THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS
ACTION AGENDA SUMMARY

DEPT: Public Works **BOARD AGENDA #** *C-1

Urgent ☐ **Routine** ☑ **AGENDA DATE** January 26, 2016

CEO Concurs with Recommendation YES ☐ **NO** ☐ **4/5 Vote Required YES** ☐ **NO** ☑
(Information Attached)

SUBJECT:

Approval to Amend the Agreement for the Bridge Engineering Services and Project Delivery Services with T.Y.Lin International of Sacramento, California, and Approval to Amend the Memorandum of Agreement Between Merced County and Stanislaus County for the Hills Ferry Road Bridge Seismic Retrofit Project

STAFF RECOMMENDATIONS:

1. Approve Amendment No. 2 to the Professional Design Services Agreement for the Bridge Engineering Services and Project Delivery Services with T.Y.Lin International, in the amount of $384,575 for a total not to exceed amount of $1,305,558 for the Hills Ferry Road Bridge Seismic Retrofit Project (project).

2. Authorize the Director of Public Works to execute the amendment with T.Y.Lin International in the amount of $384,575 and sign the necessary documents.

3. Approve Amendment 1 to the Memorandum of Agreement (MOA) between Merced County and Stanislaus County (Counties) for the Preliminary Engineering Phase of the project.

(Continued on Page 2)

FISCAL IMPACT:

On October 18, 2011, the Board of Supervisors approved a contract with T.Y.Lin International (Consultant) in the amount of $920,983 for design and project delivery services associated with the project's preliminary engineering phase. The requested Amendment No. 2 will add $384,575 to the contract for a total contract amount of $1,305,558. The preliminary engineering phase is funded by the Federal Highway Bridge Program (HBP) with a local match of 11.47%. The original Authorization to Proceed (E-76) received from Caltrans totaled $924,400.

(Continued on Page 2)

BOARD ACTION AS FOLLOWS:

No. 2016-53

On motion of Supervisor Withrow , **Seconded by Supervisor** Chiesa
and approved by the following vote,
Ayes: Supervisors: O'Brien, Chiesa, Withrow, De Martini, and Chairman Monteith
Noes: Supervisors: None
Excused or Absent: Supervisors: None
Abstaining: Supervisor: None

1) X **Approved as recommended**
2) _____ **Denied**
3) _____ **Approved as amended**
4) _____ **Other:**

MOTION:

Christine Ferraro

ATTEST: CHRISTINE FERRARO TALLMAN, Clerk **File No.**

STAFF RECOMMENDATIONS (CONTINUED):

4. Authorize the Chairman of the Board to execute Amendment 1 to the MOA between the Counties for the Preliminary Engineering Phase of the project.

5. Authorize the Director of Public Works to take any appropriate action necessary to carry out the purpose and intent of these recommendations.

FISCAL IMPACT (CONTINUED):

Per the Memorandum of Agreement (MOA) approved by the Stanislaus County Board of Supervisors on June 14, 2011, the original local match was equally split between the Counties with each county responsible for $53,014.50.

Due to the additional funding needs for the preliminary engineering phase, Stanislaus County has secured a revised E-76 in the amount of $1,656,000. The revised local match obligation of $189,944 will be shared as $94,972 from each county. Stanislaus County's portion of local match is funded by the local roads funds. The Amendment 1 to the MOA is necessary to adjust equal split contribution as project's local match has increased. Merced County Board of Supervisors has approved Amendment 1 to the MOA on January 12, 2016. Funding for the project is available in the Fiscal Year 2015-2016 Road Projects budget.

DISCUSSION:

The project's purpose is to retrofit the existing seismically deficient bridge Hills Ferry Road Bridge, which spans the San Joaquin River northwest of Newman at the Stanislaus and Merced County lines. Most of the current efforts and expanded funding by the Consultant are associated with the Strategy Approval Phase. The Strategy Approval Phase is a critical milestone as Caltrans and the Federal Highway Administration set an approved level of funding for the participating project construction costs based on the approved project strategy.

Liquefaction is one of the primary deficiencies associated with this project. One of the goals of the Strategy Determination Phase is to determine an appropriate solution for the liquefaction issue. Liquefaction is a phenomenon in which the strength and stiffness of a soil is greatly reduced in the event of an earthquake. Once liquefaction occurs the soil loses most of its capacity to resists loads leading to possible collapse of the bridge structure. Shortly after the contract was awarded to the Consultant in 2011, Caltrans released new liquefaction guidelines. Because these guidelines were new and still evolving, Caltrans hadn't developed clear procedures for evaluating and approving retrofit strategy for bridge projects with liquefaction deficiency.

Caltrans then spent the next few years developing procedures and methodology for processing bridge retrofit projects that were deficient due to potential liquefaction. Because this project was one of the first to be evaluated by Caltrans under the new guideline, Caltrans used this project as a test case to apply new engineering concepts and analytical techniques to create a model for

statewide policy on retrofitting bridges with similar deficiencies. The Consultant coordinated closely with Caltrans staff in order to develop a comprehensive methodology for processing future bridge projects with similar liquefaction deficiencies. This extensive collaborative effort required the Consultant to perform significantly more work than anticipated.

To date, some of the task budgets have been depleted due to the unusually lengthy and complicated project strategy review and approval by Caltrans Structural Headquarters. The project duration and engineering level of effort have exceeded the Consultant's original estimate for services necessary to deliver this project for construction. Issues contributing to the need for the amendment with the Consultant include:

1. Resolving highly technical issues directly with various Caltrans offices and divisions,
2. Completing additional extensive analyses and tasks as requested and approved by Caltrans,
3. Additional sampling and engineering required during final design, and
4. Adjusting project budget due to the extended schedule for project delivery.

Caltrans staff recognized that the unique focus on this project significantly increased the costs associated with this project. Therefore, Caltrans authorized additional funding for the preliminary engineering phase of this project.

This amendment is necessary for the Consultant to move forward toward securing appropriate strategy approval from Caltrans, and developing the final plans, specifications, and estimate necessary for the project's construction.

The MOA was approved by Merced County on January 12, 2016.

POLICY ISSUES:

The project supports the Board's priorities of providing A Safe Community, A Healthy Community, and A Well Planned Infrastructure System by rehabilitating a deficient bridge in Stanislaus County.

STAFFING IMPACT:

Public Works staff is overseeing this project.

CONTACT PERSON:

Matthew Machado, Public Works Director. Telephone: (209) 525-4153.

ATTACHMENT(S):

1. Amendment No. 2 with T.Y.Lin International
2. MOA Amendment 1

ATTACHMENT 1

Amendment No. 2 with T.Y.Lin International

STANISLAUS COUNTY
Second Amendment to Professional Design Services Agreement
Hills Ferry Road Bridge Seismic Retrofit Project
Contract #9203

This Amendment is made and entered into this 15th day of December, 2015, in the City of Modesto, State of California, by and between the County of Stanislaus ("County") and T.Y. Lin International, ("Consultant"), for and in consideration of the promises, and the mutual promises, covenants, terms, and conditions, hereinafter contained.

WHEREAS, on October 18, 2011, the Stanislaus County Board of Supervisors awarded a Professional Design Services Agreement ("Agreement") to Consultant for bridge engineering and project delivery services for the Hills Ferry Road Bridge Seismic Retrofit Project;

WHEREAS, the project duration and engineering level of effort have exceeded the original project estimates as stated in "Exhibit 1-A", attached hereto and made a part of this Amendment;

WHEREAS, an increase of Three Hundred Eighty-Four Thousand Five Hundred Seventy-Five Dollars ($384,575) to the Agreement is necessary to cover the additional services;

$920,983.00	Agreement
+384,575.00	Second Amendment
$1,305,558.00	Total

WHEREAS, T.Y. Lin International has continued to diligently perform the services requested to support this project in good faith; and,

NOW THEREFORE, the parties agree as follows:

1. Section 1.1 of the Agreement: Scope of Services is amended to include additional services as shown in Exhibit "1-A" attached hereto and made a part of this Amendment.

2. Section 2.1 of the Agreement: Compensation is amended to include additional fees of Three Hundred Eighty-Four Thousand Five Hundred Seventy-Five Dollars ($384,575) as shown in Exhibit "1-A" attached hereto and made a part of this Amendment. Consultant's compensation shall in no case exceed One Million Three Hundred Five Thousand Five Hundred Fifty-Eight Dollars ($1,305,558).

3. All other terms and conditions of the Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Second Amendment effective on the date written above.

