

**SECOND AMENDMENT TO
PROFESSIONAL SERVICES AGREEMENT**

**BETWEEN THE CITY OF CORONA
AND
FALCON ENGINEERING SERVICES, INC.
CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES - MCKINLEY STREET
GRADE SEPARATION PROJECT**

1. PARTIES AND DATE.

This Second Amendment to the Professional Services Agreement (“Second Amendment”) is made and entered into this _____ day of _____, 2024 by and between the City of Corona (“City”) and Falcon Engineering Services, Inc., a California corporation (“Consultant”). City and Consultant are sometimes individually referred to as “Party” and collectively as “Parties” in this Second Amendment.

2. RECITALS.

2.1 Agreement. City and Consultant entered into that certain Professional Services Agreement dated April 7, 2021 (“Agreement”), whereby Consultant agreed to provide construction management and inspection services for the McKinley Street Grade Separation Project.

2.2 Prior Amendments. City and Consultant entered into that certain First Amendment to the Professional Services Agreement dated December 28, 2021 (“First Amendment”).

2.3 Amendment. City and Consultant desire to amend the Agreement for the second time to (1) extend the Term of the Agreement through December 31, 2026; (2) amend the Rates & Total Compensation by \$2,933,461.04 to \$13,428,081.84; (3) replace Exhibit “A-1” (Scope of Services) with Exhibit “A-2” (Scope of Services); and (4) replace Exhibit “C-1” (Compensation) with Exhibit “C-2” (Compensation).

3. TERMS.

3.1 Term. Section 3.1.2 (Term) of the Agreement is hereby deleted in its entirety and replaced with the following:

“3.1.2 Term. The term of this Agreement shall be from April 7, 2021 to December 31, 2026 (“Term”), unless earlier terminated as provided herein. Consultant shall complete the Services within the Term of this Agreement, and shall meet any other established schedules and deadlines. The Parties may, by mutual, written consent, extend the Term of this Agreement one or more times by executing a written amendment pursuant to section 3.6.8 below (each a “Renewal Term”). The terms “Term” and “Renewal Term” may sometimes be generally and collectively referred to as “Term” in this Agreement.”

3.2 Section 3.3.1 Rates & Total Compensation and Exhibit “C-1” (Compensation) as amended of the Second Amendment are hereby deleted in their entirety and replaced with the following:

“3.3.1 Rates & Total Compensation. Consultant shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement at the rates set forth in Exhibit “C-2” attached hereto and incorporated herein by reference. The total compensation, including authorized reimbursements, shall not exceed Thirteen Million Four Hundred Twenty-Eight Thousand Eighty-One - Dollars and Eighty-Four Cents (\$13,428,081.84) (“Total Compensation”), without written approval of City’s Representative. Extra Work may be authorized, as described below, and if authorized, will be compensated at the rates and manner set forth in this Agreement.”

3.3 Exhibit “A-2”. Exhibit “A-1” (Scope of Services) of the Agreement is hereby deleted in its entirety and replaced with Exhibit “A-2” (Scope of Services) attached hereto and incorporated herein by reference.

3.4 Continuing Effect of Agreement. Except as amended by this Second Amendment, all provisions of the Agreement shall remain unchanged and in full force and effect. From and after the date of this Second Amendment, whenever the term “Agreement” appears in the Agreement, it shall mean the Agreement as amended by this Second Amendment.

3.5 Adequate Consideration. The Parties hereto irrevocably stipulate and agree that they have each received adequate and independent consideration for the performance of the obligations they have undertaken pursuant to this Second Amendment.

3.6 Counterparts. This Second Amendment may be executed in duplicate originals, each of which is deemed to be an original, but when taken together shall constitute but one and the same instrument.

[SIGNATURES ON FOLLOWING PAGE]

**CITY'S SIGNATURE PAGE FOR
SECOND AMENDMENT TO
PROFESSIONAL SERVICES AGREEMENT
BETWEEN THE CITY OF CORONA
AND FALCON ENGINEERING SERVICES, INC.
CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES - MCKINLEY STREET
GRADE SEPARATION PROJECT**

IN WITNESS WHEREOF, the Parties have entered into this Second Amendment to Professional Services Agreement as of the date first written above.

CITY OF CORONA

By: Savat Khamphou
Savat Khamphou
Public Works Director/City Engineer

Reviewed By: Keegan Olds
Keegan Olds
Acting CIP Manager

Reviewed By: 
Yasmin Lopez
Purchasing Manager

Attest:

Sylvia Edwards, City of Corona, CA
City Clerk

**CONSULTANT'S SIGNATURE PAGE FOR
SECOND AMENDMENT TO
PROFESSIONAL SERVICES AGREEMENT
BETWEEN THE CITY OF CORONA
AND FALCON ENGINEERING SERVICES, INC.
CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES - MCKINLEY STREET
GRADE SEPARATION PROJECT**

IN WITNESS WHEREOF, the Parties have entered into this Second Amendment to Professional Services Agreement as of the date first written above.

FALCON ENGINEERING SERVICES, INC.
a California corporation

By: DocuSigned by:
Wael Faqih
2A89CDBA9AD0407...
Wael Faqih, PE
Vice President

By: Signed by:
Ahmad Faqih
6A9C36594E554AA...
Ahmad Faqih, PE
Secretary

EXHIBIT "A-1 SCOPE OF SERVICES

A. PROJECT DESCRIPTION

The McKinley Street Grade Separation Project proposes to construct a new four-lane overhead grade separation at the BNSF Railway double tracks near the McKinley Street intersection with Sampson Avenue. The project limits extend from the SR-91 interchange on the north side to Magnolia Avenue on the south side. A new network steel tied arch bridge will cross over the railroad tracks, Arlington Channel, and Sampson Avenue. The Project will also include new connector road facilities in the northeast and northwest quadrant of the McKinley Street/Sampson Avenue intersection and approximately four hundred (400) feet of reconstruction of Estelle Street west of McKinley Street. The Project will also realign and widen the SR-91 eastbound off-ramp and reconstruct the SR-91 eastbound loop on-ramp and eastbound slip on-ramp entrances.

It is also anticipated the project will include the relocation of several underground utility facilities prior to and during the construction of the proposed Project improvements. Due to the proposed elevations of the grade separated railroad crossing, the Project includes reconstruction/reconfiguration of multiple private property driveway entrances and parking areas along McKinley Street, Estelle Street, and Sampson Avenue. Additionally, the City will procure a separate contractor from the proposed Project contractor to demolish and remove two existing buildings in conflict with the proposed improvements. Consultant shall manage the Project construction contractor only.

The Work to be performed by the general construction contractor and specialty sub-contractors includes furnishing products, labor, tools, transportation, and services to construct and complete all roadway improvements, retaining walls and concrete structures, and the steel bridge for the proposed grade separated improvements, including, but not limited to:

1. Demolishing miscellaneous roadway, landscape, hardscape and improvements within the project limits.
2. Constructing new storm drain, potable/non-potable water, and sanitary sewer underground infrastructure.
3. Constructing all roadway improvements including light weight cellular concrete structure fill, excavation/compaction/backfill, PCC concrete curbs/sidewalks/driveways, and asphalt concrete improvements.
4. Constructing all pre-cast panel and MSE retaining wall systems.
5. Installation of CIDH piles, bridge abutments and PCC concrete structural retaining systems necessary to support the proposed bridge.
6. On-site prefabrication, movement, and pre-fabrication of the proposed steel tied arch bridge.
7. Construction of a water quality basin, numerous water quality best management practice treatment control devices, and miscellaneous drainage features.

8. Installation of landscape and irrigation facilities.
9. Modification/installation of traffic signals and equipment at numerous intersections
10. Installation of proposed streetlight system including streetlights, conductors, conduit, pull boxes and appurtenances.
11. Providing the City documentation and as-built schematics and notes pertinent to Project Closeout.

Demolition of two buildings will be done through a separate demolition contractor prior to mobilization for the general contractor to construct improvements listed above. The Consultant will be responsible for managing the demolition contractor's scope of work.

Final design plans and specifications will be completed by the City's design consultant by March, 2021. The City intends to pre-qualify the general contractor and steel bridge special sub-consultants prior to advertising of the construction of the project. Additionally, the City will advertise a demolition specific bid to remove two buildings beginning in March, 2021 with all demolition to be completed by June, 2021. Bid advertising for the general construction of the Project is planned to begin in late-April 2021 and award of contract planned for late-June 2021.

The pre-construction meeting for demolition services is anticipated to occur early July, 2021 and for the general construction in June 2021. It is anticipated the Consultant selected to perform Construction Management services for this project will be issued a Notice to Proceed in April, 2021 starting with the management/inspection of all demolition work associated with the two structures.

The Consultant, acting as an agent of City, shall provide construction management, inspection, administrative, land surveying, biological/archeological/paleontological monitoring, geotechnical and materials testing, public outreach and related services as required to manage the construction contract and monitor and coordinate activities of the Contractor to complete the Project in accordance with City 's objectives for cost, time, and quality. The Consultant shall provide sufficient organization, personnel, and management to carry out the requirements of the City. Consultant shall provide all necessary instruments, tools, and safety equipment required for their personnel to perform their work accurately, efficiently, and safely. In addition to the requirements specified elsewhere in this contract, the following also shall apply:

1. Consultant shall conform to the safety provisions of OSHA's Construction and Safety Manuals.
2. Consultant 's personnel shall wear safety hard hats, safety vests, safety glasses, steel-toed shoes, or other approved attire at all times while working in the field.
3. Consultant shall provide appropriate safety training for all Consultant's personnel required to work on and near the Projectsite.

4. All safety equipment and personnel protective devices and gear shall be provided by the Consultant.

B. SCOPE OF SERVICES

Under the direction of the City's Consultant Project Manager, the Consultant shall perform construction management, inspection, land surveying, soils and materials testing, biological/archeological/paleontological monitoring, and public outreach services, as well as office engineering and field calculations to support the construction of the Project.

Task 1 – CONSTRUCTION MANAGEMENT

1.1 Construction Management

1.1.1. Project Controls System Development

Purpose:

To develop an integrated cost and schedule information system to provide up to date and accurate information regarding schedule, budgets, expenditures, and change orders to ENGINEER managers, contractors, Caltrans, and the CITY.

The master schedule of the Project Controls System (PCS) will enable critical activities and interrelationships between the contractors, suppliers, the CITY, the CITY's Project Manager, design engineers, environmental monitors, CHP, utility companies, biologist and construction manager (including its subcontractors) to be monitored efficiently during the construction phase of the project. The master schedule will identify permit constraints, work area restrictions and other known work and/or coordination constraints.

The cost-monitoring element of the PCS will enable project-wide monitoring of expenditures for comparison with the original budgets and budget updates resulting from change orders processed during the life of the project. Monthly reporting will enable accurate cost forecasting at any time.

The automation of the above information will enable timely analysis, intervention, and decision making to enable efficient control of the project.

Approach:

CONSULTANT will develop the PCS using software similar to Primavera P6 and Expedition, Microsoft Word and Excel software. A master schedule will be developed summarizing all significant activities of project related entities including the contractor, equipment suppliers, the CITY project manager, design consultants, biologist, and the construction manager. The schedule will be structured to include the following:

- Primary contractor work activities, including major submittals required accomplishing the work.
- Principal work activities of the CONSULTANT construction manager, the CITY's project manager, design consultants, biologist, contractors, and suppliers.
- Activities necessary for regulatory compliance.
- Activities related to utility relocations.
- Relationships between submittals, approvals, procurement, and delivery of materials.
- Milestones associated with permitting and approvals.
- Any activity requiring coordination with the CITY, Cities, Caltrans oversight, and other local utility/regulatory agencies.
- Substantial and final completion dates.

The cost accounting format will use a work breakdown structure and cost categories that will be compatible with the CITY's cost accounting system. The work breakdown structure will be based on contractor's activities and will provide the basis for cost-loading activities in the schedule.

Assumptions:

1. The initial master project schedule will be developed based on information available before the award of contracts for construction.
2. The CITY will provide a description of the CITY invoicing requirements and guidelines for project work breakdown structure and cost reporting format.
3. CITY will provide copies of all consultant contracts including scope of services and budgets.

Deliverables:

1. Implementation of Project Control System.
2. Draft master project schedule.
3. Initial master project schedule following review and approval by the CITY.
4. Initial project cost.

1.1.2. Monthly Project Progress Meetings and Reports

Purpose:

To apprise CITY management and other stakeholders of CONSULTANT'S activities under this contract via written report and monthly meeting.

Approach:

CONSULTANT will provide a brief written report covering a summary of the status and expenditures associated with each of the tasks described in this scope of work; including highlights of any unusual contractual issues that arise during the reporting period and a listing of approved work that is beyond the boiler plate scope with a determination of who is responsible for the associated additional costs (contractor, project, etc.).

CONSULTANT will schedule monthly progress meetings, which will provide for discussion of progress reports and issues related to (a) this agreement and (b) the construction agreements.

