

AMENDMENT NO. 4

CITY OF CHICO - PROFESSIONAL SERVICES AGREEMENT

AGREEMENT DATED June 12, 2017

BETWEEN CITY OF CHICO

AND

MARK THOMAS & COMPANY, INC.  
Consultant

POMONA AVENUE BRIDGE REHABILITATION/REPLACEMENT:  
DESIGN & ENVIRONMENTAL SERVICES  
Project Title

300-000-8800/50233-300-4140  
Budget Account No.

**THIS PROFESSIONAL SERVICES AGREEMENT AMENDMENT** (Amendment) is entered into on June 24, 2022, between the City of Chico, a municipal corporation under the laws of the State of California (City), and Mark Thomas & Company, Inc., (Consultant). On June 12, 2017, City and Consultant entered into "City of Chico - Professional Services Agreement" (Agreement). The provisions of the Agreement are hereby amended as follows:

1. Exhibit B is hereby superseded and replaced by revised Pages B1-R4 through B22-R4 attached hereto.
2. Exhibit C is hereby superseded and replaced by revised Pages C1-R4 through C13-R4 attached hereto.
3. All other provisions of the Agreement shall remain in full force and effect.

CITY:



Paul Hahn, Interim City Manager\*

CONSULTANT:



By: M. Matt Brogan

Title Principal/Vice President

\*Authorized pursuant to Section 3.08.060 of the Chico Municipal Code

APPROVED AS TO FORM:



Vincent C. Ewing, City Attorney\*

APPROVED AS TO CONTENT:



Leigh Ann Sutton, Public Works  
Director, Engineering

\*Pursuant to The Charter of the  
City of Chico, Section 906(D)

REVIEWED AS TO CONTENT:



Barbara Martin, Interim Administrative Services Director\*

\*Reviewed by Finance and Information Systems

**AMENDMENT NO. 4**

**CITY OF CHICO - PROFESSIONAL SERVICES AGREEMENT**

MARK THOMAS & COMPANY, INC.

Architect/Consultant/Engineer

POMONA AVENUE BRIDGE REHABILITATION/REPLACEMENT:

DESIGN & ENVIRONMENTAL SERVICES

Project Title

300-000-8800/50233-300-4140

Budget Account No.

AMENDED

EXHIBIT B

SCOPE OF PROFESSIONAL SERVICES - BASIC: COMPLETION SCHEDULE

**Amendment No. 4 Services (in bold):**

Background

The Pomona Avenue bridge over Little Chico Creek is located at the southwest edge of the City limits. Pomona Avenue is a two-lane local road that stretches 0.5 miles from Miller Avenue/West 5<sup>th</sup> Avenue at its west terminus to Dayton Road at its east terminus. The bridge provides the South Campus Neighborhood access over Little Chico Creek.

Key Project considerations are shown below:

Hydraulics

Little Chico Creek is located within a Federal Emergency Management Agency (FEMA) designated floodplain. According to FEMA, the 100-year floodplain is approximately 2,400 feet wide at the Project site, and Pomona Avenue, with the exception of the bridge, is overtopped over its entire length. The existing structure provides slightly less than two feet of freeboard over the 100-year water surface elevation (WSE). FEMA's requirement is that the Project have no impact to the WSE.

Little Chico Creek is also within the jurisdiction of the Central Valley Flood Protection Board (CVFPB), and an encroachment permit will be required to proceed with the construction. The CVFPB's design standards will govern the work within the channel. Most notably, the CVFPB has established that bridges in urban areas are required to have three feet of freeboard over the 200-year WSE. In order to meet this requirement, the roadway profile would need to be raised approximately two feet. Caltrans District 3 Local Assistance is unlikely to approve funding to raise the roadway profile when the approach roadways are

overtopped. A variance will need to be requested from the CVFPB.

### Replacement Versus Rehabilitation

Due to the sufficiency rating 59.2, the bridge is currently programmed for rehabilitation in the HBP. The existing bridge roadway width of 20'-4" is substandard and needs to be widened to accommodate American Association of State Highway and Transportation Officials (AASHTO) minimum requirements of ten-foot lanes with five-foot shoulders. At 98 years old, the Pomona Avenue bridge is the oldest bridge within the City. Widening and rehabilitating the existing structure will require extensive seismic retrofitting. The bridge as-built plan shows poor reinforcement throughout the structure, especially within the bridge columns; inadequately braced, tall, slender columns subject to buckling; and undersized spread footings which have experienced long-term scour issues. Bridge rehabilitation would include strengthening of the reinforced "T" girders through fiber reinforced polymer (FRP) wrapping, construction of infill pier walls, and substantial footing retrofit. It is expected that the cost of rehabilitating the bridge and constructing a sliver widening will exceed the cost of bridge replacement. The Consultant shall prepare a cost comparison analysis to substantiate bridge replacement as the preferred alternative. The new structure is anticipated to be approximately 75 feet long in order to construct the new abutments further up the creek banks and behind the existing abutments. Given the bridge length and the need to minimize the structure depth for hydraulic requirements, viable replacement structure alternatives include cast-in-place post-tensioned concrete slab, precast pre stressed "I" girder, and cast-in-lace reinforced concrete slab.

Debris build-up has been a long-standing maintenance item at the bridge site and has contributed to scour issues at Abutment 4 and Pier 3. This scope of services anticipates that a clear span replacement structure will alleviate this issue and provide improved hydraulic conveyance at the crossing.

### Roadway Alignment and Profile

This scope of services recognizes two widening strategies for the Pomona Avenue bridge. The first option would hold the southerly edge of deck and widen to the north. The benefit of this option is that the new improvements would match up well with the existing curb, gutter, and sidewalk on the northwest side of the bridge. The downside to widening solely to the north is the resulting property impacts. The existing driveways at 915 and 921 Pomona Avenue would require major reconstruction and would change the character of the existing front yards.

The second option is to widen the existing bridge symmetrically. While the construction would be more cumbersome, there are clear benefits from a right-of-way and property-impact standpoint; and this scope of services recognizes this option as the preferred alternative. The south side of Pomona Avenue has more right-of-way room to accommodate the widened roadway which would limit the right-of-way needs in this area to Temporary Construction Easements (TCEs) only. Furthermore, property impacts such as driveway reconstruction and mailbox relocations would be spread more evenly among the affected parcels. With this approach, no one owner would feel singled out and public opposition would be minimized.

Since there is a strong case for replacing the Pomona Avenue bridge the vertical alignment (profile) has also been reviewed. Using the topographic surveys the Consultant completed in 2012, the Consultant developed an existing ground profile along the centerline of Pomona Avenue to determine if the profile meets current AASHTO standards for sight distance and vertical curve length. Assuming a design speed of 25 mile per hour (mph), it was determined that the profile does meet standards and no major reconstruction of Pomona Avenue will be required. Based on this review, this scope of services anticipates that the approach roadways will fall within fundable limits under HBP.

### Utilities

Based on Project base mapping and site visits, the following utilities have been documented at the Pomona Avenue bridge site:

- *Overhead Joint Poles* - There are existing overhead pole lines along Pomona Avenue carrying PG&E electric, AT&T telephone, and Comcast cable. The PG&E and Comcast lines terminate on either side of the bridge and provide service to the adjacent properties. The AT&T telephone line continues across Little Chico Creek and Pomona Avenue diagonally over the bridge. This line will need to be reviewed for vertical clearance requirements once the new bridge profile is set. If the lines need to be raised, then the poles on either side of the creek will need to be replaced.
- *PG&E Gas* - There is an existing four-inch gas main running along the north side of Pomona Avenue and is attached to the existing bridge. This main will need to be relocated and reattached to the new structure.
- *California Water* - There is an existing six-inch water main running along the north side of Pomona Avenue and is attached to the existing bridge. This main will need to be relocated and reattached to the new structure.
- *Sanitary Sewer* - There are two 33-inch sanitary sewer lines running along Pomona Avenue which continue under Little Chico Creek. There is a large sewer manhole structure on the northeast corner of the bridge that will require adjustment with the new Project. With bridge replacement, it would be easier to keep the sewer lines in place because the abutment foundations can be designed to span the sewer pipelines.

### Scope of Professional Services - Basic

The Consultant shall provide overall management of the project, including approvals or preliminary engineering, and coordination with the City and other stakeholders. The professional services as follows:

## TASK 1.0 PROJECT MANAGEMENT

Project management shall be conducted under this task. This task shall include managing subconsultant's (Carollo) project team, the scope of work, the project schedule and budget, and the coordination of, and documentation of, project meetings led by Carollo. The project management task shall include Carollo's quality management program and providing monthly progress reports to Consultant to accompany the invoices for the services provided by Carollo related to the project. There are three subtasks under project management.

### 1.0 Project Administration

Subconsultant shall administer the project to maintain project schedule and budget. The project progress and budget status shall be included in monthly progress reports that shall be attached to billing invoices to Consultant. Additionally, the monthly progress reports shall include a list of work completed for the time period, meeting notes for all meetings led by Carollo during the time period, and an updated project design decision log.

### 1.1 Project Meetings

The Consultant shall coordinate a project kick-off meeting with the City and design team to discuss the project background, scope, concepts, schedule, project management and issues with stakeholders. The Consultant shall participate in a field review meeting and a Preliminary Environmental Study (PES) field review with the City, Caltrans, and design team in order to gain consensus on the project requirements necessary to comply with federal and state laws. The field meeting will allow the project team to become familiar with the project site, check for any conditions that would be affected by construction and begin discussion of environmental considerations.