COUNTY OF STANISLAUS

By: _____
Matt Machado, Director
Department of Public Works

T.Y. LIN INTERNATIONAL

By: _____
W. Mark Ashley
Sr. Vice President

APPROVED AS TO FORM
John P. Doering, County Counsel

By: _____
Amanda DeHart
Deputy County Counsel

T·Y·LIN INTERNATIONAL

engineering planning design

EXHIBIT 1-A

October 23, 2015

Mr. Denis Bazyuk
Stanislaus County, Department of Public Works
1716 Morgan Road
Modesto, CA 95358

SUBJECT: Hills Ferry Road Bridge Seismic Retrofit Project
Request for Contract Amendment

Dear Mr. Bazyuk,

The Hills Ferry Road Bridge Seismic Retrofit Project has been continuously evolving over the past 4 years as a technical challenge based on the mix of structure and foundation types and the site conditions. The project is a point of focus for Caltrans, serving as a proving ground for applying new engineering concepts and analytical approaches in seismic loading and for developing the corresponding structure response. As T.Y. Lin International (TYLI) and Stanislaus County (County) move forward to define the recommended seismic retrofit strategy, we must be able to mobilize the resources needed to complete the first phase of this project, the Strategy Determination Phase, and deliver the final plans, specifications, and estimate for our project's construction.

Since the initial award in late 2011, the project budget has been depleted from a series of unforeseen and compounding developments. Most of these unforeseen developments are associated with unusually lengthy and complicated project strategy reviews and approval by Caltrans Structures Local Assistance and Earthquake Engineering. Along with input from Caltrans, the original scope was defined as a verification of the previously approved seismic retrofit strategy when subjected to current seismic loading and engineering methodologies. A primary focus was the application of a new Caltrans guideline for the effects of liquefaction and lateral spreading upon a bridge structure combined with the updated earthquake inertial loading. Due to the implementation of new guidelines and the potential fiscal consequences of applying our recommended strategy to hundreds of similar bridges across the state, Caltrans has been completing unforeseen and unusually intensive reviews of the engineering analyses and reporting for this project. As documented in previous meeting minutes, Caltrans has acknowledged the unique focus devoted by their department upon our project, even calling it at times a "test case" to set a precedent for a statewide policy on retrofitting bridges with this type of soil-structure response.

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The project duration and engineering level of effort have exceeded the original project estimates. There are four significant issues that can be readily identified as contributing to the need for this amendment. These issues are summarized in the following list:

1. Resolving highly technical issues directly with various Caltrans offices and divisions,
2. Completing additional extensive analyses and tasks as requested and approved by Caltrans,
3. Additional sampling and engineering required during final design, and
4. Adjusting project budget due to the extended schedule for project delivery.

An expanded description of each of these items is included in Attachment A. Several items have already been completed or are being continuously developed with coordination from Caltrans.

As a result of the on-going effort required to maintain project momentum, some project task expenditures have exceeded existing task budgets. TYLI has continued to diligently perform the services requested by Caltrans to support this project in good faith. Our amendment request seeks to appropriately increase task budgets to deliver the high quality plans, specifications, and estimate necessary for a successful project construction. A breakdown of these transactions is summarized in the following table:

	Original Contract	**Additional Funds Requested with this Amendment**	**Revised Budget**
Phase 1 - Strategy Determination	$ 188,142	$ 377,933	$ 566,075
Phase 2 - Project Design	$ 660,987	-$ 42	$ 660,945
Phase 3 - Construction Support	$ 71,854	$ 6,684	$ 78,538
Totals:	**$920,983**	**$384,575**	**$1,305,558**

A task level breakdown of the above transactions is provided in Attachment B. The $384,575 requested by this amendment in a 42% increase over the original contract budget. However, the requested budget increase is a direct result of the additional analyses required to resolve the soil-structure response and of the additional scope for a full as-built assessment. Caltrans requested TYLI perform these additional tasks and extensive analyses as part of the Strategy Determination Phase of this project.

The design phase of the Hills Ferry Bridge Seismic Retrofit Project is funded by Federal Highway Bridge Program (Seismic Safety) and local match from the County. Strategy Approval is one of first critical milestones, as Caltrans/FHWA sets the approved funding level for the participating project construction costs based on the approved project strategy. To address our increase to project's analysis and design cost, TYLI assisted the County in completing and submitting the necessary LAPG Exhibit 6-D paperwork documenting the request for increased funding necessary to complete

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the design phase of this project. Formal approval (E-76 Authorization) for the increased project funding was received from Caltrans/FHWA in May 2015.

In addition to adjusting funding and scope for this project, this amendment request also seeks to extend the contract between County and TYLI. Please see attached revised project schedule.

We look forward to continuing our work as a partner with the County on this challenging project. The requested amendment is necessary to assure that the essential resources can be mobilized to complete the project as planned. We welcome the opportunity to discuss our request or provide any clarifications needed.

Regards,

Chris Hodge

ATTACHMENTS:

Attachment A:	Task Level Description
Attachment B:	Task Level Breakdown
Attachment C:	Revised Project Schedule

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HILLS FERRY ROAD BRIDGE SEISMIC RETROFIT PROJECT
STANISLAUS COUNTY, DEPARTMENT OF PUBLIC WORKS

AMENDMENT - ATTACHMENT A
TASK LEVEL DESCRIPTION

Introduction

The unanticipated lengthy coordination with Caltrans has increased the project's scope, duration, and the level of effort beyond the original project estimates. The following information is provided to describe the additional effort required in developing project strategy and to justify the requested increase in project cost. The four interrelated issues summarized in the following list are readily identified as contributing to the need for this amendment:

1. Resolving highly technical issues directly with various Caltrans offices and divisions,
2. Completing additional extensive analyses and tasks as requested and approved by Caltrans,
3. Additional sampling and engineering required during final design, and
4. Adjusting project budget due to the extended schedule for project delivery.

PHASE I TASKS

Task 1 PM - Project Initiation & Project Management

The Hills Ferry Road Bridge Seismic Retrofit Project (Project) has been continuously evolving over the past 4 years as a technical challenge based on the mix of structure and foundation types and the site conditions. Significant project management efforts have been expended during the Strategy Determination Phase in resolving highly technical topics related to geotechnical, hydraulic, and structure response issues. Over the past several years, TYLI has been working closely with Caltrans Structures Local Assistance and Earthquake Engineering (Caltrans HQ) in order to develop a seismic retrofit strategy to satisfy Caltrans' goals. As the issues associated with this project are fairly unique, Caltrans HQ did not have proper precedent for processing bridge projects with such issues. Thus, Caltrans HQ required an unusually extensive and complex strategy review period. This extensive review period and additional requirements mandated by Caltrans HQ are the primary contributing factors for the contract funding increase associated with this amendment.

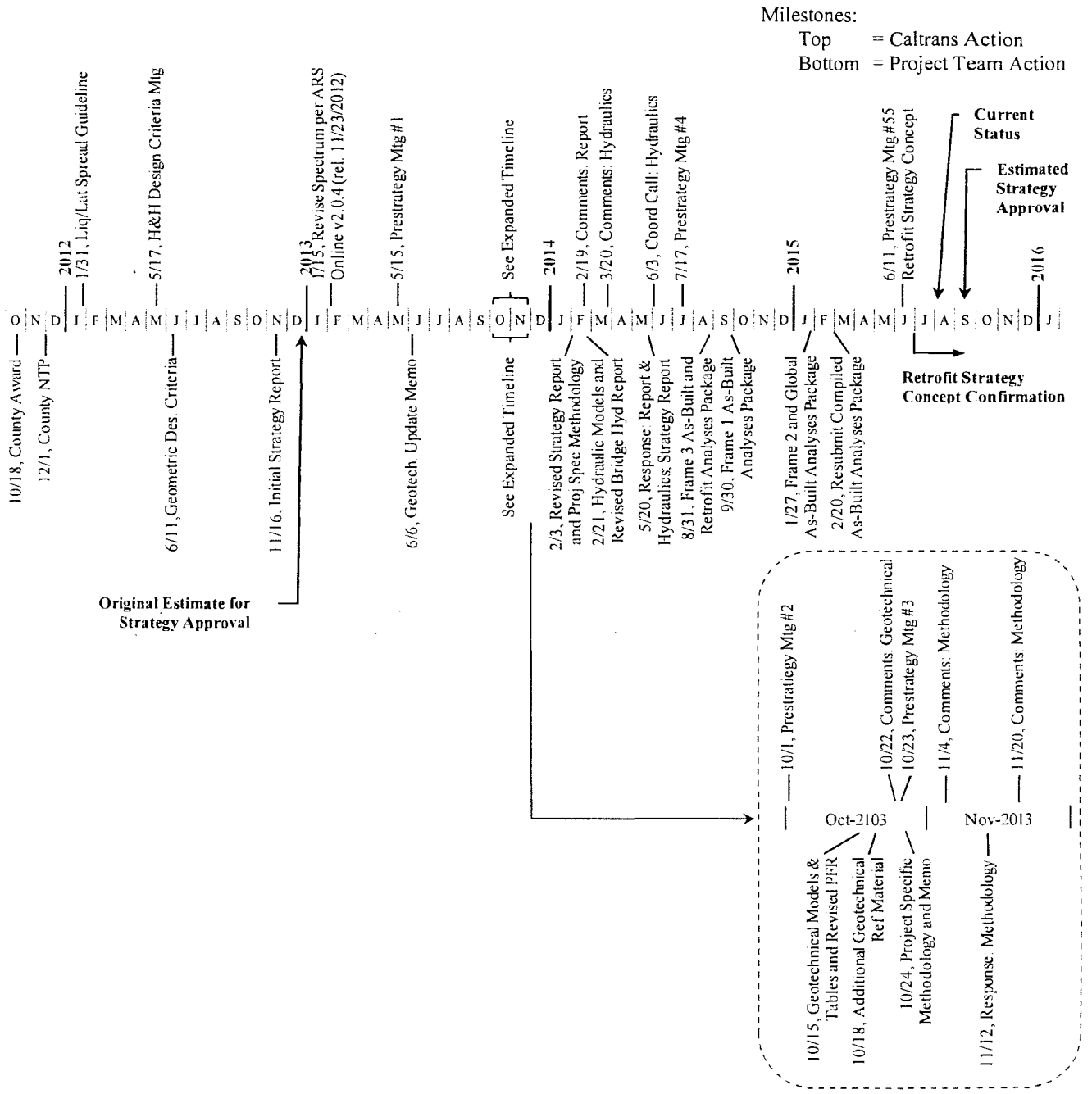
Caltrans participation has included close coordination with and oversight by the Office of Structures Local Assistance, Office of Earthquake Engineering, Office of Geotechnical Design North, and Office of Design and Technical Services-Structure Hydraulics and Hydrology. As depicted on the following timeline, TYLI's coordination with Caltrans has included multiple review cycles on reports and technical memoranda, five pre-strategy meetings, and several conference calls and meetings with their technical specialists. Each of these activities required time from the project team to prepare requisite materials, to participate, and to report results (response to comments, revised reports and memoranda, records of conversation, or meeting minutes), which were not included in the original scope or budget for this project.