Assumptions:

1. The project monthly progress report will be provided throughout the contract period for an estimated duration of 24 months.
2. A regular monthly meeting date and time will be established. Meeting date is typically the first week of each month, the same day of the week, i.e., Monday, Tuesday, etc.
3. Written progress reports will be provided to the CITY at least 5 working days in advance of each progress meeting.
4. CITY to submit proposed changes/amendments to the monthly progress reports, in writing, to CONSULTANT for its use.
5. Additional project budget expenditures determined to be the responsibility of the contractor will be addressed quarterly with adjustments being made to progress payments.

Deliverables:

1. Monthly project progress report that also includes a brief analysis of Contractor's monthly updates to the schedule and budget as well as a brief discussion on the review of Time Impact Analysis documentation from Contractor.
2. One page summary report.
3. Monthly progress review meetings with minutes/summaries.

1.1.3. Document Management System

Purpose:

To establish a system for the timely logging, filing, and tracking of project related correspondence to assure timely responses, and provide a record of communications to enable efficient retrieval and establish the chronology of events for use in dispute resolution.

Approach:

CONSULTANT will set up a document tracking system; using software similar to Primavera and *Expedition* to maintain project files.

Assumptions:

1. Actual logging, filing, and tracking of project information will be performed under separate tasks and subtasks.
2. The CONSULTANT'S File Index will conform to the Caltrans filing numbering system.

Deliverables:

Implementation of a computerized document management system that includes written procedures for use of the ENGINEER project team.

1.1.4. Sub-Consultant Management

Purpose:

To coordinate and manage sub-consultant services contracted with CONSULTANT. Sub-consultants include inspectors, surveyors, landscape architects, materials testing consultants, biologists, and/or others, to be determined at a later date and secured at reasonable rates.

Approach:

CONSULTANT will coordinate and manage the utilization of sub-consultants for the CITY in order to comply with the terms of the contract documents and the requirements of regulatory agencies.

At the CITY's direction, CONSULTANT will negotiate and enter into sub-consultant agreements with select sub-consultants.

CONSULTANT will work with consultants contracted directly with the CITY. CONSULTANT will review and approve invoices provided by CITY consultants and forward said invoices to the CITY for approval and processing and payment.

Assumptions:

1. The CITY will retain final approval rights over invoices for CITY contracted consultants.
2. All costs associated with CONSULTANT'S sub-consultant services will be billed to the CITY in conjunction with CONSULTANT's services on a monthly basis.

Deliverables:

1. Copies of all sub consultant reports. Original reports will remain with CONSULTANT until project closeout, at which time all originals will be forwarded to the CITY with the project documentation.
2. Copies of all sub-consultant invoices billed through CONSULTANT.
3. Original invoices reviewed and approved by CONSULTANT for CITY contracted consultants.

1.2. Pre-Construction Phase Services

CONSULTANT shall provide specialized services during the project Pre-Construction phase, including the bidding periods of the project. These services are intended to involve the construction manager early in the project and to provide advanced planning for construction phase activities.

1.2.1. Constructability Review

Purpose:

To provide the CITY and CONSULTANT with reasonable assurance that project can be adequately constructed as indicated on the Design Plans and to endeavor to minimize contract change orders and reduce the project schedule to

the extent possible. To enable changes to be made to the Project Documents by the Design Engineer before the construction contract bids are due.

Approach:

CONSULTANT will perform a constructability review of the project, analyzing the phasing and staging of project construction for conflicts and to minimize the disruption to traffic and local business concerns. Review of the Project Plans (including construction notes), the Project Specifications, Estimates, and applicable permits and technical reports for the Project is required for a thorough understanding of the project. CONSULTANT will also perform an Independent Quantity Take-off of the major items of work on the Project.

Assumptions:

The Project Plans, Project Specifications and Engineer's Estimate are essentially complete and ready for advertisement.

Deliverables:

1. Constructability comments and report for review by the CITY and Design Engineer. CONSULTANT will provide two (2) copies of the comments and report.
2. The Independent Quantity Take-off with comments and supporting calculations, wet stamped and signed by CONSULTANT'S Engineer in Responsible Charge.

After CITY and Design Engineer have reviewed and/or made changes, log changes made and changes not made in the project records.

1.2.2. Pre-Construction Coordination

Purpose:

In order to minimize the project construction time there will be a need to have a concentrated effort to do as much non-contract work in advance of the contractor moving on site and to coordinate with other projects in the vicinity.

Approach:

CONSULTANT will coordinate with other agencies, companies, other contractors, local residents and the contractor to ensure that there are no delays to the start of construction. This will involve close coordination with utility companies to ensure that any relocation work done prior to construction is properly managed. Also, CONSULTANT needs to assist the utility companies to plan any relocation work scheduled during construction. Once the low bid contractor is selected CONSULTANT is to work closely with the construction team to ensure that they obtain all necessary approvals, permits, supplies, etc.

CONSULTANT will need to be aware of other public and private construction projects in the vicinity and ensure that there is close coordination between the projects.

1.2.3. Construction Management Plan

Purpose:

To provide the CITY and CONSULTANT with uniform procedures and standards for the administration of the construction contract.

Approach:

CONSULTANT will develop a procedures manual that is usable for the construction project utilizing the *Caltrans Construction Management Manual* and portions of the *Local Assistance Manual*. The Manual will be a compilation of both manuals, using various parts from both manuals as appropriate and incorporating a section concerning emergencies. The CITY approved manual will be used by the CITY, as it deems appropriate.

Assumptions:

The final project manual will be bound in a three ring binder to facilitate future revisions.

Deliverables:

1. Draft project manual for review by the CITY. CONSULTANT will provide two (2) copies of the draft.
2. After review and comments, provide two (2) hard copies and an electronic file (PDF or .docx) of final project manual to the CITY.

1.2.4. Contract Bidding Support

Purpose:

To provide support to the CITY during the Bidding Phase of the project to insure bid documents are satisfactory and complete, and selection of the contractor follows proper standards and procedures as well as applicable CFRs.

Assumptions:

CONSULTANT will be available as needed to coordinate activities, review documents, provide recommendations and attend meetings during the Bid document preparation and Contract Bidding phase.

Deliverables:

CONSULTANT will:

1. Assist the CITY to pre-qualify bidders and major sub-bidders and develop bidder's interest in the project. Assist the CITY in issuing bidding documents.
2. Attend pre-bid conferences and provide information to bidders regarding County expectations of them throughout the project duration and familiarize bidders with the bidding documents, proposed management techniques and with any special systems, materials or methods.
3. Assist the CITY and Design Engineers with the receipt of questions and timely responses to bidders.
4. Assist in the review and preparation of Addenda to be issued to the Bidders.

5. Assist in the bid analysis including accuracy of bids, identifying the lowest responsive bidder, checking references and other bid forms and make recommendations to the CITY for the award of contracts and/or rejection of bids.
6. Conduct a pre-construction “kick-off meeting” that includes all agencies, utilities, and contractors that will be participating in the Project. Attend any other pre-construction meetings that may be required.

1.2.5. Local Assistance Documentation / Federal Contract Management Requirements

Purpose:

To assist the CITY in field observation, testing and preparation of documentation required for compliance with FHWA Contract Management Requirements as detailed in the Caltrans’s Local Assistance Procedures Manual and applicable CFRs.

Approach:

CONSULTANT, in conjunction with the CITY will review the Local Assistance Procedures Manual to insure that all contract administration procedures, documentations, and filing systems are in accordance with the Local assistance Procedures Manual. Subsections included in various chapters have been discussed in detail throughout the sections of the Scope of Services for this project:

Chapter 1, Introduction and Overview

Chapter 5, Invoicing

Chapter 7, Field Review

Chapter 12, Plans, Specifications & Estimate

Chapter 14, Utility Facility

Chapter 15, Advertise and Award Project; including the following sections:

Approval for Local Agency to Administer Projects. Design Professional’s obligations for indemnities defense related costs shall not exceed the design professional's proportionate percentage of fault.”

Project Advertisement,

Contract Bid Opening

Contract Award

Award Package

Chapter 16, Administer Construction Contracts, including the following:

Project Supervision and Inspection

Pre-Construction Conference and Partnering

Contract Time

Subcontractors

Engineer’s Daily Reports

Project Files

Construction Records and Accounting Procedures
Safety Provisions
Labor Compliance
Equal Employment Opportunity
Contract Change Orders
Quality Assurance Program
Contract Claims
Traffic Safety in Highway and Street Work Zones
Construction Engineering Review by the State.

Chapter 17, Project Completion includes the following:
Final Inspection Procedures for Federal-Aid Projects
“As-Built” plans
Report of Expenditures
Consequences for Non-Compliance

Chapter 19, Oversight and Process Reviews

Chapter 20, Deficiencies and Sanctions

All the above Chapters and sections have specific formats, checklists, and procedures that must be implemented as required by the Local Assistance Procedures Manual and Contract Provisions.

The CITY and CONSULTANT will incorporate specific deliverables within FALCON’s scope of services and designate the party or parties responsible.

Assumptions:

The CITY will review CONSULTANT’S Contract scope of services and deliverables to ensure that all tasks required are identified and an individual party is assigned responsibility for that task.

Deliverables:

Individual tasks required for compliance with the Local Assistance Procedures Manual are identified as specific tasks including all required checklists, forms, filing system, procedures for progress payments, change orders, claims, correspondence, as-builts, reporting, permit compliance, permit renewals, final invoicing and claims mitigations and resolutions.

Compliance with the Caltrans Construction Manual, Federal CFRs, Traffic Manual, MUTCD, ADA Guidelines, CAL OSHA Safety Orders, SWPPP & PMP preparation Handbook, and all Bridge Manuals is also required, as applicable.

1.2.6. Pre-construction Walk Thru

Purpose:

To review, document and agree to the existing conditions of the project site and neighboring area conditions prior to the start of construction.

Approach:

Prior to the issuance of a Notice to Proceed, CONSULTANT, the Contractor, utility company representatives, biologist, archaeologists, and CITY will walk the entire project and record existing conditions via a written log, still photographs, and videotape where required. CONSULTANT will provide copies of all documentation to the Contractor and the CITY. CONSULTANT will keep documentation originals in the project files until project completion.

Assumptions:

Project walk will not take longer than two days with approximately the same amount of time to log, file and copy the information.

Deliverables:

A written log, still photographs and any videotape depicting existing site conditions, as recorded prior to the start of construction.

1.2.7. Environmental Compliance Prior to Start of Construction

Purpose:

To maintain compliance with permitting agency guidance and Special Provisions. Please see individual permits for more detailed information regarding activities, submittals, and reporting.

Assumptions:

That these activities will occur prior to the start of construction.

Deliverables:

1. Submit to USFWS and CDFW name of Project Biologist(s) at least 60 days prior to project construction start for approval by USFWS and CDFW.
2. Notify permitting agencies of start of construction as per individual permit conditions.
3. Project Biologist shall implement Worker Environmental Awareness Program to educate on-site workers about sensitive environmental issues. Project Biologist shall provide interpretation for non-English speaking workers.
4. Project Biologist shall conduct all pre-construction surveys in accordance with the environmental document, MMRP and permits for Project within their specific survey time frames. This includes least Bell's vireo, nesting birds, burrowing owl and bats.
5. Project Biologist shall oversee delineation of work boundary with appropriate fencing or flagging. Biologist shall determine and clearly delineate avoidance or buffer areas.
6. At least 60 days prior to construction, Project Biologist shall prepare and submit an Aquatic Species Protection Plan to CDFW.

1.3. Construction Management Services

CONSULTANT, on behalf of the CITY, will provide construction management services for administration of the construction contract in conformance with the

requirements set forth in the State's Construction Manual, State's Local Programs and Procedures Manual, State's Encroachment Permit and the CITY's requirements. Construction Management services will encompass the Quality Assurance and enforcement of all construction contract requirements. It can be expected that the contractor will be working on site up to 24 hours per day. CM services are to be provided to enforce construction contract requirements.

1.3.1. Pre-construction Conferences

Purpose:

To provide a forum for all essential project participants to meet prior to the start of work. This meeting will outline the CITY's administration of the contract, introduction of the participants, and record all comments and questions submitted by the contractor. Provides an understanding of the procedures to be used on the project and what the Contractor can expect from the CITY and its consultants.

Approach:

CONSULTANT will schedule, prepare the agenda, chair and take minutes of the pre-construction meeting. The meeting will outline project specifics and inform the Contractor of project administration procedures.

Assumptions:

1. The CITY will provide the meeting venue.
2. The CITY will assist CONSULTANT in developing the attendee list.
3. CONSULTANT will prepare a draft agenda for CITY approval prior to the meeting.

Deliverables:

1. Written agenda and minutes of pre-construction conference.
2. Electronic copies of pre-construction meeting minutes to the CITY and attendees.
3. Review and comment on contractor's base-line schedule.
4. Establish ground rules of coordination & communications with contractor and designer concerning the processing and reviewing of submittals and RFI's.
5. Maintain construction documents per federal requirements and as detailed in Chapters 15, 16, 17 and other relevant Chapters of the Local Assistance procedures Manual.
6. Discussion of enforcement of DBE requirements.
7. Discussion of enforcement of Labor Compliance Requirements, including completion federal Labor Compliance Pre-job Checklist.
8. Discussion of enforcement of Quality Assurance Program
9. Completion of the Federal Resident Bridge Engineer's Construction Contract Administration Checklist, including all necessary attachments as detailed in Local Assistance Procedures Manual.
10. Discussion of environmental permits requirements.
11. Discussion of water quality requirements.
12. Discussion of utility company requirements.
13. Preparation of invoices for federal reimbursement.

