

**AGREEMENT
CITY OF FRESNO, CALIFORNIA
CONSULTANT SERVICES**

THIS AGREEMENT is made and entered into effective the 12 day of June, 2015, by and between the CITY OF FRESNO, a California municipal corporation (hereinafter referred to as "CITY"), and Blair, Church & Flynn Consulting Engineers, a California Corporation (hereinafter referred to as "CONSULTANT").

RECITALS

WHEREAS, CITY desires to obtain professional design services services for Final Design of the Phase 2 Regional Transmission Mains, hereinafter referred to as the "Project;" and

WHEREAS, CONSULTANT is engaged in the business of furnishing services as a Engineer and hereby represents that it desires to and is professionally and legally capable of performing the services called for by this Agreement; and

WHEREAS, CONSULTANT acknowledges that this Agreement is subject to the requirements of Fresno Municipal Code Section 4-107 and Administrative Order No. 6-19; and

WHEREAS, this Agreement will be administered for CITY by its Director of Public Utilities (hereinafter referred to as "Director") or his/her designee.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and of the covenants, conditions, and promises hereinafter contained to be kept and performed by the respective parties, it is mutually agreed as follows:

1. Scope of Services. CONSULTANT shall perform to the satisfaction of CITY the services described in **Exhibit A**, including all work incidental to, or necessary to perform, such services even though not specifically described in **Exhibit A**.

2. Term of Agreement and Time for Performance. This Agreement shall be effective from the date first set forth above and shall continue in full force and effect through the earlier of complete rendition of the services hereunder or December 16, 2016, subject to any earlier termination in accordance with this Agreement. The services of CONSULTANT as described in **Exhibit A** are to commence upon CITY'S issuance of a written "Notice to Proceed." Work shall be undertaken and completed in a sequence assuring expeditious completion, but in any event, all such services shall be completed within 547 consecutive calendar days from such authorization to proceed.

3. Compensation.

(a) CONSULTANT'S sole compensation for satisfactory performance of all services required or rendered pursuant to this Agreement shall be a total fee not to exceed \$2,836,195, paid on a time and materials basis in accordance with the schedule of fees contained in **Exhibit A**.

(b) Detailed statements shall be rendered monthly and will be payable in the normal course of CITY business. CITY shall not be obligated to reimburse any expense for which it has not received a detailed invoice with applicable copies of representative and identifiable receipts or records substantiating such expense.

(c) The parties may modify this Agreement to increase or decrease the scope of services or provide for the rendition of services not required by this Agreement, which modification shall include an adjustment to CONSULTANT'S compensation. Any change in the scope of services must be made by written amendment to the Agreement signed by an authorized representative for each party. CONSULTANT shall not be entitled to any additional compensation if services are performed prior to a signed written amendment.

4. Termination, Remedies and Force Majeure.

(a) This Agreement shall terminate without any liability of CITY to CONSULTANT upon the earlier of: (i) CONSULTANT'S filing for protection under the federal bankruptcy laws, or any bankruptcy petition or petition for receiver commenced by a third party against CONSULTANT; (ii) 7 calendar days prior written notice with or without cause by CITY to CONSULTANT; (iii) CITY'S non-appropriation of funds sufficient to meet its obligations hereunder during any CITY fiscal year of this Agreement, or insufficient funding for the Project; or (iv) expiration of this Agreement.

(b) Immediately upon any termination or expiration of this Agreement, CONSULTANT shall (i) immediately stop all work hereunder; (ii) immediately cause any and all of its subcontractors to cease work; and (iii) return to CITY any and all unearned payments and all properties and materials in the possession of CONSULTANT that are owned by CITY. Subject to the terms of this Agreement, CONSULTANT shall be paid compensation for services satisfactorily performed prior to the effective date of termination. CONSULTANT shall not be paid for any work or services performed or costs incurred which reasonably could have been avoided.

(c) In the event of termination due to failure of CONSULTANT to satisfactorily perform in accordance with the terms of this Agreement, CITY may withhold an amount that would otherwise be payable as an offset to, but not in excess of, CITY'S damages caused by such failure. In no event shall any payment by CITY pursuant to this Agreement constitute a waiver by CITY of any breach of this Agreement which may then exist on the part of CONSULTANT, nor shall such payment impair or prejudice any remedy available to CITY with respect to the breach.

(d) Upon any breach of this Agreement by CONSULTANT, CITY may (i) exercise any right, remedy (in contract, law or equity), or privilege which may be available to it under applicable laws of the State of California or any other applicable law; (ii) proceed by appropriate court action to enforce the terms of the Agreement; and/or (iii) recover all direct, indirect, consequential, economic and incidental damages for the breach of the Agreement. If it is determined that CITY improperly terminated this Agreement for default, such termination shall be deemed a termination for convenience.

(e) CONSULTANT shall provide CITY with adequate written assurances of future performance, upon Director's request, in the event CONSULTANT fails to comply with any terms or conditions of this Agreement.

(f) CONSULTANT shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of CONSULTANT and without its fault or negligence such as, acts of God or the public enemy, acts of CITY in its contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. CONSULTANT shall notify Director in writing as soon as it is reasonably

possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, and shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to Director of the cessation of such occurrence.

5. Confidential Information, Ownership of Documents and Copyright License.

(a) Any reports, information, or other data prepared or assembled by CONSULTANT pursuant to this Agreement shall not be made available to any individual or organization by CONSULTANT without the prior written approval of CITY. During the term of this Agreement, and thereafter, CONSULTANT shall not, without the prior written consent of CITY, disclose to anyone any Confidential Information. The term Confidential Information for the purposes of this Agreement shall include all proprietary and confidential information of CITY, including but not limited to business plans, marketing plans, financial information, designs, drawings, specifications, materials, compilations, documents, instruments, models, source or object codes and other information disclosed or submitted, orally, in writing, or by any other medium or media. All Confidential Information shall be and remain confidential and proprietary in CITY.

(b) Any and all original sketches, pencil tracings of working drawings, plans, computations, specifications, computer disk files, writings and other documents prepared or provided by CONSULTANT pursuant to this Agreement are the property of CITY at the time of preparation and shall be turned over to CITY upon expiration or termination of the Agreement or default by CONSULTANT. CONSULTANT grants CITY a copyright license to use such drawings and writings. CONSULTANT shall not permit the reproduction or use thereof by any other person except as otherwise expressly provided herein. CITY may modify the design including any drawings or writings. Any use by CITY of the aforesaid sketches, tracings, plans, computations, specifications, computer disk files, writings and other documents in completed form as to other projects or extensions of this Project, or in uncompleted form, without specific written verification by CONSULTANT will be at CITY'S sole risk and without liability or legal exposure to CONSULTANT. CONSULTANT may keep a copy of all drawings and specifications for its sole and exclusive use.

(c) If CONSULTANT should subcontract all or any portion of the services to be performed under this Agreement, CONSULTANT shall cause each subcontractor to also comply with the requirements of this Section 5.

(d) This Section 5 shall survive expiration or termination of this Agreement.

6. Professional Skill. It is further mutually understood and agreed by and between the parties hereto that inasmuch as CONSULTANT represents to CITY that CONSULTANT and its subcontractors, if any, are skilled in the profession and shall perform in accordance with the standards of said profession necessary to perform the services agreed to be done by it under this Agreement, CITY relies upon the skill of CONSULTANT and any subcontractors to do and perform such services in a skillful manner and CONSULTANT agrees to thus perform the services and require the same of any subcontractors. Therefore, any acceptance of such services by CITY shall not operate as a release of CONSULTANT or any subcontractors from said professional standards.

7. Indemnification. To the furthest extent allowed by law, CONSULTANT shall indemnify, hold harmless and defend CITY and each of its officers, officials, employees, agents and volunteers from any and all loss, liability, fines, penalties, forfeitures, costs and damages

(whether in contract, tort or strict liability, including but not limited to personal injury, death at any time and property damage), and from any and all claims, demands and actions in law or equity (including reasonable attorney's fees and litigation expenses) that arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of CONSULTANT, its principals, officers, employees, agents or volunteers in the performance of this Agreement.

If CONSULTANT should subcontract all or any portion of the services to be performed under this Agreement, CONSULTANT shall require each subcontractor to indemnify, hold harmless and defend CITY and each of its officers, officials, employees, agents and volunteers in accordance with the terms of the preceding paragraph.

This section shall survive termination or expiration of this Agreement.

8. Insurance.

(a) Throughout the life of this Agreement, CONSULTANT shall pay for and maintain in full force and effect all insurance as required in **Exhibit B**, which is incorporated into and part of this Agreement, with an insurance company(ies) either (i) admitted by the California Insurance Commissioner to do business in the State of California and rated no less than "A-VII" in the Best's Insurance Rating Guide, or (ii) as may be authorized in writing by CITY'S Risk Manager or his/her designee at any time and in his/her sole discretion. The required policies of insurance as stated in Exhibit B shall maintain limits of liability of not less than those amounts stated therein. However, the insurance limits available to CITY, its officers, officials, employees, agents and volunteers as additional insureds, shall be the greater of the minimum limits specified therein or the full limit of any insurance proceeds to the named insured.

(b) If at any time during the life of the Agreement or any extension, CONSULTANT or any of its subcontractors/sub-consultants fail to maintain any required insurance in full force and effect, all services and work under this Agreement shall be discontinued immediately, and all payments due or that become due to CONSULTANT shall be withheld until notice is received by CITY that the required insurance has been restored to full force and effect and that the premiums therefore have been paid for a period satisfactory to CITY. Any failure to maintain the required insurance shall be sufficient cause for CITY to terminate this Agreement. No action taken by CITY pursuant to this section shall in any way relieve CONSULTANT of its responsibilities under this Agreement. The phrase "fail to maintain any required insurance" shall include, without limitation, notification received by CITY that an insurer has commenced proceedings, or has had proceedings commenced against it, indicating that the insurer is insolvent.

(c) The fact that insurance is obtained by CONSULTANT shall not be deemed to release or diminish the liability of CONSULTANT, including, without limitation, liability under the indemnity provisions of this Agreement. The duty to indemnify CITY shall apply to all claims and liability regardless of whether any insurance policies are applicable. The policy limits do not act as a limitation upon the amount of indemnification to be provided by CONSULTANT. Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of CONSULTANT, its principals, officers, agents, employees, persons under the supervision of CONSULTANT, vendors, suppliers, invitees, consultants, sub-consultants, subcontractors, or anyone employed directly or indirectly by any of them.

(d) If CONSULTANT should subcontract all or any portion of the services to be performed under this Agreement, CONSULTANT shall require each subcontractor/sub-consultant to provide insurance protection, as an additional insured, to the CITY and each of its officers, officials, employees, agents and volunteers in accordance with the terms of this section, except

that any required certificates and applicable endorsements shall be on file with CONSULTANT and CITY prior to the commencement of any services by the subcontractor. CONSULTANT and any subcontractor/sub-consultant shall establish additional insured status for CITY, its officers, officials, employees, agents and volunteers by using Insurance Service Office (ISO) Form CG 20 10 11 85 or both CG 20 10 10 01 and CG 20 37 10 01 or by an executed manuscript company endorsement providing additional insured status as broad as that contained in ISO Form CG 20 10 11 85.

9. Conflict of Interest and Non-Solicitation.

(a) Prior to CITY'S execution of this Agreement, CONSULTANT shall complete a City of Fresno conflict of interest disclosure statement in the form as set forth in **Exhibit C**. During the term of this Agreement, CONSULTANT shall have the obligation and duty to immediately notify CITY in writing of any change to the information provided by CONSULTANT in such statement.

(b) CONSULTANT shall comply, and require its subcontractors to comply, with all applicable (i) professional canons and requirements governing avoidance of impermissible client conflicts; and (ii) federal, state and local conflict of interest laws and regulations including, without limitation, California Government Code Section 1090 et. seq., the California Political Reform Act (California Government Code Section 87100 et. seq.), the regulations of the Fair Political Practices Commission concerning disclosure and disqualification (2 California Code of Regulations Section 18700 et. seq.) and Section 4-112 of the Fresno Municipal Code (Ineligibility to Compete). At any time, upon written request of CITY, CONSULTANT shall provide a written opinion of its legal counsel and that of any subcontractor that, after a due diligent inquiry, CONSULTANT and the respective subcontractor(s) are in full compliance with all laws and regulations. CONSULTANT shall take, and require its subcontractors to take, reasonable steps to avoid any appearance of a conflict of interest. Upon discovery of any facts giving rise to the appearance of a conflict of interest, CONSULTANT shall immediately notify CITY of these facts in writing.

(c) In performing the work or services to be provided hereunder, CONSULTANT shall not employ or retain the services of any person while such person either is employed by CITY or is a member of any CITY council, commission, board, committee, or similar CITY body. This requirement may be waived in writing by the City Manager, if no actual or potential conflict is involved.

(d) CONSULTANT represents and warrants that it has not paid or agreed to pay any compensation, contingent or otherwise, direct or indirect, to solicit or procure this Agreement or any rights/benefits hereunder.

(e) Neither CONSULTANT, nor any of CONSULTANT'S subcontractors performing any services on this Project, shall bid for, assist anyone in the preparation of a bid for, or perform any services pursuant to, any other contract in connection with this Project. CONSULTANT and any of its subcontractors shall have no interest, direct or indirect, in any other contract with a third party in connection with this Project unless such interest is in accordance with all applicable law and fully disclosed to and approved by the City Manager, in advance and in writing.

(f) If CONSULTANT should subcontract all or any portion of the work to be performed or services to be provided under this Agreement, CONSULTANT shall include the provisions of this Section 9 in each subcontract and require its subcontractors to comply therewith.

(g) This Section 9 shall survive expiration or termination of this Agreement.

10. Recycling Program. In the event CONSULTANT maintains an office or operates a facility(ies), or is required herein to maintain or operate same, within the incorporated limits of the City of Fresno, CONSULTANT at its sole cost and expense shall:

- (i) Immediately establish and maintain a viable and ongoing recycling program, approved by CITY'S Solid Waste Management Division, for each office and facility. Literature describing CITY recycling programs is available from CITY'S Solid Waste Management Division and by calling City of Fresno Recycling Hotline at (559) 621-1111.
- (ii) Immediately contact CITY'S Solid Waste Management Division at (559) 621-1452 and schedule a free waste audit, and cooperate with such Division in their conduct of the audit for each office and facility.
- (iii) Cooperate with and demonstrate to the satisfaction of CITY'S Solid Waste Management Division the establishment of the recycling program in paragraph (i) above and the ongoing maintenance thereof.

11. General Terms.

(a) Except as otherwise provided by law, all notices expressly required of CITY within the body of this Agreement, and not otherwise specifically provided for, shall be effective only if signed by the Director or his/her designee.

(b) Records of CONSULTANT'S expenses pertaining to the Project shall be kept on a generally recognized accounting basis and shall be available to CITY or its authorized representatives upon request during regular business hours throughout the life of this Agreement and for a period of three years after final payment or, if longer, for any period required by law. In addition, all books, documents, papers, and records of CONSULTANT pertaining to the Project shall be available for the purpose of making audits, examinations, excerpts, and transcriptions for the same period of time. If any litigation, claim, negotiations, audit or other action is commenced before the expiration of said time period, all records shall be retained and made available to CITY until such action is resolved, or until the end of said time period whichever shall later occur. If CONSULTANT should subcontract all or any portion of the services to be performed under this Agreement, CONSULTANT shall cause each subcontractor to also comply with the requirements of this paragraph. This Section 11(b) shall survive expiration or termination of this Agreement.

(c) Prior to execution of this Agreement by CITY, CONSULTANT shall have provided evidence to CITY that CONSULTANT is licensed to perform the services called for by this Agreement (or that no license is required). If CONSULTANT should subcontract all or any portion of the work or services to be performed under this Agreement, CONSULTANT shall require each subcontractor to provide evidence to CITY that subcontractor is licensed to perform the services called for by this Agreement (or that no license is required) before beginning work.