Progress to date has exceeded the milestone for achieving an approved retrofit strategy set in the initial project schedule. Over the past 30+ months beyond the original anticipated strategy approval date, the TYLI project team has worked continuously in good faith with the various reviewing divisions and offices within Caltrans to address new advances and requirements in seismic analysis, geotechnical modeling, and available tools; to develop and document project specific methodologies; and to address

numerous cycles of review comments. The extended project duration has required additional project management and administrative effort to complete the Strategy Determination Phase.

Original Budget:	$40,807
Requested Amendment:	***$27,315***
Revised Task Budget:	$68,122

The project progress to date is depicted in the following timeline:



Task 1.3 - Seismic Strategy Verification

The budget for this task includes services provided by the geotechnical sub-consultant Blackburn Consulting (BCI) and hydraulics sub-consultant WRECO (see Attachment B for detailed fees). The original project scope was a verification of the 2004 approved seismic retrofit strategy when subjected to current seismic loading and engineering methodologies. A critical component of the Project was the application of a new Caltrans guideline for the effects of liquefaction and lateral spreading upon a bridge structure combined with the updated earthquake inertial loading. Due to the statewide financial consequences from the eventual retrofit strategy approved for our project, Caltrans has acknowledged the unique focus devoted by their department upon our project, even calling it at times a "test case" to set a precedent for a statewide policy on retrofitting bridges with this type of soil-structure response. The initial analyses completed by TYLI indicated the previous 2004 retrofit strategy was not adequate to withstand the updated seismic loading and achieve the required "no-collapse" standard of performance. In addition, our analyses demonstrated a lack of clarity and an unintended variability with the application of the new guideline.

TYLI is working with Caltrans HQ to develop a retrofit strategy applying recently developed standardized methodology. As a result of the effort, TYLI has completed additional analyses and engineering iterations at the request of Caltrans HQ in order to define the "minimum structural retrofit strategy that satisfies all the project performance criteria (structural, hydraulic, and geotechnical)". The level of effort required to support Caltrans HQ in developing the methodology and proofing their evolving guidelines is beyond the original project scope and could not have been reasonably anticipated during the original proposal period. The major components of this additional work are discussed in the following sections.

Liquefaction and Lateral Spreading Guideline

Shortly after the County's negotiations, award, and project notice-to-proceed with TYLI in December 2011, Caltrans issued a new guideline in January 2012 related to liquefaction and liquefaction induced lateral spreading. The guideline contains revised methods for assessing soils susceptible to liquefaction and provides provision for determining the foundation loads due to soil lateral spreading. Caltrans HQ required the application of the new guideline on this seismic strategy validation project.

The requirements of the guideline had not been previously circulated for public distribution and were not included in the original proposed scope of work. Since the analytical component of the project was in the early phases, the new requirements were incorporated by the project team into the seismic validation and strategy development. However, per the direction from Caltrans HQ, some initial work completed by the TYLI project team was abandoned as the new guidelines were implemented, and this action resulted in some lost effort.

Updates to the Ground Motion Tools

During the period from February 2012 through October 2012, the project team implemented all available analysis tools and current resources in completing the strategy validation of the 2004 approved retrofit measures. One resource forming the basis of all subsequent work is the Caltrans ARS Online tool. This web-based tool calculates the acceleration response spectra for any location in California based on criteria provided in the Caltrans Seismic Design Criteria. This information was applied in completing the seismic evaluation and strategy validation and directly affects the inertial and soil-structure forces acting on the bridge.

Despite the updated tool being released after the submittal of the draft report, Caltrans HQ required the analyses to be updated using the current online tool. The initial draft Seismic Strategy Report was submitted to Caltrans HQ on November 16, 2012. Subsequent to that submittal, Caltrans Office of Earthquake Engineering released an updated revision of the ARS Online tool on November 23, 2013. The updated tool identified additional faults not previously mapped, modified the earthquake data (e.g., earthquake magnitudes), and provided envelop spectrum values considering both deterministic and probabilistic methods. Per request from Caltrans HQ, TYLI revised the previous analyses to incorporate the updated spectra. The revised results were incorporated into the strategy validation analyses.

Project Specific Seismic Methodology

The liquefaction and lateral spreading guideline is a presentation of the "best-available" knowledge of the phenomena of liquefaction and lateral spreading. In addition, the guideline is considered a living and evolving document. It is meant to standardize the analyses to enable engineers to obtain reproducible results for design, check, and review purposes. The guideline describes the methods and tools for assessing soil movements and developing the soil load imposed on the bridge structure, including a provision for combining the soil loads with the standard inertial loads. However, the focus of the guideline is an examination of the local effects of that movement and load on a single bridge support. There is little discussion of the global response of the bridge, either to soil loads acting at both ends of the bridge or to the global seismic response including both soil and inertial loads on the bridge, especially for bridge supports like columns and pile extensions are loaded along the mid-height.

As a result of our analyses demonstrating a lack of clarity and an unintended variability with the application of the new guideline (Pre-strategy Meeting #2 and #3), TYLI was asked by Caltrans HQ to prepare a project specific methodology for connecting the localized soil loads and effects to the overall global response of the bridge system to be used on the validation and final design phases of work. Similar to their liquefaction guideline, the goal of the methodology is to standardize the analyses to enable engineers (Caltrans and other consultants) to obtain reproducible results for design, check, and review purposes. In order to develop this new methodology, several iterations of modeling, response interpretation, retrofit strategy development, documenting and reporting, Caltrans review, and responding to review comments were completed by the project team. This task was not included in the original project scope.

Hydraulic Impacts

As the structural shortcomings of the previous retrofit strategy were being documented, it became apparent that the previously approved retrofit measures had the potential to create negative hydraulic impacts. The increase in water surface elevation extended far upstream of the confluence to an established floodplain and to levees along the Merced and San Joaquin Rivers. Several iterations of structural and hydraulic modeling, along with numerous cycles of Caltrans review and comment, were completed in order to "tune" the necessary retrofit measure to an acceptable change in water surface elevation (and acceptable impacts to the adjacent Federal levees). The level of effort required to determine a new minimum structural retrofit strategy that satisfies all the project performance criteria (structural, hydraulic, and geotechnical), specifically the tuning of the retrofit measures with respect to the hydraulic impacts, could not have been foreseen at the time the original scope of work was developed and thus was not included in the original project scope.