1.3.2. Communications and Correspondence

Purpose:

To provide for and/or facilitate effective communication, on behalf of the CITY and among all stakeholders in the administration of the construction contract.

Approach:

CONSULTANT will obtain all pertinent information as required to develop a project directory of all key personnel and stakeholders working on the project. CONSULTANT will develop a graphic chart indicating the proper flow of correspondence. CONSULTANT will log all information received from the Contractor and others, in *Expedition*. Lastly, CONSULTANT will prepare and/or forward appropriate responses, obtaining CITY approval when required.

Assumptions:

1. CONSULTANT'S Correspondence Log will be used for all correspondence received from the CITY, the Contractor and others.
2. All original correspondence will remain with the ENGINEER project files. Only copies will be distributed, with the exception of shop drawing submittals.
3. CONSULTANT'S project files will be turned over to the CITY upon the conclusion of the project.

Deliverables:

1. Communication flow chart.
2. Written logs of information received from the CITY, the Contractor, design consultants, biologist, testing firm, citizens and/or others.

1.3.3. Project Changes and Construction Change Order Management

Purpose:

1. To review proposed changes to the project and determine if the change is necessary and/or beneficial to the project, and if such changes constitute a change order.
2. To provide a system for logging and tracking all changes on the project.
3. To provide the CITY with assurance that the Contractor is not presenting requests to be paid for additional work included in the original contract.
4. To assure the CITY that the associated extra work costs and time extension requests are fair and reasonable to both the CITY and the Contractor.

Approach:

CONSULTANT will review potential changes to the project for contractual and technical merit, prepare independent cost estimates and schedule analysis of work, discuss proposed changes with CITY, and negotiate change order costs with the Contractor. CONSULTANT will prepare change orders with all required support documentation for execution by the CITY. CONSULTANT will keep the CITY apprised of cumulative changes in project cost and project duration.

CONSULTANT will negotiate change orders on behalf of the CITY and will use the following approach in assisting & coordinating the process with the CITY:

Requests for Changes by the CITY

1. CONSULTANT will forward a Request for Quote (RFQ) to the Contractor for pricing and stipulation of proposed time extension (with Time Impact Analysis if necessary), if requested work can be shown to impact the project's critical path. The RFQ shall contain a description of the extra work (normally provided by the Designer) to fairly price the work.
2. CONSULTANT will prepare an independent cost estimate of the extra work.
3. CONSULTANT will review the cost quote from the Contractor for completeness, negotiate cost and time extension requests (and TIA) as required and, obtaining CITY concurrence throughout the process. Obtain CITY authorization for proceeding with the change, based on definitive cost and time extension values.
4. Should CONSULTANT and the Contractor be unable to negotiate a reasonable price, the CITY will be consulted prior to directing the work via alternative contract change options such as proceeding on a time and material basis or proceeding by force account.

Requests for Changes by Contractor

1. CONSULTANT will review requests of proposed cost and/or time impacts (with TIA if necessary) for merit. If CONSULTANT determines the request fails on merit, the Contractor will be informed of the reasons why the request is denied. Should CONSULTANT determine the request has merit; CONSULTANT will proceed with steps 2 and 3.
2. CONSULTANT will prepare an independent cost estimate and schedule analysis of the work.
3. CONSULTANT will negotiate extra work cost and time extensions with the Contractor.
4. CONSULTANT will prepare change order documents for approval and execution by the CITY.

Assumptions:

1. CONSULTANT will have authority to make minor changes to work that it determines to have no cost or time impacts to the construction project.
2. CONSULTANT will be allowed to use their own judgment regarding how best to handle cost negotiations with the Contractor, but will keep the CITY informed throughout the process.
3. CONSULTANT will prepare official change order documentation to be processed with the Contractor's regular application for payment.
4. CONSULTANT will transmit electronic copies (MS Word *.docx files) of change order documentation to the CITY's capital project construction group.

5. CONSULTANT will obtain final approval of all project cost and/or project time changes from the CITY, and Caltrans prior to authorizing the Contractor to proceed with changes.

Deliverables:

1. Perform quantity, time and cost analysis as required for negotiation of change orders
2. Analyze additional compensation and time extension claims that are submitted during the construction period and prepare responses.
3. Perform claims administration including coordinating and monitoring claim responses, logging claims and tracking claim status.
4. Change order documentation ready for approval and execution by the CITY.

1.3.4. Monthly Construction Progress Reports

Purpose:

To keep the CITY apprised of the project status during the prescribed construction period.

Approach:

CONSULTANT will prepare a monthly report that provides construction status to the CITY and other involved parties. The monthly report shall contain the following:

1. Status of contractor's schedule and what the contractor is doing to maintain or catch up if the schedule has slipped. While the focus will be on critical path items, other items that might become critical will be discussed in the report.
2. Construction and construction manager's costs incurred for the month.
3. Cash flow projections for both the contractor and Construction manager.
4. Identify actual and potential problems associated with the construction project and consult with the Project Manager and design engineer.
5. Evaluate Value Engineering Change Proposals (VECPs) and provide recommendations to the Engineer for acceptance or denial.
6. Potential Issues, pending change orders and executed change orders.
7. Photographs to show construction activities and for clarity regarding special issues.
8. Other information deemed necessary for the CITY to have a concise understanding of the construction Projects.

Assumptions:

The CITY will assist CONSULTANT in the initial formatting of the first report.

Deliverables:

1. Monthly progress report.
2. One page summary report for distribution to Senior CITY staff or elected officials.

1.3.5. Schedule Monitoring

Purpose:

To monitor and review the Contractor's schedule, after acceptance of the baseline schedule, so that the project is not being delayed over issues within the control of the Contractor and ensure project is completed by December 31, 2022.

Approach:

CONSULTANT will develop procedures, using available software, to review the Contractor's monthly schedule updates for logic, duration, and resource changes. CONSULTANT will notify the Contractor of discovered changes and document the Contractor's response, for the record. CONSULTANT will keep the CITY apprised of the Contractor's current construction schedule.

Assumptions:

Contract specifications will require the Contractor to use Critical Path Method (CPM) scheduling tools/software. The preferred scheduling software is P6 or Suretrak by Primavera. Gantt charts will be strictly forbidden.

Deliverables:

1. Monthly review of contractor's schedule updates and provide a summary to CITY on schedule status and impact of changes to completion date.
2. CONSULTANT will prepare and transmit to the Contractor, schedule review comments.
3. Monitor and facilitate utility coordination with various utility companies and the Contractor. Incorporate relocations in the schedule and report any delays and impacts to the completion date.

1.3.6. Cost Monitoring

Purpose:

To provide the CITY with a system that is easy to understand and provides up-to-date cost information for making timely decisions.

Approach:

Using a combination of software like *Expedition* and *Excel*, CONSULTANT will generate spreadsheets and graphs for the purpose of monitoring anticipated and actual cost outlays.

Assumptions:

The CITY will provide direction regarding desired cost monitoring information and report formats.

Deliverables:

1. Monthly cost monitoring reports in a format to be determined.
2. Monthly progress report for the CITY describing key issues, cost vs. budget status, and schedule status.

1.3.7. Progress / Coordination Meetings

Purpose:

To provide a forum for the review of the project status, the look-ahead schedule including activity sequence and duration, schedule for delivery of long lead items, outstanding RFIs, submittals, and other project issues.

Approach:

CONSULTANT will conduct weekly progress/coordination meetings, to be attended by the CITY, the Contractor, CONSULTANT and other invitees. CONSULTANT will request the CITY and the Contractor to submit agenda items for the meetings. Using the proposed agenda items and agenda items developed in house, CONSULTANT will prepare a comprehensive agenda for the meeting and distribute the agenda to all parties scheduled to attend. Following the meeting, CONSULTANT will distribute meeting minutes, requesting either the concurrence of those who attended, or suggested corrections to the minutes. Minutes will be filed as either approved or amended.

Assumptions:

1. The CITY’s and Contractor’s staffs will be able to meet on a regular basis with minimal absences.
2. The meeting room will be able to seat a minimum of 20 people and have video conferencing capabilities, especially while COVID restrictions are in effect.
3. Meetings will not take place more than once a week and will last approximately one and one half hour.
4. The Contractor will submit a look-ahead schedule (3 week) at each meeting.

Deliverables:

1. Agenda with status of open items from previous meetings.
2. Meeting minutes, for review, with action items noted.
3. Amended meeting minutes, if required.
4. Submittal, Issues log, Change Order log and RFI and RFQ working logs.

1.3.8. Payment Recommendations

Purpose:

To verify that the Contractor’s request for payment does not represent more than an amount that is reasonable for the work done on a monthly basis. To prepare progress payment recommendations on behalf of the CITY for work completed and materials stored on hand (if allowed).

Approach:

CONSULTANT will review and approve the Contractor’s monthly progress based on the percentage of work activities complete. The Contractor will submit a certified application for payment to CONSULTANT for final review. Once approved, FALCON will prepare a payment application certificate, using software similar to *Excel*, for approval and execution by the CITY.

Assumptions:

1. The CITY will make payments in accordance with the contract stipulations and State Law to the Contractor once each month.
2. CONSULTANT will use software that is acceptable to the CITY for use preparing progress payment application certificates.

Deliverables:

1. Contractor's certified application for payment.
2. Progress payment request documents suitable for approval and execution by the CITY.

1.3.9. Safety

Purpose:

To review the Contractor's work site safety and notify the Contractor of unsafe conditions, as observed. Implement the CAL OSHA Safety Orders requirements for providing safe work site conditions.

Approach:

CONSULTANT will observe contractors' work area. Contractor is to be informed if unsafe work conditions and/or areas are observed. Immediate shutdown of contractors' work may be required if conditions endanger property and/or life. Random attendance of contractor's tailgate meeting. CONSULTANT will conduct its own bi-weekly staff safety meeting to discuss specific safety procedures and issues relating to current or upcoming construction activities requiring unique safety procedures.

Assumptions:

1. Contract document requires Contractor to submit its safety program and safety officer prior to the start of work
2. Contract documents or Contractor's safety program requires contractor to submit accident reports.
3. CONSULTANT assumes no responsibility for safety of Contractor's work areas.
4. CONSULTANT assumes no responsibility for implementation of Contractor safety program, or its construction means and methods.

Deliverables:

1. Accident reports from Contractor.
2. Bi-weekly safety meeting minutes
3. Copies of safety issues discussed during contractors tailgate meetings.
4. Documentation of unsafe work conditions and/or areas as observed and any shut-down orders.

1.3.10. Traffic Control and Signal Timing

Purpose:

To provide an efficient means for keeping traffic flowing through the site to adjacent residents and businesses during construction.

Approach:

Using a Traffic Engineer, CONSULTANT will provide the necessary expertise to evaluate and modify permanent and temporary traffic controls, including signal timing as necessary to ensure the safe and efficient handling of traffic through the project site. Work with the CITY and City traffic engineering offices.

Assumptions:

Any CITY and City desired changes to the traffic handling will be communicated to CONSULTANT in a timely manner.

Any Contractor desired changes to the traffic handling plans will be handled per Section 4.3 of this scope and require CITY concurrence prior to implementation.

Deliverables:

1. Monitor, review and provide recommendations for modifications to traffic handling during the course of construction.
2. Prepare signal timing charts for traffic signals within and adjacent to project site as necessary to promote improved traffic flow for the various phases of construction and maintain coordinated timing to the extent possible (i.e. time based coordination/gps or wireless communication).
3. Work with the County and City to implement those signal timing charts.
4. Provide a recommended signal timing chart for implementation at project completion based on the ultimate configuration.

1.3.11. Submittal Management and Review

Purpose:

To provide an efficient means of processing and reviewing submittals, including working drawings, shop drawings, product data, sample and other items furnished in accordance with Sections 5-1.02 and 5-1.02A of the State Standard Specifications, from the Contractor and forwarding applicable submittals to the Project Designer as may be appropriate.

Approach:

Using software similar to *Expedition*, CONSULTANT will develop a comprehensive submittal list for distribution to the Contractor and the Designer. CONSULTANT will update and submit status submittal logs for review at each coordination meeting. CONSULTANT will work with the Contractor and Designer (where applicable) to encourage timely submission, review and approval of submittals as outlined in the Contract Documents, prior to inclusion of submitted materials in the progress of the work. In addition, CONSULTANT will perform the engineering reviews and approvals for working drawings and calculations provided by the Contractor in accordance with Sections 5-1.02 and 5-

1.02A of the State Standard Specifications and within the review timeframes as specified in the applicable sections of the contract documents and specifications. The following steps will be taken in reviewing the Contractor's submittals:

1. Log all submittals by Specification Section.
2. Ensure that the Contractor has provided a complete submittal, coordinated with the work of other trades, and that all deviations have been noted. Submittal is returned to the contractor if it is not complete.
3. Construction Manager reviews submittal for general compliance with the specification.
4. Applicable Submittals are forwarded to Designer for formal review. Submittal status is logged.
5. Submittals sent to Designer are returned to CONSULTANT. Submittal status is logged.
6. CONSULTANT to perform engineering review of submittals consisting of working drawings and calculations furnished in accordance with Sections 5-1.02 and 5-1.02A of the State Standard Specifications. Such submittals shall be reviewed and approved by CONSULTANT'S Resident Engineer in accordance the above sections, other applicable sections of the State Standard Specifications and the Caltrans Inspection Manuals for the associated work (i.e. Falsework, Prestressing, Trenching and Shoring, etc.).
7. Approved submittals are returned to the Contractor for use in work. Submittal status is logged.
8. CONSULTANT to inform Contractor if a re-submittal is required.