Project Development Team (PDT) meetings will be held at the City offices. A total of eighteen (18) PDT meetings are proposed with this scope of work. The purpose of the PDT meetings is to provide a forum to share project information, identify critical issues, make decisions, assign project tasks, identify design criteria, or any other items critical to project delivery. The Consultant shall prepare agendas for each meeting and distribute them to the PDT prior to each meeting. The Consultant shall facilitate meetings as applicable and prepare meeting minutes with action items.

Carollo shall coordinate the project tasks related to the inverted siphon system between Consultant, City and other project participants as required through project meetings. Meetings shall be conducted virtually using a platform agreeable to Consultant and the City. Carollo shall prepare an agenda and meeting notes for each meeting that it leads. Planned project meetings shall include the following:

- Inverted Siphon Hydraulic Analysis Review Meeting
- Inverted Siphon Preliminary Design Review Meeting
- Pre-Bid Meeting
- Pre-Construction Meeting

### 1.2 Project Management

The Consultant shall provide management of subconsultants in the performance of their work. Management activities shall also include development and maintenance of a critical

path method (CPM) design schedule and progress reports to be distributed monthly. The schedule will be updated as progress is made, with critical path activities clearly shown for team review purposes. The schedule and billings shall be submitted in the form and in sufficient detail to track the project status and contract expenditures as outlined by the City at the beginning of the project.

### 1.3 Quality Assurance/Quality Control/Quality Management

The Consultant's Quality Assurance/Quality Control plan consists of established procedures for performing the work (which are reassessed with each project), including methods for design calculations, establishing appropriate levels of design development for intermediate submittals, identification of required plan checks, design checklists, and methods of project documentation.

Our QC/QA Manager will implement and maintain these quality control procedures during the preparation of plans and documents throughout design.

Carollo shall implement and maintain the Quality Management Program for the project. This program is based on the concept of continually improving quality by identifying and correcting problems, eliminating inefficiency, reducing variability, and increasing performance. There are three main components of quality management that Carollo shall apply to the project including planning, monitoring, and reporting. Each one of these components shall be reviewed monthly and any necessary adjustments to the project shall be made to address the issues at hand.

#### *Task 1 Deliverables:*

- *Meeting Agendas and Minutes*
- *Project Schedule*
- *Quality Control Documents*
- *Monthly Progress Reports*
- *Meeting Agendas and Notes for Carollo Lead Meetings*

## TASK 2.0 PRELIMINARY ENGINEERING

### 2.1 Base Mapping Review and Site Reconnaissance

The Consultant shall supplement field surveys already completed. All record maps will be obtained by the Consultant and the City will provide title reports including all vesting and back up deeds, for all properties that will be impacted by acquisitions. The Consultant shall determine right of way, boundary and property lines within the project limits.

### 2.2 Conceptual Layout Plans

The Consultant shall prepare conceptual geometric plans (including horizontal alignment, vertical profile, and typical roadway sections) for review by the City. Two roadway alternatives are anticipated for study with selection of one alternative by the City to carry forward into design. Concurrence from Caltrans Local Assistance will be required to document approval of the roadway cross-section and approach limits for approved HBP funding. If necessary, The Consultant shall prepare a Funding Justification Fact Sheet that describes the various project components for participation in the federally funded Highway Bridge Program (HBP). This could include roadway approach limits beyond the traditional limits as well as unique bridge construction techniques for accelerated bridge construction.

2.3 Rehabilitation vs. Replacement Strategy Report/Structure Type Selection Report  
The Consultant shall coordinate with the City and Caltrans to determine the level of detail required for the rehabilitation vs. replacement. It is anticipated that a straight cost comparison will be sufficient when comparing the rehabilitation and widening option to the replacement option, but a LCCA may be necessary depending on the proposed improvements. The cost comparison analyses will include both bridge-only costs as well as total (bridge plus roadway approach) cost estimates.

The Strategy Report will also serve as the structure type selection document. The Consultant shall work with the City to determine the best suited structure type for the project. Up to two different alternatives will be presented in the report, which will include a General Plan, Foundation Plan, and General Plan Estimate for each structure type. The report will discuss the advantages and disadvantages of the alternatives and will address geotechnical, hydraulic, and environmental issues as well as costs. Approval of the Strategy Report will be required from Caltrans Structure Local Assistance.

#### 2.4 Preliminary Cost Estimate

The Consultant shall prepare a preliminary cost estimate and quantity calculations to accompany the conceptual geometric plans.

#### 2.5 Geotechnical Analysis and Report

##### 2.5.1 Preliminary Foundation Memorandum

CAInc will prepare a Preliminary Foundation Memorandum as part of alternatives analysis, Type Selection and preliminary cost estimates. The memoranda will be based on available subsurface data (including nearby City and/or Caltrans bridges), as-built drawings, published geologic mapping and seismicity data, aerial photographs, preliminary project data, and a site review. No subsurface exploration will be completed for this task.

The Preliminary Foundation Memoranda will summarize anticipated earth materials and conditions based on reference data and site exposures; provide seismic input parameters consistent with current Caltrans practice; discuss roadway approaches and pavement options; and discuss foundation types, channel scour, and liquefaction potential.

##### 2.5.2 Foundation Investigations

CAInc will perform a site-specific foundation study to evaluate the subsurface conditions, assess existing foundation support, and design new structure foundations. The Foundation Reports will include two test borings - one at each abutment - extended to depths approximately 50-70 feet below channel bottom. We expect to encounter sandy clay, silty sand, and clayey sand at the project site. For approach roadway design, CAInc will collect a bulk sample from the roadway approach for laboratory testing.

Laboratory testing will likely include moisture content, unit weight, direct shear or unconfined compressive strength, sieve analysis, plasticity index, soil corrosion, and R-value for pavement design.



The Foundation Report will include a summary of the subsurface exploration; field and laboratory soils testing; "Log of Test Borings" drawings; seismic design criteria; liquefaction evaluation ; corrosion evaluation; foundation recommendations per current Caltrans procedures; approach earthwork recommendations with pavement sections; and construction considerations.

## 2.6 Hydrology/Hydraulic Analysis and Report **and Updating Existing Hydraulic Model**

### 2.6.1 Information Gathering and Field Review

Avila will gather and review existing information and conduct project field review including:

- Bridge maintenance records for the existing and adjacent bridges
- Survey request outlining the location and extent of cross section near the bridge necessary to create the HEC-RAS model
- Request HEC-2 information from the Federal Emergency Management Agency to be sent through the City of Chico

#### 2.6.1a Data Collection and Review

- Carollo shall collect and review flow rate related data to update the model to current flow rates as well as for future flow rates. Flow rates of interest shall include the minimum flowrate, the average day dry weather flow rate, and the peak hour flow rate. The required data includes, but is not limited to, current and future land use and zoning, and treatment plant influent rates over the last five years.
- Carollo shall also request the City's current GIS database and shape files to identify wastewater collection system changes from 2013 and shall update the hydraulic model accordingly.
- Carollo shall review the data to establish the flow rate design criteria for the inverted siphon system.

#### 2.6.2 Hydrology & Hydraulic Analysis

Avila will estimate discharge at the site using streamstats to check the FEMA discharge estimates. A 200-year discharge will be estimated to allow permitting with the CVFPB.

Based on survey information obtained from the survey request noted above and boundary conditions obtained from FEMA, Avila will set up an existing conditions HEC-RAS model of the bridge reach. Calibration data will be researched to determine if any high-water elevations were documented for the flood of record. The proposed bridge will be modeled to determine the impact to the water surface elevation and velocity. The model will also incorporate any encroachment from bridge approach fills.

The hydraulic variables (water surface elevation, velocity etc.) will be determined for the design discharge, 50-, 100-year discharges estimated above. Results from the hydraulic analysis will be provided in both tabular as well as graphical output formats.

#### 2.6.2a Update Hydraulic Model

- Using the updated flow rates and collection system modifications, Carollo shall update and calibrate the existing hydraulic model based on the data collected and reviewed in Task 2.6.1a.

#### 2.6.2b Inverted Siphon Hydraulic Analysis

- Carollo shall use the hydraulic model updated in Task 2.6.2a to perform a hydraulic analysis of the inverted siphon improvements to establish the recommended configuration and to size the pipelines of the siphon system. This effort shall also size the upstream flow control structure and set the elevations of the weirs within the structure. Carollo shall conduct a meeting to present to Consultant and the City the recommended inverted siphon improvements.

#### 2.6.2c Prepare Technical Memorandum No. 1

- Carollo shall prepare Technical Memorandum No. 1 – Inverted Siphon Hydraulic Analysis. The memorandum shall present a summary of findings of the hydraulic analysis task. The memorandum shall also serve as the basis of design for the inverted siphon. A draft version of the memorandum shall be provided to Consultant and the City for review and comment. A final version of the memorandum shall be prepared incorporating any comments received.

#### 2.6.3 Scour and Bank Protection

Avila will review maintenance records for the existing and adjacent bridges to determine if the stream has aggraded or degraded over time. Contraction and abutment scour will be estimated using the methods described in the Federal Highway Administration (FHWA) Publication HEC- 18, Evaluating Scour at Bridges. It is assumed that degradation estimates will be straight line extrapolation using best available data if no numeric sediment transport models are available.