"As-Built" Structure Assessment

Based on the conclusions from the strategy verification, it was determined that the previously approved retrofit strategy did not satisfy the no-collapse criterion, and the strategy resulted in unacceptable hydraulic impacts. As a result during the Pre-strategy Meeting #4 on July 17, 2014, the project team received a revised project directive from Caltrans HQ to switch from completing a simple strategy verification to instead performing a full seismic assessment of the as-built structure response to establish a new baseline of seismic deficiencies. The project team has developed and submitted the As-Built Assessment on a component level basis for review and acceptance by Caltrans, which is currently under review by their technical specialists. The project team is currently working on finalizing the new retrofit strategy based on the conclusions from the As-Built Assessment, the final determinations related to the lateral spread soil-structure interaction and overall global response, and the mitigation of hydraulic impacts resulting from the retrofit measures. This task was not included in the original project scope.

Original TYLI Budget:	$51,601
Requested Amendment:	***$247,065***
Revised Task Budget:	$298,666
Original BCI sub-consultant Budget:	$25,865
Requested Amendment:	***$16,465***
Revised Task Budget:	$42,330
Original WRECO sub-consultant Budget:	$4,500
Requested Amendment:	***$9,750***
Revised Task Budget:	$14,250

Total revised budget for services associated with Task 1.3 "Seismic Strategy Verification": $ 355,246

Task 1.4 - Retrofit Strategy Report

Increased scope of work described in Task 1.4 required three (3) complete revisions of the Retrofit Strategy Report written to address various evolving changes in seismic assessment methodologies, to resolve comments on previous submittals, and to describe the refined structural response and deficiencies. In addition, the development of the project specific seismic methodology required multiple revisions per the direction of Caltrans HQ. Each revision of the Retrofit Strategy Report and the methodology required support from graphics and administrative personnel and technical writers for publication. The additional number of review and revision cycles, in response to new and evolving requirements from Caltrans HQ, was not included in the original project scope.

Original Budget:	$37,073
Requested Amendment:	***$73,513***
Revised Task Budget:	$110,586

Task 1.5 - Strategy Meeting

Increased scope of work described in Task 1.5, to date required five (5) "pre-strategy" meetings with various Caltrans personnel from Office of Structures Local Assistance, Office of Earthquake Engineering, Office of Geotechnical Design North, and Office of Design and Technical Services-Structure Hydraulics and Hydrology. The "pre-strategy" meetings were held to resolve the technical issues and to discuss new and evolving methodologies. Typically, only one (1) pre-strategy meeting is

necessary to secure project strategy approval. The additional "pre-strategy" meetings, held at the request from Caltrans HQ, were not included in the original project scope.

Original Budget:	$4,481
Requested Amendment:	***$3,825***
Revised Task Budget:	$8,306

Total Phase I Funding Increase: $377,933

PHASE II TASKS

Based on the outcome of work performed under Phase I (Strategy Determination), the bases for Project's design (Phase II) will be seismic retrofit of the existing bridge. This amendment request reflects the difference in scope and budget between replacement and retrofit project alternatives for project tasks associated with Phase II "Project Design."

Per the outcome of studies and determinations performed under Phase I, the Phase II scope for this project will be based on the "retrofit" alternative. The original fee estimate for the retrofit alternative presented potential reductions compared to the Phase II replacement task budgets. Based on the outcome of work perform under Phase I, the scope of services necessary to deliver the Phase II retrofit alternative is significantly greater than originally anticipated. The following section is an explanation for how task budgets were impacted by switching Phase II scope of services from the replacement to the retrofit alternative.

Task 2 PM – Project Management

As a result of the work completed in Phase I, the project alternative carried forward will be a seismic retrofit of the existing bridge. Once Phase I work is completed and project strategy is approved by Caltrans, the next step in Project's development is Phase II, "Project Design." The Phase II tasks will focus on preparing project improvement plans (and other related deliverables) necessary to design bridge retrofit project. The retrofit project alternative will required enhanced technical coordination with the applicable Caltrans offices and divisions during the final design process to achieve final project approval from Caltrans Office of Earthquake Engineering. Thus, there is a need to maintain the original replacement budget and perform the following adjustment:

Original Budget:	$25,188
Requested Amendment [(1)]***:***	***$7,716***
Revised Task Budget:	$32,904

[(1)] Additional budget includes adjustment due to escalation. See following description at end of section.

Task 2.2 - Geotechnical Engineering

Increased scope of work due to the importance of the soil characteristics on the soil-structure response, as described in Task 1.3. The geotechnical boring plan for final design will be modified based on the requirements established in Phase I to provide adequate subsurface information for engineering design and construction. The revised plan will entail completing one additional boring near each abutment (total 3 borings). In addition, all borings will be extended deeper, as a result of lower anticipated final tip elevations (>20 feet below the deepest as-built boring depth). Thus, there is a need to maintain the original replacement budget and perform the following adjustment:

Original BCI sub-consultant Budget:	$75,650
Requested Amendment:	***$26,454***
Revised BCI sub-consultant Task Budget:	$102,104

Task 2.3 - Hydrology and Hydraulics

Increased scope of work necessary to evaluate the effects from proposed retrofit measures upon the water surface elevation and the resulting floodplain impacts. Increased coordination required with USACE, CVFPB, Department of Water Resources, and Caltrans to mitigate any negative impacts upon the water surface elevation and to secure final project approval from these agencies. Thus, there is a need to maintain the original replacement budget and perform the following adjustment:

Original WRECO sub-consultant Budget:	$15,800
Requested Amendment:	***$12,713***
Revised WRECO sub-consultant Task Budget:	$28,513

Task 2.7 - Preliminary Engineering

As a result of the work completed in Phase I, the bases for the project's design will be seismic retrofit of the existing bridge. The retrofit project alternative will not require a Project Design Report, as the project summarizing document is addressed by the Seismic Strategy Report completed in Phase I. However, there is a need to maintain the original replacement budget with an adjustment shown below. Per the original contract scope, Task 2.7 "Preliminary Engineering," was primarily intended to produce 30% level plans and estimate of construction cost for the replacement option. Per the outcome of Phase I "Strategy Determination," the design and construction scope for this project will not be replacement but rather retrofit of the existing bridge. Therefore, the scope for Task 2.7 will now be defined as the level of effort necessary to produce 30% level plans and estimate of construction cost for the retrofit alternative and the necessary engineering support to complete the environmental studies and CEQA/NEPA clearance. For the milestone 30% level submittal, TYLI will coordinate with the County and other necessary/relevant agencies to ensure that the plans and estimate are reviewed to obtain comments. TYLI will be responsible for coordinating the submittal with the County and, as necessary, other applicable agencies. TYLI will address the comments received on the 30% level submittal and return a Response to Comments to each reviewing entity for agreement on resolution. Thus, there is a need to maintain the original replacement budget and perform the following adjustment:

Original Budget:	$51,014
Requested Amendment (Credit):	***($13,232)***
Revised Task Budget:	$37,782

Task 2.10 - Final PS&E (60%, 90%, 100%)/Permitting and Documentation

As a result of the work completed in Phase I, the bases for the project's design will be seismic retrofit of the existing bridge. The retrofit project alternative will not require as extensive of an engineering effort as the full replacement structure constructed on an adjacent alignment. Thus, there is a need to maintain the original replacement budget and perform the following adjustment:

Original Budget:	$235,054
Requested Amendment (Credit) [1]***:***	***($39,263)***
Revised Task Budget:	$195,791

[1] Additional budget includes adjustment due to escalation. See following description at end of section.

All Phase 2 and 3 Tasks, Labor Escalation

Amendment request to adjust the labor budgets in Phase 2 and 3 for inflation and wage escalation over the project duration beyond that included in the original contract fee estimate. An annual increase of 3% per year was used for the calculations represented in the following tables:

Phase 2 – Project Design (Retrofit)

Year	Project Year	Escalation from Year 1 3% per Year	Escalation from Year 1	Base Rate Increase per Year [1]	Full Fee Increase per Year [2]
2012	1	1	0.000	$0	$0
2013	2	(1)*(1+3%)	0.030	$1,790.17	$5,053.82
2014	3	(1+3%)*(1+3%)	0.061	$1,843.87	$5,205.43
2015	4	$(1+3\%)^2*(1+3\%)$	0.093	$1,899.19	$5,361.60
2016	5	$(1+3\%)^3*(1+3\%)$	0.126	$1,956.16	$5,522.44
2017	6	$(1+3\%)^4*(1+3\%)$	0.159	$2,014.85	$5,688.12

Phase 3 – Construction Support

Year	Project Year	Escalation from Year 1 3% per Year	Escalation from Year 1	Base Rate Increase per Year [1]	Full Fee Increase per Year [2]
2012	1	1	0.000	$0	$0
2013	2	(1)*(1+3%)	0.030	$722.02	$2,038.32
2014	3	(1+3%)*(1+3%)	0.061	$743.68	$2,099.47
2015	4	$(1+3\%)^2*(1+3\%)$	0.093	$765.99	$2,162.46
2016	5	$(1+3\%)^3*(1+3\%)$	0.126	$788.97	$2,227.33
2017	6	$(1+3\%)^4*(1+3\%)$	0.159	$812.64	$2,294.15

[1] Escalation factor is applied to base rates (raw labor rates). Base rate increase per year is the amount of escalation attributable to the specific project year.