12. Nondiscrimination. To the extent required by controlling federal, state and local law, CONSULTANT shall not employ discriminatory practices in the provision of services, employment of personnel, or in any other respect on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era. Subject to the foregoing and during the performance of this Agreement, CONSULTANT agrees as follows:

(a) CONSULTANT will comply with all applicable laws and regulations providing that no person shall, on the grounds of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity made possible by or resulting from this Agreement.

(b) CONSULTANT will not discriminate against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era. CONSULTANT shall ensure that applicants are employed, and the employees are treated during employment, without regard to their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era. Such requirement shall apply to CONSULTANT'S employment practices including, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. CONSULTANT agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provision of this nondiscrimination clause.

(c) CONSULTANT will, in all solicitations or advertisements for employees placed by or on behalf of CONSULTANT in pursuit hereof, state that all qualified applicants will receive consideration for employment without regard to race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era.

(d) CONSULTANT will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising such labor union or workers' representatives of CONSULTANT'S commitment under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(e) If CONSULTANT should subcontract all or any portion of the services to be performed under this Agreement, CONSULTANT shall cause each subcontractor to also comply with the requirements of this Section 12.

13. Independent Contractor.

(a) In the furnishing of the services provided for herein, CONSULTANT is acting solely as an independent contractor. Neither CONSULTANT, nor any of its officers, agents or employees shall be deemed an officer, agent, employee, joint venturer, partner or associate of CITY for any purpose. CITY shall have no right to control or supervise or direct the manner or method by which CONSULTANT shall perform its work and functions. However, CITY shall retain the right to administer this Agreement so as to verify that CONSULTANT is performing its obligations in accordance with the terms and conditions thereof.

(b) This Agreement does not evidence a partnership or joint venture between CONSULTANT and CITY. CONSULTANT shall have no authority to bind CITY absent CITY'S express written consent. Except to the extent otherwise provided in this Agreement, CONSULTANT shall bear its own costs and expenses in pursuit thereof.

(c) Because of its status as an independent contractor, CONSULTANT and its officers, agents and employees shall have absolutely no right to employment rights and benefits available to CITY employees. CONSULTANT shall be solely liable and responsible for all payroll and tax withholding and for providing to, or on behalf of, its employees all employee benefits including, without limitation, health, welfare and retirement benefits. In addition, together with its other obligations under this Agreement, CONSULTANT shall be solely responsible, indemnify, defend and save CITY harmless from all matters relating to employment and tax withholding for and payment of CONSULTANT'S employees, including, without limitation, (i) compliance with Social Security and unemployment insurance withholding, payment of workers' compensation benefits, and all other laws and regulations governing matters of employee withholding, taxes and payment; and (ii) any claim of right or interest in CITY employment benefits, entitlements, programs and/or funds offered employees of CITY whether arising by reason of any common law, de facto, leased, or co-employee rights or other theory. It is acknowledged that during the term of this Agreement, CONSULTANT may be providing services to others unrelated to CITY or to this Agreement.

14. Notices. Any notice required or intended to be given to either party under the terms of this Agreement shall be in writing and shall be deemed to be duly given if delivered personally, transmitted by facsimile followed by telephone confirmation of receipt, or sent by United States registered or certified mail, with postage prepaid, return receipt requested, addressed to the party to which notice is to be given at the party's address set forth on the signature page of this Agreement or at such other address as the parties may from time to time designate by written notice. Notices served by United States mail in the manner above described shall be deemed sufficiently served or given at the time of the mailing thereof.

15. Binding. Subject to Section 16, below, once this Agreement is signed by all parties, it shall be binding upon, and shall inure to the benefit of, all parties, and each parties' respective heirs, successors, assigns, transferees, agents, servants, employees and representatives.

16. Assignment.

(a) This Agreement is personal to CONSULTANT and there shall be no assignment by CONSULTANT of its rights or obligations under this Agreement without the prior written approval of the City Manager or his/her designee. Any attempted assignment by

CONSULTANT, its successors or assigns, shall be null and void unless approved in writing by the City Manager or his/her designee.

(b) CONSULTANT hereby agrees not to assign the payment of any monies due CONSULTANT from CITY under the terms of this Agreement to any other individual(s), corporation(s) or entity(ies). CITY retains the right to pay any and all monies due CONSULTANT directly to CONSULTANT.

17. Compliance With Law. In providing the services required under this Agreement, CONSULTANT shall at all times comply with all applicable laws of the United States, the State of California and CITY, and with all applicable regulations promulgated by federal, state, regional, or local administrative and regulatory agencies, now in force and as they may be enacted, issued, or amended during the term of this Agreement.

18. Waiver. The waiver by either party of a breach by the other of any provision of this Agreement shall not constitute a continuing waiver or a waiver of any subsequent breach of either the same or a different provision of this Agreement. No provisions of this Agreement may be waived unless in writing and signed by all parties to this Agreement. Waiver of any one provision herein shall not be deemed to be a waiver of any other provision herein.

19. Governing Law and Venue. This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding, however, any conflict of laws rule which would apply the law of another jurisdiction. Venue for purposes of the filing of any action regarding the enforcement or interpretation of this Agreement and any rights and duties hereunder shall be Fresno County, California.

20. Headings. The section headings in this Agreement are for convenience and reference only and shall not be construed or held in any way to explain, modify or add to the interpretation or meaning of the provisions of this Agreement.

21. Severability. The provisions of this Agreement are severable. The invalidity, or unenforceability of any one provision in this Agreement shall not affect the other provisions.

22. Interpretation. The parties acknowledge that this Agreement in its final form is the result of the combined efforts of the parties and that, should any provision of this Agreement be found to be ambiguous in any way, such ambiguity shall not be resolved by construing this Agreement in favor of or against either party, but rather by construing the terms in accordance with their generally accepted meaning.

23. Attorney's Fees. If either party is required to commence any proceeding or legal action to enforce or interpret any term, covenant or condition of this Agreement, the prevailing party in such proceeding or action shall be entitled to recover from the other party its reasonable attorney's fees and legal expenses.

24. Exhibits. Each exhibit and attachment referenced in this Agreement is, by the reference, incorporated into and made a part of this Agreement.

25. Precedence of Documents. In the event of any conflict between the body of this Agreement and any Exhibit or Attachment hereto, the terms and conditions of the body of this Agreement shall control and take precedence over the terms and conditions expressed within the Exhibit or Attachment. Furthermore, any terms or conditions contained within any Exhibit or

Attachment hereto which purport to modify the allocation of risk between the parties, provided for within the body of this Agreement, shall be null and void.

26. Cumulative Remedies. No remedy or election hereunder shall be deemed exclusive but shall, wherever possible, be cumulative with all other remedies at law or in equity.

27. No Third Party Beneficiaries. The rights, interests, duties and obligations defined within this Agreement are intended for the specific parties hereto as identified in the preamble of this Agreement. Notwithstanding anything stated to the contrary in this Agreement, it is not intended that any rights or interests in this Agreement benefit or flow to the interest of any third parties.

28. Extent of Agreement. Each party acknowledges that they have read and fully understand the contents of this Agreement. This Agreement represents the entire and integrated agreement between the parties with respect to the subject matter hereof and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be modified only by written instrument duly authorized and executed by both CITY and CONSULTANT.

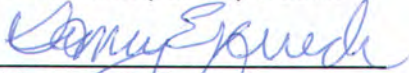
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IN WITNESS WHEREOF, the parties have executed this Agreement at Fresno, California, the day and year first above written.

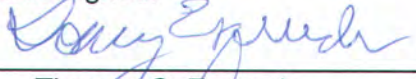
CITY OF FRESNO,
a California municipal corporation

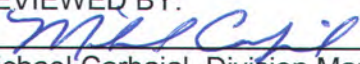
By: 
Thomas C. Esqueda,
Director
Department of Public Utilities

ATTEST:
YVONNE SPENCE, CMC
City Clerk

By:  6/15/15
Deputy

No signature of City Attorney required.
Standard Document #DPU-S 8.2 has been
used without modification, as certified by
the undersigned.


By: 
Thomas C. Esqueda
Director
Department of Public Utilities

REVIEWED BY:

Michael Carbajal, Division Manager
Department of Public Utilities

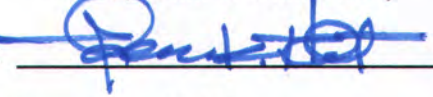
Addresses:
CITY:
City of Fresno
Attention: Paul Amico, PE,
Senior Project Manager
2101 G Street, Building A
Fresno, CA 93706
Phone: (559) 621-1602
FAX: (559) 498-4126

- Attachments:
1. Exhibit A - Scope of Services
 2. Exhibit B - Insurance Requirements
 3. Exhibit C - Conflict of Interest Disclosure Form

Blair, Church & Flynn Consulting Engineers,
a California Corporation

By: 
Name: : Karl E. Kienow

Title: Vice President
(if corporation or LLC, Board
Chair, Pres. or Vice Pres.)

By: 
Name: Adam K. Holt

Title: CFO / Secretary
(if corporation or LLC, CFO,
Treasurer, Secretary or Assistant
Secretary)

Any Applicable Professional License:
Number: C51,615
Name: Karl E. Kienow
Date of Issuance: 4 Feb 1994

CONSULTANT:
Blair, Church & Flynn Consulting Engineers
Attention: Karl Kienow, PE,
Principal
451 Clovis Avenue, Suite 200
Clovis, CA 93612
Phone: (559) 326-1400
FAX: (559) 326-1500

Exhibit A

SCOPE OF SERVICES

Consultant Service Agreement between City of Fresno ("City") and Blair, Church & Flynn Consulting Engineers ("Consultant")

Final Design of Phase 2 Regional Transmission Mains

PROJECT TITLE

Overview

The City of Fresno Department of Public Utilities Water Division (City) is taking the next steps towards providing the City with treated surface water and reducing overdrafting of the available groundwater supply. The Regional Transmission Mains (RTMs) will interconnect the City's existing and proposed surface water treatment facilities and storage reservoirs with the water distribution network and allow the City to move large quantities of treated surface water throughout the system. Schematic design of the Phase 2 RTMs was recently completed resulting in the need to construct approximately 13 miles of 66- to 30-inch diameter pipelines. The City has divided the 13 miles of Phase 2 pipelines into five design and construction packages roughly defined as follows:

- Package 1 - Olive Ave - Fowler to Chestnut - 16,100 +/- feet of 60- to 66-inch pipe
- Package 2 - Olive Ave - Chestnut to Fresno - 13,400 +/- feet of 48-to 54-inch pipe
- Package 3 - Fresno / McKinley / Palm P2 RTM - 18,700 +/- feet of 30- to 48-inch pipe
- Package 4 - Chestnut - Olive to Ashlan - 13,400 +/- feet of 30-inch pipe
- Package 5 - Temperance / Kings Canyon - 7,700 +/- feet of 20- to 42-inch pipe

The City's goal is to have the Phase 2 RTMs ready to be fully operational before the Southeast Surface Water Treatment Facility (SEWTF) is operational, which is anticipated to be in Summer 2018. Construction of these five packages is expected to be complete in Spring 2018.

Consultant will perform final design of the pipeline facilities based on the information provided in the Draft Preliminary Design Report that has been completed by others. This scope covers final design services for Packages 1, 2, 3, 4, and 5.

Schematic Design Information Provided by City

Schematic Design of the Priority 2 RTMs was conducted beginning in March 2014 and is substantially complete. As part of this Schematic Design work, a significant amount of design-related information has been compiled and it will be provided to the Consultant as a basis for performing Final Design. The City will provide the following information:

- Aerial photogrammetry with rectified photos of final alignment
- Control Survey
- Right-of-Way Survey
- Digital Terrain Model

- Utility Locations (based on plat maps, visual inspection, and limited subsurface utility locates [potholes])
- Schematic Traffic Control Report
- Permitting Summary
- Preliminary Geotechnical Reports and Data
- Hazardous Materials Report
- Corrosion Report
- Standard Details and Specifications
- Plan View Drawings (showing proposed location of pipeline alignment, including contours and utility locations)

Scope of Services

Task 100 – Project Management

The purpose of this task is to provide technical and administrative oversight during the final design and bidding phases. This task includes the following activities:

1. Implement project controls to monitor and report on project progress, schedule, and budget status.
2. Develop a detailed, task-based critical path project schedule that describes the major project activities and deliverables and the relationships between the activities.
3. Provide monthly reports to the City that report on earned value (project percent complete) progress against schedule, and progress against budget. Provide invoices to the City on a monthly basis.
4. Establish change management procedures
5. Develop and maintain a risk register that identifies risks to the design budget or schedule and actions to mitigate the risk.
6. Implement a communications plan.
7. Attend bi-weekly telephone conversations or in-person meetings with City staff to discuss project status and issues during the design phase. Progress meetings are not expected during the bidding phase.
8. Develop and maintain a Project Decision Log and Action Item List, which will be reviewed with City staff on a regular basis.

Task 200 – Schematic Design Review and Kickoff Meeting

The purpose of this task is to review and provide comments on the Preliminary Design Report (PDR) and the specifications and standard details that were developed as a part of the Schematic Design. It also includes participation in a kickoff workshop that will be used to review and establish project goals, organizational structure, reporting and communication plans, risk registers, and change management plans. This task includes the following activities:

1. Review the PDR and provide written comments on Packages 1, 2, 3, 4, and 5 in advance of the kickoff workshop.
2. Review the standard details and specifications and provide written comments in advance of the kickoff workshop.
3. Participate in a kickoff workshop. For budgeting purposes, the workshop is assumed to last up to 8 hours.

Assumptions and Clarifications

- Consultant shall review Preliminary Design Report with focus on developing comments on the alignments and features common to all packages
- Workshop is assumed to last for 8 hours
- The schematic plans and standard details and specifications will be updated as required by the schematic designer

Deliverables

- Summary of review comments on Preliminary Design Report

Task 300 – Design Development Phase (60%)

The purpose of the design development phase is to complete engineering services through 60% design. A total of five separate sets of documents will be prepared, one for each of the five bid packages. The City will provide the hydraulic surge analysis results for all five packages, and the corrosion mitigation design will consist only of a monitoring system.