#### 2.6.4 Draft & Final Hydraulic Report

Avila will complete a Draft and Final Hydraulic Report documenting the hydrology, hydraulics and scour. Avila will revise the Draft Hydraulic Report based on comments received by the City and the Consultant.

#### 2.6.5 Location Hydraulic Study and Summary Floodplain Encroachment Report

Avila will complete items 3, 4, 5, 7 and 9 of the Floodplain Evaluation Report. It is assumed that the bridge will not cause a significant encroachment into the floodplain or change in the water surface elevation; if a significant encroachment into the floodplain is found, a separate task order will be necessary. Survey information for adjacent buildings will be needed to determine the potential impact of the bridge replacement on adjacent insurable structures. It is assumed that there will be no significant change to the Base Flood Elevations (BFEs) and that no Conditional Letter of Map Revision (CLOMR) will be required; if a CLOMR is required, a separate task order will be required.

2.6.6 Location Hydraulic Study and Summary Floodplain Encroachment Report  
Avila will provide project management for the project. This includes attending conference calls and performing QA/QC for the project.

## 2.7 Utility Coordination

The Consultant shall provide utility coordination for the project. Due to the federal funding associated with the project, utility coordination services will be conducted in general conformance with Caltrans Local Assistance and Utility Relocation Manuals.

*Utility "A" Letters* - The Consultant shall send letters to utility companies with facilities in the area of the project, requesting copies of their existing facility maps. These maps will become the basis of the project utility mapping.

*Conflict Mapping* - Using the 65% plan package, The Consultant shall prepare conflict mapping ("B" Plans) and "B" Letters for City review. Two copies of the conflict mapping will be sent to each utility showing their facilities and the anticipated conflicts. The Consultant shall draft signature-ready utility notification letters to utility companies for City signatures.

Utility Notification letters will identify limits of relocation and proportionate cost sharing.

*Relocation Coordination* - The Consultant shall follow the Caltrans process for utility relocations which includes: Record of Investigation (ROI), Claim Letters, Utility Agreements (UA), and Notice to Owners (NTO), prior to completing the Utility Certification.

The Consultant shall work with the City to finalize all utility agreements and certifications to satisfy City requirements. This task includes reviewing relocation agreements for proper charges and fees and negotiating as necessary to ensure correct advances, refunds and reimbursements. Final utility agreements will be included in the Right of Way Certification package.

When the relocation plans are received, the Consultant shall check the relocation design against the latest project plans for conflicts. The Consultant shall then send a copy of the Final Plans ("C" Plans) along with a Notice to Owner (Caltrans Exhibit 14-d in the Local Assistance Procedures Manual) directing the utility company to initiate relocation construction. It is assumed that these designs will be provided by the private utility company.

Depending on the proximity to potential physical conflicts, potholing of existing underground facilities may be necessary to positively locate the utility. If this is determined to be the case, the Consultant shall submit an amendment request to cover this additional work.

### *Task 2 Deliverables:*

- *Conceptual Geometric Drawings*
- *Rehabilitation vs. Replacement Strategy Report/Structure Type Selection Report*
- *30% Preliminary Cost Estimate*
- *Preliminary Foundation Memoranda*
- *Draft & Final Foundation Report*

- *Draft & Final Hydraulic Report*
- *Location Hydraulic Study and Floodplain Encroachment Report*
- *Utility Relocation - Utility "A", "B" & "C" Letters, Conflict Mapping, ROI, NTO, UA's*
- *Updated hydraulic model*
- *Draft Technical Memorandum No. 1 – Inverted Siphon Hydraulic Analysis*
- *Final Technical Memorandum No. 1 – Inverted Siphon Hydraulic Analysis*

## TASK 3.0 PUBLIC OUTREACH

### 3.1 Project Notification Letters

The Consultant shall work with the City to develop a public outreach strategy to guide outreach activities. The Consultant shall prepare a project fact sheet outlining the reasons for the project, what the community can expect from the project process, the schedule for the project and ways to communicate to the project team via City staff.

Ahead of the first public meeting, The Consultant shall prepare a master announcement notification to be reproduced and distributed to invitees by City staff 2-3 weeks prior to the meeting date. It is assumed that the City will develop the outreach mailing list and complete the mailing. All postage and materials related to a community mailing will be the responsibility of the City.

### 3.2 Public Meeting Attendance

The Consultant shall work with the City to confirm public meeting objectives, finalize the meeting format and develop related materials to engage the public in conversations about the bridge replacement. The public meetings will be held at locations determined by the City and it is assumed that the City will secure the facilities for use.

The Consultant shall facilitate an open-house format public workshop. Graphics developed in the preliminary engineering phase will be presented at the workshop after a team introduction and project overview. The Consultant shall prepare the meeting exhibits, presentation and handout materials. Three public meetings are assumed.

#### *Task 3 Deliverables:*

- *Project Fact Sheet and Meeting Announcement*
- *Materials (handouts, exhibit boards, presentations) for public meetings*
- *Public Meeting Attendance (3 Meetings)*

## TASK 4.0 ENVIRONMENTAL CLEARANCE

### 4.1 Preliminary Environmental Study (PES) Form

Utilizing the updated field review process as outlined in Chapter 7 of the Local Assistance Procedures manual (July 2015), Gallaway will coordinate the field review and preparation of the PES forms for the bridge project.

### 4.2 Technical Studies

Gallaway anticipates the need for a Natural Environment Study, Biological Assessment, Delineation of Waters of the U.S., and Cultural studies to be prepared for the bridge. If during the design process Gallaway determines that potential impacts are minimized or avoided, then we will consult with Caltrans to prepare MINES and other more appropriate

technical studies.

#### 4.2.1 Natural Environmental Study (NES)

Gallaway will prepare a draft NES following field surveys of the Biological Study Areas (BSA). The NES documents will be prepared taking into consideration the information obtained from the respective wetland delineations, field surveys, project specific impacts, location of staging areas, and mitigation. Based on our recent site visit and preliminary review of the California Natural Diversity Database (CNDDDB), it appears that elderberry bushes occur in close proximity to the bridge structure. There is also suitable habitat for state species of special concern, including migratory birds and raptors at the site. Therefore, compensatory mitigation in addition to site specific avoidance and minimization measures can be expected. Due to the potential for impacts to federally listed species, the preparation of Biological Assessments will be necessary and is discussed further in Task 4.2.2 below.

Gallaway will conduct botanical and biological surveys, including migratory bird surveys, per California Department of Fish and Wildlife (CDFW), California Natural Plant Society (CNPS), and all other appropriate protocols. Gallaway Enterprises will document all vegetation communities, plant species observed on-site, and will report any sensitive species per CNPS and CDFW guidelines to the California Natural Diversity Database. The NES report will follow Caltrans' most recent guidance and document formats, currently the October 13, 2014 version. Gallaway will coordinate with the Consultant, the City, and Caltrans to ensure consistency in the project description between all associated documents.

#### 4.2.2 Biological Assessment (BA)

Due to the presence of elderberry shrubs, the host plant for the federally listed valley elderberry longhorn beetle (VELB) Gallaway will prepare a BA for the specific use in assisting the FHWA with Section 7 consultation per the Endangered Species Act. Gallaway will prepare a BA that addresses all components of the project. In situations where the project design allows, Gallaway will work with Caltrans to make a "no affect" determination with regards to potential impacts to federally listed valley elderberry longhorn beetle (VELB). Gallaway will conduct protocol level surveys to determine the presence or absence of VELB. Information contained within the BA includes species accounts, description of action area, results of our impacts analysis, incorporation of other technical studies such as drainage, hydrology, topographic, protocol level surveys, and project specific mitigation strategy. If determined necessary, Gallaway will be available to meet with the representatives of the USFWS to respond to questions and/or conduct a site visit.

#### 4.2.3 Delineation of Waters of the United States

Delineations of Waters of the U.S. are required if jurisdictional waters occur within the project's boundaries. All waters of the United States that meet the US Army Corps of Engineers (USACE) criteria will be delineated within the APE. For the purpose of determining a delineation study area for federally funded projects, Gallaway utilizes the limits of the APE so that there is consistency Section 106 of the National Historic Preservation Act. Gallaway will obtain aerial photography of the site, using readily available resources. Topography for the project area will be supplied by the

Consultant, the City or, if not available, USGS topo will be used. All wetland resources will be mapped according to USACE 2012 minimum mapping standards. A formal wetland delineation report prepared per the 1987 Wetland Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (2008) will be submitted. The delineations will be compliant with the Minimum Standards for Acceptance of Aquatic Resource Delineation Reports which becomes effective on January 1, 2016.