[2] Full fee increase is calculated using the TYLI audited overhead rate of 159% and the approved fee of 9% (effective multiplier applied to base rate labor = 2.823).

Our request reflects the difference in Phase budgets for the period beyond the original contract fee estimate. For Phase 2, this period is 2014-2016. For Phase 3, this period is 2015-2017. The escalation is distributed between all of the Phase 2 and 3 tasks proportionally, based on the original task budgets. Revised task budgets, shown in the Attachment B, include corresponding escalation distributions.

Phase 2 Requested Amendment:	*$5,205.43 + $5,361.60 + $5,522.44*	=	*$16,089*
Phase 3 Requested Amendment:	*$2,162.46 + $2,227.33 + $2,294.15*	=	*$6,684*

Total Phase II Funding Increase: ($42)

Total Phase III Funding Increase: $6, 984

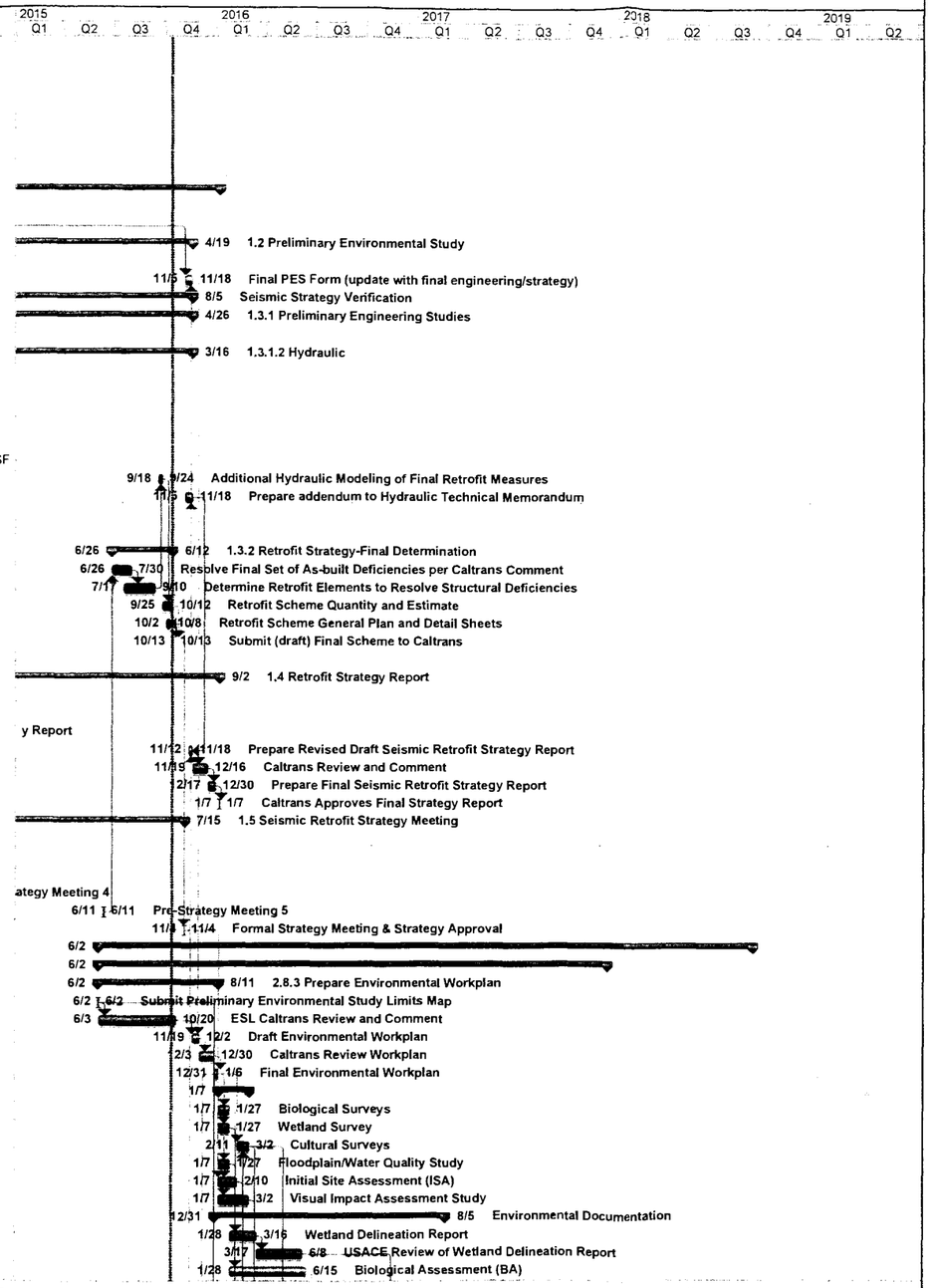
HILLS FERRY ROAD BRIDGE SEISMIC RETROFIT
STANISLAUS COUNTY, DEPT OF PUBLIC WORKS

AMENDMENT – ATTACHMENT B
TASK LEVEL BREAKDOWN

Task ID		Description		Original Contract Budget	Total Requested Amendment	Revised Contract
1	PM	Project Initiation & Proejct Management		$ 40,807	$ 27,315	$ 68,122
1	1	Field Review		$ 10,158	$ -	$ 10,158
	2	Preliminary Environmental Study		$ 6,620	$ -	$ 6,620
	3	Seismic Strategy Verification		$ 51,601	$ 247,065	$ 298,666
	4	Retrofit Strategy Report		$ 37,073	$ 73,513	$ 110,586
	5	Strategy Meeting		$ 4,481	$ 3,825	$ 8,306
		Prime Labor Subtotal		***$ 150,740***	***$ 351,718***	***$ 502,458***
		TYLI ODC		$ 219	$ -	$ 219
Enviromental		LSA	*Task 1.1 & 1.2*	$ 6,818	$ -	$ 6,818
Geotechncial		BCI	*Task 1.3*	$ 25,865	$ 16,465	$ 42,330
Hydraulics		WRECO	*Task 1.3*	$ 4,500	$ 9,750	$ 14,250
		Direct Cost Subtotal		***$ 37,402***	***$ 26,215***	***$ 63,617***
		Phase 1 Total		***$ 188,142***	***$ 377,933***	***$ 566,075***
2	PM	Project Management		$ 25,188	$ 7,716	$ 32,904
2	1	Survey and R/W Mapping		$ 6,261	$ 723	$ 6,984
	2	Geotechnical Engineering		$ 3,395	$ 383	$ 3,778
	3	Hydrology and Hydraulics		$ 3,984	$ 449	$ 4,433
	4	Utility Survey and Coordination		$ 5,323	$ 600	$ 5,923
	5	Traffic Analysis and Handling		$ 5,323	$ 600	$ 5,923
	6	Electrical and Lighting		$ 2,965	$ 334	$ 3,299
	7	Preliminary Engineering/Design Report		$ 51,014	$ (13,232)	$ 37,782
	8	Right-of-Way Services		$ 2,965	$ 334	$ 3,299
	9	Environmental/Public Outreach		$ 21,601	$ 2,147	$ 23,748
	10	Final PS&E; Permitting & Documentation		$ 235,054	$ (39,263)	$ 195,791
		Prime Labor Subtotal		***$ 363,073***	***$ (39,209)***	***$ 323,864***
		TYLI ODC		$ 1,859	$ -	$ 1,859
Enviromental		LSA	*Task 2.2*	$ 74,850	$ -	$ 74,850
Geotechncial		BCI	*Task 2.1.2*	$ 75,650	$ 26,454	$ 102,104
Hydraulics		WRECO	*Task 2.1.3*	$ 15,800	$ 12,713	$ 28,513
Survey, R/W		NSE	*Task 2.1.1*	$ 57,935	$ -	$ 57,935
Traffic, Striping		Y&C	*Tasks 2.1.7 & 2.3*	$ 18,000	$ -	$ 18,000
Outreach		BUETHE	*Task 2.2*	$ 12,200	$ -	$ 12,200
Real Property		OPC	*Task 2.1.8*	$ 41,620	$ -	$ 41,620
		Direct Cost Subtotal		***$ 297,914***	***$ 39,167***	***$ 337,081***
		Phase 2 Total		***$ 660,987***	***$ (42)***	***$ 660,945***
3	PM	Project Management		$ 9,124	$ 1,079	$ 10,203
3	1	Bidding Support and Analysis		$ 7,488	$ 695	$ 8,183
	2	Construction Support		$ 45,418	$ 4,215	$ 49,633
	3	Project Closeout		$ 7,488	$ 695	$ 8,183
		Prime Labor Subtotal		***$ 69,518***	***$ 6,684***	***$ 76,202***
		TYLI ODC		$ 336	$ -	$ 336
Traffic		Y&C	*Task 3.2*	$ 2,000	$ -	$ 2,000
		Direct Cost Subtotal		***$ 2,336***	***$ -***	***$ 2,336***
		Phase 3 Total		***$ 71,854***	***$ 6,684***	***$ 78,538***
		TOTAL CONTRACT		**$ 920,983**	**$ 384,575**	**$ 1,305,558**