This task includes the following activities:

1. Prepare 60% PS&E for Bid Package 1:
 - 1.1. Prepare 60% design drawings in AutoCAD/Civil3D 2013 or later digital format that include general, civil, plan and profile, traffic, corrosion, special details, and standard details. The drawing border sheet will be as supplied by the City. The following is a list of sheets that are expected to be in the plans:

Sheet No.	Drawing No.	Title
1.	G-1	Title Sheet, Vicinity Map and Location Map
2.	G-2	General Abbreviations, Legend, and Survey Control
3.	G-3	General Notes
4.	P-1	Olive Avenue Plan and Profile – Station 140+50 to 142+50 and Station 10+00 to 20+00
5.	P-2	Olive Avenue Plan and Profile – Station 20+00 to 31+00

Sheet No.	Drawing No.	Title
6.	P-3	Olive Avenue Plan and Profile – Station 31+00 to 43+00
7.	P-4	Olive Avenue Plan and Profile – Station 43+00 to 55+00
8.	P-5	Olive Avenue Plan and Profile – Station 55+00 to 67+50
9.	P-6	Olive Avenue Plan and Profile – Station 67+50 to 79+00
10.	P-7	Olive Avenue Plan and Profile – Station 79+00 to 91+00
11.	P-8	Olive Avenue Plan and Profile – Station 91+00 to 103+00
12.	P-9	Olive Avenue Plan and Profile – Station 103+00 to 114+50
13.	P-10	Olive Avenue Plan and Profile – Station 114+50 to 126+50
14.	P-11	Olive Avenue Plan and Profile – Station 126+50 to 138+00
15.	P-12	Olive Avenue Plan and Profile – Station 138+00 to 150+50
16.	P-13	Olive Avenue Plan and Profile – Station 150+50 to 162+00
17.	P-14	Olive Avenue Plan and Profile – Station 162+00 to 167+50
18.	D-1	Special Details 1
19.	D-2	Special Details 2
20.	SD-1	Standard Details – Trench/Surface Restoration
21.	SD-2	Standard Details – Steel Pipe Details 1
22.	SD-3	Standard Details – Steel Pipe Details 2
23.	SD-4	Standard Details - Tunneling
24.	SD-5	Standard Details – Air Valves/Blowoffs
25.	SD-6	Standard Details – Corrosion Mitigation Details 1
26.	SD-7	Standard Details – Corrosion Mitigation Details 2
27.	T-1	Traffic Control Legends and Notes
28.	T-2	Traffic Control Details 1
29.	T-3	Traffic Control Details 2
30.	T-4	Traffic Control Details 3
31.	T-5	Traffic Control Plan 1
32.	T-6	Traffic Control Plan 2

Sheet No.	Drawing No.	Title
33.	T-7	Traffic Control Plan 3
34.	T-8	Traffic Control Plan 3
35.	T-9	Traffic Signal Loop Plans 1
36.	T-10	Traffic Signal Loop Plans 1

- 1.2. Prepare technical specifications using City supplied standard specifications developed during schematic design and as modified in Task 200. The City will supply standard format for Div 0 and Div 1 Front Ends. Provide mark-ups specific to Package 1 where appropriate.
 - 1.3. Conduct internal QA/QC review.
 - 1.4. Update construction cost estimates.
 - 1.5. Prepare 60% corrosion mitigation plans, specifications, and estimate.
 - 1.6. Prepare 60% traffic control plans, specifications, and estimate.
 - 1.7. Prepare 60% traffic signal loop schematic plans specifications, and estimate.
 - 1.8. Provide PS&E to City project manager for City inter-departmental review of the 60% design documents as necessary to facilitate approval by Public Works and other City departments.
 - 1.9. Conduct a 60% design submittal workshop with the City. The submittal review workshop will discuss comments on the 60% PS&E submittal packages and will be conducted at the end of the City's review period. The objective of the workshop is to discuss changes from the 30% design, and solicit city review comments. Document all review comments in a tabular Quality Review Form (QRF) for tracking purposes and for inclusion into next submittal package.
2. Prepare 60% PS&E for Bid Package 2:
- 2.1. Prepare 60% design drawings in AutoCAD/Civil3D 2013 or later digital format that include general, civil, plan and profile, traffic, corrosion, special details, and standard details. The drawing border sheet will be as supplied by the City. The following is a list of sheets that are expected to be in the plans:

Sheet No.	Drawing No.	Title
1.	G-1	Title Sheet, Vicinity Map and Location Map
2.	G-2	General Abbreviations, Legend, and Survey Control

Sheet No.	Drawing No.	Title
3.	G-3	General Notes
4.	P-1	Fresno Street Plan and Profile – Station 34+00 to 37+00
5.	P-2	Olive Avenue Plan and Profile – Station 10+00 to 20+50
6.	P-3	Olive Avenue Plan and Profile – Station 20+50 to 32+50
7.	P-4	Olive Avenue Plan and Profile – Station 32+50 to 44+50
8.	P-5	Olive Avenue Plan and Profile – Station 44+50 to 56+50
9.	P-6	Olive Avenue Plan and Profile – Station 56+50 to 68+50
10.	P-7	Olive Avenue Plan and Profile – Station 68+50 to 80+50
11.	P-8	Olive Avenue Plan and Profile – Station 68+50 to 80+50
12.	P-9	Olive Avenue Plan and Profile – Station 80+50 to 92+50
13.	P-10	Olive Avenue Plan and Profile – Station 92+50 to 104+50
14.	P-11	Olive Avenue Plan and Profile – Station 104+50 to 116+50
15.	P-12	Olive Avenue Plan and Profile – Station 116+50 to 128+50
16.	P-13	Olive Avenue Plan and Profile – Station 128+50 to 140+50
17.	D-1	Special Details 1
18.	D-2	Special Details 2
19.	SD-1	Standard Details – Trench/Surface Restoration
20.	SD-2	Standard Details – Steel Pipe Details 1
21.	SD-3	Standard Details – Steel Pipe Details 2
22.	SD-4	Standard Details - Tunneling
23.	SD-5	Standard Details – Air Valves/Blowoffs
24.	SD-6	Standard Details – Corrosion Mitigation Details 1
25.	SD-7	Standard Details – Corrosion Mitigation Details 2
26.	T-1	Traffic Control Legends and Notes
27.	T-2	Traffic Control Details 1
28.	T-3	Traffic Control Details 2
29.	T-4	Traffic Control Details 3

Sheet No.	Drawing No.	Title
30.	T-5	Traffic Control Plan 1
31.	T-6	Traffic Control Plan 2
32.	T-7	Traffic Control Plan 3
33.	T-10	Traffic Signal Loop Plans 1
34.	T-11	Traffic Signal Loop Plans 1

2.2. Prepare technical specifications using City supplied standard specifications developed during schematic design and as modified in Task 200. The City will supply standard format for Div 0 and Div 1 Front Ends. Provide mark-ups specific to Package 2 where appropriate.

2.3. Conduct internal QA/QC review.

2.4. Update construction cost estimates.

2.5. Prepare 60% corrosion mitigation plans, specifications, and estimate.

2.6. Prepare 60% traffic control plans, specifications, and estimate.

2.7. Prepare 60% traffic signal loop schematic plans specifications, and estimate.

2.8. Provide PS&E to City project manager for City inter-departmental review of the 60% design documents as necessary to facilitate approval by Public Works and other City departments.

2.9. Conduct a 60% design submittal workshop with the City. The submittal review workshop will discuss comments on the 60% PS&E submittal packages and will be conducted at the end of the City's review period. The objective of the workshop is to discuss changes from the 30% design, and solicit city review comments. Document all review comments in a tabular Quality Review Form (QRF) for tracking purposes and for inclusion into next submittal package.

3. Prepare 60% PS&E for Bid Package 3:

3.1. Prepare 60% design drawings in AutoCAD/Civil3D 2013 or later digital format that include general, civil, plan and profile, traffic, corrosion, special details, and standard details. The drawing border sheet will be as supplied by the City. The following is a list of sheets that are expected to be in the plans:

Sheet No.	Drawing No.	Title
1.	G-1	Title Sheet, Vicinity Map and Location Map

Sheet No.	Drawing No.	Title
2.	G-2	General Abbreviations, Legend, and Survey Control
3.	G-3	General Notes
4.	P-1	McKinley Avenue Plan and Profile – Station 10+00 to 21+00
5.	P-2	McKinley Avenue Plan and Profile – Station 21+00 to 33+00
6.	P-3	McKinley Avenue Plan and Profile – Station 33+00 to 45+00
7.	P-4	McKinley Avenue Plan and Profile – Station 45+00 to 57+00
8.	P-5	McKinley Avenue Plan and Profile – Station 57+00 to 69+00
9.	P-6	McKinley Avenue Plan and Profile – Station 69+00 to 81+00
10.	P-7	McKinley Avenue Plan and Profile – Station 81+00 to 90+00
11.	P-8	Fresno Street Plan and Profile – Station 10+00 to 21+00
12.	P-9	Fresno Street Plan and Profile – Station 21+00 to 34+00
13.	P-10	G Street Plan and Profile – Station 10+00 to 17+00
14.	P-11	H Street Plan and Profile – Station 17+00 to 28+00
15.	P-12	Palm Avenue Plan and Profile – Station 28+00 to 35+50
16.	P-13	Palm Avenue Plan and Profile – Station 35+50 to 46+50
17.	P-14	Palm Avenue Plan and Profile – Station 46+50 to 58+50
18.	P-15	Palm Avenue Plan and Profile – Station 58+50 to 70+50
19.	P-16	Palm Avenue Plan and Profile – Station 70+50 to 82+50
20.	P-17	Palm Avenue Plan and Profile – Station 82+50 to 94+00
21.	D-1	Special Details 1
22.	D-2	Special Details 2
23.	SD-1	Standard Details – Trench/Surface Restoration
24.	SD-2	Standard Details – Steel Pipe Details 1
25.	SD-3	Standard Details – Steel Pipe Details 2
26.	SD-4	Standard Details - Tunneling
27.	SD-5	Standard Details – Air Valves/Blowoffs
28.	SD-6	Standard Details – Corrosion Mitigation Details 1

Sheet No.	Drawing No.	Title
29.	SD-7	Standard Details – Corrosion Mitigation Details 2
30.	T-1	Traffic Control Legends and Notes
31.	T-2	Traffic Control Details 1
32.	T-3	Traffic Control Details 2
33.	T-4	Traffic Control Details 3
34.	T-5	Traffic Control Plan 1
35.	T-6	Traffic Control Plan 2
36.	T-7	Traffic Control Plan 3
37.	T-8	Traffic Control Plan 4
38.	T-10	Traffic Signal Loop Plans 1
39.	T-11	Traffic Signal Loop Plans 1

- 3.2. Prepare technical specifications using City supplied standard specifications developed during schematic design and as modified in Task 200. The City will supply standard format for Div 0 and Div 1 Front Ends. Provide mark-ups specific to Package 3 where appropriate.
 - 3.3. Conduct internal QA/QC review.
 - 3.4. Update construction cost estimates.
 - 3.5. Prepare 60% corrosion mitigation plans, specifications, and estimate.
 - 3.6. Prepare 60% traffic control plans, specifications, and estimate.
 - 3.7. Prepare 60% traffic signal loop schematic plans specifications, and estimate.
 - 3.8. Provide PS&E to City project manager for City inter-departmental review of the 60% design documents as necessary to facilitate approval by Public Works and other City departments.
 - 3.9. Conduct a 60% design submittal workshop with the City. The submittal review workshop will discuss comments on the 60% PS&E submittal packages and will be conducted at the end of the City's review period. The objective of the workshop is to discuss changes from the 30% design, and solicit city review comments. Document all review comments in a tabular Quality Review Form (QRF) for tracking purposes and for inclusion into next submittal package.
4. Prepare 60% PS&E for Bid Package 4:

4.1. Prepare 60% design drawings in AutoCAD/Civil3D 2013 or later digital format that include general, civil, plan and profile, traffic, corrosion, special details, and standard details. The drawing border sheet will be as supplied by the City. The following is a list of sheets that are expected to be in the plans:

Sheet No.	Drawing No.	Title
1.	G-1	Title Sheet, Vicinity Map and Location Map
2.	G-2	General Abbreviations, Legend, and Survey Control
3.	G-3	General Notes
4.	P-1	Chestnut Avenue Plan and Profile – Station 12+00 to 20+50
5.	P-2	Chestnut Avenue Plan and Profile – Station 20+50 to 32+50
6.	P-3	Chestnut Avenue Plan and Profile – Station 32+50 to 44+00
7.	P-4	Chestnut Avenue Plan and Profile – Station 44+00 to 55+50
8.	P-5	Chestnut Avenue Plan and Profile – Station 55+50 to 68+00
9.	P-6	Chestnut Avenue Plan and Profile – Station 68+00 to 79+50
10.	P-7	Chestnut Avenue Plan and Profile – Station 79+50 to 91+50
11.	P-8	Chestnut Avenue Plan and Profile – Station 91+50 to 103+50
12.	P-9	Chestnut Avenue Plan and Profile – Station 103+50 to 115+00
13.	P-10	Chestnut Avenue Plan and Profile – Station 115+00 to 126+50
14.	P-11	Chestnut Avenue Plan and Profile – Station 126+50 to 138+00
15.	P-12	Chestnut Avenue Plan and Profile – Station 138+00 to 143+50
16.	D-1	Special Details 1
17.	D-2	Special Details 2
18.	SD-1	Standard Details – Trench/Surface Restoration
19.	SD-2	Standard Details – Steel Pipe Details 1
20.	SD-3	Standard Details – Steel Pipe Details 2
21.	SD-4	Standard Details - Tunneling
22.	SD-5	Standard Details – Air Valves/Blowoffs
23.	SD-6	Standard Details – Corrosion Mitigation Details 1
24.	SD-7	Standard Details – Corrosion Mitigation Details 2

Sheet No.	Drawing No.	Title
25.	T-1	Traffic Control Legends and Notes
26.	T-2	Traffic Control Details 1
27.	T-3	Traffic Control Details 2
28.	T-4	Traffic Control Details 3
29.	T-5	Traffic Control Plan 1
30.	T-6	Traffic Control Plan 2
31.	T-7	Traffic Control Plan 3
32.	T-8	Traffic Control Plan 4
33.	T-10	Traffic Signal Loop Plans 1
34.	T-11	Traffic Signal Loop Plans 1

- 4.2. Prepare technical specifications using City supplied standard specifications developed during schematic design and as modified in Task 200. The City will supply standard format for Div 0 and Div 1 Front Ends. Provide mark-ups specific to Package 4 where appropriate.
- 4.3. Conduct internal QA/QC review.
- 4.4. Update construction cost estimates.
- 4.5. Prepare 60% corrosion mitigation plans, specifications, and estimate.
- 4.6. Prepare 60% traffic control plans, specifications, and estimate.
- 4.7. Prepare 60% traffic signal loop schematic plans specifications, and estimate.
- 4.8. Provide PS&E to City project manager for City inter-departmental review of the 60% design documents as necessary to facilitate approval by Public Works and other City departments.
- 4.9. Conduct a 60% design submittal workshop with the City. The submittal review workshop will discuss comments on the 60% PS&E submittal packages and will be conducted at the end of the City's review period. The objective of the workshop is to discuss changes from the 30% design, and solicit city review comments. Document all review comments in a tabular Quality Review Form (QRF) for tracking purposes and for inclusion into next submittal package.
5. Prepare 60% PS&E for Bid Package 5:
 - 5.1. Prepare 60% design drawings in AutoCAD/Civil3D 2013 or later digital format that include general, civil, plan and profile, traffic, corrosion, special details, and standard

details. The drawing border sheet will be as supplied by the City. The following is a list of sheets that are expected to be in the plans:

Sheet No.	Drawing No.	Title
1.	G-1	Title Sheet, Vicinity Map and Location Map
2.	G-2	General Abbreviations, Legend, and Survey Control
3.	G-3	General Notes
4.	P-1	Kings Canyon Road Plan and Profile – Station 10+00 to 18+00
5.	P-2	Kings Canyon Road Plan and Profile – Station 18+00 to 24+00
6.	P-3	Temperance Avenue Plan and Profile – Station 10+00 to 21+00
7.	P-4	Temperance Avenue Plan and Profile – Station 21+00 to 33+00
8.	P-5	Temperance Avenue Plan and Profile – Station 33+00 to 45+00
9.	P-6	Temperance Avenue Plan and Profile – Station 45+00 to 57+00
10.	P-7	Temperance Avenue Plan and Profile – Station 57+00 to 69+00
11.	D-1	Special Details 1
12.	D-2	Special Details 2
13.	SD-1	Standard Details – Trench/Surface Restoration
14.	SD-2	Standard Details – Steel Pipe Details 1
15.	SD-3	Standard Details – Steel Pipe Details 2
16.	SD-4	Standard Details - Tunneling
17.	SD-5	Standard Details – Air Valves/Blowoffs
18.	SD-6	Standard Details – Corrosion Mitigation Details 1
19.	SD-7	Standard Details – Corrosion Mitigation Details 2
20.	T-1	Traffic Control Legends and Notes
21.	T-2	Traffic Control Details 1
22.	T-2	Traffic Control Details 2
23.	T-2	Traffic Control Details 3
24.	T-3	Traffic Control Plan 1
25.	T-4	Traffic Control Plan 2

Sheet No.	Drawing No.	Title
26.	T-5	Traffic Signal Loop Plans

- 5.2. Prepare technical specifications using City supplied standard specifications developed during schematic design and as modified in Task 200. The City will supply standard format for Div 0 and Div 1 Front Ends. Provide mark-ups specific to Package 5 where appropriate.
 - 5.3. Conduct internal QA/QC review.
 - 5.4. Update construction cost estimates.
 - 5.5. Prepare 60% corrosion mitigation plans, specifications, and estimate.
 - 5.6. Prepare 60% traffic control plans, specifications, and estimate.
 - 5.7. Prepare 60% traffic signal loop schematic plans specifications, and estimate.
 - 5.8. Provide PS&E to City project manager for City inter-departmental review of the 60% design documents as necessary to facilitate approval by Public Works and other City departments.
 - 5.9. Conduct a 60% design submittal workshop with the City. The submittal review workshop will discuss comments on the 60% PS&E submittal packages and will be conducted at the end of the City's review period. The objective of the workshop is to discuss changes from the 30% design, and solicit city review comments. Document all review comments in a tabular Quality Review Form (QRF) for tracking purposes and for inclusion into next submittal package.
6. Meet with City to discuss steel pipe design and other coordination issues (maximum of 4 hours with project manager and project engineer).