#### 4.2.4 NHPA Section 106 Documentation

Gallaway will contract with Genesis Society to prepare the ASR and HPSR documentation. It does not appear that the bridge has been identified as a historical resource and per the Caltrans structural maintenance and investigations list from July 2015, the bridge is identified as not being eligible for the National Register of historic places. Therefore, the need for a Historical Resources Evaluation Report (HRER) is not anticipated. Genesis Society will complete the following:

- Conduct Records Searches involving County Records maintained by the Northeast Information Center (NEIC) at CSU, Chico.
- Consult with the Native American Heritage Commission regarding Sacred Land listings and with local Native American representatives for information they may provide concerning prehistoric sites and possible traditional use areas within or near the APE.
- Conduct pedestrian archaeological survey (for prehistoric and historic archaeological sites) within the APE.
- Prepare an ASR and HPSR documentation, including relevant Primary Records (State DP 523 forms) for prehistoric and historic-era archaeological sites identified during the pedestrian field survey.
- Deliver Final inventory reports to NEIC and Gallaway Enterprises.

It is assumed that no other built environmental resource other than the bridge will need to be evaluated as part of the Section 106 documentation. In the event that additional historic documentation is required, additional scoping and task identification will be required.

#### 4.2.5 Initial Site Assessment (ISA)

CAInc will perform the following tasks to provide an ISA for the bridge to evaluate the planned improvement location and adjacent properties for evidence of recognized environmental conditions (RECs) and/or potential RECs that may significantly impact the project.

- Review and discuss the projects with the design team.
- Review available project documents and reports including existing ISA/ESA reports for nearby projects, APN parcel maps, site geology and ground water data. We will review this information for evidence of suspected or known contamination/hazardous materials issues (such as pesticide usage, industrial parks, orchards, etc.).
- Conduct a limited site reconnaissance to observe current land use and indications of potential contamination at the site, and to view publicly accessible portions of the adjacent properties.
- Review historical aerial photographs, topographic maps, and soil maps of the sites and surrounding properties for indications of site use and potential sources of contamination.

- Perform federal, state, and city records review for indications of the use, misuse, or storage of hazardous and/or potentially hazardous materials on or near the sites. The federal, state, and city database searches will be provided by a professional record check service.
- Based on the results of the database search, site review, land use and existing assessments, CAInc will determine the risk of potential hazardous materials within and adjacent to the project areas.
- Prepare a report summarizing the findings of our review, site reconnaissance, property owner interviews, historical photograph evaluation, and regulatory records review. We will address identified potential contamination and hazardous material impacts to provide recommendations and determine additional investigation and analysis, if necessary.

#### 4.3 CEQA/NEPA Compliance

Once the preferred project alternative is selected, Gallaway will prepare an Initial Study (IS) to determine project impacts and level of significance for the project. Based on the Request for Proposal, Addendum 1, the City anticipates the preparation of an Initial Study/Mitigated Negative Declaration for each project. By using the project alternative screening process and early identification of potential impacts, the project design and appropriate mitigation development may reduce project impacts to a less than significant level. If there are no significant, unmitigable environmental impacts or significant public controversy associated with the project, a Mitigated Negative Declaration (MND) will be prepared in compliance with CEQA. Gallaway will assist the City in complying with CEQA submittal and noticing responsibilities, including the preparation of CEQA public notices to be filed by the City with the Butte County Clerk Recorder's Office and State Clearinghouse (i.e. NOI and NOC) and published in newspaper(s) in local general circulation. Payment of CEQA filing fees and costs associated with document reproductions, publishing of public notices in newspapers, internal distribution, and mailing is the responsibility of the City. Gallaway will prepare up to five (5) written responses to public inquiries/input received during the IS/MND 30-day public comment period and a Notice of Determination (NOD) for the City to file with County Clerk and State Clearinghouse.

In regards to NEPA clearance, Caltrans as the FHWA designated Lead Agency and responsible agency under the Highway Bridge Program typically handles all NEPA documentation utilizing supporting technical studies such as the NES, WD, and the ASR/HPSR. Gallaway will ensure that all technical studies comply with Caltrans and NEPA standards. The Consultant shall coordinate with Caltrans on the delivery of the NEPA document.

#### 4.4 Permitting

Gallaway anticipates the need for a Clean Water Act (CWA) Section 404 Nationwide Permit from the USACE, a CWA Section 401 Water Quality Certification from the Regional Water Quality Control Board, a CWA Section 1600 Streambed Alteration Agreement from the California Department of Fish and Wildlife, and an encroachment permit from the Central Valley Flood Protection Board. Each of these permitting tasks is further described below.

##### 4.4.1 Section 404 USACE Permit

Projects such as the Pomona Avenue Bridge Replacement are generally covered by

Nationwide Permit (NWP) 14 (Linear Transportation Projects). NWP 14 applies to activities required for the construction, expansion, modification, or improvement of linear transportation project in Waters of the U.S. Currently, for linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than ½ acre of Waters of the U.S. After bridge project plans are further refined and final project scope identified, the NWP 3 (Maintenance) or NWP 33 (Temporary Construction, Access, and Dewatering) may be the more appropriate permitting approach for bridge preventative maintenance / rehabilitation projects. Gallaway will prepare the appropriate USACE permit application based on the final design and scope of work when it becomes available.

4.4.2 Section 401 Regional Water Quality Control Board (RWQCB) Certification  
Gallaway will prepare the CWA § 401 applications to obtain the Water Quality Certification from the RWQCB. The application cannot be submitted until the lead agency has made a determination pursuant to CEQA and the Notice of Determination (NOD) has been filed with the State Clearinghouse.

4.4.3 Section 1600 California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement  
Gallaway will prepare the CWA § 1600 application for the Streambed Alteration Agreement from the CDFW. Construction drawings at greater than 60% complete for improvements that result in impacts to waters within CDFW jurisdiction will be required. Upon submission of the permit application, Gallaway may conduct a site visit with CDFW to assure that all desired information is included in our submittal. The application cannot be submitted until the CEQA documentation and NOD has been filed with the California Office of Planning and Research State Clearinghouse.

4.4.4 Central Valley Flood Protection Board Encroachment Permit  
Little Chico Creek is listed on the Title 23, Section 112, Table 8.1 of regulated streams and is also categorized as a Season 2 stream which means that it is subject to construction restrictions from November 1 to April 15. It is anticipated that the project will need a CVFPB encroachment permit. Gallaway will utilize existing information, project designs, and the results of technical studies to develop the application.

*Task 4 Deliverables:*

- *Preliminary Environmental Study Form*
- *Technical Studies listed in 4.2*
- *CEQA IS/MND*
- *Permit Applications listed in 4.4*

## TASK 5.0 CONTRACT BID DOCUMENTS

### 5.1 65% Roadway Plans

Comments from the City on the conceptual geometric plans will be addressed and incorporated into the 65% roadway plans. Responses to comments will be prepared and submitted to the City.

The roadway design will be advanced to a 65% level that will include the following plans being updated and/or prepared: Title Sheet, Typical Sections, Horizontal Control, Layouts,



Profiles, Construction Details, Drainage Plans, Utility Plans and Details, Traffic Handling and Stage Construction, Erosion Control/Water Pollution Control Plans, Pavement Delineation and Sign Plans.

#### 5.2 Structure Design (65% Unchecked Plans)

The bridge will be designed in accordance with current Caltrans Bridge Design manuals, including current Seismic Design Criteria. The design will be advanced to a 65% level (unchecked design) that will include the following plans being updated and/or prepared: General Plan, Deck Contours, Foundation Plan, Abutment Layout, Abutment Details, Bent Layout, Bent Details, Typical Section, Girder Layout, Miscellaneous Details, Retaining Wall Layout, Retaining Wall Details, and Log of Test Borings.

#### 5.3 95% Roadway Plans

Comments from the City on the 65% Plans will be addressed and incorporated into the 95% design. Responses to comments will be prepared and submitted to the City.

The roadway design will be advanced to a 95% level and will include construction areas signs sheet, additional detailing for roadway and/or driveway conforms, grading, landscape, traffic signal, lighting, and drainage details.

#### 5.4 Structure Independent Check (95% Plans)

Comments from the City on the 65% Plans will be addressed and incorporated into the 95% design. Responses to comments will be prepared and submitted to the City.

The Consultant shall perform an independent design check of the bridge plans in conformance with usual Caltrans bridge design procedures. A plan set will be marked up and provided to the bridge designer. Upon completion of the design check, discrepancies between the designer and checker will be reconciled and plans updated for preparation of final quantities, estimate and specifications.

#### 5.5 Special Provisions

The Consultant shall develop project special provisions using Caltrans Standard Special Provisions and the City's Design and Construction Standards. The special provisions will be prepared using Microsoft Word. Special provisions will be submitted at the 95% and Final submittals. The City's boilerplate contract language will be incorporated into the specifications at the 95% submittal.

#### 5.6 Estimate

The Consultant shall develop quantities and prepare construction cost estimates using the project geometrics and surfaces developed from survey information. Cost estimates will be calculated at the 65%, 95% and Final submittals.

Construction costs will be developed using current bid results from similar projects, Caltrans data base information and from Caltrans latest Construction Cost Manual. All estimates will be done in Caltrans BEES format using Microsoft Excel.

#### 5.7 Final PS&E

Comments from the City on the 95% PS&E will be addressed and incorporated into the final construction documents. Any additional detailing will be included as required. Responses to comments will be prepared and submitted to the City.

Updates to the specifications and estimate will be completed. Final contract documents will be provided to the City for project advertisement.