Assumptions:

1. CONSULTANT will not be responsible for errors or omissions in submittal lists.
2. Coordination and submission of submittals in accordance with requirements of the contract is the responsibility of the Contractor.
3. CITY will provide a listing of submittals to be reviewed by the Designer or others including CITY staff.
4. CONSULTANT will not make an exhaustive review of Contractor's submittals except as noted above.
5. CONSULTANT will forward to the Designer all submittals designated by the CITY to be reviewed and approved by Designer. These submittals are typically for pre-manufactured materials and assemblies specified in the Contract.

Deliverables:

1. Submittal status log.
2. Check Calculations, where required.
3. Copy of all approval letters, approved working drawings, submittals and final submittal log.
4. Request for Information (RFI) Management

1.3.11. Request for Information (RFI) Management and Review

Purpose:

To provide an efficient means of processing Requests for Information (RFIs) submitted by the Contractor. The efficient management of RFIs permits timely communication between the Designer and the Contractor.

Approach:

CONSULTANT will receive, log and review all RFIs for completeness and verify the question is reasonable and understandable. CONSULTANT will provide a short technical review of the RFI to determine if the issue is addressed adequately in the contract documents. CONSULTANT will return the RFI if the question is unclear or, in the opinion of CONSULTANT staff, the answer is contained in the contract documents, noting where the requested information can be found in the contract documents. CONSULTANT will track RFIs, using the software similar to *Expedition*, and facilitate the timely response from the Designer.

Assumptions:

The Designer will respond with an answer to all RFIs within the contract stipulated time period for response. Facsimile or e-mail will be used to forward RFIs to the Designer and return responses to the Contractor, with original documents to follow.

Deliverables:

1. Comprehensive log of all outstanding RFIs and their status.
2. Prepare responses to RFI's related construction issues
3. Transmit design related RFI's to design engineer and copy CITY Project Manager.
4. Conduct meetings with the Contractor and other parties as needed to discuss and resolve RFI's.

1.3.12. Document Management

Purpose:

To provide the CITY with an electronic means of tracking all documents exchanged between the parties involved in the construction of the project.

Approach:

FALCON will use software similar to *Primavera* and *Expedition* and the CONSULTANT File Index modified to conform to the Caltrans filing system to log all documents in the project field office. Documents will be scanned into the document control system and attached to the file index categories. All documents will be filed as an electronic file and hardcopy.

Assumptions:

1. CONSULTANT will use software similar to *Primavera* and *Expedition*.
2. The CITY may not use the chosen software.

Deliverables:

1. Comprehensive logs of all documents in the project files (electronic and hardcopy). Electronic files shall not require special software to read or access.
2. All hardcopy project documents exchanged on the project between the various parties.
3. Establish and process project control documents to include:
 - Daily inspection and Resident Engineer’s diaries
 - Weekly Newsletter and Weekly Statement of Working Days
 - Monthly progress report and monthly progress pay estimate
 - RFI’s, Submittals
 - Correspondences with Contractor, Caltrans, Permitting Agencies, Utility Companies, Regulatory Agencies, and other stake holders
 - Survey requests and survey notes
 - Materials receipts, materials testing results, and certificate of compliance
 - Mix designs for PCC, CTPB, AC, AB

1.3.13. Review Certified Payrolls

Purpose:

To verify the Contractor provides certified payroll reports in conformance with the provisions of the contract and applicable State and Federal Law. To verify the certified payroll reports contain information required by the Labor Code.

Approach:

CONSULTANT will receive and review certified payrolls from the Contractor and each of its subcontractors. CONSULTANT will check for the “Statement of Compliance” from the Contractor and/or subcontractors, and spot-check wages for each classification of laborer or craftsperson. CONSULTANT will notify the CITY and the Contractor of all discrepancies and/or errors and request a corrected Certified Payroll.

Assumptions:

1. CONSULTANT will conduct employee interviews, for the purpose of verifying payment of prevailing wages. FALCON will perform a minimum of one interview per trade, per contractor per month.
2. CONSULTANT will not be held responsible for enforcement of the Labor Code.
3. CONSULTANT will maintain a weekly list of subcontractors working on the project.
4. CONSULTANT will not be responsible for identifying every worker on site.

Deliverables:

Hardcopies of the interviews and notifications of non-compliance and State enforcement issues that may be happening with the contractor.

1.3.14. Storm Water Pollution Prevention Plan (SWPPP)

Purpose:

To protect the CITY from potential fines from regulatory agencies by monitoring contractors' activities regarding pollution prevention controls and/or activities for general compliance with the contractor's SWPPP Best Management Practices (BMP).

Approach:

CONSULTANT will ensure the contractor has obtained a WDID, the SWPPP is uploaded, maintenance and other reports are being uploaded, and general relevant documentation is in order. CONSULTANT will observe the contractor's work area for general compliance with the General Permit for the NPDES / SWPPP, SWPPP Best Management Practices (BMP) and notify the contractor if the pollution prevention controls are not in accordance with the SWPPP. Failure to revise and correct conditions will be cause to have the CITY take corrective action. Immediate shutdown of the contractor's work may be required, if conditions are in non-compliance with the SWPPP or other permit conditions.

Assumptions:

1. CONSULTANT will not provide full time inspections of contractor's work areas for compliance with the contractor(s) SWPPP and BMP.
2. CONSULTANT will not be responsible for contractor(s) means and methods for complying with the BMP listed in the SWPPP.
3. CONSULTANT will not be responsible for costs incurred by the contractor(s) for its failure to comply with its SWPPP.
4. CONSULTANT will document site conditions with respect to SWPPP and BMP weekly and maintain a separate file for said reports.

Deliverables:

Contractor(s)' SWPPP monitoring reports and CONSULTANT documentation of site conditions kept in project file for the record.

1.4. Construction Closeout Activities

1.4.1. Contract Closeout

Purpose:

To provide the CITY with final closeout documentation, including any permit completion documentation.

Approach:

CONSULTANT will turn over all project files, contract correspondence and documents including final logs at time of project completion.

Assumptions:

CITY will file final Notice of Completion and Acceptance of Work.

Deliverables:

1. Notice of Completion form for CITY.
2. Notices of Completion for any Permits, including “duplicate” permits for project and documentation showing the NOT has been recorded.
3. Preparation of supporting information for NOT.
4. Copy of the Contractor’s performance bond, good for the warranty period.
5. Final project documentation in accordance with the requirements of the Caltrans local assistance manual and FHWA requirements.

1.4.2. Project As-Built Drawings

Purpose:

To provide the CITY and City with accurate record drawings indicating all changes and as- built conditions.

Approach: In addition to monitoring the Contractor’s record drawings, CONSULTANT will maintain a copy of up-to-date contract plans for the purpose of aiding the Engineer of Record in final review of the record drawings.

Assumptions:

1. The Contractor will be responsible for preparing the record drawings in both reproducible and electronic formats.
2. CONSULTANT will assist the Engineer of Record in review and final approval of the as-built record drawings.

Deliverables:

One set of contract drawings indicating recorded changes to the contract, as maintained by CONSULTANT. This set will be in addition to the Contractor’s marked up set of contract drawings. Provide one copy of the revised Mylar drawings. The Engineer of Record will prepare the record drawings for the project.

1.4.3. Final Project Report

Purpose:

To provide the CITY with a written history of the construction contract. The contents of the final report are to fulfill federal requirements for federal financial participation.

Approach:

CONSULTANT will review the project documents and prepare a written report for the CITY. As a minimum, the report will include the following:

1. Names of all organizations involved with the Projects, i.e., CITY managers, City, construction manager, contractor and any other parties that may have a significant part in the construction of the projects.

2. Chronological history of the construction effort, to include all significant dates.
3. Contract amounts at bid time with all other bids in tabular form.
4. Change order history, to include summary statement about each change, negotiated cost of each change and other information deemed necessary by CONSULTANT and the CITY's Project Manager.
5. Summary of Requests for Information, in tabular or matrix form.
6. Summary of outstanding claims not resolved when the notice of completion is filed.
7. Summary of final contract amount.
8. Final DBE Report.
9. Project photographs.
10. "Lessons learned"

Assumptions:

CITY will provide input to CONSULTANT regarding the form of the final report and federal required documents to be included in the report.

Deliverables:

One hard copy and one electronic file will be provided.

1.4.4. Final Payment, Final Report of Expenditure Checklist

Purpose:

To provide the CITY with the final contract cost and final balance due the Contractor. Also prepare Report of Expenditure Checklist for federal reimbursement including all necessary attachments.

Approach:

Following completion of the contract work, CONSULTANT will, in accordance with the Designer, determine the final quantities and cost of all outstanding unit price work and all outstanding approved change order work. CONSULTANT will prepare for the CITY and the Contractor, a final balancing change order quantifying the final contract amount. Contractor will include amount of final balancing change order in submission of last certified application for payment, submitted to CONSULTANT. Once approved, CONSULTANT will forward application for payment to the CITY for final approval and processing.

Assumptions:

1. There are no outstanding issues or claims.
2. The CITY is responsible for filing Notice of Completion and addressing all subcontractor claims prior to release of final payment. The CITY will file the Report of Expenditure Checklist for federal reimbursement.

Deliverables:

1. Final Pay Estimate including finalized bid items, claims, change orders, punch-list items, and corrected shop drawings.
2. Contractor's last certified application for payment with application certificate.

3. Report of Expenditure Checklist with attachments
4. Final report for all funding sources including all attachments similar to a federal standard report.

1.4.5. Audit Support

Purpose:

To assist CITY during any future audits of the project.

Assumptions:

CITY may be audited one or more times following project close-out. The CITY will issue a future task order to pay for support services during any such audits, should they request these services.

Deliverables:

CONSULTANT will participate in the audit process at the CITY offices and provide any and all documentation from the project as requested by the auditors, and attend meetings as needed.

Task 2 – FIELD INSPECTION

2.1. Inspection and Documentation

Purpose:

To provide the CITY with documentation of construction activities, duration of activities, manpower and equipment allocation, inspections, and work conditions.

Approach:

CONSULTANT will provide experienced and qualified inspectors (qualified by the State of California Department of Transportation) acceptable to the CITY, Caltrans and cities. Inspectors will document the Contractors' daily activities, manpower loading, on-site equipment and items considered pertinent to the project. Construction contractor may be working on site 24 hours per day. CM services are to be provided to enforce the construction contract requirements.

CONSULTANT will coordinate and manage the utilization of CONSULTANT'S inspectors for the purpose of providing daily inspections and/or special inspections as deemed necessary and beneficial for proper completion of the project, or, at the CITY'S direction, CONSULTANT will negotiate and enter into sub-consultant agreements with qualified inspectors including special inspectors, as needed and defined in Task 2.5.

Assumptions:

1. CONSULTANT shall provide inspectors who are experienced and qualified for the inspection required.
2. All inspections will be within the project limits.

Deliverables:

1. The Inspectors will ensure compliance with all aspects of this construction contract by continuously monitoring, evaluating, approving or rejecting the

contractor's work in accordance with the approved construction contract and Caltrans requirements.

2. CONSULTANT Inspector's daily and/or special inspection reports maintained in the CONSULTANT project files and turned over to the CITY at the completion of the project. Copies of these daily reports will be submitted on a weekly basis or upon request.
3. Take and maintain digital photographs and videos as necessary to provide documentation of construction activities. All photos will be logged, dated and kept at the field office in a bound folder (hard copies and CD copy).
4. Verify field measurements for compliance with contract plans and specifications and provide quantity calculations for progress payments.
5. Continue to update an As-Built set of plans and review contractor's marked set.
6. Conduct weekly project meetings, prepare and distribute to all designated parties.
7. Review the updated construction schedule and maintain record.
8. Review laboratory, shop and mill test reports of materials and equipment, and coordinate with design engineers as required, to ensure compliance with contract and Caltrans requirements to guard against defects and deficiencies in the project work.
9. As appropriate, require special inspection or testing, or make recommendations to the CITY regarding special inspections or testing of work not in accordance with the provisions of the contract documents whether or not such work is fabricated, installed or completed. Subject to review by Caltrans, CITY and cities, Inspector may reject work which does not conform to the provisions of the contract and approving agencies.
10. Establish and process job control documents including:
 - Daily inspection diaries
 - Weekly Resident Engineers Newsletter
 - Monthly construction progress payment
 - Request for information
 - Survey requests
 - Materials receipts
 - Weigh master certificates
 - Materials submittals
 - Weekly statements of working days
 - Construction change orders
 - Review of certified payrolls

2.2. Materials Testing, Construction Testing & Quality Assurance Program (QAP)

Purpose:

To provide project site and laboratory testing of construction materials used in the project for the purpose of determining quality and acceptability of materials and

workmanship incorporated into the project and in compliance with the contract documents.