Assumptions and Clarifications

- Review comments will be summarized in a Quality Review Form (QRF).
- Hydraulic surge analysis will be performed by others.
- Corrosion mitigation design will consist only of a monitoring system.

Deliverables

- Drawings for five separate Bid Packages
- Draft specification sections for five separate Bid Packages
- Updated construction cost estimate for five separate Bid Packages
- Five (5) full size (22x34) drawings in hard copy and electronic files (pdf) for five separate Bid Packages

- Five (5) specifications in hard copy and electronic files (pdf) for five separate Bid Packages

Task 400 – Construction Documents Phase (90%)

The purpose of the construction documents phase is to complete engineering services through 90% design. This task includes the following activities:

1. Prepare 90% PS&E for Bid Package 1:
 - 1.1. Prepare 90% design drawings based on the results of the 60% review comments.
 - 1.2. Prepare 90% technical specifications based on the results of the 60% review comments.
 - 1.3. Conduct internal QA/QC review.
 - 1.4. Update construction cost estimates.
 - 1.5. Prepare 90% corrosion mitigation plans, specifications, and estimate.
 - 1.6. Prepare 90% traffic control plans, specifications, and estimate.
 - 1.7. Prepare 90% traffic signal loop schematic plans specifications, and estimate.
 - 1.8. Provide PS&E to City project manager for City inter-departmental review of the 90% design documents as necessary to facilitate approval by Public Works and other City departments.
 - 1.9. Conduct a 90% design submittal workshop with the City. The submittal review workshop will discuss comments on the 60% PS&E submittal packages and will be conducted at the end of the City's review period. The objective of the workshop is to discuss changes from the 60% design, and solicit city review comments. Document all review comments in a tabular Quality Review Form (QRF) for tracking purposes and for inclusion into next submittal package.
2. Prepare 90% PS&E for Bid Package 2:
 - 2.1. Prepare 90% design drawings based on the results of the 60% review comments.
 - 2.2. Prepare 90% technical specifications based on the results of the 60% review comments.
 - 2.3. Conduct internal QA/QC review.
 - 2.4. Update construction cost estimates.
 - 2.5. Prepare 90% corrosion mitigation plans, specifications, and estimate.
 - 2.6. Prepare 90% traffic control plans, specifications, and estimate.
 - 2.7. Prepare 90% traffic signal loop schematic plans specifications, and estimate.
 - 2.8. Provide PS&E to City project manager for City inter-departmental review of the 90% design documents as necessary to facilitate approval by Public Works and other City departments.

- 2.9. Conduct a 90% design submittal workshop with the City. The submittal review workshop will discuss comments on the 60% PS&E submittal packages and will be conducted at the end of the City's review period. The objective of the workshop is to discuss changes from the 60% design, and solicit city review comments. Document all review comments in a tabular Quality Review Form (QRF) for tracking purposes and for inclusion into next submittal package.
3. Prepare 90% PS&E for Bid Package 3:
 - 3.1. Prepare 90% design drawings based on the results of the 60% review comments.
 - 3.2. Prepare 90% technical specifications based on the results of the 60% review comments.
 - 3.3. Conduct internal QA/QC review.
 - 3.4. Update construction cost estimates.
 - 3.5. Prepare 90% corrosion mitigation plans, specifications, and estimate.
 - 3.6. Prepare 90% traffic control plans, specifications, and estimate.
 - 3.7. Prepare 90% traffic signal loop schematic plans specifications, and estimate.
 - 3.8. Provide PS&E to City project manager for City inter-departmental review of the 90% design documents as necessary to facilitate approval by Public Works and other City departments.
 - 3.9. Conduct a 90% design submittal workshop with the City. The submittal review workshop will discuss comments on the 60% PS&E submittal packages and will be conducted at the end of the City's review period. The objective of the workshop is to discuss changes from the 60% design, and solicit city review comments. Document all review comments in a tabular Quality Review Form (QRF) for tracking purposes and for inclusion into next submittal package.
4. Prepare 90% PS&E for Bid Package 4:
 - 4.1. Prepare 90% design drawings based on the results of the 60% review comments.
 - 4.2. Prepare 90% technical specifications based on the results of the 60% review comments.
 - 4.3. Conduct internal QA/QC review.
 - 4.4. Update construction cost estimates.
 - 4.5. Prepare 90% corrosion mitigation plans, specifications, and estimate.
 - 4.6. Prepare 90% traffic control plans, specifications, and estimate.
 - 4.7. Prepare 90% traffic signal loop schematic plans specifications, and estimate.
 - 4.8. Provide PS&E to City project manager for City inter-departmental review of the 90% design documents as necessary to facilitate approval by Public Works and other City departments.

- 4.9. Conduct a 90% design submittal workshop with the City. The submittal review workshop will discuss comments on the 60% PS&E submittal packages and will be conducted at the end of the City's review period. The objective of the workshop is to discuss changes from the 60% design, and solicit city review comments. Document all review comments in a tabular Quality Review Form (QRF) for tracking purposes and for inclusion into next submittal package.
5. Prepare 90% PS&E for Bid Package 5:
 - 5.1. Prepare 90% design drawings based on the results of the 60% review comments.
 - 5.2. Prepare 90% technical specifications based on the results of the 60% review comments.
 - 5.3. Conduct internal QA/QC review.
 - 5.4. Update construction cost estimates.
 - 5.5. Prepare 90% corrosion mitigation plans, specifications, and estimate.
 - 5.6. Prepare 90% traffic control plans, specifications, and estimate.
 - 5.7. Prepare 90% traffic signal loop schematic plans specifications, and estimate.
 - 5.8. Provide PS&E to City project manager for City inter-departmental review of the 90% design documents as necessary to facilitate approval by Public Works and other City departments.
 - 5.9. Conduct a 90% design submittal workshop with the City. The submittal review workshop will discuss comments on the 60% PS&E submittal packages and will be conducted at the end of the City's review period. The objective of the workshop is to discuss changes from the 60% design, and solicit city review comments. Document all review comments in a tabular Quality Review Form (QRF) for tracking purposes and for inclusion into next submittal package.
6. Construction Packaging and Sequencing
 - 6.1. In coordination and in conjunction with the City, assist with determining construction sequencing for the five Bid Packages by performing required research and providing information requested by the City. The construction sequencing is expected to be constrained by school schedules, including John Muir Elementary School, Fresno High School, Fresno City College, San Joaquin Memorial High School, Ewing Elementary School, and the Fresno Adventist Academy, and by the Fresno Irrigation District's irrigation season.

Assumptions and Clarifications

- Review comments will be summarized in a Quality Review Form (QRF).

Deliverables

- Drawings for five separate Bid Packages
- Draft specification sections for five separate Bid Packages

- Updated construction cost estimate for five separate Bid Packages
- Five (5) full size (22x34) drawings in hard copy and electronic files (pdf) for five separate Bid Packages
- Five (5) specifications in hard copy and electronic files (pdf) for five separate Bid Packages

Task 500 – Bid Documents (100%)

The purpose of the bid documents phase is to prepare a final set of bid documents that includes incorporation of all City review comments deemed applicable and all approval signatures.

1. Prepare 100% PS&E for Bid Package 1:
 - 1.1. Prepare 100% design drawings based on the results of the 90% review comments.
 - 1.2. Prepare 100% technical specifications based on the results of the 90% review comments.
 - 1.3. Conduct internal QA/QC review.
 - 1.4. Update construction cost estimates.
 - 1.5. Prepare final corrosion mitigation plans, specifications, and estimate.
 - 1.6. Prepare final traffic control plans, specifications, and estimate.
 - 1.7. Prepare final traffic signal loop schematic plans specifications, and estimate.
 - 1.8. Submit Final PS&E to City project manager for approval signatures and bidding.
2. Prepare 100% PS&E for Bid Package 2:
 - 2.1. Prepare 100% design drawings based on the results of the 90% review comments.
 - 2.2. Prepare 100% technical specifications based on the results of the 90% review comments.
 - 2.3. Conduct internal QA/QC review.
 - 2.4. Update construction cost estimates.
 - 2.5. Prepare final corrosion mitigation plans, specifications, and estimate.
 - 2.6. Prepare final traffic control plans, specifications, and estimate.
 - 2.7. Prepare final traffic signal loop schematic plans specifications, and estimate.
 - 2.8. Submit Final PS&E to City project manager for approval signatures and bidding.
3. Prepare 100% PS&E for Bid Package 3:
 - 3.1. Prepare 100% design drawings based on the results of the 90% review comments.
 - 3.2. Prepare 100% technical specifications based on the results of the 90% review comments.

- 3.3. Conduct internal QA/QC review.
- 3.4. Update construction cost estimates.
- 3.5. Prepare final corrosion mitigation plans, specifications, and estimate.
- 3.6. Prepare final traffic control plans, specifications, and estimate.
- 3.7. Prepare final traffic signal loop schematic plans specifications, and estimate.
- 3.8. Submit Final PS&E to City project manager for approval signatures and bidding.
4. Prepare 100% PS&E for Bid Package 4:
 - 4.1. Prepare 100% design drawings based on the results of the 90% review comments.
 - 4.2. Prepare 100% technical specifications based on the results of the 90% review comments.
 - 4.3. Conduct internal QA/QC review.
 - 4.4. Update construction cost estimates.
 - 4.5. Prepare final corrosion mitigation plans, specifications, and estimate.
 - 4.6. Prepare final traffic control plans, specifications, and estimate.
 - 4.7. Prepare final traffic signal loop schematic plans specifications, and estimate.
 - 4.8. Submit Final PS&E to City project manager for approval signatures and bidding.
5. Prepare 100% PS&E for Bid Package 5:
 - 5.1. Prepare 100% design drawings based on the results of the 90% review comments.
 - 5.2. Prepare 100% technical specifications based on the results of the 90% review comments.
 - 5.3. Conduct internal QA/QC review.
 - 5.4. Update construction cost estimates.
 - 5.5. Prepare final corrosion mitigation plans, specifications, and estimate.
 - 5.6. Prepare final traffic control plans, specifications, and estimate.
 - 5.7. Prepare final traffic signal loop schematic plans specifications, and estimate.
 - 5.8. Submit Final PS&E to City project manager for approval signatures and bidding.

Assumptions and Clarifications

- Consultant will work with City project manager to obtain final approval from Public Works and other City departments.

Deliverables

- Final Drawings (.pdf) for five separate Bid Packages
- Final specification sections (.pdf and .doc) for five separate Bid Packages
- Five (5) full size (22x34) drawings in hard copy for five separate Bid Packages
- Five (5) specifications in hard copy for five separate Bid Packages
- Final Engineers Estimate for five separate Bid Packages

Task 600 - Utility Confirmation

The purpose of this task is to continue the utility identification and confirmation task that was started during schematic design. This task includes the following activities:

1. Review the existing utility data furnished in the Preliminary Design Report, identify areas where additional utility locating and/or confirmation is required, and develop a detailed list of areas where additional investigation is required.
2. Issue letter to utility companies and identify information obtained during Schematic Design and describe additional information required. Obtain additional maps and as-built information.
3. Prepare utility investigation plan that identifies locations requiring additional investigation, and the proposed investigation method.
4. Use ground penetrating radar (GPR) and electronic methods to locate utilities that parallel or possibly conflict with the proposed alignment. If the located position of the utilities is certain, then those utilities will not be potholed.
5. Utilize vacuum excavation to obtain horizontal and vertical location of buried City water facilities that have the potential to impact the pipe alignment. Where the GPR and electronic locating information do not provide location information that is deemed to be accurate, then vacuum excavation will be utilized. Prepare summary sheets for each location that include a sketch and other measurements with the reference mark location data to identify the location of the located water feature. Perform surveying and transfer locations into the CAD basemap. Obtain traffic control permits for all potholing locations. For each pothole in paved areas, resurface with a method acceptable to the City and/or the County (not cold patch).
6. Utilize vacuum excavation to obtain horizontal and vertical location of buried utilities that are not City-owned water facilities and have the potential to impact the pipe alignment. Where the GPR and electronic locating information do not provide location information that is deemed to be accurate, then vacuum excavation will be utilized. Prepare summary sheets for each location that include a sketch and other measurements with the reference mark location data to identify the location of the located utility feature. Perform surveying and transfer locations into the CAD basemap. Obtain traffic control permits for all potholing locations. For each pothole in paved areas, resurface with a method acceptable to the City and/or the County (not cold patch).

7. Prepare a table that documents the quality of all utilities proximate to the RTM alignment in conformance with ASCE 38-02 "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data," and include the table in either the plans or the specifications.

Assumptions and Clarifications

- Review of schematic design report section on utilities will be reviewed and field investigation will follow with the objective of developing a list of additional potholes required.
- A maximum of 102 potholes for City water facilities will be performed to confirm and/or locate subsurface City water facilities, including transmission grid mains that will be connected to the new RTM.
- A maximum of 203 potholes for utilities that are not City-owned water facilities will be performed to confirm and/or locate subsurface non-City water utilities.
- Potholing will include surveying, traffic control and associated permits.
- An allowance of 15 days is included for utility locating by GPR and other electronic means.

Deliverables

- Sketch of utility pothole containing pertinent information for each
- Updated utility matrix log

Task 700 - Permitting Coordination

The purpose of this task is to identify the necessary permits, and obtain preliminary permit approvals from local agencies that will be affected by RTM construction, where applicable. This task includes the following activities:

1. Prepare applications for permits and provide to City for signature and submission. Provide a permitting plan that documents which permits will be required and the timeline for each required permit. City will pay application fees.
 - 1.1. Coordinate with County of Fresno and Obtain "Dummy" Encroachment Permits
 - 1.2. Organize and Attend Meetings with Caltrans and Obtain Encroachment Permits for the Following Locations:
 - 1.2.1. State Route 180 at H Street.
 - 1.2.2. State Route 41 at Olive Avenue.
 - 1.2.3. State Route 168 at Olive Avenue.
 - 1.2.4. Station Route 180 at Temperance Avenue.
 - 1.3. California Department of Fish and Wildlife (CDFW)
 - 1.3.1. Prepare for and conduct pre-construction consultation meeting
 - 1.3.2. Conduct plant and wildlife surveys for federally listed species and assess riparian habitat

- 1.3.3. Prepare lake and streambed alteration agreements
- 1.3.4. Prepare required project site location maps
- 1.3.5. Meet with the City and with CDFW to review documents
- 1.3.6. Review 1600 Requirements in all agreements, prepare compliance report, and develop field training
- 1.3.7. Prepare for and conduct 1600 compliance review meeting with the City
- 1.3.8. Provide site specific training at each site to ensure compliance
- 1.3.9. Prepare post-construction notification letter
- 1.4. United States Army Corps of Engineers (USACE)
 - 1.4.1. Prepare for and conduct pre-construction consultation meeting with USACE to clarify objectives
 - 1.4.2. Prepare 5 USACE 404 permit applications
 - 1.4.3. Prepare for and conduct submittal consultation meeting with the City
 - 1.4.4. Prepare post-construction report and submit to City
- 1.5. Regional Water Resources Control Board (RWRCB)
 - 1.5.1. Prepare for and conduct pre-construction meeting with RWRCB to discuss application for 401 Water Quality Certifications on 5 identified crossings
 - 1.5.2. Prepare 5 Clean Water Act 401 Water Quality Certifications
 - 1.5.3. Prepare and conduct submittal consultation meeting with the City
 - 1.5.4. Review the compliance requirements, prepare the compliance reports for each site, and develop field training as necessary
 - 1.5.5. Upstream baseline monitoring
 - 1.5.6. Downstream NTU monitoring per permit requirement
 - 1.5.7. Take site pictures as required
 - 1.5.8. Prepare post-construction report and submit to City
- 1.6. Railroad Permits:
 - 1.6.1. Union Pacific Railroad on near H Street and Divisadero Street.
 - 1.6.2. Union Pacific Railroad on McKinley Avenue west of Blackstone Avenue.
 - 1.6.3. Tulare Valley Railroad Company on Fresno Street at Floradora Avenue.
 - 1.6.4. San Joaquin Valley Railroad on Olive Avenue east of Clovis Avenue.
 - 1.6.5. San Joaquin Valley Railroad on Chestnut Avenue south of McKinley Avenue.