#### 5.8 Stormwater Pollution Prevention Plan (SWPPP)

Depending on the approved project footprint, a SWPPP may be required for this project. The SWPPP will be in compliance with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP), and in accordance with the City's Storm Water Management Plan. If required, The Consultant shall prepare the SWPPP for the project, including uploading Permit Registration Documents (PRD's) to the state-wide database of construction projects (referred to as the Storm Water Multi-Application Report Tracking System or SMARTS database). The PRD's include the Notice of Intent (NOI), a risk assessment, post construction calculations, a site map, a SWPPP, a signed certificate, and the first annual permit fee (to be paid by the City). Temporary and permanent water quality and erosion control measures will be designed using Best Management Practices (BMP), as identified on the Water Pollution Control Plans, included in the SWPPP.

#### CA STD FORMS 515115

#### 5.9 RE Pending File

The Consultant shall prepare the RE Pending File for the project. The RE file will include project correspondence and memorandums that are important for the Resident Engineer to know about decisions, etc. that were made during project development, as well as quantity calculations and technical reports. Construction Staking Notes are not included within this task.

##### *Task 5 Deliverables:*

- *Project Plans at 65%, 95%, and Final Submittals*
- *Special Provisions at 95% and Final Submittals*
- *Engineer's Estimate at 65%, 95%, and Final Submittals*
- *SWPPP*
- *RE Pending File*

#### TASK 6.0 CALTRANS FUNDING ASSISTANCE

#### 6.1 Caltrans Funding Assistance

The Consultant shall ensure compliance with Caltrans' Local Assistance Procedures Manual and work with the City to develop project approval documents for the project. The Consultant shall prepare Requests for Authorization (RFA) documents for right of way, utility relocation, and construction as the PE phase moves forward. No reimbursable work will begin on any of these subsequent phases until the City has received authorization to proceed (e76) from Caltrans. Additionally, The Consultant shall work directly with Caltrans Local Assistance on the documentation for special funding approvals when needed for the project.

##### *Task 6 Deliverables:*

- *RFA Documents*
- *Funding Approval Documents*

## TASK 7.0 RIGHT OF WAY

It is assumed that there will be two (2) parcels impacted at the structure (APN 004-510-032 and 004-510-011) requiring permanent acquisitions. All R/W activities will follow Caltrans Division of Local Assistance procedures.

### 7.1 Right of Way Engineering

Once right-of-way needs have been identified, the Consultant shall provide right-of-way appraisal maps needed for negotiations with property owners for permanent acquisition required for the project. The Consultant shall prepare one legal description and one exhibit drawing for each of the two impacted parcels. Areas of each acquisition will be calculated as well as the areas of existing encumbrances that reside within the right of way acquisition to aid Bender Rosenthal, Inc. (BRI) in appraisals and negotiations. A draft of each legal description and exhibit drawing will be submitted to the City for review and comments.

### 7.2 Right of Way Appraisals and Acquisitions

#### 7.2.1 Waiver Valuation

BRI will provide Waiver Valuations for the two impacted parcels in lieu of appraisal reports. The proposed acquisitions are estimated to be valued under \$10,000 each. As the acquisitions will be valued under \$10,000 each and the property owners are deemed willing participants in the process, BRI recommends that Waiver Valuations be completed in lieu of full appraisal reports. Per Caltrans right of way manual chapter 7.02.13, if the value of a given right of way acquisition is less than \$10,000, a Waiver Valuation can be completed. A Waiver Valuation is a 2 to 3-page document outlining how the value of the acquisition was developed. A full appraisal is roughly 50 pages with a detailed analysis of the market, comparables, and must follow stringent state and federal standards. Waiver Valuations also do not require an independent review. As Waiver Valuations may not be used in court proceedings, the criteria for completing a waiver valuation are:

- A. There is no serious question as to highest and best use.
- B. Adequate market data is available.
- C. Substantial damages and benefits are not involved.
- D. There is no substantial decrease in market value due to the presence of hazardous material/waste.

BRI presumes that a waiver valuation will be prepared for all of the acquisitions on the impacted parcels. The waiver valuations will provide sufficient information for the City to determine the just compensation for the acquisitions for a fee and with a schedule duration shorter than that of full appraisal reports.

If direction is received from the City that a parcel owner is not a willing participant in the right of way process, acquisitions will require condemnation proceedings, or just compensation will exceed \$10,000, BRI will submit an amendment request to complete a full appraisal for the parcel.

#### 7.2.2 Acquisitions

BRI proposes to develop all necessary contracts, conveyance documents and escrow instructions necessary to make offers based on client's process. BRI will prepare the

offer letter based on the "Just Compensation" value determined by the City's staff. If directed, BRI will meet with the owners and convey documents until acceptance or impasse is reached regarding necessary acquisitions and easements.

Steps within the acquisition process are outlined below and will be tailored to the City's need for services:

1. Review the project concept and design with staff and other consultants.
2. Review appraisal (Waiver), title report, maps and descriptions of the required parcel.
3. Conduct field review of the project area.
4. Prepare right-of-way contract and other acquisition documents.
5. Meet with the property owners to discuss the project in general; review of maps and legal descriptions; confirm information about occupants/owners and make the official First Written Offer to owner. Acquire tenant consent if required.
6. The acquisition task assumes a settlement by the third contact either in person or by telephone. A recommendation to client will be made after impasse has been reached.

To reach *impasse*:

- A. Go through the acquisition steps outlined; plus
- B. Make at least three contacts with owner (personal call, letter or phone call) in any combination; plus
- C. Spend up to eight hours working on the parcel acquisition.
- D. Respond to property owner inquiries verbally and in writing within two business days.

The acquisition steps when offering compensation to the property owner include:

- A. Owner accepts offer. (Close)
- B. Owner rejects offer.
  1. Owner refuses to counter. (Impasse)
  2. Owner makes counter proposal.
    - a. Client accepts counter. (Close)
    - b. Client rejects counter. (Impasse)
    - c. Client makes new offer.
      1. Owner accepts new offer. (Close)
      2. Owner does not accept new offer. (Impasse)
7. Deliver signed right-of-way contract and signed and acknowledged grant deed for closed transaction or deliver a memorandum explaining impasse.
8. Prepare a final report, including transfer of all pertinent correspondence and files to client. BRI will develop and maintain the escrow schedule, deliver documents and checks to escrow companies, review all documents for submission to escrow companies, review title and escrow documents, and apply extensive acquisition experience so that the project acquires good title and property rights necessary for the completion of the project. BRI will coordinate escrow closings and file all applicable forms and documents with the County Assessor's office. BRI will work with all parties to encourage acquisition within 30 days of the approval of the appraisal. BRI's acquisition agents will maintain a parcel diary to document all interactions with property owners and their tenants.

### 7.2.3 Right of Way Certification

Upon completion of the acquisitions, BRI will assist the City with the Right of Way

Certification, as needed. Key Staff, Brenda, Tom, and Mike are former Caltrans right of way agents, and are extremely knowledgeable about the Caltrans right of way certification process and, if requested, will work with the Caltrans staff to expedite the approval process.

*Task 7 Deliverables:*

- *Plats & Legal Descriptions - (2 parcels)*
- *Waiver Valuations - (2 parcels)*
- *Negotiation Services - (2 parcels)*
- *Permanent Acquisitions - (2 parcels)*
- *Right of Way Certification*

## TASK 8.0 BIDDING ASSISTANCE AND CONSTRUCTION SUPPORT

### 8.1 Bidding Assistance and Construction Support

The Consultant's team will provide assistance to the City during the bidding process and during construction of the project. The work may include answering bid inquiries from prospective bidders, attending pre-bid meetings, and preparing addenda to the PS&E documents during the advertisement period. During construction, the work may include responding to Requests for Information (RFIs) by the contractor, providing consultation and interpretation of the contract documents, preparing Contract Change Orders (CCOs), reviewing shop drawings, and attending construction meetings and field visits. We have assumed that a total of 150 hours is needed for this effort. The Consultant has provided a "budget " amount to be used on a time and materials basis as requested by the City. Any time spent beyond this budget will require a contract amendment.

### PROJECT ASSUMPTIONS

This scope of work has been prepared using the following assumptions:

- The project will be advertised, awarded, and administered by the City and the City will coordinate reproductions of the bid package.
- No Design Exceptions will be required.
- Bridge replacement is the preferred alternative.
- Project duration through final PS&E is 24 months.
- Title reports will be provided by the City.
- Utilization of an offsite detour or stage construction will be determined during preliminary design. Only two alternatives will be considered during the conceptual state.
- City required permits acquired by City.
- Temporarily closure of the bridge during field exploration is acceptable if necessary.
- The City will waive all fees related to encroachment permits.
- Geotechnical field crews will be allowed to work at least during the hours of 8AM

- and 5PM.
- The subsurface exploration can be performed within City right-of-way.
  - Geotechnical fieldwork will be combined with the bridge projects at Pomona Avenue and Salem Street so one drill mobilization can be accomplished for all three bridges.
  - A formal Structure Type Selection Meeting with Caltrans is not required.
  - City will prepare "front-end" (boiler plate) documentation for the specifications and assemble the technical specifications with the "front-end" documentation.
  - One project design alternative is assessed through environmental review.
  - The Consultant 's team prepares regulatory agency permit applications, but all application fees required by regulatory and resource agencies are the responsibility of the City.
  - The project will run concurrent with the bridge projects at Guynn Avenue and Salem Street so efficiencies in project management, report preparation and design development can be realized.