Approach:

CONSULTANT will coordinate and manage the utilization of the materials and testing laboratory for the purpose of providing laboratory and field-testing of materials in accordance with test methods and frequencies specified in the contract documents, as required by the California Test Methods, and Caltrans' Quality Assurance Manual.

Assumptions:

1. It is assumed that the CITY will not provide the Materials Testing services on this contract under the direction of the CM.
2. CONSULTANT shall provide material testers and laboratory technicians who are experienced and qualified for the inspection required.
3. CONSULTANT will ensure the implementation of the Quality Assurance Program for source inspections, materials acceptance, and special inspections as required by the contract.
4. All material testing, materials acceptance and special inspections will be within the project limits or as required by the contract.
5. Contractor must formally request testing in writing. If no formal request is made (at what time), the CM will ensure the contractor will stop the effected work until testing is complete and materials are deemed acceptable.

Note: CITY may, if they choose, perform part or all of the materials testing.

Deliverables:

1. Laboratory test reports maintained in the CONSULTANT project files and turned over to the CITY at the completion of the project.
2. Summary sheet of all test reports submitted by others to substantiate compliance with contract documents.
3. Summary sheets of all Certificates of Compliance or source release tags furnished by the Contractor along with the applicable delivered materials at the job site.
4. Testing summary sheets.
5. Coordinate source inspections and special inspections as required by the contract document and the Quality Assurance Program.

2.3. Maintain Photographic and Video Records of Construction Progress

Purpose:

To provide the CITY with a photographic record of the project, before, during and after construction.

Approach:

Using digital photography, and construction video recording cameras, CONSULTANT will record the Contractor's progress during construction on a

daily basis or otherwise as approved by the CITY. Care will be taken to record all items and/or conditions that have or may have a bearing on claimed extra work. Still photographs will be labeled with captions indicating subject matter, date taken, and any description required to further clarify the item/issue being photographed.

Assumptions:

All photographs will remain at the CONSULTANT office until the end of the project. Video will be recoded and saved as part of the protect records. Video will also be made available to the public via the Project web site. CONSULTANT assumes the City or Contractor will provide poles and/or equipment and appurtenances necessary to facilitate video operations.

Deliverables:

1. A detailed photographic history of all phases of the project will be maintained in an album and the photographs will be indexed for ease of retrieval. Each photograph will be labeled as to location, direction of view, date, time, and description of work. Photos will include, but not be limited to, the following:
 - Showing existing conditions prior to construction
 - When opening or changing a detour
 - Barricade placement
 - Disputed work item
 - Work that has to be duplicated, replaced or removed
 - Completed work.
 - Extra work

2. Construction video cameras, with pan, zoom, tilt capabilities are to be installed prior to construction start and maintained throughout the project. One camera in each quadrant of the interchange shall be place so as to capture the widest range of activity and clearest views of the project to the extent possible. Cameras may be required to be relocated as project phase's change. Coordination with CITY to provide live video feed via the CITY web site is required. CONSULTANT is responsible for arranging for an appropriate power source for the cameras. Solar power may be considered.

2.4. Review and Maintain “As Built” Drawings

Purpose:

To provide the CITY with accurate record drawings for the project.

Approach:

CONSULTANT will monitor the contractor's required record drawings on a monthly basis. In addition to monitoring the contractor's drawings, CONSULTANT will maintain a copy of the contract plans for the project. CONSULTANT will ensure that items that may not normally be shown on the contractor's set of record drawings, but are of importance to the CITY and Caltrans are included in the as-built drawings. This information is not necessarily

construction related, but is project related and may be important in future maintenance and/or construction projects.

Assumptions:

1. Contract documents will require contractor to prepare redline as-built drawings to reflect as-built conditions during the course of construction.
2. The CONSULTANT will be responsible for ensuring the contractor maintains red line changes and will be responsible for making redline changes to one complete set of plans.
3. CONSULTANT will assist in answering questions regarding the red line drawings, providing sketches or other clarifications to the design engineers for preparation of final As-Built record drawings.

Deliverables:

One set of marked up contract drawings. This set will be in addition to the contractor's marked up set of contract drawings.

2.5. Final Inspection and Punch-list

Purpose:

To identify elements of construction requiring correction prior to final acceptance by the CITY.

Approach:

CONSULTANT will perform a project inspection of the completed construction following substantial completion. During the inspection, the CONSULTANT will develop a list of contract work requiring correction or rework. The written list of deficient work (punch-list) will be delivered to the CITY and CONTRACTOR within three (3) working days of the final inspection. The final punch-list will include items to be corrected that were identified previously during the course of construction.

Assumptions:

1. The CITY will identify any key CITY or other permitting agency (County, Caltrans, RCFC, etc.) personnel to be included in the final inspection.
2. CONSULTANT will contact and schedule all required final inspection personnel 48 hour prior to the final inspection.
3. CONSULTANT will prepare the final punch-list.

Deliverables:

Final punch-list

2.6. Final Acceptance – Punch List Assistance

Purpose:

To provide the CITY with reasonable assurance that the work of the project has been completed in compliance with the general intent of the contract documents.

Approach:

CONSULTANT will coordinate a walk-through with the CITY, the Designer, and the Contractor. CONSULTANT, with assistance from the CITY and the Designer will prepare a punch list indicating all deficiencies and/or omissions noted in the walk-through. CONSULTANT will then forward the punch list to the Contractor for correction of the work in accordance with timelines defined in the contract. CONSULTANT, in conjunction with the CITY, will inspect items on the punch list once the Contractor has notified the CONSULTANT that the work is complete. Completed items on the punch list will be signed off by CONSULTANT. Upon completion of the punch list work CONSULTANT will notify the CITY that the work is complete and forward a copy of the completed punch list.

Assumptions:

CONSULTANT will provide a preliminary punch list of outstanding work items to the Contractor. CONSULTANT will ensure all punch list items are completed prior to requesting a final walk-thru from the CITY and the Designer.

Deliverables:

Completed and signed-off punch-list submitted to the CITY with the closeout documents.

2.7. Steel Bridge Construction - Submittal and Component Review

Purpose:

To review the technical submittals and RFIs related to the steel bridge construction and evaluation of the specialized specified components.

Approach:

CONSULTANT will coordinate and manage the utilization of TY-LIN and ZTC for the purpose of providing structural steel and component submittal review and testing for the steel bridge materials to be incorporated into the project. As part of the CONSULTANT Team, they will act as a technical liaison between the contractor and the designer to facilitate the engineering aspects of the steel bridge. Review of the contractor's submittals will focus on evaluating the completeness of the information required for the review of the submittal by the EOR. The review will also evaluate if the information provided in the contract documents is complete or if any additional information needs to be provided by the EOR for the contractor to complete the submittals. Review of the EOR's comments and RFI responses will be evaluated for completeness and clarity.

Assumptions:

1. The contractor's construction engineer will have experience in similar bridge types and complex geometry control.

2. The EOR will have a contract for design services during construction and experience in performing detailed review of submittals.
3. The contractor's means and methods will not significantly alter the design intent of the contract documents.
4. The duration of the steel bridge construction portion of the contract will be 17 months after which these services will no longer be needed.
5. CONSULTANT has assumed COVID-19 screening tests prior to domestic (inside of the U.S.)/foreign flights (destinations outside of the U.S.), both to and from travel destinations, up to 72 hours in advance of travel. Quarantine time outside of the 72-hour period is not included in this scope of services.

Deliverables:

1. Virtual attendance and construction meetings related to the steel bridge
2. In person witnessing of testing for specialty components:
 - Cable stay break test – 1 day each at 2 different test sites
 - Steel fabrication facility – 1 day at shop
 - Seismic Protection Unit – 1 day at test site
3. In person witnessing of key construction milestones
 - Project kickoff – construction kick-off at bridge site
 - Arch Erection - 1 day at bridge site
 - Hanger Installation – 3 days at bridge site
 - Hanger stressing – 3 days at bridge site
 - Bridge move – 2 days at bridge site
 - Hanger testing and Bridge certification - 1 day at bridge site
 - Project delivery – opening day at bridge site
4. Submittals evaluation
 - Erection sequence
 - Working drawings
 - Bridge Staging Area
 - Steel Shop Drawings
 - Cable Stay Drawings
 - Bridge Temporary Work Plan
 - SPU shop drawings
 - Bearing shop drawings
 - Stay Cable Testing Plan
 - Geometry Control Plan
 - Stay Handling Plan
 - Bridge Move Documents
 - SPMT & Monitoring Plan
 - Stay Stressing Plan
 - Post move bridge inspection plan
 - Bridge certification document
 - As-built plans for steel bridge
5. Steel Bridge RFI's and responses review

2.8. Steel Bridge Component and MSE Wall Source Inspection

Purpose

CONSULTANT will coordinate and manage the utilization of ZTC for the purpose of providing structural steel and component review and testing for the steel bridge materials to be incorporated into the project. As part of the CONSULTANT Team, they will act as a technical liaison between the contractor and the designer to facilitate the engineering aspects of the steel bridge. Performing Quality Assurance (QA) and Source Inspection (Special/Shop Inspection) on behalf of CITY and DESIGNER to ensure all fabricated and manufactured structural materials, from steel bridge and its components to precast MSE wall panels, are in compliance with project design documents, technical provisions, Caltrans specifications, Railroad requirements, and Federal guidelines.

Approach

ZTC will prepare a Source Inspection Quality Management Plan (SIQMP) for City of Corona (CITY) review and approval. Scope of QA source inspections will be summarized in detail based on risk-of-failure for all of project materials.

ZTC will have a Structural Material Representative (SMR), a PE Engineer, during project construction. ZTC SMR will work closely with project RE and SR. SMR will attend weekly meetings, review related project submittals, create project SIQMP, hold pre-fabrication meetings, visit fabricators, manage source inspection activities, coordinate shop inspection, sign off QA source inspection reports, etc. SMR will create an open line of communication between Fabricators and Construction staff to resolve fabrication challenges in-time to ensure unnecessary time-delays in fabrication. SMR will process all incoming notices of materials to be used and assigns appropriate quality assurance procedures for those materials.

ZTC will provide QA source inspectors including steel inspectors, Certified Weld Inspectors (CWI), ASNT Non-Destructive Inspectors NDT for Ultrasonic Testing (UT) and Magnetic-Particle Testing (MT), Certified Radiographic Testing (RT) Film Reviewer, Precast Inspectors (PCI), NACE Certified Coating Inspectors, and other specialized inspectors as needed. ZTC Structural Materials Representative (SMR) will deploy QA source inspectors to the project's various materials manufacturers, fabricators, and suppliers based on the quality assurance requirements set forth in the approved SIQMP. ZTC will file all source inspection records and will provide copy of the records to CONSULTANT as project progresses.

Assumptions

Material QA source inspection and acceptance will range from Certificate of Compliance acceptance to full source inspection by one of ZTC's certified material QA inspectors. They will perform all required source QA inspections for

Steel arch bridge -superstructure and its components, such as, tie-girders, strands, stays, hanger cables, seismic protection units (SPU), precast MSE panels, welded hoops, structural fasteners, couplers, bearings pads, spherical bearings, and all other materials identified in the SIQMP.

ZTC will make sure that all files, QC records, material test reports (MTRs), documents, test results, and engineering reviews are documented and are in conformance with the approved SIQMP.

Deliverables

ZTC will deliver the followings to CITY during project construction and at project close-out:

1. Project Source Inspection Quality Management Plan (SIQMP)
2. Constructability review of Plans and Specs
3. Organizing and Managing Pre-Fabrication Meetings (Agenda and Minutes) will be kept for records
4. Monthly SIQMP Reports for project RE
5. Submittal Reviews: Shop Drawing, Mix Design, etc.
6. Fabrication Quality Control Plans Review:
 - Welding Quality Contrail Plan (WQCP)
 - Distortion Control Plan (DCP)
 - Painting Quality Work Plan (PQWP)
 - Precast Quality Control Plan (PCQCP)
7. QA Source Inspection Reports for all materials listed in the SIQMP
8. Final material certification in accordance with the project specifications and the approved SIQMP
9. Project QA source inspection Close-Out letter

Task 3 – LAND SURVEYING

Purpose:

To provide the necessary construction surveying to enable the contractor to construct the project in conformance with the contract documents. To provide the CITY with a final Record of Survey after completion of construction.

Approach:

CONSULTANT will coordinate and manage the utilization of DEA for the purpose of providing construction surveying on the project. DEA will furnish surveying crew(s) to perform construction surveys for the McKinley Grade Separation Project. The number of survey crew(s) assigned to the Project may vary throughout the duration of the construction contract to meet the Project needs. DEA survey requests will be assigned as needed by the Resident Engineer to meet the schedule of the construction contractor.

Construction surveying services will be provided on an on-call basis up to the not-to-exceed amount. This scope has an identified a level of effort in terms of a not-to-exceed amount in furtherance of construction staking services. DEA does not commit to complete all construction survey services that may be required for the Project beyond the level of effort limited by the not-to-exceed amount stated herein. CONSULTANT will encourage DEA to provide the same field personnel for the duration of the construction. CONSULTANT recognizes that it is important that the Field Party Chief(s) assigned to the Project be completely familiar with the survey requirements and the assignments for the Project.