2. Coordinate with the Fresno Irrigation District (FID) and obtain their comments and approval for all FID canal and pipeline crossings.
3. Update the Agency Coordination Log from the Schematic Design that tracks and documents primary correspondences with each of the agencies. Information to be included in the log includes: Company Name, Address, Contact Person, Phone, Email, Date Contacted, Request Method, Date of Response, Response/Comments, and Status.
4. Environmental clearance and mitigation monitoring compliance support (Subtasks under this task are subject to change based on proposal from ESA)

4.1. Mitigated Negative Declaration (MND)

- 4.1.1. Prepare an administrative draft Initial Study (IS) consistent with CEQA Guidelines. Work with the City of Fresno to obtain information for the project description. The project description will include: project location; project objectives; description of project elements; project schedule; and required permits and approval process. Use the Environmental Checklist included in Appendix G of the CEQA Guidelines. In addition, the IS will include a discussion of environmental justice analysis (not included in Appendix G) which will include a brief evaluation of the project's potential to disproportionately affect disadvantaged people or communities, or result in environmental impacts that would disproportionately affect such people or communities. For each resource topic area, provide a brief discussion of the environmental and regulatory setting and identify potential environmental impacts and their level of significance. Mitigation measures adopted in the Master Plan EIR that will be part of the proposed project will be described and any residual impact identified, along with any additional mitigation measures. The administrative draft IS will be provided to City of Fresno for review and comment.
- 4.1.2. Based on comments received on the administrative draft IS, revise the document and provide a screencheck draft IS and draft Notice of Intent (NOI) to Adopt a MND to City of Fresno to confirm that all agreed to revisions have been incorporated prior to publication. It is assumed that review of the screencheck will not result in any new technical analysis or substantial text revisions. Based on comments received on the screencheck draft IS and draft NOI to Adopt a MND, prepare the draft IS and NOI to Adopt a MND for public circulation. Also prepare the Notice of Completion (NOC) and deliver the draft IS along with the NOC to the State Clearinghouse to initiate the 30-day public review period. Work with City of Fresno to prepare a distribution list. It is assumed that City of Fresno will post availability of the draft IS and NOI to Adopt a MND with the Fresno County Clerk and place the notice in the newspaper. Mail the NOI to agencies and interested members of the public based on the distribution list.
- 4.1.3. Following close of the public comment period, review comments received and prepare a memorandum summarizing the general issues raised and responses to those issues. As part of this task, prepare a Mitigation Monitoring and Reporting Program (MMRP) which will summarize any additional mitigation measures recommended in the IS. The MMRP will be in table format and will include mitigation measures, timing of the action and parties responsible for

implementation and monitoring. Following City of Fresno review, revise the memorandum and the MMRP and prepare the information in the form of an Errata to be included with IS and NOI to Adopt a MND for City of Fresno City Council consideration.

- 4.1.4. Attend the City of Fresno City Council meeting for adoption of the MND and be available to answer questions on the MND. Following adoption of the MND and project approval, prepare the Notice of Determination (NOD) for transmitting the MND to the State Clearinghouse. File the NOD with the State Clearinghouse and the City of Fresno will pay the applicable NOD filing fees with the Fresno County Clerk's office.
- 4.2. Preparation of a Cultural Resource Phase 1 Report, including archival search, Native American consultation, field surveys, and report preparation.
- 4.3. Preparation of a CEQA Plus compliant biological resources analysis, including the mitigation measures from the EIR, baseline field surveys, biological assessment, and wetland delineation.
- 4.4. Pre-Construction Surveys and Mitigation Monitoring Implementation
 - 4.4.1. Biological resources, including pre-construction surveys and training session with construction crews.
 - 4.4.2. Cultural resources construction training, including the creation of a construction worker training program for personnel involved with earthmoving activities associated with the construction.

Assumptions and Clarifications

- Application fees for permits will be paid for by the City or Contractor.
- City will submit applications to the CDFW, USACE, and RWRCB.
- Two field visits per site are provided for downstream NTU monitoring.
- City will provide CEQA documents required by the agencies, Notice of Determination, and delineation of the Waters of the United States for each crossing, if available.
- No permits will be obtained from FID during the course of design.
- National or California Register-eligibility evaluations for archaeological sites identified at this stage will not be conducted, although evaluations can be completed at a later point under a revised scope of work.
- This scope of work assumes that all survey areas for each portion of the construction project will be accessible to surveyors concurrently, resulting in a single field visit for the environmental clearance and mitigation monitoring compliance.
- Archaeological resources encountered during the survey will be left in-situ. Resources in danger of loss or destruction will be brought to the attention of the client immediately.
- This scope assumes that no more than two archaeological resources and two historic period structures or buildings will be recorded during the survey. Additional resources will be recorded at a rate of \$150 per hour, and work will not proceed without City approval.
- Paleontological resources are not included in this scope.
- Only one round of comments on the environmental documents is included.
- Construction monitoring, including nest and/or den monitoring, is not included.

Deliverables

- Meeting notes with agencies (electronic format)
- Agency Coordination Log (electronic format)
- Approval letters, "dummy permits," double permits, or agreements, as applicable, from various agencies (electronic format)
- Electronic version in MS Word of the administrative draft IS
- Electronic version in MS Word of the screencheck draft IS and the NOI to Adopt a MND
- 15 paper copies of the draft IS and NOI to Adopt a MND and 30 CDs (15 for the Clearinghouse and 15 to distribute)
- Notice of Completion
- Electronic version in MS Word of the draft memorandum summarizing comments received and responses
- Electronic version in MS Word of the MMRP
- Errata including comment summary, any changes to the IS and final MMRP (3 paper copies and electronic version in MS Word and CD with complete MND document)
- Notice of Determination
- Electronic version in MS Word of the draft and final Phase I Report
- Electronic version in MS Word of the draft and final technical memorandums and reports

Task 800 – Geotechnical Investigation

The purpose of this task is to perform a field and laboratory geotechnical investigation as necessary to develop understanding of excavation and backfill requirements for the trench. This task includes the following activities:

1. Review existing geotechnical information provided in the PDR, as well as the geotechnical data and engineering reports.
2. Perform geotechnical borings approximately every 1,000 feet along the proposed pipeline alignment and at each end of trenchless crossings (a total of 76 borings).
3. Test selected soil samples obtained during the field exploration to evaluate physical properties that will be necessary to complete the geotechnical engineering analysis. A total of 40 samples (approximately 1,500 feet apart) will be evaluated for corrosion potential, consisting of testing and reporting the resistivity, pH, sulfate, and chloride.
4. As an optional task, test soils at 26 locations for R-value for use in pavement design.
5. As an optional task, dig up to 20 test pits in areas exhibiting loose soil conditions. Pits should be a maximum depth of 15 feet, and be at least 15 feet long, and will be backfilled and resurfaced with hot mix asphalt.
6. Present results of the geotechnical review, and field and laboratory testing program, and summarize engineering analyses in a Final Geotechnical Engineering Report (GER). The GER will contain recommendations for pipeline construction including the E'n soil modulus for trench wall soil, the E'b for use in initial pipe deformation analysis of the pipeline, a recommended Ku' for evaluating the maximum load (Wc) on pipes, frictional resistance coefficients for various pipe types, resistance and deformation information for

shallow and deep thrust blocks, lateral earth pressures for use in evaluating shoring, and construction slope permissible gradients. To aid in evaluating the trenchless crossings, such as a jack and bore or pipe ramming operations, the potential ground surface settlement due to the ground cover thickness versus the casing diameter will be estimated and capacity of reaction blocks provided. Submit five copies of the draft GER to the City for review and comments. Comments will be incorporated in the Final GER. Submit five additional copies to the City.

7. As an optional task, Consultant will prepare a Geotechnical baseline Report (GBR) to be included in the contract documents for the bore and jack locations in accordance with the latest guidelines of the ASCE. The GBR will be a contract document for use during construction and, more importantly, during contractor bidding. The GBR will serve as the lone source of subsurface conditions to be encountered during construction at the bore and jack locations and to be used as the basis for bidding, thereby reducing the risk that unrealistic bidding strategies favor out of area contractors with little understanding of the challenging subsurface excavation conditions.

Assumptions and Clarifications

- 76 exploratory borings along proposed alignment to a depth of 20 feet for main borings and 30 feet for trenchless locations.
- Draft and final GER will be prepared, and the GER will cover Bid Packages 1, 2, 3, 4, and 5 in the same document.
- GBR will only be prepared for the bore and jack locations.

Deliverables

- Draft and Final Geotechnical Engineering Report (5 hard copies of the draft and final report and electronic files)
- Optional – R-values for pavement restoration included in GER
- Optional – GBR for the bore and jack locations to be prepared and included in bid documents

Task 900 – Bidding Phase Support

The purpose of the bid phase services is to complete engineering bid period services, including response to bidder questions, and bid document addenda. The bid phase services will culminate with the development of the Conformed Documents. This task includes the following activities:

1. Bid services for Bid Package 1:
 - 1.1. Develop a preliminary outline for the City's use in conducting the pre-bid conference. Prepare and distribute meeting notes to the City and to pre-bid conference attendees.
 - 1.2. Answer bidder technical questions regarding the design during the bidding process. Consultant will receive bidder questions via e-mail from City. Provide written responses to questions. City will develop and transmit addenda to bidders.

- 1.3. Consultant is not required to attend the bid opening and attendance is not included in this scope of work. Assist City with bid review by assessing bidders' general conformance to Contract Document requirements.
- 1.4. Prepare conformed drawings and specifications (updated design drawings and specifications to include revisions contained in the addenda).
2. Bid services for Bid Package 2:
 - 2.1. Develop a preliminary outline for the City's use in conducting the pre-bid conference. Prepare and distribute meeting notes to the City and to pre-bid conference attendees.
 - 2.2. Answer bidder technical questions regarding the design during the bidding process. Consultant will receive bidder questions via e-mail from City. Provide written responses to questions. City will develop and transmit addenda to bidders.
 - 2.3. Consultant is not required to attend the bid opening and attendance is not included in this scope of work. Assist City with bid review by assessing bidders' general conformance to Contract Document requirements.
 - 2.4. Prepare conformed drawings and specifications (updated design drawings and specifications to include revisions contained in the addenda).
3. Bid services for Bid Package 3:
 - 3.1. Develop a preliminary outline for the City's use in conducting the pre-bid conference. Prepare and distribute meeting notes to the City and to pre-bid conference attendees.
 - 3.2. Answer bidder technical questions regarding the design during the bidding process. Consultant will receive bidder questions via e-mail from City. Provide written responses to questions. City will develop and transmit addenda to bidders.
 - 3.3. Consultant is not required to attend the bid opening and attendance is not included in this scope of work. Assist City with bid review by assessing bidders' general conformance to Contract Document requirements.
 - 3.4. Prepare conformed drawings and specifications (updated design drawings and specifications to include revisions contained in the addenda).
4. Bid services for Bid Package 4:
 - 4.1. Develop a preliminary outline for the City's use in conducting the pre-bid conference. Prepare and distribute meeting notes to the City and to pre-bid conference attendees.
 - 4.2. Answer bidder technical questions regarding the design during the bidding process. Consultant will receive bidder questions via e-mail from City. Provide written responses to questions. City will develop and transmit addenda to bidders.
 - 4.3. Consultant is not required to attend the bid opening and attendance is not included in this scope of work. Assist City with bid review by assessing bidders' general conformance to Contract Document requirements.
 - 4.4. Prepare conformed drawings and specifications (updated design drawings and specifications to include revisions contained in the addenda).

5. Bid services for Bid Package 5:

- 5.1. Develop a preliminary outline for the City's use in conducting the pre-bid conference. Prepare and distribute meeting notes to the City and to pre-bid conference attendees.
- 5.2. Answer bidder technical questions regarding the design during the bidding process. Consultant will receive bidder questions via e-mail from City. Provide written responses to questions. City will develop and transmit addenda to bidders.
- 5.3. Consultant is not required to attend the bid opening and attendance is not included in this scope of work. Assist City with bid review by assessing bidders' general conformance to Contract Document requirements.
- 5.4. Prepare conformed drawings and specifications (updated design drawings and specifications to include revisions contained in the addenda).

Assumptions and Clarifications

- The scope and budget assume three (3) addenda will be prepared for each of the five bid packages.
- The scope of work and budget assume ten (10) drawings need to be modified at two (2) hours of CAD time per drawing, and one (1) hour of engineering time per drawing for each of the five bid packages.
- The scope of work and budget also assume approximately fifteen (15) specification sections will need to be modified at one (1) hour word processing per section, and one (1) hour engineering time per section for each of the five bid packages.

Deliverables

- Preliminary outline for pre-bid conference and attendance at the conference for each of the five bid packages.
- Meeting minutes for the pre-bid conference which will include questions and answers discussed at the conference for each of the five bid packages.
- Up to three (3) addenda, prepared by the City with input by the Consultant, distributed to all plan holders for each of the five bid packages.
- Bid period question and answer log for each of the five bid packages.
- Brief summary memorandum to delineate low-bidder's conformance (or non-conformance) with Contract Document requirements and recommendation for award for each of the five bid packages.
- Electronic files of conformed drawings (.pdf) and specifications (.doc), as well as fifteen (15) hard copies of each (drawings are full size 22x34), for each of the five bid packages.