#### TASK 9.0 – DEVELOP PRELIMINARY DESIGN

Using the hydraulic analysis and recommended configuration and size of the pipelines of the inverted siphon of Technical Memorandum No. 1, Carollo shall develop preliminary design of the inverted siphon.

##### 9.1 Develop Preliminary Design

Carollo shall prepare scaled CAD drawings using CAD software acceptable to Consultant and City showing plan and section views of the inverted siphon system. A meeting shall be held to present the preliminary design to Consultant and City. Carollo shall modify the preliminary design accordingly based on any issues or concerns raised in the meeting.

##### 9.2 Prepare Technical Memorandum No. 2

Carollo shall prepare Technical Memorandum No. 2 – Inverted Siphon Preliminary Design. The memorandum shall present the preliminary design developed as part of Task 9.1. Carollo shall develop a construction cost estimate of the preliminary design of the inverted siphon system for inclusion in the memorandum. The memorandum shall include a description of the minimum, average, and peak flow rate operational modes. A draft version of the memorandum shall be provided to Consultant and City for review and comment. A final version of the memorandum shall be prepared incorporating any comments received.

##### *Task 9 Deliverables:*

- *Draft Technical Memorandum No. 2 – Inverted Siphon Preliminary Design*
- *Final Technical Memorandum No. 2 – Inverted Siphon Hydraulic Analysis*

#### TASK 10.0 – ADVANCE DESIGN TO 65% COMPLETE

##### 10.1 Detailed Design to 65% Complete

In Task 10.1 Carollo shall advance the preliminary design of the inverted siphon system to the

approximately 65% complete level.

#### 10.2 Prepare 65% Complete Construction Plans, Specifications, and Cost Estimate

Carollo shall prepare full size construction plans along with the technical specifications required for the inverted siphon system. Carollo shall coordinate with Consultant to assure there is no duplication of technical specifications. The cost estimate of the inverted siphon system shall be updated to reflect the 65% complete design. The 65% complete construction plans, technical specifications shall be submitted to Consultant for inclusion in their submittal to the City.

#### *Task 10 Deliverables:*

- *Inverted siphon construction plans, technical specifications, and construction cost estimate to the approximately 65% complete level.*

### TASK 11 – ADVANCE DESIGN TO 95% COMPLETE

#### 11.1 Detailed Design to 95% Complete

In Task 11.1 Carollo shall advance the design from the approximately 65% to the 95% complete level. The 95% complete level shall essentially be 100% complete allowing for any final revisions required for the 100% complete design.

#### 11.2 Prepare 95% Complete Construction Plans, Specifications and Cost Estimate

In Task 11.2 Carollo shall prepare construction plans and technical specifications of the inverted siphon system to the approximately 95% complete level and update the construction cost estimate accordingly. The 95% complete construction plans, technical specifications shall be submitted to Consultant for inclusion in their submittal to the City.

#### *Task 11 Deliverables:*

- *Inverted siphon construction plans, technical specifications, and construction cost estimate to the approximately 95% complete level.*

### TASK 12 – ADVANCE DESIGN TO 100% COMPLETE

#### 12.1 Advance Design to 100% Complete

In Task 12.1 Carollo shall advance the design from the approximately 95% to the 100% complete level.

#### 12.2 Prepare 100% Complete Construction Plans, Specifications, and Cost Estimate

The 100% complete level construction plans and technical specifications for the inverted siphon system shall be ready for contractor bidding and shall be stamped and signed by the professional engineer, licensed in the State of California, in responsible charge of the design. The 100% complete construction plans and specifications shall be submitted to Consultant for inclusion in their submittal to the City.

#### *Task 12 Deliverables:*

- *Inverted siphon construction plans, technical specifications, and construction cost estimate to the 100% complete level.*

## TASK 13 – BID PERIOD SERVICES AND ENGINEERING SERVICES DURING CONSTRUCTION

### 13.1 Bid Period Services

In Task 13.1 Carollo shall provide construction contractor bid period services. These services shall include attending a pre-bid meeting, if held, and preparation of contract addenda, associated with the inverted siphon system, if required.

### 13.2 Engineering Services During Construction

Carollo shall provide engineering services during construction including the following:

- Attendance of the pre-construction meeting
- Attendance of up to three construction progress meetings
- Prepare responses to contractor requests for information related to the inverted siphon system.
- Review and reply to contractor submittals and shop drawings related to the inverted siphon system.
- Prepare construction change orders related to the inverted siphon system.
- Prepare as-built record drawings of completed construction related to the inverted siphon system.

#### *Task 13 Deliverables:*

- *Construction contract addenda*
- *Responses to contractor requests for information*
- *Reviewed contractor submittals and shop drawings*
- *As-build record drawings of completed construction*

## ASSUMPTIONS

This scope of work is based on the following assumptions:

1. All meetings shall be virtual using a mutually agreed upon software platform.
2. All submittals to Consultant and City shall be digital in word searchable .pdf format.
3. Carollo is subject to the terms and conditions of the agreement between Consultant and City.

#### Amendment No. 1 Services

Potholing services which include utility design, permits, traffic maintenance and materials. Report including cross-sections and photographs to be submitted upon completion of services.

#### Completion Schedule

The Consultant shall complete all services outlined herein by **December 31, 2023 2025**.



**AMENDMENT NO. 4**

**CITY OF CHICO - PROFESSIONAL SERVICES AGREEMENT**

MARK THOMAS & COMPANY, INC.

Architect/Consultant/Engineer

POMONA AVENUE BRIDGE REHABILITATION/REPLACEMENT:

DESIGN & ENVIRONMENTAL SERVICES

Project Title

300-000-8800/50233-300-4140

Budget Account No.

AMENDED

EXHIBIT C

COMPENSATION

Compensation for the services shall be in accordance with the following schedule of hourly rates attached as pages C2-R4 through C13-R4. Total maximum compensation for the services outlined herein shall not exceed \$634,452.47 for services outlined in the cost proposal attached as page(s) C-9.

Monthly progress payment shall be paid based on actual work completed.

Amendment No. 1 Services:

Original Agreement: \$280,442.00

Amendment No. 1 services: \$ 15,490.00

(See Page C2-R1)

Total: \$295,232.00

Amendment No. 1 – Cost Proposal

PROJECT ESTIMATE - PREVAILING WAGE				
Potholing				
Potholes, Vacuum Excavation Unit Price	8	holes @	\$825.00	per hole \$6,600.00
Potholes Vacuum Excavation Hourly	0	hours @	\$395.00	per hole \$0.00
Pothole Exceeding 6.99 feet (if applicable)	0	feet @	\$125.00	per foot \$0.00
Subtotal:				\$6,600.00
Utility Designating				
Utility Designating – 1 Man Crew & Equipment	4	per hour	\$215.00	per hour \$860.00
Subtotal:				\$860.00
Professional Services				
Senior Project Manager	1	hours @	\$205.00	per hour \$205.00
SUE Manager	4	hours @	\$125.00	per hour \$1,000.00
CAD	2	hours @	\$85.00	per hour \$170.00
Subtotal:				\$1,375.00
Permits & Maintenance of Traffic				
Permit - City of Chico	1	each @	\$0.00	plus 10% \$0.00
Traffic Control Plans - invoiced at Cost	1	each @	\$500.00	per each \$500.00
Maintenance of Traffic Set-ups	3	each @	\$1,400.00	per each \$4,200.00
Subtotal:				\$4,700.00
Mobilization / Subsistence				
Mobilization: Per project fee	1	each @	\$800.00	per project \$800.00
Per Diem: General Services Administration Rates	5	days @	\$151.00	per day \$755.00
Subtotal:				\$1,555.00
Miscellaneous Expenses				
Aquaphalt (Asphalt Pavement Repair)	8	holes @	\$50.00	per location \$400.00
Slurry Backfill	0	locations @	\$200.00	per location \$0.00
Excess Soil Disposal	0	each @	\$150.00	per each \$0.00
USA Removal	0	cost plus	\$0.00	plus 10% \$0.00
Subtotal:				\$400.00
TOTAL:				\$15,490.00

Amendment No. 1 Total \$295,232.00

Amendment No. 2

Encumbering the remaining funds per Original Agreement: \$219,150.32

Amendment No. 2 Agreement Total: \$514,382.32

Amendment No. 3 Services:

Task Description	Requested Budget	Reallocation	Amendment No. 3 Total
Project Management	\$8,215.57	-\$8,000.00	\$215.57
Carollo – Project Management	\$20,256.00	-\$14,970.95	\$5,285.05
Carollo – Update Hydraulic Model	\$6,731.16	\$0.00	\$6,731.16
Carollo – Hydraulic Analysis	\$9,863.17	\$0.00	\$9,863.17
Carollo – Develop Preliminary Design	\$21,283.20	\$0.00	\$21,283.20
Carollo – Advance Design to 65% Complete	\$21,756.00	\$0.00	\$21,756.00
Carollo – Advance Design to 95% Complete	\$16,016.00	\$0.00	\$16,016.00
Carollo – Advance Design to 100% Complete	\$13,828.00	\$0.00	\$13,828.00
Carollo – Bidding & Construction Support	\$25,092.00	\$0.00	\$25,092.00
Totals	\$143,041.10	(\$22,970.95)	\$120,070.15

Note: Mark-ups are Not Allowed

Prime Consultant

Subconsultant

2nd Tier Subconsultant

Consultant: Mark Thomas & Company, Inc.