San Joaquin River at Hills Ferry Road (River Road), Bridge No. 39C-0001
T.Y. Lin International

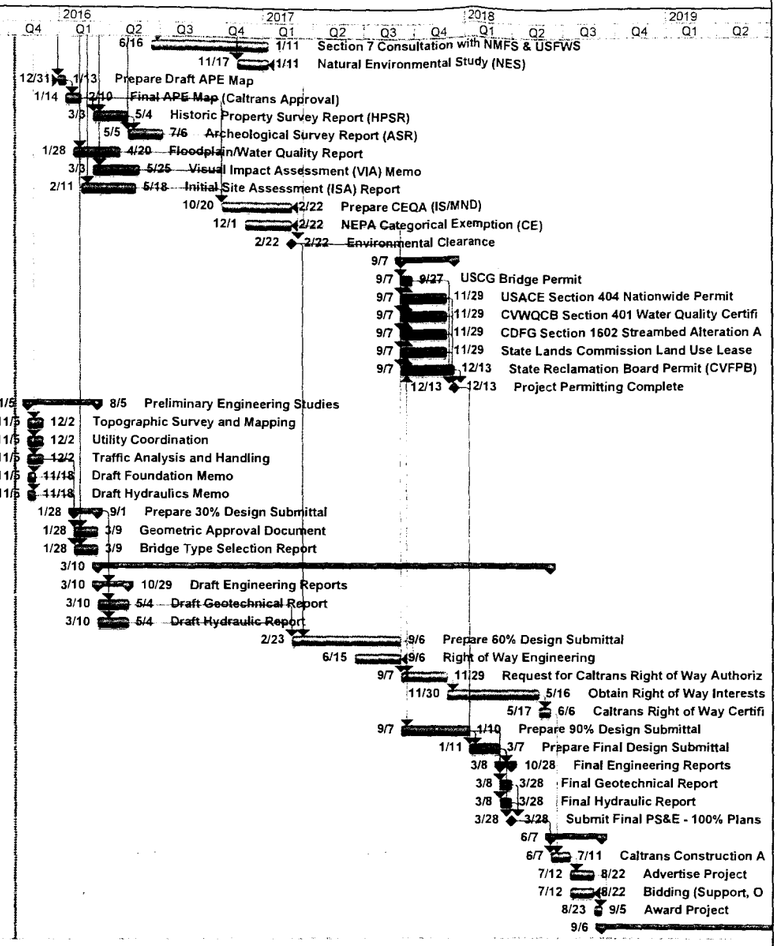
ID	% Complete	Task Name	Duration	Start	Finish	Predecessors
1	100%	Proposal Submittal	1 day	Fri 8/19/11	Fri 8/19/11	
2	100%	County Issues NTP	0 days	Mon 12/5/11	Mon 12/5/11	
3	**98%**	**PM. Project Management**	**195 days**	**Fri 12/16/11**	**Thu 9/13/12**	
4	**100%**	**PM.1 Project Initiation**	**65 days**	**Fri 12/16/11**	**Thu 3/15/12**	
5	100%	Identify PDT Members	1 day	Mon 12/19/11	Mon 12/19/11	6
6	100%	Kick-off Meeting with Stanislaus County	1 day	Fri 12/16/11	Fri 12/16/11	2
7	**100%**	**PM.1.1 Preliminary Research/Background Data**	**64 days**	**Mon 12/19/11**	**Thu 3/15/12**	
10	**93%**	**PM.2.2 Phase 1 PDT Meetings**	**141 days**	**Thu 3/1/12**	**Thu 9/13/12**	
26	**92%**	**Phase I - Strategy Determination**	**1061 days**	**Thu 12/15/11**	**Thu 1/7/16**	
27	100%	Meet with Caltrans SLA	1 day	Thu 12/15/11	Thu 12/15/11	2
28	100%	1.1 Environmental Field Review	1 day	Tue 2/28/12	Tue 2/28/12	30
29	**23%**	**1.2 Preliminary Environmental Study**	**1008 days**	**Mon 1/9/12**	**Wed 11/18/15**	
30	100%	Draft PES Form	3 days	Mon 1/9/12	Wed 1/11/12	8
31	0%	Final PES Form (update with final engineering/strategy)	10 days	Thu 11/5/15	Wed 11/18/15	28,100
32	**96%**	**1.3 Seismic Strategy Verification**	**969 days**	**Fri 3/2/12**	**Wed 11/18/15**	
33	**94%**	**1.3.1 Preliminary Engineering Studies**	**969 days**	**Fri 3/2/12**	**Wed 11/18/15**	
34	**100%**	**1.3.1.1 Geotechnical**	**124 days**	**Fri 3/2/12**	**Thu 8/23/12**	
38	**90%**	**1.3.1.2 Hydraulic**	**969 days**	**Fri 3/2/12**	**Wed 11/18/15**	
39	100%	Data Review	15 days	Fri 3/2/12	Thu 3/22/12	11
40	100%	Field Reconnaissance	15 days	Fri 3/2/12	Thu 3/22/12	11
41	100%	Request/Obtain USACE HEC-RAS Model	15 days	Fri 3/9/12	Thu 3/29/12	11FS+5 days
42	100%	Coordination/Requirements per CVFPB	15 days	Fri 3/2/12	Thu 3/22/12	11
43	100%	Preliminary Hydraulic Evaluations and Analysis	10 days	Fri 3/23/12	Thu 4/5/12	42
44	100%	Hydraulic Technical Memorandum	15 days	Fri 4/6/12	Thu 8/23/12	43,56FF,74FF,79SF
45	100%	Additional Hydraulic Modeling of Final Retrofit Measures	5 days	Fri 9/18/15	Thu 9/24/15	61FS+5 days
46	0%	Prepare addendum to Hydraulic Technical Memorandum	10 days	Thu 11/5/15	Wed 11/18/15	100
47	**100%**	**1.3.1.3 Traffic Operations**	**59 days**	**Mon 5/21/12**	**Thu 8/9/12**	
50	**100%**	**1.3.2 Seismic Retrofit Feasibility Study**	**104 days**	**Fri 3/16/12**	**Wed 8/8/12**	
59	**96%**	**1.3.2 Retrofit Strategy-Final Determination**	**78 days**	**Fri 6/26/15**	**Tue 10/13/15**	
60	100%	Resolve Final Set of As-built Deficiencies per Caltrans Comment	25 days	Fri 6/26/15	Thu 7/30/15	99FS+10 days
61	100%	Determine Retrofit Elements to Resolve Structural Deficiencies	40 days	Fri 7/17/15	Thu 9/10/15	60
62	83%	Retrofit Scheme Quantity and Estimate	12 days	Fri 9/25/15	Mon 10/12/15	45
63	100%	Retrofit Scheme General Plan and Detail Sheets	5 days	Fri 10/2/15	Thu 10/8/15	62FF
64	0%	Submit (draft) Final Scheme to Caltrans	1 day	Tue 10/13/15	Tue 10/13/15	63,62
65	**100%**	**1.3.3 Bridge Replacement Feasibility Study**	**48 days**	**Thu 6/7/12**	**Mon 8/13/12**	
77	**89%**	**1.4 Retrofit Strategy Report**	**888 days**	**Tue 8/14/12**	**Thu 1/7/16**	
78	100%	Cost Benefit Analysis - Not Req'd. No Action	7 days	Tue 8/14/12	Wed 8/22/12	50,65,73
79	100%	Prepare Draft Seismic Retrofit Strategy Report	58 days	Thu 8/23/12	Mon 11/12/12	78,48
80	**100%**	**Caltrans Reviews Draft Strategy Report**	**260 days**	**Tue 11/13/12**	**Mon 11/11/13**	
90	0%	Prepare Revised Draft Seismic Retrofit Strategy Report	5 days	Thu 11/12/15	Wed 11/18/15	100,46FF
91	0%	Caltrans Review and Comment	20 days	Thu 11/19/15	Wed 12/16/15	90
92	0%	Prepare Final Seismic Retrofit Strategy Report	10 days	Thu 12/17/15	Wed 12/30/15	91
93	0%	Caltrans Approves Final Strategy Report	1 day	Thu 1/7/16	Thu 1/7/16	92FS+5 days
94	**83%**	**1.5 Seismic Retrofit Strategy Meeting**	**646 days**	**Wed 5/15/13**	**Wed 11/4/15**	
95	100%	Pre-Strategy Meeting 1	1 day	Wed 5/15/13	Wed 5/15/13	81
96	100%	Pre-Strategy Meeting 2	1 day	Tue 10/1/13	Tue 10/1/13	83
97	100%	Pre-Strategy Meeting 3	1 day	Wed 10/23/13	Wed 10/23/13	
98	100%	Pre-Strategy Meeting 4	1 day	Thu 7/17/14	Thu 7/17/14	
99	100%	Pre-Strategy Meeting 5	1 day	Thu 6/11/15	Thu 6/11/15	
100	0%	Formal Strategy Meeting & Strategy Approval	1 day	Wed 11/4/15	Wed 11/4/15	64FS+15 days
101	**0%**	**Phase II - Project Design**	**852 days**	**Tue 6/2/15**	**Wed 9/5/18**	
102	**0%**	**Environmental Documentation & Permitting**	**662 days**	**Tue 6/2/15**	**Wed 12/13/17**	
103	**1%**	**2.8.3 Prepare Environmental Workplan**	**157 days**	**Tue 6/2/15**	**Wed 1/6/16**	
104	100%	Submit Preliminary Environmental Study Limits Map	1 day	Tue 6/2/15	Tue 6/2/15	
105	0%	ESL Caltrans Review and Comment	100 days	Wed 6/3/15	Tue 10/20/15	104
106	0%	Draft Environmental Workplan	10 days	Thu 11/19/15	Wed 12/2/15	31,105
107	0%	Caltrans Review Workplan	20 days	Thu 12/3/15	Wed 12/30/15	106
108	0%	Final Environmental Workplan	5 days	Thu 12/31/15	Wed 1/6/16	107
109	**0%**	**Environmental Studies**	**40 days**	**Thu 1/7/16**	**Wed 3/2/16**	
110	0%	Biological Surveys	15 days	Thu 1/7/16	Wed 1/27/16	108
111	0%	Wetland Survey	15 days	Thu 1/7/16	Wed 1/27/16	108
112	0%	Cultural Surveys	15 days	Thu 2/11/16	Wed 3/2/16	108,123
113	0%	Floodplain/Water Quality Study	15 days	Thu 1/7/16	Wed 1/27/16	108
114	0%	Initial Site Assessment (ISA)	25 days	Thu 1/7/16	Wed 2/10/16	108,100
115	0%	Visual Impact Assessment Study	40 days	Thu 1/7/16	Wed 3/2/16	108
116	**0%**	**Environmental Documentation**	**300 days**	**Thu 12/31/15**	**Wed 2/22/17**	
117	0%	Wetland Delineation Report	35 days	Thu 1/28/16	Wed 3/16/16	111
118	0%	USACE Review of Wetland Delineation Report	60 days	Thu 3/17/16	Wed 6/8/16	117
119	0%	Biological Assessment (BA)	100 days	Thu 1/28/16	Wed 6/15/16	110