DEA will perform survey services in accordance with the latest edition of the Caltrans Surveys Manual and District 8 Standard Staking Procedures Manual. Unless otherwise specified in the survey request, control surveys will conform to second order (modified) accuracy standards as specified in the Caltrans Survey Manual.

DEA will ensure that survey vehicles are suitable to perform the required work in varying terrain and conditions encountered on the Project. Vehicles will be fully equipped with all necessary tools, instruments, supplies and safety equipment required to perform the work accurately, efficiently, and safely. Vehicles will be equipped with a flashing yellow beacon light. DEA will provide traffic control devices as required to perform requested survey work. Traffic control devices are limited to signs, sign bases, flags, handheld signs, and 28" tall reflective traffic cones. Contractor is to provide any necessary flaggers for traffic control.

Survey Request Process:

CONSULTANT and DEA will receive a written surveying requests using an agreed upon form by email or fax from the Contractor with 48-hour prior notice. The Resident Engineer will review the survey request with the DEA's lead field party chief for completeness and applicability.

DEA will confirm by email any additional details related to the survey request. All requests for services must be in writing.

Services that may be requested:

1. *Pre-Construction: Construction Calculations*

DEA will acquire the improvement plans, horizontal control, vertical control, right of way maps, alignment files, coordinate files, and record maps from city of Corona, Caltrans, and the Engineer of Record. From this information, calculations will be performed to support the staking of items listed below.

2. *Project Control*

DEA will recover record horizontal and vertical survey control monuments within the subject area. After the complete recovery of existing control, DEA will set additional semi-permanent monuments to help assure the original horizontal and vertical control will be protected throughout the construction.

3. *Monument Perpetuation*

DEA will recover all existing survey corners and centerline monuments shown on the right of way maps that are within the construction area that may be destroyed during construction and will set reference marks for monument perpetuation. DEA will prepare and file a Pre-Construction Corner Record as required by the Professional Land Surveyors Act, as stated in Article 5, Section 8771 for the monuments that may be destroyed during construction.

4. *Construction Staking*

DEA will provide survey and staking support as requested by CONSULTANT.

5. *Post Construction: Monument Perpetuation*

DEA will re-set survey corners and any centerline monuments that were destroyed during construction within the project area. DEA will prepare and file a record of survey map with the Riverside County Surveyors office reflecting the new monuments in relation to centerline.

CONSULTANT and DEA understands the following will be provided to the Contractor:

City Provided Staking Service Requests/Hours		
Staking Service	Number of Requests	Total Hours
Slope Stakes (Detention Basin Area)	2	16
Rough Grade Stakes (Roadway Fill)	20	80
Final Grade Stakes (Roadway Fill)	20	80
Curb Stakes	10	72
Drainage / Utility Stakes	50	200
Abutment Stakes	4	32
Wall Stakes	20	80
Demolition/Sawcut Lines	8	32
Right of Way "Show Me" Stakes	8	64

Deliverables:

Unless otherwise specified in the survey request, the deliverables will conform to the following:

1. Survey points, lines, and monuments will be established, marked identified and referenced as required by survey request and requirements herein.
2. Survey notes, drawings, calculations, and other survey documents and information will be completed as required by the survey request and the requirements herein.
3. Copy of all original survey documents resulting from this contract, including copies of original field notes, adjustment calculations, final results, and appropriate intermediate documents, will be delivered to the CONSULTANT

and will become the property of the city of Corona. A copy of all survey documents furnished by the contractor will be retained by CONSULTANT for future reference.

When the survey is performed with a total station survey system, the original field notes will be a hard copy in a readable format of the data (observations) as originally collected and submitted by the survey party. The hard copy will be signed by the Party Chief. If the Party Chief is not licensed, the person in "responsible charge" will be required to sign.

4. Deliverables to the Contractor will follow the format specified below:
 - a) Horizontal Control
 - b) Alpha numeric hard copy point listing with adjusted California
 - c) Coordinate System northing and easting and the appropriate descriptions.
 - d) Vertical Control
 - e) Alpha numeric hard copy benchmark listing with adjusted elevations compatible with the design datum.
 - f) Topography
 - g) Alpha numeric hard copy listing, hard copy drawing, and computer aided drawing and design (CADD) digital drawing. The CADD drawing will be compatible with the systems utilized by Caltrans.

5. Data collection method used to collect cross-section data and the coding (feature description) of terrain data for cross-sections will conform to the survey request requirements. Deliverables will depend on the data collection method as follows:
 - a.) Conventional Cross - Sections (each cross - section)
For each cross - section and alpha numeric listing, a hard copy drawing, and a computer formatted file compatible with the systems utilized by Caltrans.
 - b.) Data Collector Data
If specified in the survey request, the raw data from the data collector will be provided in a format conforming to the survey request requirements.
 - c.) Other-As specified in the survey request.

DEA will provide survey staking notes to the Resident Engineer within 24 hours of completion of staking.

DEA will maintain working calculations and electronic files used to generate construction survey data and provide upon request.

DEA will provide a copy of the final record of survey for the project files.

The Resident Engineer will resolve and direct field crews regarding any RFI questions in writing.

Task 4 – GEOTECHNICAL AND MATERIALS TESTING AND INSPECTION

Purpose:

To provide geotechnical and materials testing and inspection services for the project with the purpose of determining quality and acceptability of materials and workmanship incorporated into the project and to confirm compliance with the contract documents.

Approach:

CONSULTANT will coordinate and manage the utilization of Converse Consultants (CONVERSE) for the purpose of providing materials testing for concrete, LWCC, soils and other miscellaneous materials on the project. CONVERSE will furnish the necessary personnel and equipment to perform the required testing for the McKinley Grade Separation Project. The number of testing personnel assigned to the Project may vary throughout the duration of the construction contract to meet the Project needs. CONVERSE testing requests will be assigned as needed by the Resident Engineer to meet the schedule of the construction contractor.

Based on our review of the project plans and specifications the scope of work will likely include the tasks listed below.

1. Document Review

CONVERSE will review project plans, specifications, and geotechnical report to gain a thorough understanding of the required material sampling and testing frequencies and test methods to be used.

2. Observation and Testing of Earthwork

CONVERSE will have a technician available on site on an as-needed basis or full time, if necessary, to sample and test material, observe the methods used by the contractor to place material and document field observation and test results. The technician will verify that all unsuitable material as identified in the materials report are removed, processed and placed back as compacted fill. The technician will also ascertain that the import soils meet the project specification. Samples will be collected, and tests will be conducted for verification.

During the course of fill placement, the technician will be available to observe that the thickness of each lift is as specified. The technician will take in-place density tests to assure that adequate moisture content and relative compaction as required by the project specifications are being achieved. The relative compaction will be determined by California Test Method 231. For each determination of relative compaction, laboratory compaction tests per Caltrans 216 will be performed, except when the use of previous laboratory maximum densities is allowed. Previous laboratory maximum dry densities will be used

to determine relative compaction if the material, as determined by the engineer, is from the same general excavation or plant source and has the same visual characteristics of color, gradation, and soil classification as the previous laboratory maximum dry densities. No maximum dry density will be used for more than 5 working days.

Our field representative will work closely with the Resident Engineer (RE) and keep him apprised of any issues on a daily basis. The technician will document any construction practices that may cause non-conforming results and report to the Resident Engineer immediately. Copies of all test results will be given to the CM representative at the end of each working day. Failed tests will be noted in the daily report and included in the test results sheet.

3. Batch Plant Inspection

Caltrans certified and experienced technicians will inspect the concrete and asphalt batch plants during production. A daily report stating all the observations made during the time of inspection will be prepared and submitted to the Resident Engineer. The Plant Inspector will have a copy of the approved mix design, indicating the aggregate source, manufacturer and grade of asphalt binder, and plant proposed to mix the AC.

The plant inspector will have on hand enough one-quart asphalt sample cans to provide up to 2 asphalt binder samples for each day of production. Cardboard boxes will be available to sample the completed AC mixture for future testing. A calibrated thermometer or infrared gun for verifying the temperature of the aggregate or the completed mix will be available. When taking aggregate samples, metal pails, sample bags, sample bag funnel, wire ties, wire twister, permanent marking pens for labeling sample bags, TL-101 booklets, heavy duty gloves, safety glasses, hard hat and appropriate clothing will be available. The plant inspector will sample enough materials to be tested in accordance with Caltrans Construction Manual, Chapter 39. The plant inspector will visually inspect the pit or quarry area on a regular basis. The inspector will document any changes in the material, such as clayey material, color changes, deleterious rock or excessive vegetation, and will discuss potential problems with the person in charge of the crushing operation and the Resident Engineer (RE). The plant inspector will document the condition of stockpiles and will notify the person in charge if segregation of aggregate is observed.

4. HMA Quality Assurance Program

CONSULTANT, through CONVERSE, will provide Caltrans-certified technicians in the field during HMA paving. For Standard and QC/QA construction processes, one 4- to 6-inch diameter density core will be taken every 250 tons of HMA from random locations as determined by the RE or his representative. The cores will be transported to the CONVERSE Caltrans certified laboratory. For each density core, a bulk specific gravity (CT 308) will be performed, in addition to percent maximum theoretical density to

determine the relative compaction of the HMA. We will perform all the quality assurance (QA) tests required as per Caltrans Standard Specification Section 39 for acceptance and provide the test results to the RE for the statistical evaluation.

5. Concrete Tests

CONVERSE will use standard calibrated equipment for all field testing. CONVERSE will observe placement and test the quality of fresh concrete. Concrete Compressive Test Specimens will be prepared in the field in accordance with California Test 540, "Test for Making, Handling, and Storing Concrete Compressive Test Specimens in the Field".

Slump of the freshly mixed concrete will be measured in accordance with Caltrans Test 556, "Test for Slump of Fresh Portland Cement Concrete". A test for penetration, in accordance with California Test 533, "Test for Ball Penetration in Fresh Portland Cement Concrete," will be conducted on each batch of concrete from which a strength specimen will be made. Unit weight of fresh concrete will be measured in accordance with California Test 518, "Method of Test for Unit Weight of Fresh Concrete". If air-entrained concrete is used, concrete will be tested using California Test 504, "Determining Air Content of Freshly Mixed Concrete by the Pressure Method", on each batch of concrete made.

Compressive strength of concrete will be tested in accordance with California Test 521, "Test for Compressive Strength of Molded Concrete Cylinder". Flexural strength of concrete will be tested in accordance with Caltrans Test CT 523, "Test for Flexural Strength of Concrete". Flexural strength of rapid strength concrete will be prepared and tested in accordance with California Test 524, "Test for Flexural Strength of Rapid Strength Concrete".

6. Gamma-Gamma Logging and Cross Hole Sonic Test

Eight (8) access tubes will be installed over the full length of each 84-inch pile. The depths given above combined with the number of inspection tubes considered lead to a presumed total quantity of 3,328 feet of gamma-gamma tube logging. The access tubes consist of 2-in diameter Schedule 40 metal pipes attached to reinforcing cage.

GGL and CSL testing to address the four 84-inch diameter piles with an approximate length of 94 at abutment 1 and 114 feet at abutment 2. The construction schedule requiring testing in up to 4 sessions (assumed).

GGL testing includes lowering of 4.5 foot long and 1.25-inch diameter probe to the bottom of each inspection tube and measuring the density of the concrete in close proximity of the inspection tubes at 0.1 feet intervals along the full length of the pile. CSL Testing is to be performed according to project specifications, ASTM D6760-08.

7. Laboratory Testing

CONVERSE and their laboratories are certified by Caltrans and AASHTO to perform various tests on the materials. They experience in testing for roads, utilities and bridge projects and have sufficient laboratory capacity and capital to enable and complete the work within the given time frame. CONVERSE will provide a hard and/or electronic copy of the test results to the RE within 5 working days of the completion of the test. Field testing/compaction results of subgrade or asphalt concrete will be communicated to the RE as soon as the tests have been completed on the same day, with a hard copy to follow.

8. Project Management

CONVERSE project manager will perform the following:

1. Ascertain that field personal with proper qualifications and experience are assigned to the project.
2. Review daily reports and laboratory test results before they are issued to the RE and contractor.
3. Submit reports and test results as soon as they are due.
4. Address promptly any issue related to CONVERSE services.
5. Attend meetings as needed.

Assumptions:

Materials Testing fees are based on the following assumptions:

1. An 8-hour day at the site. It is assumed all work will be straight time. Overtime will be charged at 1.5 times the regular hourly rate.
2. There will be a 2-hour minimum charge in case of work cancellation after our field personnel have been dispatched.
3. Minimum 4-hour charge for each site visit.
4. It is understood that this is a prevailing wage project as defined in Labor Code Sections 1770-1780.
5. During the course of this contract our rates will be adjusted if the prevailing wage is adjusted by the Department of Industrial Relations.
6. The test locations will be prepared and ready for testing by field personnel upon their arrival at the site. The contractor will be responsible for the excavation and backfilling of all test locations.
7. Additional inspections and laboratory testing outside the agreed-upon scope of work can be provided upon request.
8. No additional work required will be provided without written authorization and a budget amendment from your authorized representative.
9. Services will be performed on a time-and-materials basis in accordance with our Schedule of Fees and General Conditions.
10. The field representative will not direct, supervise or lay out the work of the contractor, nor will it include a review or evaluation of the contractor's safety measures on or near the project.
11. Any meetings and/or consultation(s) requested by the client will also be charged in accordance with the Schedule of Fees.