Project No. 300-000-8800/50233-300-4140

Contract No. \_\_\_\_\_

Date 5/17/2022

**DIRECT LABOR**

Classification/Title	Name	Range	Hours	Actual Hourly Rate	Total
Principal		\$120 - \$150		\$ 138.47	\$ -
Sr. Engineering Manager		\$99 - \$131		\$ 116.38	\$ -
Engineering Manager		\$89 - \$115		\$ 100.61	\$ -
Practice Area Leader		\$89 - \$115		\$ 100.61	\$ -
Sr. Project Manager		\$69 - \$99		\$ 83.78	\$ -
Sr. Technical Lead		\$69 - \$99		\$ 82.03	\$ -
Project Manager		\$60 - \$81		\$ 68.36	\$ -
Technical Lead		\$60 - \$81		\$ 68.36	\$ -
Sr. Project Engineer		\$51 - \$71		\$ 58.89	\$ -
Sr. Technical Engineer		\$51 - \$71		\$ 58.89	\$ -
Project Engineer		\$46 - \$65		\$ 51.53	\$ -
Design Engineer II		\$39 - \$58		\$ 44.87	\$ -
Design Engineer I		\$30 - \$51		\$ 36.81	\$ -
Planner II		\$30 - \$50		\$ 37.16	\$ -
Sr. Technician		\$36 - \$57		\$ 45.57	\$ -
Technician		\$24 - \$46		\$ 30.85	\$ -
Planner I		\$22 - \$38		\$ 29.80	\$ -
Intern		\$15 - \$35		\$ 21.03	\$ -
Survey Division Manager		\$90 - \$115		\$ 103.41	\$ -
Sr. Survey Manager		\$66 - \$90		\$ 78.17	\$ -
Survey Manager		\$57 - \$78		\$ 69.76	\$ -
Sr. Project Surveyor		\$54 - \$73		\$ 62.05	\$ -
Project Surveyor		\$49 - \$68		\$ 56.79	\$ -
Sr. Surveyor		\$40 - \$62		\$ 48.73	\$ -
Surveyor		\$35 - \$53		\$ 41.72	\$ -
Lead Survey Technician		\$46 - \$65		\$ 51.53	\$ -
Sr. Survey Technician		\$29 - \$57		\$ 41.37	\$ -
Survey Technician		\$25 - \$43		\$ 31.55	\$ -
Survey Intern		\$15 - \$35		\$ 25.94	\$ -
Single Chief*		\$47 - \$66		\$ 56.44	\$ -
Single Instrumentman*		\$43 - \$61		\$ 51.53	\$ -
Single Chainman*		\$41 - \$60		\$ 51.53	\$ -
Apprentice*		\$20 - \$55		\$ 34.00	\$ -
1 Person Field Crew*		\$47 - \$66		\$ 56.44	\$ -
2 Person Field Crew*		\$88 - \$117		\$ 103.41	\$ -
3 Person Field Crew*		\$108 - \$160		\$ 138.47	\$ -
Sr. LAUD Division Manager		\$80 - \$100		\$ 87.99	\$ -
LAUD Division Manager		\$72 - \$94		\$ 80.98	\$ -
Sr. LAUD Project Manager		\$61 - \$84		\$ 76.42	\$ -
LAUD Project Manager		\$57 - \$76		\$ 66.25	\$ -
Landscape Architect		\$35 - \$67		\$ 46.62	\$ -
Landscape Designer II		\$25 - \$55		\$ 37.16	\$ -
Landscape Designer I		\$20 - \$40		\$ 29.80	\$ -
Landscape Intern		\$15 - \$35		\$ 20.68	\$ -
District Manager-Engineer		\$95 - \$115		\$ 104.47	\$ -
Deputy District Manager		\$85 - \$110		\$ 96.05	\$ -
Operations Manager		\$75 - \$99		\$ 83.78	\$ -
Sr. Sanitary Project Engineer		\$65 - \$90		\$ 74.32	\$ -
Sanitary Project Engineer		\$61 - \$87		\$ 66.61	\$ -
Associate Sanitary Engineer		\$48 - \$70		\$ 56.44	\$ -
Assistant Sanitary Engineer		\$44 - \$62		\$ 49.08	\$ -

Sr. Inspector*		\$38 - \$57		\$ 43.82	\$ -
Inspector*		\$30 - \$50		\$ 36.11	\$ -
Inspector - Apprentice*		\$20 - \$44		\$ 25.94	\$ -
Area Manager - CM		\$102 - \$130		\$ 117.79	\$ -
Division Manager - CM		\$88 - \$112		\$ 98.16	\$ -
Sr. Project Manager - CM		\$78 - \$99		\$ 87.99	\$ -
Project Manager - CM		\$72 - \$93		\$ 79.93	\$ -
RE/Structural Representative		\$76 - \$95		\$ 78.52	\$ -
Asst. Resident Engineer*		\$57 - \$76		\$ 68.36	\$ -
Inspector - CM*		\$57 - \$76		\$ 68.36	\$ -
Office Engineer		\$40 - \$62		\$ 49.08	\$ -
Office Technician		\$20 - \$39		\$ 25.94	\$ -
Expert Witness		\$130 - \$168		\$ 154.24	\$ -
Strategic Consulting		\$130 - \$168		\$ 154.24	\$ -
Sr. Funding Specialist		\$50 - \$73		\$ 59.59	\$ -
Funding Specialist		\$40 - \$62		\$ 49.08	\$ -
Sr. Project Accountant		\$40 - \$69		\$ 57.84	\$ -
Project Accountant		\$32 - \$52		\$ 39.61	\$ -
Sr. Project Coordinator		\$36 - \$58		\$ 45.57	\$ -
Project Coordinator		\$28 - \$48		\$ 36.11	\$ -
Sr. Project Assistant		\$28 - \$48		\$ 35.76	\$ -
Project Assistant		\$20 - \$39		\$ 26.99	\$ -
Sr. Technical Writer		\$29 - \$52		\$ 41.72	\$ -
Technical Writer		\$20 - \$40		\$ 27.34	\$ -
Sr. Graphic Manager		\$47 - \$65		\$ 54.34	\$ -
Sr. Graphic Designer		\$36 - \$58		\$ 46.97	\$ -
Graphic Designer		\$31 - \$50		\$ 39.61	\$ -

**LABOR COSTS**

a) Subtotal Direct Labor Costs	\$ -
b) Anticipated Salary Increases (see page 2 for calculation)	\$ -
<b>c) TOTAL DIRECT LABOR COSTS [(a) + (b)]</b>	<b>\$ -</b>

**INDIRECT COSTS**

d) Fringe Benefits (Rate: <u>72.27%</u> )	e) Total Fringe Benefits [(c) x (d)]	\$ -
f) Overhead & G&A (Rate: <u>87.06%</u> )	g) Overhead [(c) x (f)]	\$ -
h) General & Admin (Rate: <u>          </u> )	i) Gen & Admin [(c) x (h)]	\$ -
	<b>j) TOTAL INDIRECT COSTS [(e) + (g) + (i)]</b>	<b>\$ -</b>

<b>FIXED FEE</b>	<b>k) TOTAL FIXED FEE [(c) + (j)] x fixed fee: 10%</b>	<b>\$ -</b>
------------------	--	-------------

**l) CONSULTANT'S OTHER DIRECT COSTS (ODC) - ITEMIZE (Add additional pages if necessary)**

Description of Item	Quantity	Unit	Unit Cost	Total
				\$ -
				\$ -
				\$ -

**l) TOTAL OTHER DIRECT COSTS \$ -**

**m) SUBCONSULTANTS' COSTS (Add additional pages if necessary)**

Subconsultant 1: \_\_\_\_\_  
 Subconsultant 2: \_\_\_\_\_  
 Subconsultant 3: \_\_\_\_\_  
 Subconsultant 4: \_\_\_\_\_

**m) TOTAL SUBCONSULTANTS' COSTS \$ -**

**n) TOTAL OTHER DIRECT COSTS INCLUDING SUBCONSULTANTS [(l) + (m)] \$ -**

**TOTAL COST [(c) + (j) + (k) + (n)] \$ -**

**NOTES:**

- Key personnel must be marked with an asterisk (\*) and employees that are subject to prevailing wage requirements must be marked with two asterisks (\*\*). All costs must comply with the Federal cost principles. Subconsultants will provide their own cost proposals.
- The cost proposal format shall not be amended. Indirect cost rates shall be updated on an annual basis in accordance with the consultant's annual accounting period and established by a cognizant agency or accepted by Caltrans.
- Anticipated salary increases calculation (page 2) must accompany.

**Certification of Direct Costs:**

I, the undersigned, certify to the best of my knowledge and belief that all direct costs identified on the cost proposal(s) in this contract are actual, reasonable, allowable, and allocable to the contract in accordance with the contract terms and the following requirements:

1. Generally Accepted Accounting Principles (GAAP)
2. Terms and conditions of the contract
3. Title 23 United States Code Section 112 - Letting of Contracts
4. 48 Code of Federal Regulations Part 31 - Contract Cost Principles and Procedures
5. 23 Code of Federal Regulations Part 172 - Procurement, Management and Administration of Engineering and Design Related Service
6. 48 Code of Federal Regulations Part 9904 - Cost Accounting Standards Board (when applicable)

All costs must be applied consistently and fairly to all contracts. All documentation of compliance must be retained in the project files and be in compliance with applicable federal and state requirements. Costs that are noncompliant with the federal and state requirements are not eligible for reimbursement.