Task — Progress — Summary — Project Summary
Critical Task — Milestone — Split — Deadline

San Joaquin River at Hills Ferry Road (River Road), Bridge No. 39C-0001
T.Y. Lin International

ID	% Complete	Task Name	Duration	Start	Finish	Predecessors
120	0%	Section 7 Consultation with NMFS & USFWS	150 days	Thu 6/16/16	Wed 1/11/17	119
121	0%	Natural Environmental Study (NES)	40 days	Thu 11/17/16	Wed 1/11/17	118,120FF
122	0%	Prepare Draft APE Map	10 days	Thu 12/31/15	Wed 1/13/16	108SS,104
123	0%	Final APE Map (Caltrans Approval)	20 days	Thu 1/14/16	Wed 2/10/16	122
124	0%	Historic Property Survey Report (HPSR)	45 days	Thu 3/3/16	Wed 5/4/16	123,112
125	0%	Archeological Survey Report (ASR)	45 days	Thu 5/5/16	Wed 7/6/16	124,112
126	0%	Floodplain/Water Quality Report	60 days	Thu 1/28/16	Wed 4/20/16	113
127	0%	Visual Impact Assessment (VIA) Memo	60 days	Thu 3/3/16	Wed 5/25/16	115
128	0%	Initial Site Assessment (ISA) Report	70 days	Thu 2/11/16	Wed 5/18/16	114
129	0%	Prepare CEQA (IS/MND)	90 days	Thu 10/20/16	Wed 2/22/17	121FF+6 wks,123,12
130	0%	NEPA Categorical Exemption (CE)	60 days	Thu 12/1/16	Wed 2/22/17	129FF
131	0%	Environmental Clearance	0 days	Wed 2/22/17	Wed 2/22/17	129,130
132	**0%**	**Project Permitting**	**70 days**	**Thu 9/7/17**	**Wed 12/13/17**	
133	0%	USCG Bridge Permit	15 days	Thu 9/7/17	Wed 9/27/17	131,153
134	0%	USACE Section 404 Nationwide Permit	60 days	Thu 9/7/17	Wed 11/29/17	131,153
135	0%	CVWQCB Section 401 Water Quality Certification (or waiver)	60 days	Thu 9/7/17	Wed 11/29/17	131,153
136	0%	CDFG Section 1602 Streambed Alteration Agreement	60 days	Thu 9/7/17	Wed 11/29/17	131,153
137	0%	State Lands Commission Land Use Lease	60 days	Thu 9/7/17	Wed 11/29/17	131,153
138	0%	State Reclamation Board Permit (CVFPB)	70 days	Thu 9/7/17	Wed 12/13/17	131,153
139	0%	Project Permitting Complete	0 days	Wed 12/13/17	Wed 12/13/17	133,134,135,136,137
140	**0%**	**Preliminary Engineering Studies**	**90 days**	**Thu 11/5/15**	**Wed 3/9/16**	
141	0%	Topographic Survey and Mapping	20 days	Thu 11/5/15	Wed 12/2/15	100
142	0%	Utility Coordination	20 days	Thu 11/5/15	Wed 12/2/15	100
143	0%	Traffic Analysis and Handling	20 days	Thu 11/5/15	Wed 12/2/15	100
144	0%	Draft Foundation Memo	10 days	Thu 11/5/15	Wed 11/18/15	100
145	0%	Draft Hydraulics Memo	10 days	Thu 11/5/15	Wed 11/18/15	100
146	**0%**	**Prepare 30% Design Submittal**	**30 days**	**Thu 1/28/16**	**Wed 3/9/16**	
147	0%	*Geometric Approval Document*	30 days	Thu 1/28/16	Wed 3/9/16	110,111,143
148	0%	*Bridge Type Selection Report*	30 days	Thu 1/28/16	Wed 3/9/16	110,111,144,145
149	**0%**	**Final Design**	**585 days**	**Thu 3/10/16**	**Wed 6/6/18**	
150	**0%**	**Draft Engineering Reports**	**40 days**	**Thu 3/10/16**	**Wed 5/4/16**	**146**
151	0%	Draft Geotechnical Report	40 days	Thu 3/10/16	Wed 5/4/16	146
152	0%	Draft Hydraulic Report	40 days	Thu 3/10/16	Wed 5/4/16	146
153	0%	Prepare 60% Design Submittal	140 days	Thu 2/23/17	Wed 9/6/17	151,152,131
154	0%	Right of Way Engineering	60 days	Thu 6/15/17	Wed 9/6/17	153FF
155	0%	Request for Caltrans Right of Way Authorization	60 days	Thu 9/7/17	Wed 11/29/17	154,130
156	0%	Obtain Right of Way Interests	120 days	Thu 11/30/17	Wed 5/16/18	155
157	0%	Caltrans Right of Way Certification	15 days	Thu 5/17/18	Wed 6/6/18	156
158	0%	Prepare 90% Design Submittal	90 days	Thu 9/7/17	Wed 1/10/18	153
159	0%	Prepare Final Design Submittal	40 days	Thu 1/11/18	Wed 3/7/18	158,139
160	**0%**	**Final Engineering Reports**	**15 days**	**Thu 3/8/18**	**Wed 3/28/18**	**159**
161	0%	Final Geotechnical Report	15 days	Thu 3/8/18	Wed 3/28/18	158
162	0%	Final Hydraulic Report	15 days	Thu 3/8/18	Wed 3/28/18	158
163	0%	Submit Final PS&E - 100% Plans	0 days	Wed 3/28/18	Wed 3/28/18	159,161,162
164	**0%**	**Advertise & Award**	**65 days**	**Thu 6/7/18**	**Wed 9/5/18**	
165	0%	Caltrans Construction Authorization	25 days	Thu 6/7/18	Wed 7/11/18	163FS+5 days,157
166	0%	Advertise Project	30 days	Thu 7/12/18	Wed 8/22/18	165
167	0%	Bidding (Support, Opening, Analysis)	30 days	Thu 7/12/18	Wed 8/22/18	166FF
168	0%	Award Project	10 days	Thu 8/23/18	Wed 9/5/18	167
169	**0%**	**Phase III - Construct Project**	**390 days**	**Thu 9/6/18**	**Wed 3/4/20**	



Task | Progress | Summary | Project Summary
Critical Task | Milestone | Split | Deadline

ATTACHMENT 2

MOA Amendment 1

MEMORANDUM OF AGREEMENT
For the Preliminary Engineering Phase
Of the Hills Ferry / River Road Bridge Project

Amendment 1

Amendment 1 to the Memorandum of Agreement (MOA) by and between County of Stanislaus ("Stanislaus") located at 1716 Morgan Road, Modesto, CA, 95358, and County of Merced ("Merced") located at 715 Martin Luther King Junior Way, Merced, CA, 95341. (Stanislaus and Merced are collectively referred to herein as "The Parties."