Task 1000 – Required Project Surveying

The purpose of this task is to perform surveying necessary for the project. This task includes the following activities:

1. Obtain right-of-way maps from Caltrans and perform record research to show the following state rights-of-way on the plans:

- 1.1. State Route 180 right-of-way near H Street.
- 1.2. State Route 41 right-of-way along Olive Avenue.
- 1.3. State Route 168 right-of-way along Olive Avenue.
- 1.4. State Route 180 right-of-way along Temperance Avenue.
2. Perform infill surveying where required to supplement aerial photogrammetry, including measuring rims and invert elevations for all crossing sanitary sewers and storm drains.
3. Acquire easements for up to 30 locations for pipeline appurtenances that do not fit within existing right-of-way.
 - 3.1. Prepare legal descriptions and diagrams.
 - 3.2. Procure a preliminary title report for each affected parcel
 - 3.3. Provide an appraisal for each acquisition.
 - 3.4. Prepare offer letters, meet with each property owner, prepare purchase and sale agreements, coordinate payment to the property owners, and obtain subordinations or consent of lien holder documents from holders of deeds of trust. If eminent domain is required, then prepare acquisition summaries for attorney, assist with the resolution of necessity document, and provide other assistance or documentation as needed.
4. Horizontal Control Surveys
 - 4.1. Research available corner records for section corners along the RTM alignments. For the purposes of the scope of services, the term section corners includes both section corners and quarter-section corners. It is estimated that a total of 29 section corners will be surveyed.
 - 4.2. Provide traffic control for horizontal control surveys using a third party contractor specializing in the provision of traffic control services, namely Alert-O-Lite.
 - 4.3. Conduct a field survey of the section corners using GPS methods, based on the horizontal datum NAD 83 (2011) [Epoch Date 2010.0] as established by the National Geodetic Survey (NGS) Continuous Operating Reference Stations (CORS), to match initial control surveys already performed in support of the AECOM schematic design effort. Local horizontal accuracy shall be 0.05 feet or less.
 - 4.4. Check the condition of section corner monuments and ties in comparison to existing corner record data.
 - 4.5. Where the condition of section corner monuments and ties differs from existing corner record data, prepare and file new or revised corner records to document current field conditions.
 - 4.6. Prepare survey control plans to document horizontal control survey results. The survey control plans will also serve to document vertical control surveys described below.
5. Vertical Control Surveys

- 5.1. Research City bench mark records along the RTM alignments. In coordination with the City, select a City bench mark to serve as the Basis of Elevations for the RTMs.
- 5.2. Conduct a level loop field survey along the RTM project alignments using electronic level surveying equipment, based on the City of Fresno (NGVD 29) datum, to match initial control surveys already performed in support of the AECOM schematic design effort. Vertical accuracy shall be 0.01 feet or less. Include elevation measurements at all City bench marks along the RTM alignments.
- 5.3. Establish and document project bench marks along the RTM alignments, at intervals of approximately 1,000 feet or less.
- 5.4. Perform office calculations to make and distribute elevation measurement adjustments and assign project elevations to all City bench marks and project bench marks.
- 5.5. Prepare survey control plans to document vertical control survey results. The survey control plans will also serve to document horizontal control surveys described above.

Assumptions and Clarifications

- The right-of-way provided in the schematic plans will be used in the contract documents, except it will be modified in conformance with the subtasks of this task.
- Nineteen days of surveying are included for infill surveying.

Deliverables:

- Caltrans right-of-way included in plans.
- Infill survey data included in plans.
- Acquired easements for up to 30 acquisitions.
- Raw survey data in native electronic format.
- Submit survey control plans in digital form as both Acrobat PDF and AutoCAD DWG files.

Task 1100 – Optional Supplemental Services

Throughout the project, Blair, Church & Flynn will provide as needed services upon approval by the City. This scope of services includes up to \$257,836 (10% of the project budget for Tasks 100 through 1000) to perform this task on a T&M basis, as approved by the City.

Task 1100 Assumptions and Clarifications

- Blair, Church & Flynn shall not begin this activity until authorized by the City.

Task 1100 Deliverables:

- As determined through City authorization.

SCHEDULE OF FEES

Effective January 1, 2015
with Prevailing Wage

<u>CLASSIFICATION</u>	<u>RATE</u>
Principal Engineer	\$165.00/Hour
Program Manager	\$160.00/Hour
Professional Civil Engineer 3	\$155.00/Hour
Professional Civil Engineer 2	\$140.00/Hour
Professional Civil Engineer 1	\$130.00/Hour
Assistant Engineer 3	\$110.00/Hour
Assistant Engineer 2	\$105.00/Hour
Assistant Engineer 1	\$97.00/Hour
Professional Land Surveyor 2	\$135.00/Hour
Professional Land Surveyor 1	\$125.00/Hour
Assistant Land Surveyor	\$105.00/Hour
Professional Landscape Architect	\$110.00/Hour
Landscape Designer	\$90.00/Hour
Design Technician	\$100.00/Hour
CAD Technician 3	\$95.00/Hour
CAD Technician 2	\$84.00/Hour
CAD Technician 1	\$68.00/Hour
Environmental, Health & Safety Officer	\$90.00/Hour
Construction Manager	\$120.00/Hour
Construction Inspector	100.00/Hour
Construction Administrator	\$85.00/Hour
Staff Analyst	\$90.00/Hour
Administrative	\$65.00/Hour
Engineering Aide	\$55.00/Hour
1-Man Survey Party	\$155.00/Hour
2-Man Survey Party	\$275.00/Hour
3-Man Survey Party	\$360.00/Hour
Survey Party Travel	\$85.00/Hour
HDS Scanner	\$200.00/Hour
Equipment Rental and Associated Expense	Cost x 1.10
Materials, Printing, Subconsultant Procurement	Cost x 1.10
Mileage	@ Current IRS Rate

Note: Blair, Church & Flynn Consulting Engineers General Engineering Fee Schedule rates are subject to adjustment annually. Survey party and construction inspector rates are also subject to adjustment upon change in "Prevailing Rate" as determined by the Director of Industrial Relations, State of California.

Consultant fees will be based on the following terms.

1. Travel expenses and all other expenses directly related to the Project will be based on actual costs and will not be marked up. Receipts for all costs over \$25 will be maintained and submitted with invoices.
2. The automobile mileage rate will be based on the IRS established rate times mileage directly attributable to the Project.
3. Subconsultant labor will be marked up by 6%. First-tier subconsultant labor will be marked up by the prime consultant only, and second-tier labor will be marked up by the first-tier subconsultant only. Additional tiers, if any, will be treated similarly. No subconsultant's labor will be marked up by any party other than the one with whom they are contracted (no compounding markups).
4. Monthly invoices will present labor costs and expenses on a per-task basis. Subconsultants will be shown on the invoice as a separate line item under each task on the Consultant's invoice. Mark-up on subconsultant will be shown as a separate line item clearly indicating that the mark-up applies to subconsultant labor costs. Subconsultant invoices will also present labor costs and expenses on a per-task basis.

Exhibit B

INSURANCE REQUIREMENTS

Consultant Service Agreement between City of Fresno ("CITY")
and Blair, Church & Flynn Consulting Engineers ("CONSULTANT")
Phase 2 Regional Transmission Mains Final Design
PROJECT TITLE

MINIMUM SCOPE OF INSURANCE

Coverage shall be at least as broad as:

1. The most current version of Insurance Services Office (ISO) Commercial General Liability Coverage Form CG 00 01, providing liability coverage arising out of your business operations. The Commercial General Liability policy shall be written on an occurrence form and shall provide coverage for "bodily injury," "property damage" and "personal and advertising injury" with coverage for premises and operations (including the use of owned and non-owned equipment), products and completed operations, and contractual liability (including, without limitation, indemnity obligations under the Agreement) with limits of liability not less than those set forth under "Minimum Limits of Insurance."
2. The most current version of ISO *Commercial Auto Coverage Form CA 00 01, providing liability coverage arising out of the ownership, maintenance or use of automobiles in the course of your business operations. The Automobile Policy shall be written on an occurrence form and shall provide coverage for all owned, hired, and non-owned automobiles or other licensed vehicles (Code 1- Any Auto). If personal automobile coverage is used, the CITY, its officers, officials, employees, agents and volunteers are to be listed as additional insureds.
3. Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.
4. Professional Liability (Errors and Omissions) insurance appropriate to CONSULTANT'S profession. Architect's and engineer's coverage is to be endorsed to include contractual liability.

MINIMUM LIMITS OF INSURANCE

CONSULTANT, or any party the CONSULTANT subcontracts with, shall maintain limits of liability of not less than those set forth below. However, insurance limits available to CITY, its officers, officials, employees, agents and volunteers as additional insureds, shall be the greater of the minimum limits specified herein or the full limit of any insurance proceeds available to the named insured:

1. **COMMERCIAL GENERAL LIABILITY:**
 - (i) \$1,000,000 per occurrence for bodily injury and property damage;
 - (ii) \$1,000,000 per occurrence for personal and advertising injury;
 - (iii) \$2,000,000 aggregate for products and completed operations; and,

- (iv) \$2,000,000 general aggregate applying separately to the work performed under the Agreement.

2. **COMMERCIAL AUTOMOBILE LIABILITY:**

\$1,000,000 per accident for bodily injury and property damage;

OR*

PERSONAL AUTOMOBILE LIABILITY insurance with limits of liability not less than:

- (i) \$100,000 per person;
- (ii) \$300,000 per accident for bodily injury; and,
- (iii) \$50,000 per accident for property damage.

3. **WORKERS' COMPENSATION INSURANCE** as required by the State of California with statutory limits.

4. **EMPLOYER'S LIABILITY:**

- (i) \$1,000,000 each accident for bodily injury;
- (ii) \$1,000,000 disease each employee; and,
- (iii) \$1,000,000 disease policy limit.

5. **PROFESSIONAL LIABILITY** (Errors and Omissions):

- (i) \$1,000,000 per claim/occurrence; and,
- (ii) \$2,000,000 policy aggregate.

UMBRELLA OR EXCESS INSURANCE

In the event CONSULTANT purchases an Umbrella or Excess insurance policy(ies) to meet the "Minimum Limits of Insurance," this insurance policy(ies) shall "follow form" and afford no less coverage than the primary insurance policy(ies). In addition, such Umbrella or Excess insurance policy(ies) shall also apply on a primary and non-contributory basis for the benefit of the CITY, its officers, officials, employees, agents and volunteers.

DEDUCTIBLES AND SELF-INSURED RETENTIONS

CONSULTANT shall be responsible for payment of any deductibles contained in any insurance policy(ies) required herein and CONSULTANT shall also be responsible for payment of any self-insured retentions. Any deductibles or self-insured retentions must be declared on the Certificate of Insurance, and approved by, the CITY'S Risk Manager or his/her designee. At the option of the CITY'S Risk Manager or his/her designee, either:

- (i) The insurer shall reduce or eliminate such deductibles or self-insured retentions as respects CITY, its officers, officials, employees, agents and volunteers; or

- (ii) (ii) CONSULTANT shall provide a financial guarantee, satisfactory to CITY'S Risk Manager or his/her designee, guaranteeing payment of losses and related investigations, claim administration and defense expenses. At no time shall CITY be responsible for the payment of any deductibles or self-insured retentions.

OTHER INSURANCE PROVISIONS/ENDORSEMENTS

The General Liability and Automobile Liability insurance policies are to contain, or be endorsed to contain, the following provisions:

1. CITY, its officers, officials, employees, agents and volunteers are to be covered as additional insureds. CONSULTANT shall establish additional insured status for the City and for all ongoing and completed operations by use of ISO Form CG 20 10 11 85 or both CG 20 10 10 01 and CG 20 37 10 01 or by an executed manuscript insurance company endorsement providing additional insured status as broad as that contained in ISO Form CG 20 10 11 85.
2. The coverage shall contain no special limitations on the scope of protection afforded to CITY, its officers, officials, employees, agents and volunteers. Any available insurance proceeds in excess of the specified minimum limits and coverage shall be available to the Additional Insured.
3. For any claims related to this Agreement, CONSULTANT'S insurance coverage shall be primary insurance with respect to the CITY, its officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by the CITY, its officers, officials, employees, agents and volunteers shall be excess of CONSULTANT'S insurance and shall not contribute with it. CONSULTANT shall establish primary and non-contributory status by using ISO Form CG 20 01 04 13 or by an executed manuscript insurance company endorsement that provides primary and non-contributory status as broad as that contained in ISO Form CG 20 01 04 13.

The Workers' Compensation insurance policy is to contain, or be endorsed to contain, the following provision: CONSULTANT and its insurer shall waive any right of subrogation against CITY, its officers, officials, employees, agents and volunteers.

If the Professional Liability (Errors and Omissions) insurance policy is written on a claims-made form:

1. The retroactive date must be shown, and must be before the effective date of the Agreement or the commencement of work by CONSULTANT.
2. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the Agreement work or termination of the Agreement, whichever occurs first, or, in the alternative, the policy shall be endorsed to provide not less than a five (5) year discovery period.
3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the effective date of the Agreement or the commencement of work by CONSULTANT, CONSULTANT must purchase

“extended reporting” coverage for a minimum of five (5) years after completion of the Agreement work or termination of the Agreement, whichever occurs first.

4. A copy of the claims reporting requirements must be submitted to CITY for review.
5. These requirements shall survive expiration or termination of the Agreement.

All policies of insurance required herein shall be endorsed to provide that the coverage shall not be cancelled, non-renewed, reduced in coverage or in limits except after thirty (30) calendar days written notice by certified mail, return receipt requested, has been given to CITY. CONSULTANT is also responsible for providing written notice to the CITY under the same terms and conditions. Upon issuance by the insurer, broker, or agent of a notice of cancellation, non-renewal, or reduction in coverage or in limits, CONSULTANT shall furnish CITY with a new certificate and applicable endorsements for such policy(ies). In the event any policy is due to expire during the work to be performed for CITY, CONSULTANT shall provide a new certificate, and applicable endorsements, evidencing renewal of such policy not less than fifteen (15) calendar days prior to the expiration date of the expiring policy.

VERIFICATION OF COVERAGE

CONSULTANT shall furnish CITY with all certificate(s) and **applicable endorsements** effecting coverage required hereunder. All certificates and **applicable endorsements** are to be received and approved by the CITY'S Risk Manager or his/her designee prior to CITY'S execution of the Agreement and before work commences. All non-ISO endorsements amending policy coverage shall be executed by a licensed and authorized agent or broker. Upon request of CITY, CONSULTANT shall immediately furnish City with a complete copy of any insurance policy required under this Agreement, including all endorsements, with said copy certified by the underwriter to be a true and correct copy of the original policy. This requirement shall survive expiration or termination of this Agreement.

Exhibit C

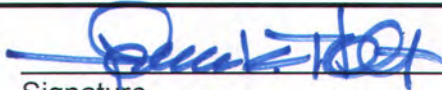
DISCLOSURE OF CONFLICT OF INTEREST

Phase 2 Regional Transmission Mains Final Design
PROJECT TITLE

		YES*	NO
1	Are you currently in litigation with the City of Fresno or any of its agents?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Do you represent any firm, organization or person who is in litigation with the City of Fresno?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Do you currently represent or perform work for any clients who do business with the City of Fresno?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Are you or any of your principals, managers or professionals, owners or investors in a business which does business with the City of Fresno, or in a business which is in litigation with the City of Fresno?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Are you or any of your principals, managers or professionals, related by blood or marriage to any City of Fresno employee who has any significant role in the subject matter of this service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Do you or any of your subcontractors have, or expect to have, any interest, direct or indirect, in any other contract in connection with this Project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
* If the answer to any question is yes, please explain in full below.			

Explanation:

Item 3: Blair, Church & Flynn Consulting Engineers has a number of clients that could potentially do business with the City of Fresno including: the City of Clovis, the County of Fresno, Fresno Irrigation District, Fresno Metropolitan Flood Control District, Clovis USD, Fresno USD and Central USD.



Signature

May 13, 2015

Date

Adam K. Holt

(name)

Blair, Church & Flynn

(company)

451 Clovis Ave, Suite 200

(address)

Clovis, CA 93612

(city state zip)

FIRST AMENDMENT TO AGREEMENT

THIS FIRST AMENDMENT TO AGREEMENT ("Amendment") made and entered into effective the 1st day of September, 2016 ("Effective Date") amends the Agreement heretofore entered into between the CITY OF FRESNO, a California municipal corporation (("CITY"), and BLAIR, CHURCH & FLYNN CONSULTING ENGINEERS, a California corporation ("CONSULTANT").

RECITALS

WHEREAS, CITY and CONSULTANT entered into an Agreement, dated June 12, 2015 ("Agreement") to provide professional design services for the CITY's Phase 2 Regional Transmission Mains ("Project"); and

WHEREAS, project bidding for one of the four Regional Transmission Main segments has been completed and project construction on that segment will be initiated, the parties have agreed to a scope of work that includes submittal review, attendance at project construction meetings, project site visits, preparation of record drawings, and design services for a change in the design of two of the segments, and

WHEREAS, the parties have negotiated changes in compensation that result in an increase in the total compensation of \$999,996 for the changes described in this amendment, and

WHEREAS, with entry into this Amendment, CONSULTANT agrees that CONSULTANT has no claim, demand or dispute against CITY.