Local governments are responsible for applying only cognizant agency or Caltrans accepted Indirect Cost Rate(s).

**Prime Consultant or Subconsultant Certifying:**

Name: R. Matt Brogan

Title \*: Vice President

Signature: 

Date of Certification: 05/17/2022

Email: mbrogan@markthomas.com

Phone number: (916) 381-9100

Address: 701 University Avenue, Suite 200, Sacramento, CA 95825

\* An individual executive or financial officer of the consultant's or subconsultant's organization at a level no lower than a Vice President or a Chief Financial Officer, or equivalent, who has authority to represent the financial information utilized to establish the cost proposal for the contract.

List services the consultant is providing under the proposed contract:

**SUBCONSULTANT 10-H TOTAL COSTS**

Bender Rosenthal  
Gallaway Enterprises  
Crawford & Associates  
Avila & Associates

\$ 18,001.00  
\$ 52,386.00  
\$ 32,943.00  
\$ 34,423.00

**Subconsultants Total Costs**

\$ 137,753.00

**TOTAL COSTS**

\$ 498,892.32

## COST PROPOSAL

CONTRACT No. City of Chico: Pomona Avenue Bridge  
CONSULTANT Bender Rosenthal, Inc.

Date 28-Apr-17

**DIRECT LABOR**

Classification	Name	Task	Hours	Actual/Average	
				Hourly Rate	Total
ROW Project Manager	Brenda Schimpf	PM	8.0 @	\$ 76.92	\$ 615.36
Appraisal Manager	Mike Lahadny	Waivers	8.0 @	\$ 65.10	520.80
Appraiser	TBD	Waivers	36.0 @	\$ 42.26	\$ 1,521.36
Acquisition Manger	Tom Ganyon	Acquisitions	5.0 @	\$ 69.00	\$ 414.00
Acquisition Agents	TBD	Acquisitions	50.0 @	\$ 54.00	\$ 2,700.00
Researchers	TBD	Waivers/Support	28.0 @	\$ 26.83	\$ 751.24
Administrator / Clerical	TBD	Support	18.0 @	\$ 24.86	\$ 447.48

**Subtotal Direct Labor Costs**    \$ 6,970.24

**Total Direct Labor Costs**    \$ 6,970.24

**FRINGE BENEFITS**

Fringe Benefits	Rate		Total	
	65.20%	\$	4,544.60	
<b>Total Fringe Benefits</b>				<b>\$ 4,544.60</b>

**INDIRECT COSTS**

Overhead/General and Administrative	Rate		Total	
	43.18%	\$	3,009.75	
<b>Total Indirect Costs</b>				<b>\$ 3,009.75</b>

**FEE @ 10%**

**\$ 1,452.46**

**OTHER COSTS**

Travel & Per Diem		\$	440.00	
Preliminary Title Reports	2 at	\$ 750.00	1,500.00	
Shipping			\$ 83.95	
<b>Total Other Costs</b>				<b>\$ 2,023.95</b>

**TOTAL COSTS**

**\$ 18,001.00**



**COST PROPOSAL**

CONTRACT No. \_\_\_\_\_ Date 27-Apr-17  
 CONSULTANT Galloway Enterprises, Inc

**DIRECT LABOR**

Classification	Name	Range	Hours	Initial Hourly Rate	Total
Sr. Biologist	<u>Jody Galloway</u>		<u>48.0 @</u>	<u>\$ 55.00</u>	<u>\$ 2,640.00</u>
Sr. Planner/Project Manager	<u>Kevin Sevier</u>		<u>142.0 @</u>	<u>\$ 45.00</u>	<u>\$ 6,390.00</u>
Sr. Botanist	<u>Elena Gregg</u>		<u>64.0 @</u>	<u>\$ 42.00</u>	<u>\$ 2,688.00</u>
Biologist	<u>Staff</u>	<u>28.00</u>	<u>140.0 @</u>	<u>\$ 28.00</u>	<u>\$ 3,920.00</u>
GIS Analyst 1	<u>Sam Rossi</u>		<u>84.0 @</u>	<u>\$ 28.00</u>	<u>\$ 2,352.00</u>
Administrator / Clerical	<u>Ganna Kleppe</u>		<u>14.0 @</u>	<u>\$ 18.00</u>	<u>\$ 252.00</u>
			<u>@</u>	<u>\$</u>	<u>\$</u>

Subtotal Direct Labor Costs \$ 18,242.00

Total Direct Labor Costs \$ 18,242.00

**FRINGE BENEFITS**

Fringe Benefits

	Rate	Total
	<u>34.00%</u>	<u>\$ 6,202.28</u>
Total Fringe Benefits		<u>\$ 6,202.28</u>

**INDIRECT COSTS**

Overhead/General and Administrative

	Rate	Total
	<u>87.00%</u>	<u>\$ 15,870.54</u>
Total Indirect Costs		<u>\$ 15,870.54</u>

FEE @ 10% \$ 4,031.48

**OTHER COSTS**

Travel & Per Diem	<u>\$ 140.00</u>
Office Misc. & Reproductions	<u>\$</u>
SUBCONTRACTORS	<u>\$</u>
Bollard	<u>\$ 4,000.00</u>
Genesis	<u>\$ 3,900.00</u>
Total Other Costs	<u>\$ 8,040.00</u>

**TOTAL COSTS** \$ 52,388.30







# COST PROPOSAL FOR PROJECT SCOPE: POMONA AVENUE OVER LITTLE CHICO CREEK

## MARK THOMAS & COMPANY INC. HOURS

Task Description	MARK THOMAS & COMPANY INC. HOURS										MTCO HOURS	MTCO RATE	MTCO TOTAL	SUBCONSULTANT	SUBCONSULTANT FEES		
	Principal	Engineering Manager	Project Manager	Sr. Project Engineer	Project Engineer	Design Engineer II	Design Engineer I	Technician	Intern	Project Surveyor						Survey Technician	Project Coordinator
<b>1.0 PROJECT MANAGEMENT</b>																	
1.1 Project Meetings	4	20	20		10												145.00
1.2 Project Management	4	60	40		10												85.00
1.3 Quality Assurance/Quality Control			40			40											
<b>Subtotal Task 1</b>	<b>8</b>	<b>120</b>	<b>80</b>		<b>20</b>	<b>40</b>											
<b>2.0 PRELIMINARY ENGINEERING</b>																	
2.1 Base Mapping Review and Site Reconnaissance		6	8		16		16										88.00
2.2 Conceptual Layout Plans			8		24		60	40									
2.3 Rehab vs. Replace Strategy Report/Structure Type Selection Report		8		40	40												87.00
2.4 Preliminary Cost Estimate			4		48												
2.5 Geotechnical Analysis and Report		4		8	16												
2.6 Hydrology/Hydraulic Analysis and Report		4		8	16												
2.7 Utility Coordination		2	4		16												
<b>Subtotal Task 2</b>		<b>24</b>	<b>24</b>	<b>56</b>			<b>\$23,070</b>	<b>\$4,128</b>	<b>\$4,128</b>	<b>\$3,306</b>	<b>\$15,680</b>	<b>\$16,404</b>	<b>\$6,854</b>	<b>\$18,404</b>	<b>\$10,872</b>	<b>\$28,672</b>	<b>\$14,120</b>
<b>3.0 PUBLIC OUTREACH</b>																	
3.1 Project Notification Letters		16	16														
3.2 Public Meeting Attendance																	
<b>Subtotal Task 3</b>		<b>16</b>	<b>16</b>														
<b>4.0 ENVIRONMENTAL CLEARANCE</b>																	
4.1 Preliminary Environmental Study (PES) Form																	
4.2 Technical Studies																	
4.3 CEQA/NEPA Compliance																	
4.4 Permitting																	
<b>Subtotal Task 4</b>							<b>\$4,027</b>	<b>\$17,848</b>	<b>\$17,848</b>	<b>\$9,306</b>	<b>\$15,680</b>	<b>\$16,404</b>	<b>\$6,854</b>	<b>\$18,404</b>	<b>\$10,872</b>	<b>\$28,672</b>	<b>\$14,120</b>
<b>5.0 CONTRACT BID DOCUMENTS</b>																	
5.1 65% Roadway Plans																	
5.2 Structure Design (65% Unchecked)																	
5.3 95% Roadway Plans																	
5.4 Structure Independent Check																	
5.5 Special Provisions																	
5.6 Estimate																	
5.7 Final PS&E																	
5.8 Storm Water P																	
5.9 RE Pending																	
<b>Subtotal Task 5</b>							<b>\$4,027</b>	<b>\$17,848</b>	<b>\$17,848</b>	<b>\$9,306</b>	<b>\$15,680</b>	<b>\$16,404</b>	<b>\$6,854</b>	<b>\$18,404</b>	<b>\$10,872</b>	<b>\$28,672</b>	<b>\$14,120</b>
<b>6.0 CA</b>																	
<b>Subtotal Task 6</b>																	
<b>TOTAL FEE</b>																	