12. If services are provided on an as-needed basis, no comments regarding compaction procedures or observations will be made. Daily field reports indicating work performed and test locations will be provided as the testing is completed.
13. Travel time will be billed for a 30-minute trip to the site and a 30-minute trip from site for a total of 1 hour.
14. Testing requests require 24 hours advance notice for services. We will, however, make every attempt to accommodate requests on shorter notice.

Deliverables:

CONVERSE deliverables will include the following:

1. Field report to RE at the end of each day. The report will include the following:
 - Project Number
 - Project identification number
 - Project location
 - Sample description and results
 - Date sample collected.
 - Date tester with name of the tester
 - Data sample analyzed
 - Analytical summary of testing method
 - Special provision and other standards
 - QAP certification
 - Laboratory test result(s) as soon as they are due to the Registered Engineer and other team members as directed by the City.
2. Final close-out report which will include copies of all field daily reports, summary of all failed and passing tests, laboratory test results and interim letter/memos.
3. Photographs of the field sampling and geotechnical inspection work, including photographic evidence of non-complying materials

Task 5 – PUBLIC OUTREACH

5.1. Neighborhood Liaison Strategy

Purpose:

To provide a strategy for dealing with issues related to the impacts of construction on the residential neighborhoods and businesses located adjacent to and within the limits of the project, to respond to public inquiries regarding the project, and to coordinate with the City, County, law enforcement, emergency services providers, transit agencies, school districts and others as needed regarding construction activities that may impact public safety.

As part of the public outreach effort it is anticipated that the team will coordinate with the CITY's consultant, Arellano and Associates, to conduct public meetings before and during construction. The team will also need to attend local community meetings to provide updates and information as requested.

Approach:

CONSULTANT will develop in conjunction with the CITY and the CITY's consultant, Arellano and Associates, a strategy for neighborhood and local community communication related to construction phase impacts and mitigation.

Assumptions:

CONSULTANT will be responsible for development of the neighborhood liaison strategy. However, the CITY and the CITY's consultant, Arellano and Associates, will provide general guidelines for community and neighborhood affairs, dictate protocol, and initiate contact with local elected officials, as required. The CITY will be responsible for the review and approval of the overall plan.

Deliverables:

1. CONSULTANT: Draft Neighborhood Affairs Strategy memorandum.
2. CITY: Review and comment on draft Affairs Strategy memorandum.
3. CITY's consultant, Arellano and Associates: Review and comment on draft Affairs Strategy memorandum.
4. CONSULTANT: Final Neighborhood Affairs Strategy memorandum.

5.2. Neighborhood Communication /Public Information

Purpose:

To provide an efficient means for keeping traveling public, adjacent residents and businesses apprised of the work activities they will encounter during construction. To provide a local contact telephone number that residents and businesses may contact to pose questions and discuss concerns.

Approach:

Using the Neighborhood affairs strategy memorandum, developed per Section 2 of this scope, CONSULTANT, in coordination with the CITY's consultant Arellano and Associates, will prepare "Dear Neighbor" letters and door hangers as a means to communicate with adjacent residents and businesses. Attending and facilitating public meetings, responding to citizens and business owner's inquiries. Working with the CITY and Caltrans public information offices.

Assumptions:

All information for public use is to be reviewed for concurrence by the CITY and the CITY's consultant Arellano and Associates, and provided to the CITY as requested.

Deliverables:

1. Attend CONSULTANT’S weekly Neighborhood/Business meetings on an as needed basis.
2. Minutes of any meetings listing questions posed by residents and business owners.
3. Work progress flyers (Dear Neighbor letters).
4. Door hangers if not provided by the Contractor.
5. Local contact number for CONSULTANT.
6. 24-hour hot line
7. Installation of a construction site video camera
8. Project web page maintenance and updates including current schedule, progress updates, costs, public meeting information, camera feed, and project exhibits.
9. Provide Draft “Friday” report items to the CITY and draft news releases as needed.
10. Coordinate with CHP, law enforcement, emergency services, transit, schools, etc. regarding construction activities that may impact public safety.

**Task 6 – BIOLOGICAL/PALEONTOLOGICAL/ARCHEOLOGICAL
MONITORING**

Purpose:

To maintain compliance with federal, state, county and city of Corona (City) guidelines, requirements, and conditions of approval as required by regulatory permitting agency guidance and the Special Provisions.

Approach:

CONSULTANT will coordinate and manage the utilization of Wood for the purpose of providing monitoring, reporting, submittal review and testing for all aspects of Biological/Paleontological/Archeological issues on the project. As part of the CONSULTANT Team, they will act as a liaison between the contractor, City and the various regulatory agencies to facilitate the construction of the project.

6.1. Pre-Construction Environmental Compliance

Purpose:

To maintain compliance with federal, state, and city of Corona (City) guidelines, requirements, and conditions of approval including pre-construction activities as required by regulatory permitting agency guidance and Special Provisions. Please see individual permits for more detailed information regarding activities, submittals, and reporting.

Assumptions:

1. That these activities will occur prior to the start of construction.

2. All regulatory agency permits will be provided by the City for review
3. California Environmental Quality Act (CEQA) document will be provided for review.
4. The City will provide a copy of the Biological Resources Assessment, Jurisdictional Delineation Report, Natural Environmental Study (NES), Nesting Bird Management Plan, Bat Management Plan, Storm Water Pollution Prevention Plan (SWPPP), Paleontological Resource Mitigation Plan (PRMP), and Cultural Resource Mitigation Plan (CRMP).
5. BNSF safety training may be required before work can be completed within the BNSF right-of-way.

Deliverables:

1. Submit to USFWS and CDFW name of Project Biologist(s) at least 60 days prior to project construction start for approval by USFWS and CDFW.
2. Notify permitting agencies of start of construction as per individual permit conditions.
3. Project Biologist and Paleontologist/Archaeologist shall implement Worker Environmental Awareness Program to educate on-site workers about sensitive environmental issues. Project Biologist and Paleontologist/Archaeologist shall provide interpretation for non-English speaking workers, if necessary.
4. Project Biologist shall conduct all pre-construction surveys in accordance with the environmental document, MMRP and permits for Project within their specific survey time frames. This includes nesting birds and bats.
5. Project Biologist shall oversee delineation of work boundary with appropriate fencing or flagging. Biologist shall determine and clearly delineate avoidance or buffer areas associated with actively nesting birds.

6.2. Environmental Coordination & Biological and Cultural Monitoring

Purpose:

To verify the contractor has copies of applicable permits and that the work activities abide by the requirements of the permits granted by regulatory agencies. All permits shall be kept current and renewed prior to expiration throughout the project duration. A copy of all permits should be kept on-site during construction activities.

Approach:

CONSULTANT, through Wood, will review and enforce requirements stipulated in permits issued by Regulatory Agencies. Wood will mobilize a qualified Biologist and Archaeologist/Paleontologist to complete the necessary biological and cultural monitoring during construction activities identified during the pre-construction review and assessment. Immediately prior to and periodically throughout construction, Worker Environmental Awareness Program (WEAP) training will be provided and available throughout the construction process for both biological and cultural resources. A sign-in sheet will be maintained to

document those that have completed the training. A biological monitor will be required on-site during construction related activities associated with the drainage feature and removal of native vegetation and landscape vegetation that may provide suitable habitat for nesting birds during the nesting bird season as identified in the regulatory agency permits. Cultural Resource Monitoring is required during disturbance of virgin soils as identified in the PRMP.

Assumptions:

1. All permits will be provided for review.
2. All permits will be included in the contract documents.
3. Project Biologist and Archaeologist/Paleontologist will ensure compliance with permits and Stewardship Section of the project's Special Provisions.
4. A qualified Biologist will be provided. This Biologist shall be knowledgeable and experienced in biology of wildlife resources present at the Project including nesting birds and bats.
5. The CDFW must approve the Biological Monitor. Biological Monitor will be responsible for ensuring the project site limits are maintained, establishing buffer areas to protect active nests, and identifying any listed or protected species within or adjacent to the PROJECT site.
6. CONSULTANT assumes that no sensitive biological resource habitat occurs within the project site.
7. A single concrete-lined drainage feature occurs immediately adjacent to the BNSF railroad line.
8. No riparian habitat occurs within the drainage feature.
9. CONSULTANT assumes nesting habitat is limited to the bridge crossing of the drainage and surrounding landscape vegetation.
10. CDFW may require a nesting bird management plan, if not already prepared.
11. A qualified Paleontologist/Archaeologist will be provided. The Paleontologist/Archaeologist shall be knowledgeable and experienced in cultural resources present at the Project. The monitor will also be experienced working with local tribal representatives, if necessary.

Deliverables:

Biological Monitor will:

1. Develop a Worker Environmental Awareness Program for sensitive biological resources potentially occurring within the project site. Each employee (including temporary, contractors, and subcontractors) will receive a training/awareness program. Interpretation for non-English speaking workers will be provided. They will be advised of the potential impact to the listed species and the potential penalties for taking such species. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violation of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area environs. The RESIDENT

ENGINEER, CONTRACTOR, and USFWS-approved biological monitor will be responsible for ensuring that employees are aware of the sensitive biological resources on-site.

2. Weekly monitoring emails will be prepared documenting the construction activities and occurrence of sensitive biological resources. Monthly progress reports will also be provided to summarize the weekly monitoring reports. A final biological monitoring report will be prepared and submitted to all appropriate resource agencies following the completion of construction activities.

Cultural Resource team will:

1. Develop a Worker Environmental Awareness Program for sensitive cultural resources potentially occurring within the project site. This training includes project-specific descriptions of potential significant impacts and a clear set of procedures to follow in the event of unanticipated discoveries (including a cultural resources discovery plan). Wood updates trainings as necessary for new project personnel, keeping a record of contractor staff who have received training and providing handout reminders with contact information.
2. Provide paleontological/archaeological monitors to comply with project specific PRMP and CRMP. Cultural monitors will identify and record resources – including through photo documentation, monitoring records, and GIS data to comply with industry standards. The cultural monitor will comply with federal regulation governing unanticipated discoveries – including of human remains in compliance with 43 Code of Federal Regulations [CFR] 10.4. If necessary, our cultural resources team will develop a project-specific plan in consultation with the lead agency to comply with mitigation measures based on California (Public Resources Code [PRC] 5097) law. In general, the approach to unanticipated discoveries follows standard best practices: establishing a temporary exclusion zone around the find, notifying lead agency representatives, assessing the find, and conducting necessary consultation regarding appropriate mitigation.
3. CONSULTANT does not anticipate any fossil recovery or curation associated with this Project. If inadvertent discoveries occur, however, it is anticipated that fossil recovery will follow local guidelines.
4. Project paleontologist, in consultation with local area experts, will apply current best practices to stabilize and recover the fossil and to identify it to the most specific taxon possible. All recovered fossils will be analyzed and curated with appropriate local facilities.

1st Amendment Added Services:

Generate a 3-D model of all major arch components to evaluate constructability and details of constructability and provide City with an advanced mill order. Tensor Engineering to serve as Consultant’s subconsultant in the performance of these services, including but not limited to:

SUB-TASK 1.2 – PRE-CONSTRUCTION PHASE SERVICES

1.2.1 Constructability Review

Purpose:

To provide CITY and CONSULTANT with reasonable assurance that the project can be adequately constructed as indicated on the Design Plans and to endeavor to minimize contract change orders and reduce the project schedule to the extent possible. To enable changes to be made to the Project Documents by the Design Engineer before construction contract bids are due.

Approach:

CONSULTANT will perform a constructability review of the project, analyzing the phasing and staging of project construction for conflicts and to minimize the disruption to traffic and local business concerns. Review of the Project Plans (including construction notes), the Project Specifications, Estimates, and applicable permits and technical reports for the Project is required for a thorough understanding of the project. CONSULTANT will also perform an Independent Quantity Take-off of the major items of work on the Project.

Assumptions:

The Project Plans, Project Specifications and Engineer's Estimate are essentially complete and ready for advertisement.

Deliverables:

1. Calculate a coordinate geometry model of the "No Load" based on the geometry in the contract plans. Plan will provide 3-D coordinates of working points for all framing elements.
2. Provide a set of worksheets showing cambered geometry that represents the fabricated geometry.
3. Provide cutting sketches of knuckles, tie girders, arch ribs, end support diaphragms, floor beams and cantilever brackets. Sketches will detail each major component.
4. Generate a 3-D model of all major components using "Creo Direct Elements Modeling" and convert to a neutral file format for general use.
5. Provide 2-D CAD layouts of all major steel to steel joints to review constructability of major connections.
6. Furnish advanced mill order so material can be purchased after award.