AGREEMENT

NOW, THEREFORE, the parties agree that the Agreement be amended as follows:

1. Exhibit A of the Agreement was authorized and is amended to include the services described in the attached Exhibit A-1.

2. Section 3(a) of the Agreement shall be modified such that CONSULTANT's sole compensation for satisfactory performance of all services required or rendered pursuant to this Agreement shall be a total fee not to exceed \$3,836,191.

3. The subsections of Section 3(a) of the Agreement identified below shall be modified in entirety to read as follows:

CONSULTANT'S sole compensation for satisfactory performance of all services required or rendered pursuant to this Agreement shall be a total fee not to exceed \$3,836,191, paid on a time and materials basis in accordance with the schedule of fees

contained in Exhibit A.

In the event of any conflict between the body of this Amendment and any Attachment hereto, the terms and conditions of the body of this Amendment shall control and take precedence over the terms and conditions expressed within the Attachment. Furthermore, any terms or conditions contained within any Attachment hereto which purport to modify the allocation of risk between the parties, provided for within the body of the Agreement or this Amendment, shall be null and void.


4. Except as otherwise provided herein, the Agreement entered into by CITY and CONSULTANT, dated June 12, 2015 remains in full force and effect.

[SIGNATURES APPEAR ON THE NEXT PAGE.]

IN WITNESS WHEREOF, the parties have executed this Amendment at Fresno, California, the day and year first above written.

CITY OF FRESNO,
a California municipal corporation

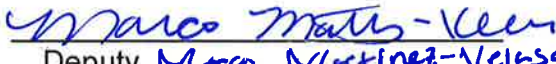
BLAIR, CHURCH & FLYNN
CONSULTING ENGINEERS, a
California corporation

By: 
Thomas C. Esqueda, Director
Department of Public Utilities

By: 
Name: Karl E. Kienow

ATTEST:
YVONNE SPENCE, CMC
City Clerk


Title: Vice President
[If corporation or LLC, Board Chair,
Pres., or Vice Pres.]

By: 
Deputy Marco Martinez-Velasquez
8/7/16

By: 
Name: Adam K. Holt

APPROVED AS TO FORM:
Douglas T. Sloan
City Attorney

Title: CFO / Secretary
[if corporation or LLC, CFO
Treasurer, Secretary or Assistant
Secretary]

By:  8/12/16
Brandon M. Collet Date
Deputy City Attorney

Attachment: Exhibit A-1

Exhibit A-1

SCOPE OF SERVICES

Consultant Service Agreement between City of Fresno (“City”) and Blair, Church & Flynn Consulting Engineers (“Consultant”)

Additional Services for the Phase 2 Regional Transmission Mains PROJECT TITLE

Overview

The City of Fresno Department of Public Utilities Water Division (City) is taking the next steps towards providing the City with treated surface water and reducing overdrafting of the available groundwater supply. The Regional Transmission Mains (RTMs) will interconnect the City's existing and proposed surface water treatment facilities and storage reservoirs with the water distribution network and allow the City to move large quantities of treated surface water throughout the system. The Phase 2 RTMs have been split into four design and construction segments roughly defined as follows:

- Segment A1 - Olive Ave - Fowler to First - 26,600 +/- feet of 54- to 66-inch pipe
- Segment A2 - Olive Ave - First to Fresno, Fresno / McKinley / Palm - 22,200 +/- feet of 24-to 48-inch pipe
- Segment B - Temperance / Kings Canyon - 7,400 +/- feet of 20- to 42-inch pipe
- Segment C - Chestnut - Olive to Winery - 11,900 +/- feet of 24- to 30-inch pipe

Final design and bid services are provided for Segments A1, A2, B, and C under a separate agreement, and this scope is intended to be an amendment to that agreement.

This scope includes engineering services during construction for Segments A1, A2, B, and C and design services for the Segment C realignment in the Chestnut Diagonal.

Scope of Services – Engineering Services During Construction

TASK 100 - ENGINEERING SERVICES DURING CONSTRUCTION FOR SEGMENT A1

The purpose of this task is to complete Engineering Services During Construction (ESDC) for Segment A1. The ESDC work will include submittal review, response to Contractor questions, change order assistance, site visits/meetings, development of record drawings, and project closeout assistance.

CONSULTANT shall provide the ESDCs as described herein. With the exception of the Project Management subtask, the scope of these services is not based on a certain construction duration, but the estimated effort for each subtask is described below under each subtask.

It is understood that construction management and inspection services will be completed by a third party. For the purposes of the scope of work presented herein, the third party construction manager will be referred to as "CONSTRUCTION MANAGER."

This task includes the following activities:

Subtask 110 - Project Management

CONSULTANT shall maintain effective project management and communication with the CONSTRUCTION MANAGER during construction. Monthly Progress Reports shall be prepared to summarize project work progress, issues, and scope and budget status.

The subtask shall consist of the following:

1. Monthly Progress Report, containing the following:
 - 1.1. Work Progress – A progress report of specific accomplishments during the reporting period, problems encountered or anticipated, and work scheduled for the next reporting period.
 - 1.2. Time Report – A report comparing the actual time expended towards each subtask compared with the estimated time.
 - 1.3. Anticipated Out of Scope Tasks – An itemization and brief description of any anticipated out of scope activities for which the CONSULTANT intends to request reimbursement.
2. Monthly invoices.

Assumptions and Clarifications

- a. Construction duration is assumed to be 17 months, based on the schedule received from the City on 3/17/2016.

Deliverables

- a. Monthly Progress Report, electronic only (PDF format).
- b. Monthly invoice, hard copy and electronic (PDF format).

Subtask 120 - Shop Drawing and Submittal Review

CONSULTANT shall receive, review, comment on, and return shop drawings, submittals, and samples provided by the Contractor via the CONSTRUCTION MANAGER. Work related to shop drawings and submittals will be done using a SharePoint, or similar, site provided by the CONSTRUCTION MANAGER. Hard copies of shop drawings and submittals will generally not be provided to the CONSULTANT, and review comments will be provided digitally. The CONSTRUCTION MANAGER shall screen all submittals for form and general content conforming to that specified in the Contract Documents prior to transmitting them to the CONSULTANT. The purpose of reviewing submittals by CONSULTANT is to determine if the equipment and materials proposed by the Contractor will meet the design intent of the Project and the requirements stipulated in the Contract Documents.

Assumptions and Clarifications

- a. It is estimated that approximately one hundred fifty (150) submittals and equipment operations and maintenance manuals will be submitted by the Contractor. It is estimated

that approximately fifty percent (50%) of the original submittals will require a resubmittal process. The scope and budget assumes three (3) hours per submittal review time for one hundred fifty (150) submittals and one and one half (1.5) hours review time for seventy five (75) resubmittals for the CONSULTANT, sixteen (16) hours review time for the corrosion SUBCONSULTANT, and sixteen (16) hours review time for the tunneling SUBCONSULTANT.

- b. Factory acceptance tests and observations are not included.

Subtask 130 - Design Clarifications / Requests for Information (RFIs)

CONSULTANT shall prepare Design Clarifications (DCs) as necessary to clarify design plans and specifications. These may be made at the request of the CONSTRUCTION MANAGER or in response to a need discovered during submittal review. DCs will be submitted to the CONSTRUCTION MANAGER for transmittal to the CONTRACTOR.

CONSULTANT shall respond to Contractor's Requests for Information (RFIs) on the Contract Documents forwarded by the CONSTRUCTION MANAGER. The CONSTRUCTION MANAGER will screen the RFIs submitted by the Contractor and will transmit to the CONSULTANT only those RFIs which require a response by the CONSULTANT. The work will involve both written responses to formal requests for information, and informal verbal telephone responses.

Assumptions and Clarifications

- a. The budget for this task is based on an estimate of a total of one hundred twenty five (125) DC/RFIs at an average of three (3) hours per DC/RFI for the CONSULTANT, sixteen (16) hours review time for the corrosion SUBCONSULTANT, and eight (8) hours review time for the tunneling SUBCONSULTANT.

Subtask 140 - Change Orders

In the event changes to the Contract Documents are required, the CONSULTANT will assist the CONSTRUCTION MANAGER in review of Change Order Requests (CORs) or the CONSTRUCTION MANAGER's Requests for Proposals (RFPs) and with the preparation of Change Orders (COs). CONSULTANT, at the request of the CONSTRUCTION MANAGER, shall either: review the COR/RFP, or when COR/RFP requires redesign, prepare detailed CO specifications, drawings, and/or sketches.

The CONSTRUCTION MANAGER will prepare all cost estimates for each CO, and negotiate with the CONTRACTOR the cost and extension of Contract Time associated with each CO.

CONSULTANT shall assist with field changes for which a CO is not issued as referred by the CONSTRUCTION MANAGER. Field changes shall be checked for general compliance with the intent of the design.

Assumptions and Clarifications

- a. The budget for this task is based on assistance with eight (8) COR/RFP/COs at six (6) hours each.

Subtask 150 - Attendance at Meetings/Site Visits

CONSULTANT's representative shall attend and participate in certain project meetings at the job site in order to keep abreast of construction activities and be involved in questions which may arise concerning construction progress. During construction site visits, CONSULTANT's representative shall walk the construction area with the CONSTRUCTION MANAGER to observe construction progress and discuss relevant construction issues.

Assumptions and Clarifications

- a. CONSULTANT's representatives, consisting of the project engineer and an assistant engineer, shall attend up to sixteen (16) meetings total during the project duration to monitor construction progress and to facilitate resolution of construction issues as needed. If required, a representative from one of the CONSULTANT's subcontractor can attend instead of the assistant engineer. Each meeting is assumed to last no longer than four (4) hours.

Subtask 160 - Record Documents and Project Closeout

CONSULTANT shall prepare Record Contract Drawings to incorporate modifications of Drawings resulting from change orders, observed site conditions, and CONTRACTOR's record of construction.

Assumptions and Clarifications

- a. Construction changes will be monitored and recorded by the CONTRACTOR and CONSTRUCTION MANAGER. CONSULTANT shall incorporate field markups at the end of construction and translate into electronic Record Contract Drawings.
- b. The scope of work and budget assumes approximately forty five (45) drawings need to be modified at two (2) hours of CAD time per drawing, and one (1) hour of engineering time per drawing.
- c. Record drawings will not be prepared for traffic control plans.

Deliverables

- a. Electronic files of all construction record documents (AutoCAD and PDF format).
- b. Four (4) sets of full-sized drawings.
- c. Four (4) sets of half-sized drawings.

TASK 200 - ENGINEERING SERVICES DURING CONSTRUCTION FOR SEGMENT A2

The purpose of this task is to complete Engineering Services During Construction (ESDC) for Segment A2. The ESDC work will include submittal review, response to Contractor questions, change order assistance, site visits/meetings, development of record drawings, and project closeout assistance.

CONSULTANT shall provide the ESDCs as described herein. With the exception of the Project Management subtask, the scope of these services is not based on a certain construction duration, but the estimated effort for each subtask is described below under each subtask.

It is understood that construction management and inspection services will be completed by a third party. For the purposes of the scope of work presented herein, the third party construction manager will be referred to as "CONSTRUCTION MANAGER."

This task includes the following activities:

Subtask 210 - Project Management

CONSULTANT shall maintain effective project management and communication with the CONSTRUCTION MANAGER during construction. Monthly Progress Reports shall be prepared to summarize project work progress, issues, and scope and budget status.

The subtask shall consist of the following:

1. Monthly Progress Report, containing the following:
 - 1.1. Work Progress – A progress report of specific accomplishments during the reporting period, problems encountered or anticipated, and work scheduled for the next reporting period.
 - 1.2. Time Report – A report comparing the actual time expended towards each subtask compared with the estimated time.
 - 1.3. Anticipated Out of Scope Tasks – An itemization and brief description of any anticipated out of scope activities for which the CONSULTANT intends to request reimbursement.
2. Monthly invoices.

Assumptions and Clarifications

- a. Construction duration is assumed to be 14 months, based on the schedule received from the City on 3/17/2016.

Deliverables

- a. Monthly Progress Report, electronic only (PDF format).
- b. Monthly invoice, hard copy and electronic (PDF format).

Subtask 220 - Shop Drawing and Submittal Review

CONSULTANT shall receive, review, comment on, and return shop drawings, submittals, and samples provided by the Contractor via the CONSTRUCTION MANAGER. Work related to shop drawings and submittals will be done using a SharePoint, or similar, site provided by the CONSTRUCTION MANAGER. Hard copies of shop drawings and submittals will generally not be provided to the CONSULTANT, and review comments will be provided digitally. The CONSTRUCTION MANAGER shall screen all submittals for form and general content conforming to that specified in the Contract Documents prior to transmitting them to the CONSULTANT. The purpose of reviewing submittals by CONSULTANT is to determine if the equipment and materials proposed by the Contractor will meet the design intent of the Project and the requirements stipulated in the Contract Documents.

Assumptions and Clarifications

- a. It is estimated that approximately one hundred fifty (150) submittals and equipment operations and maintenance manuals will be submitted by the Contractor. It is estimated that approximately fifty percent (50%) of the original submittals will require a resubmittal process. The scope and budget assumes three (3) hours per submittal review time for one hundred fifty (150) submittals and one and one half (1.5) hours review time for seventy five (75) resubmittals for the CONSULTANT, sixteen (16) hours review time for the corrosion SUBCONSULTANT, and thirty two (32) hours review time for the tunneling SUBCONSULTANT.
- b. Factory acceptance tests and observations are not included.

Subtask 230 - Design Clarifications / Requests for Information (RFIs)

CONSULTANT shall prepare Design Clarifications (DCs) as necessary to clarify design plans and specifications. These may be made at the request of the CONSTRUCTION MANAGER or in response to a need discovered during submittal review. DCs will be submitted to the CONSTRUCTION MANAGER for transmittal to the CONTRACTOR.

CONSULTANT shall respond to Contractor's Requests for Information (RFIs) on the Contract Documents forwarded by the CONSTRUCTION MANAGER. The CONSTRUCTION MANAGER will screen the RFIs submitted by the Contractor and will transmit to the CONSULTANT only those RFIs which require a response by the CONSULTANT. The work will involve both written responses to formal requests for information, and informal verbal telephone responses.

Assumptions and Clarifications

- a. The budget for this task is based on an estimate of a total of one hundred twenty (120) DC/RFIs at an average of three (3) hours per DC/RFI for the CONSULTANT, sixteen (16) hours review time for the corrosion SUBCONSULTANT, and sixteen (16) hours review time for the tunneling SUBCONSULTANT

Subtask 240 - Change Orders

In the event changes to the Contract Documents are required, the CONSULTANT will assist the CONSTRUCTION MANAGER in review of Change Order Requests (CORs) or the

CONSTRUCTION MANAGER's Requests for Proposals (RFPs) and with the preparation of Change Orders (COs). CONSULTANT, at the request of the CONSTRUCTION MANAGER, shall either: review the COR/RFP, or when COR/RFP requires redesign, prepare detailed CO specifications, drawings, and/or sketches.

The CONSTRUCTION MANAGER will prepare all cost estimates for each CO, and negotiate with the CONTRACTOR the cost and extension of Contract Time associated with each CO.

CONSULTANT shall assist with field changes for which a CO is not issued as referred by the CONSTRUCTION MANAGER. Field changes shall be checked for general compliance with the intent of the design.

Assumptions and Clarifications

- a. The budget for this task is based on assistance with eight (8) COR/RFP/COs at six (6) hours each.

