed by RailPros' subconsultant (Ayers). This will also include time for GHD to provide a peer review (1 iteration) of the updated hydraulic modelling to be performed by RailPros' subconsultant. If additional reviews are required, additional budget will be required.

**Proposed Effort:** 32 hours

**Deliverable:** One set of report comments provided as markups in pdf format

**Assumptions:**

GHD will not be revising the previous hydraulic model, scour calculations, or report that was prepared by GHD. GHD assumes that Railpros' subconsultant (Ayers) will be producing an updated model and report and that it will be provided to GHD to complete a thorough review and produce comments. GHD will participate in one comment resolution call with RailPros and Ayers Associates to discuss our comments on the Ayers' report. This is included as part of the number of meetings in Task 2.

**Schedule:**

GHD's schedule to complete this work is contingent upon timely receipt of the new hydraulic report from Ayers Associates provided by the RailPros team. GHD will provide comments to RailPros on the hydraulic model and report within 15 business days of receipt of the Ayers report and digital model.

**Fee:**

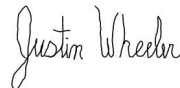
The total number of hours assumed for this amendment is 49 hours for a total fee request of \$11,078. If additional support is required, we would be happy to discuss further.

Please let us know if you have any additional questions.

Regards



**Erik Fanselau**  
Project Manager  
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**Justin Wheeler**  
Business Group Leader  
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