2nd Amendment Added Services:

Task 1: Project Administration / Meetings

- Conduct monthly Project Progress Meetings and Reports
- Prepare monthly project progress report
- Process monthly progress payment and material on hands for the contractor
- Monthly project Schedule updates review • Coordinating subconsultant services

- Submittal and RFIs reviews
- Coordinating with BNSF, and RCFC
- Processing Change Orders and EWBs
- Document and respond to the contractor's disputes
- Labor Compliance
- Coordinate with Caltrans, Riverside County and City of Corona

Task 2: Continued Construction Management / Inspections (Through end of July, 2025)

- Field Inspection of roadway construction
- Field inspection of bridge and retaining walls
- Electrical systems and signal lights inspection
- Documentation with daily reports and photographs
- Monthly drone photography
- Measurements/Calculations quantities for monthly progress payments
- Material sampling and testing • Construction surveying
- Source Inspection
- SWPPP Compliance inspection
- Biological monitoring
- Utility coordination
- Meeting with property owners to coordinate work, closures, and reduce impact

Task 3: Claim Number 1 Support

- Review claim about bridge fabrication delays
- Participate in the meetings with the city, contractor and designer
- Documenting schedule, activities, and cost related to the claim
- Reviewing contractor's claim letters and assisting with responses
- Documenting schedule impacts
- Assist with any mediation, arbitration, settlement or legal resolution

Task 4: Construction Close Out Support

- Caltrans close out documentation
- Finalizing Contract Change Orders
- Completing final progress payment
- As-Built drawings
- Prepare final project report
- Notice of Termination (SWPPP)
- Close out of permits and agreements
- Prepare final material certification
- Construction punch list
- Caltrans Safety, operations and maintenance walk/punch list

**EXHIBIT "C-2"
COMPENSATION**

1. Rates

A. Consultant Hourly Rates

Consultant shall charge the rates provided for on Page C-1 (dated 03-24-21) attached hereto and incorporated herein by reference.

B. Subconsultant Hourly Rates

For its subconsultants, Consultant shall charge the rates provided for on Pages C-2 through C-4 (dated 03-24-21) attached hereto and incorporated herein by reference.

2. Reimbursable Expenses

A. The following reimbursable expenses shall be deemed to be pre-authorized:

- Section 3.2.10.4 (Railroad Protective Liability Insurance): If, pursuant to Section 3.2.10.4 of the Agreement, the City directs Consultant to provide Railroad Protective Liability Insurance, the premium shall be reimbursable up to a maximum of \$50,000 per year for up to two years (total of \$100,000).
- Section 3.2.12 (Payment Bond): If, pursuant to Section 3.2.12 of the Agreement, the City determines that a payment bond is required by the DIR for the Services, the premium shall be reimbursable up to a reasonable amount which is documented to the satisfaction of the City's Representative with at least three (3) written quotes from sureties.

B. Other Reimbursable Expenses

All other expenses shall be subject to the prior written approval of the City's Representative, in his or her sole discretion, as provided for in Section 3.3.3 of the Agreement.

City of Corona
Agreement with Falcon Engineering Services, Inc. for
Construction Management and Inspection Services
(McKinley Street Grade Separation Project - Project No. 2012-12)

FALCON Engineering Services, Inc. (Prime)		
Billing/Hourly Rates		
Name	CLASSIFICATION	Billing Rate Range
Wael Faqih, PE *	Construction Manager-Project Manager	\$330.54
Hugh Smith, PE *	Resident Engineer	\$330.54
Ahmad Faqih, PE	Lead Roadway Inspector	\$251.54
Ahmed Hamasha	Roadway/Structures Inspector/ SWPPP	\$172.00 - \$ 199.00
To Be Determined	Electrical/Signals (PT-As Needed)	\$211.54 - \$215.00
To Be Determined	Sr. Structures/Roadway Inspector /Utility Coord.(PE)	\$230.00 - \$250.00
To Be Determined	Office Engineer - Office Support	\$106.00-\$135.00
To Be Determined	Technical Support/Claims Support (As Needed)	\$277.00 - \$318.00
To Be Determined	Field Inspector	\$171.88
To Be Determined	Public Outreach /Public Relations/Drone Aerial/Doc.	\$210.00 - \$291.00
To Be Determined	Landscape Architect/Inspection (As Needed)	\$166.59-\$185.10
To Be Determined	Pavement Specialist	\$317.31
To Be Determined	Construction Survey	\$198.32
To Be Determined	RR Liaison	\$237.99

March 24, 2021

City of Corona
Agreement with Falcon Engineering Services, Inc. for
Construction Management and Inspection Services
(McKinley Street Grade Separation Project - Project No. 2012-12)

FALCON Team Subconsultants			
TY Lin International			
Name	CLASSIFICATION		
Dan Fitzwilliam, PE	Structures Design Support	\$	252.78
Anthea Billings	Scheduling	\$	194.32
Mick Bartholomew	Technical Support	\$	269.10
Alejandro Armendariz	Structures Inspection	\$	161.38

Danken Construction Engineering Corp			
Name	CLASSIFICATION		
Scott Walker, PE	Structures Rep.	\$	290.00

KZAB Engineers, Inc.			
Name	CLASSIFICATION		
Abunnasr Husain, PE	Project Manager	\$	254.10
Stephen Yench	Sr. Resident Engineer	\$	219.45
Howard Sanders	Resident Engineer	\$	150.15

David Evans and Associates			
Name	CLASSIFICATION		
Robert Vasquez, PLS	Survey Project Manager	\$	230.00
Jerry Woodrow, PLS	Survey Project Surveyor	\$	180.00
Gary Lewis, PLS	Survey Project Surveyor	\$	185.00
Jay Bentley, PLS	Survey Project Surveyor	\$	165.00
Jerry Woodrow, PLS	Survey Party Chief	\$	180.00
Lou Henry	Survey Party Chief	\$	170.00
Robert Muro	Survey Party Chief	\$	170.00
Fulton Torreyson	Survey Instrumentman	\$	155.00
Michael Balderston	Survey Instrumentman	\$	155.00
Felicia Mantz	Project Coordinator	\$	105.00

March 24, 2021

City of Corona
Agreement with Falcon Engineering Services, Inc. for
Construction Management and Inspection Services
(McKinley Street Grade Separation Project - Project No. 2012-12)

FALCON Team Subconsultants			
Converse Consultants			
Name	CLASSIFICATION		
Hashmi Quazi, PE, GE	Principal Engineer	\$	344.01
Siva Sivathasan, PE, GE	Project Manager	\$	245.64
Antonio Maciel, EIT	Asst. Project Manager	\$	102.63
Ali Peval	Laboratory Technician	\$	78.88
Bill Kowalski	Field Technician	\$	143.29
Gerardo Portea	Field Technician	\$	143.49
David Hainsworth	Field Technician	\$	143.29
Penney Munns	Dispatcher	\$	85.84
Kathy Von Glahn	Word Processor	\$	84.24
Danielle Ertl	Accounting	\$	103.57
Wyllie Duarte	Support	\$	71.44

ZT Consulting Group			
Name	CLASSIFICATION		
Farzad Tasbihgoo	Structural Material Rep	\$	184.80
Dan Chang, DWI, NDT	Source Inspector	\$	138.60
Andrew Soria, CWI, NACE	Source Inspector	\$	115.50
Reid Gerritsen, CQI	Source Inspector	\$	109.15

Z&K Consultants, Inc.			
Name	CLASSIFICATION		
Crystal Faqih, PE	Sr. Construction Inspector	\$	204.43
Brittany Dunh, PE	Sr. Construction Inspector	\$	185.95
Noah Hernandez	Sr. Construction Inspector	\$	169.78
Ziad Al-Dasouqi	Sr. Construction Inspector	\$	204.43
Zack Faqih, PE	Sr. Construction Inspector	\$	204.43

March 24, 2021

City of Corona
Agreement with Falcon Engineering Services, Inc. for
Construction Management and Inspection Services
(McKinley Street Grade Separation Project - Project No. 2012-12)

FALCON Team Subconsultants		
Wood Environment and Infrastructure Solutions, Inc.		
Name	CLASSIFICATION	
Project Support	Belinda Lopez	\$ 60.45
Biology Group Manager	Scott Crawford	\$ 205.81
Senior Biologist	Dale Hameister	\$ 102.49
Senior Biologist	Nathan Moorhatch	\$ 116.80
Senior Biologist	Michael Wilcox	\$ 113.93
Senior Biologist	John Green	\$ 117.80
Senior Biologist	Lisa Wadley	\$ 99.78
GIS Manager	Aaron Johnson	\$ 111.40
GIS Analyst	Chris Nixon	\$ 105.54
Biologist	Alec Williams	\$ 46.48
Biologist	Phil Cleveninger	\$ 38.73
Biologist	Juan Eason	\$ 38.73
Archaeologist	Michael Amorelli	\$ 69.72
Archaeologist	Cynthia Morales	\$ 63.21
Archaeologist	Melissa Jenkins	\$ 56.81
Senior Archaeologist	Trisha Drennan	\$ 99.42
Cultural Resource Manager	Scott Sunell	\$ 160.77
Senior Paleontologist	Matt Sauter	\$ 103.57
Contracts	Carol Shore	\$ 89.29

March 24, 2021

1st Amendment Added Rates:

Generate a 3-D model of all major arch components to evaluate constructability and details of constructability and provide City with an advanced mill order for a total not to exceed fee of \$99,963.00 as detailed below.

Section 1.2.1 Constructability Review/Pre-Construction Phase Services and Deliverables performed by specialty subconsultant, Tensor Engineering: lump sum cost of \$66,000.

Structural Engineering Manager: 40 hours @\$240/hour = \$9,600

Bridge Engineer: 80 hours @210/hour = \$16,800

CADD Technician 2D: 240 hours @\$110/hour = \$26,400

CADD Technician 3D Modeling: 110 hours @\$120/hr = \$13,200

Administer, provide comments, work product evaluation and model/mill sheet contract incorporation: lump sum cost of \$21,516

Specification development and plan sheet recommendations for alternate bridge superstructure construction method: lump sum cost of \$12,447.

2nd Amendment Added Rates: Additional compensation total not exceed \$2,933,461.04.

		Falcon										DANKEN				DEA	ZTC	Converse
		Claims Support	Lead Roadway Inspector	Electrical Inspector	Roadway Inspection	Structures Inspection	Labor Compliance	SYNPP Review & Safety Engineer	Landscape Architect/Inspection	Admin Support / Office Engineering	Drone Aerial/Photo Documentarian	Senior RESR	Document Control	Asst Resident Engineer / Utility Coordinator	Structures Rep / Structures Inspector	Construction Surveying	Source Insection	Material Testing
		\$396.64	\$251.21	\$211.54	\$211.54	\$211.54	\$237.99	\$198.32	\$185.10	\$134.86	\$211.54	\$290.00	\$107.92	\$260.00	\$272.58	\$175.00	\$165.00	\$155.00
Task 1	Project Administration / Meetings		48				48	48		48		48	48	48				
		\$ -	\$ 12,057.96	\$ -	\$ -	\$ -	\$ 11,423.33	\$ 9,519.44	\$ -	\$ 6,473.22	\$ -	\$ 13,920.00	\$ 5,180.16	\$ 12,480.00	\$ 13,083.84	\$ -	\$ -	\$ -
Task 2	Construction Managemenet - Inspection		1024	760	1024	1024	128	128	400	1024	160	632	48	632	618	1100	500	700
		\$ -	\$ 257,236.53	\$ 160,772.83	\$ 216,620.24	\$ 216,620.24	\$ 30,462.22	\$ 25,385.18	\$ 74,040.12	\$ 138,095.40	\$ 33,846.91	\$ 183,280.00	\$ 5,180.16	\$ 164,320.00	\$ 167,909.28	\$ 192,500.00	\$ 82,500.00	\$ 108,500.00
Task 3	Claim #1 support	774	400							160		268		268		0	0	0
		\$ 307,002.07	\$ 100,483.02	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,577.41	\$ -	\$ 77,720.00	\$ -	\$ 69,680.00	\$ -	\$ -	\$ -	\$ -
Task 4	Construction close out support		176	120	80	80	40	80	80	80	40	40		40	40	40	40	40
		\$ -	\$ 44,212.53	\$ 25,385.18	\$ 16,923.46	\$ 16,923.46	\$ 9,519.44	\$ 15,865.74	\$ 14,808.02	\$ 10,788.70	\$ 8,461.73	\$ 11,600.00	\$ -	\$ 10,400.00	\$ 10,903.20	\$ 7,000.00	\$ 6,600.00	\$ 6,200.00

	Falcon	Danken	DEA	ZTC	CONVERSE	
Task 1	\$ 39,473.96	\$ 44,664.00	\$ -	\$ -	\$ -	
Task 2	\$ 1,153,079.67	\$ 520,689.44	\$ 192,500.00	\$ 82,500.00	\$ 108,500.00	
Task 3	\$ 429,062.50	\$ 147,400.00	\$ -	\$ -	\$ -	
Task 4	\$ 162,888.26	\$ 32,903.20	\$ 7,000.00	\$ 6,600.00	\$ 6,200.00	
	Total per consultant	\$ 1,784,904.40	\$ 745,656.64	\$ 199,500.00	\$ 89,100.00	\$ 114,700.00

Total per Task
\$ 84,137.96
\$ 2,057,269.11
\$ 576,462.50
\$ 215,591.46
\$ 2,933,461.04