Recitals

WHEREAS, on June 7, 2011, the Merced Board of Supervisors approved MOA (Merced Resolution No. 2011-84) with Stanislaus for the Preliminary Engineering Phase of the Hills Ferry/River Road Bridge over the San Joaquin River Project ("Project"); and

WHEREAS, Section 3.7 "AMENDMENTS" states that this MOA may be amended or provisions contained herein may be altered, changed, or amended for the Project only by mutual written agreement signed and approved by the respective approving authorities of Merced and Stanislaus. No oral understanding or agreement, not incorporated herein, shall be binding on any of the parties hereto; and

WHEREAS, Stanislaus has a need to amend the Local Match split for the Preliminary Engineering Phase of the Project as defined in Section 3.2 "LOCAL MATCH"; and

WHEREAS, Section 3.2 "LOCAL MATCH" states that the Local Match is the remaining balance of the Project's costs not covered or reimbursed by State and/or Federal funds and shall be split equally at fifty percent (50%) Merced and fifty percent (50%) Stanislaus; and

WHEREAS, Section 3.2 "LOCAL MATCH" states that the existing Project's Local Match for the Preliminary Engineering Phase of the work which was estimated at $106,029 and, therefore, Merced and Stanislaus' share of the Local Match was $53,014.50 each based on an previously estimated design cost of $924,400; and

WHEREAS, the previously estimated Project's design cost of $924,400 has increased to $1,656,000 and Authorization to Proceed (E-76) has been secured from Caltrans for the increased project cost.

NOW, THEREFORE, the Parties hereby mutually agree as follows:

1. Local Match. The following amendment is made to Section 3.2 "Local Match" of the MOA. The Project's cost for the Preliminary Engineering Phase has increased to $1,656,000 as specified herein in Exhibit A titled "Revised Authorization to Proceed (E-76)." Thus, the amended Local Match for Project's

Preliminary Engineering Phase in the amount of $189,944 shall be equally split between Merced and Stanislaus with each responsible for $94,972 share of the amended Local Match.

2. Any notice which may be required under this Amendment 1 to the Agreement shall be in writing and shall be given by personal service, first-class mail, certified or registered mail return receipt requested, or overnight delivery to the addresses set forth below:

Merced County:	Stanislaus County:
Dana S. Hertfelder	Matthew Machado
Director	Director
Department of Public Works	Department of Public Works
715 Martin Luther King Junior Way	1716 Morgan Road
Merced, California 95341	Modesto, California 95358

All notices and other communications shall be deemed communicated as of actual receipt or after the second business day after the notice has been dispatched. The parties may change their respective address by giving notice of such change to the other party in the manner provided in this Section.

3. Stanislaus shall cause copies to be furnished to Merced following full execution of this Amendment 1 to the Agreement.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, MERCED has authorized the execution of this Amendment 1 to the Agreement in duplicate by its Chief Executive Officer under authority of Resolution No. _____, adopted by the Board of Supervisors of Merced County on the ____ day of _____, 2016, and STANISLAUS has authorized the execution of this Amendment 1 to the Agreement in duplicate by its Chief Executive Officer under authority of Resolution No. 2016-53, adopted by the Board of Supervisors of Stanislaus County on the 26th day of January, 2016.

COUNTY OF STANISLAUS,
a political subdivision of the
State of California

By: _____
Dick Monteith
Chairman of the Board

COUNTY OF MERCED,
a political subdivision of the
State of California

By: _____ JAN 12 2016
Chairman of the Board

ATTEST:
Christine Ferraro Tallman
Clerk of the Board of Supervisors
of the County of Stanislaus,
State of California

By: _____
Deputy Clerk

APPROVED AS TO CONTENT:
Department of Public Works

By: _____
Matthew Machado, Director

APPROVED AS TO FORM:
John P. Doering
County Counsel

By: _____
Amanda DeHart
Deputy County Counsel

APPROVED AS TO FORM:
James N. Fincher,
County Counsel

By: _____
Michael Linden
Deputy County Counsel

Exhibit - A: Revised Authorization to Proceed (E-76)

AMENDMENT MODIFICATION SUMMARY - (E-76)

FEDERAL AID PROGRAM — **CALIFORNIA DEPARTMENT OF TRANSPORTATION**

DLA LOCATOR: 10-STA-0-CR
PREFIX: BRLSZ
PROJECT NO: 5938(176)
SEQ NO: 2
STATE PROJ NO: 10957015L
AGENCY: STANISLAUS
ROUTE:
TIP DATA
MPO: STANCOG
FSTIP YR: 09/10
STIP REF: 214-0000-0447
DISASTER NO:
BRIDGE NO'S: 39C0001

PROJECT LOCATION:
RIVER ROAD OVER SAN JOAQUIN RIVER (BRIDGE 39C0001)
TYPE OF WORK:
SEISMIC RETROFIT
FED RR NO'S:
PUC CODES:
PROJ OVERSIGHT: DELEGATED/LOCAL ADMIN
ENV STATUS / DT:
RW STATUS / DT:
INV RTE:
BEG MP: 0
END MP: 0

PREV AUTH / AGREE DATES:
PE: 08/05/2010
R/W:
CON:
SPR:
MCS:
OTH:

PROG CODE	LINE NO	IMPV TYPE	FUNC SYS	URBAN AREA	URB/RURAL	DEMO ID
L1CE	10	15	C		RURAL	
M24E	10	15	C		RURAL	

FUNDING SUMMARY

PHASE		PROJECT COST	FEDERAL COST	AC COST
PE	PREV. OBLIGATION	$924,400.00	$818,371.00	$0.00
	THIS REQUEST	$731,600.00	$647,685.00	$0.00
	SUBTOTAL	$1,656,000.00	$1,466,056.00	$0.00
R/W	PREV. OBLIGATION	$0.00	$0.00	$0.00
	THIS REQUEST	$0.00	$0.00	$0.00
	SUBTOTAL	$0.00	$0.00	$0.00
CON	PREV. OBLIGATION	$0.00	$0.00	$0.00
	THIS REQUEST	$0.00	$0.00	$0.00
	SUBTOTAL	$0.00	$0.00	$0.00
	TOTAL:	$1,656,000.00	$1,466,056.00	$0.00

STATE REMARKS

07/21/2010 This request is for authorization of $818,371 Federal HBP funds for PE phase to design for seismic retrofit. Scope of work includes installation of deck restrainers, modification of footings, and retrofitting of columns.
07/26/2010 Final Design shall start prior finishing the NEPA Document. The initial seismic strategy was performed under related project 5938(037).
05/07/2015 This request is for additional $647,685 federal STP Flex funds as post-programming in PE phase to complete all required environmental studies, and subsequently final design. Final design shall not begin prior to NEPA environmental clearance. Agreement end date = 9/30/2019.
05/14/2015 Agreement End Date: 09/30/2019

FEDERAL REMARKS

AUTHORIZATION

AUTHORIZATION TO PROCEED WITH REQUEST: OTH
FOR: ADJUST PE COST
DOCUMENT TYPE: AMOD

PREPARED IN FADS BY: SERRANO, JESUS — ON 05/07/2015 948-3689
REVIEWED IN FADS BY: SAFAIE, FRANK — ON 05/14/2015 653-5345
SUBMITTED IN FADS BY: KE, RICHARD — ON 05/18/2015 FOR CALTRANS
PROCESSED IN FADS BY: HUEY, SHUN — ON 05/18/2015 FOR FHWA
APPROVED IN FMIS BY: MARY CUNNINGHAM — ON 05/27/2015