Subtask 250 - Attendance at Meetings/Site Visits

CONSULTANT's representative shall attend and participate in certain project meetings at the job site in order to keep abreast of construction activities and be involved in questions which may arise concerning construction progress. During construction site visits, CONSULTANT's representative shall walk the construction area with the CONSTRUCTION MANAGER to observe construction progress and discuss relevant construction issues.

Assumptions and Clarifications

- a. CONSULTANT's representatives, consisting of the project engineer and an assistant engineer, shall attend up to sixteen (16) meetings total during the project duration to monitor construction progress and to facilitate resolution of construction issues as needed. If required, a representative from one of the CONSULTANT's subcontractor can attend instead of the assistant engineer. Each meeting is assumed to last no longer than four (4) hours.

Subtask 260 - Record Documents and Project Closeout

CONSULTANT shall prepare Record Contract Drawings to incorporate modifications of Drawings resulting from change orders, observed site conditions, and CONTRACTOR's record of construction.

Assumptions and Clarifications

- a. Construction changes will be monitored and recorded by the CONTRACTOR and CONSTRUCTION MANAGER. CONSULTANT will incorporate field markups at the end of construction and translate into electronic Record Contract Drawings.
- b. The scope of work and budget assumes approximately forty (40) drawings need to be modified at two (2) hours of CAD time per drawing, and one (1) hour of engineering time per drawing.
- c. Record drawings will not be prepared for traffic control plans.

Deliverables

- a. Electronic files of all construction record documents (AutoCAD and PDF format).
- b. Four (4) sets of full-sized drawings.
- c. Four (4) sets of half-sized drawings.

TASK 300 - ENGINEERING SERVICES DURING CONSTRUCTION FOR SEGMENT B

The purpose of this task is to complete Engineering Services During Construction (ESDC) for Segment B. The ESDC work will include submittal review, response to Contractor questions, change order assistance, site visits/meetings, development of record drawings, and project closeout assistance.

CONSULTANT shall provide the ESDCs as described herein. With the exception of the Project Management subtask, the scope of these services is not based on a certain construction duration, but the estimated effort for each subtask is described below under each subtask.

It is understood that construction management and inspection services will be completed by a third party. For the purposes of the scope of work presented herein, the third party construction manager will be referred to as "CONSTRUCTION MANAGER."

This task includes the following activities:

Subtask 310 - Project Management

CONSULTANT shall maintain effective project management and communication with the CONSTRUCTION MANAGER during construction. Monthly Progress Reports shall be prepared to summarize project work progress, issues, and scope and budget status.

The subtask shall consist of the following:

1. Monthly Progress Report, containing the following:
 - 1.1. Work Progress – A progress report of specific accomplishments during the reporting period, problems encountered or anticipated, and work scheduled for the next reporting period.
 - 1.2. Time Report – A report comparing the actual time expended towards each subtask compared with the estimated time.
 - 1.3. Anticipated Out of Scope Tasks – An itemization and brief description of any anticipated out of scope activities for which the CONSULTANT intends to request reimbursement.
2. Monthly invoices.

Assumptions and Clarifications

- a. Construction duration is assumed to be 11 months, based on the schedule received from the City on 3/17/2016.

Deliverables

- b. Monthly Progress Report, electronic only (PDF format).
- c. Monthly invoice, hard copy and electronic (PDF format).

Subtask 320 - Shop Drawing and Submittal Review

CONSULTANT shall receive, review, comment on, and return shop drawings, submittals, and samples provided by the Contractor via the CONSTRUCTION MANAGER. Work related to shop drawings and submittals will be done using a SharePoint, or similar, site provided by the CONSTRUCTION MANAGER. Hard copies of shop drawings and submittals will generally not be provided to the CONSULTANT, and review comments will be provided digitally. The CONSTRUCTION MANAGER shall screen all submittals for form and general content conforming to that specified in the Contract Documents prior to transmitting them to the CONSULTANT. The purpose of reviewing submittals by CONSULTANT is to determine if the equipment and materials proposed by the Contractor will meet the design intent of the Project and the requirements stipulated in the Contract Documents.

Assumptions and Clarifications

- a. It is estimated that approximately one hundred (100) submittals and equipment operations and maintenance manuals will be submitted by the Contractor. It is estimated that approximately fifty percent (50%) of the original submittals will require a resubmittal process. The scope and budget assumes three (3) hours per submittal review time for one hundred (100) submittals and one and one half (1.5) hours review time for fifty (50) resubmittals for the CONSULTANT and eight (8) hours review time for the corrosion SUBCONSULTANT.
- b. Factory acceptance tests and observations are not included.

Subtask 330 - Design Clarifications / Requests for Information (RFIs)

CONSULTANT shall prepare Design Clarifications (DCs) as necessary to clarify design plans and specifications. These may be made at the request of the CONSTRUCTION MANAGER or in response to a need discovered during submittal review. DCs will be submitted to the CONSTRUCTION MANAGER for transmittal to the CONTRACTOR.

CONSULTANT shall respond to Contractor's Requests for Information (RFIs) on the Contract Documents forwarded by the CONSTRUCTION MANAGER. The CONSTRUCTION MANAGER will screen the RFIs submitted by the Contractor and will transmit to the CONSULTANT only those RFIs which require a response by the CONSULTANT. The work will involve both written responses to formal requests for information, and informal verbal telephone responses.

Assumptions and Clarifications

- a. The budget for this task is based on an estimate of a total of forty (40) DC/RFIs at an average of three (3) hours per DC/RFI for the CONSULTANT and eight (8) hours review time for the corrosion SUBCONSULTANT.

Subtask 340 - Change Orders

In the event changes to the Contract Documents are required, the CONSULTANT will assist the CONSTRUCTION MANAGER in review of Change Order Requests (CORs) or the CONSTRUCTION MANAGER's Requests for Proposals (RFPs) and with the preparation of Change Orders (COs). CONSULTANT, at the request of the CONSTRUCTION MANAGER, shall either: review the COR/RFP, or when COR/RFP requires redesign, prepare detailed CO specifications, drawings, and/or sketches.

The CONSTRUCTION MANAGER will prepare all cost estimates for each CO, and negotiate with the CONTRACTOR the cost and extension of Contract Time associated with each CO.

CONSULTANT shall assist with field changes for which a CO is not issued as referred by the CONSTRUCTION MANAGER. Field changes shall be checked for general compliance with the intent of the design.

Assumptions and Clarifications

- a. The budget for this task is based on assistance with four (4) COR/RFP/COs at six (6) hours each.

Subtask 350 - Attendance at Meetings/Site Visits

CONSULTANT's representative shall attend and participate in certain project meetings at the job site in order to keep abreast of construction activities and be involved in questions which may arise concerning construction progress. During construction site visits, CONSULTANT's representative shall walk the construction area with the CONSTRUCTION MANAGER to observe construction progress and discuss relevant construction issues.

Assumptions and Clarifications

- a. CONSULTANT's representatives, consisting of the project engineer and an assistant engineer, shall attend up to five (5) meetings total during the project duration to monitor construction progress and to facilitate resolution of construction issues as needed. If required, a representative from one of the CONSULTANT's subcontractor can attend instead of the assistant engineer. Each meeting is assumed to last no longer than four (4) hours.

Subtask 360 - Record Documents and Project Closeout

CONSULTANT shall prepare Record Contract Drawings to incorporate modifications of Drawings resulting from change orders, observed site conditions, and CONTRACTOR's record of construction.

Assumptions and Clarifications

- a. Construction changes will be monitored and recorded by the CONTRACTOR and CONSTRUCTION MANAGER. CONSULTANT will incorporate field markups at the end of construction and translate into electronic Record Contract Drawings.
- b. The scope of work and budget assumes approximately twenty five (25) drawings need to be modified at two (2) hours of CAD time per drawing, and one (1) hour of engineering time per drawing.
- c. Record drawings will not be prepared for traffic control plans.

Deliverables

- a. Electronic files of all construction record documents (AutoCAD and PDF format).
- b. Four (4) sets of full-sized drawings.
- c. Four (4) sets of half-sized drawings.

TASK 400 - ENGINEERING SERVICES DURING CONSTRUCTION FOR SEGMENT C

The purpose of this task is to complete Engineering Services During Construction (ESDC) for Segment C. The ESDC work will include submittal review, response to Contractor questions, change order assistance, site visits/meetings, development of record drawings, and project closeout assistance.

CONSULTANT shall provide the ESDCs as described herein. With the exception of the Project Management subtask, the scope of these services is not based on a certain construction duration, but the estimated effort for each subtask is described below under each subtask.

It is understood that construction management and inspection services will be completed by a third party. For the purposes of the scope of work presented herein, the third party construction manager will be referred to as "CONSTRUCTION MANAGER."

This task includes the following activities:

Subtask 410 - Project Management

CONSULTANT shall maintain effective project management and communication with the CONSTRUCTION MANAGER during construction. Monthly Progress Reports shall be prepared to summarize project work progress, issues, and scope and budget status.

The subtask shall consist of the following:

1. Monthly Progress Report, containing the following:
 - 1.1. Work Progress – A progress report of specific accomplishments during the reporting period, problems encountered or anticipated, and work scheduled for the next reporting period.

1.2. Time Report – A report comparing the actual time expended towards each subtask compared with the estimated time.

1.3. Anticipated Out of Scope Tasks – An itemization and brief description of any anticipated out of scope activities for which the CONSULTANT intends to request reimbursement.

2. Monthly invoices.

Assumptions and Clarifications

a. Construction duration is assumed to be 11 months, based on the schedule received from the City on 3/17/2016.

Deliverables

a. Monthly Progress Report, electronic only (PDF format).

b. Monthly invoice, hard copy and electronic (PDF format).

Subtask 420 - Shop Drawing and Submittal Review

CONSULTANT shall receive, review, comment on, and return shop drawings, submittals, and samples provided by the Contractor via the CONSTRUCTION MANAGER. Work related to shop drawings and submittals will be done using a SharePoint, or similar, site provided by the CONSTRUCTION MANAGER. Hard copies of shop drawings and submittals will generally not be provided to the CONSULTANT, and review comments will be provided digitally. The CONSTRUCTION MANAGER shall screen all submittals for form and general content conforming to that specified in the Contract Documents prior to transmitting them to the CONSULTANT. The purpose of reviewing submittals by CONSULTANT is to determine if the equipment and materials proposed by the Contractor will meet the design intent of the Project and the requirements stipulated in the Contract Documents.

Assumptions and Clarifications

a. It is estimated that approximately one hundred (100) submittals and equipment operations and maintenance manuals will be submitted by the Contractor. It is estimated that approximately fifty percent (50%) of the original submittals will require a resubmittal process. The scope and budget assumes three (3) hours per submittal review time for one hundred (100) submittals and one and one half (1.5) hours review time for fifty (50) resubmittals for the CONSULTANT, ten (10) hours review time for the corrosion SUBCONSULTANT, and eight (8) hours review time for the tunneling SUBCONSULTANT.

b. Factory acceptance tests and observations are not included.

Subtask 430 - Design Clarifications / Requests for Information (RFIs)

CONSULTANT shall prepare Design Clarifications (DCs) as necessary to clarify design plans and specifications. These may be made at the request of the CONSTRUCTION MANAGER or in response to a need discovered during submittal review. DCs will be submitted to the CONSTRUCTION MANAGER for transmittal to the CONTRACTOR.

CONSULTANT shall respond to Contractor's Requests for Information (RFIs) on the Contract Documents forwarded by the CONSTRUCTION MANAGER. The CONSTRUCTION MANAGER will screen the RFIs submitted by the Contractor and will transmit to the CONSULTANT only those RFIs which require a response by the CONSULTANT. The work will involve both written responses to formal requests for information, and informal verbal telephone responses.

Assumptions and Clarifications

- a. The budget for this task is based on an estimate of a total of seventy (70) DC/RFIs at an average of three (3) hours per DC/RFI for the CONSULTANT, ten (10) hours review time for the corrosion SUBCONSULTANT, and four (4) hours review time for the tunneling SUBCONSULTANT.

Subtask 440 - Change Orders

In the event changes to the Contract Documents are required, the CONSULTANT will assist the CONSTRUCTION MANAGER in review of Change Order Requests (CORs) or the CONSTRUCTION MANAGER's Requests for Proposals (RFPs) and with the preparation of Change Orders (COs). CONSULTANT, at the request of the CONSTRUCTION MANAGER, shall either: review the COR/RFP, or when COR/RFP requires redesign, prepare detailed CO specifications, drawings, and/or sketches.

The CONSTRUCTION MANAGER will prepare all cost estimates for each CO, and negotiate with the CONTRACTOR the cost and extension of Contract Time associated with each CO.

CONSULTANT shall assist with field changes for which a CO is not issued as referred by the CONSTRUCTION MANAGER. Field changes shall be checked for general compliance with the intent of the design.

Assumptions and Clarifications

- a. The budget for this task is based on assistance with six (6) COR/RFP/COs at six (6) hours each.

Subtask 450 - Attendance at Meetings/Site Visits

CONSULTANT's representative shall attend and participate in certain project meetings at the job site in order to keep abreast of construction activities and be involved in questions which may arise concerning construction progress. During construction site visits, CONSULTANT's representative shall walk the construction area with the CONSTRUCTION MANAGER to observe construction progress and discuss relevant construction issues.

Assumptions and Clarifications

- a. CONSULTANT's representatives, consisting of the project engineer and an assistant engineer, shall attend up to seven (7) meetings total during the project duration to monitor construction progress and to facilitate resolution of construction issues as needed. If required, a representative from one of the CONSULTANT's subcontractor can attend instead of the assistant engineer. Each meeting is assumed to last no longer than four (4) hours.

Subtask 460 - Record Documents and Project Closeout

CONSULTANT shall prepare Record Contract Drawings to incorporate modifications of Drawings resulting from change orders, observed site conditions, and CONTRACTOR's record of construction.

Assumptions and Clarifications

- a. Construction changes will be monitored and recorded by the CONTRACTOR and CONSTRUCTION MANAGER. CONSULTANT will incorporate field markups at the end of construction and translate into electronic Record Contract Drawings.
- b. The scope of work and budget assumes approximately thirty (30) drawings need to be modified at two (2) hours of CAD time per drawing, and one (1) hour of engineering time per drawing.
- c. Record drawings will not be prepared for traffic control plans.

Deliverables

- a. Electronic files of all construction record documents (AutoCAD and PDF format).
- b. Four (4) sets of full-sized drawings.
- c. Four (4) sets of half-sized drawings.

Scope of Services – Additional Design Services

The RTM pipeline for Segment C was originally planned to be on the Chestnut Avenue alignment, extending northerly from Olive Avenue to Ashlan Avenue. The City has decided to eliminate that portion of the RTM that extended from Dakota Avenue northerly through Leaky Acres to Ashlan Avenue. The engineering design of the eliminated portion of the RTM has already progressed to a level of completion of more than 60 percent. Instead, the RTM is to be constructed on the Chestnut Diagonal alignment, extending northeasterly from Dakota Avenue to Winery Avenue. At Winery Avenue the RTM will connect to one or more existing water mains, or to onsite facilities at Pump Station No. 080, which is at the southwest corner of Chestnut Diagonal and Winery Avenue.

TASK 500 - DESIGN SERVICES FOR SEGMENT C REALIGNMENT ON CHESTNUT DIAGONAL

Subtask 510 - Topographic Surveys and Mapping

The purpose of this subtask is to conduct required topographic surveying, determine the existing right-of-way, and obtain aerial photography required for the design and plan preparation for the revised alignment. This subtask includes the following activities:

- A. Conduct a topographic survey of the new alignment area, including the site of Pump Station No. 080. As directed by the City, the RTM will be routed in the northeast-bound lanes of Chestnut Diagonal, which accordingly will be the primary focus of the topographic survey.
- B. Provide traffic control for field surveying activities.
- C. Conduct research of records for rights-of-way and alignments for Chestnut Diagonal and Winery Avenue to establish new alignment rights-of-way and incorporate into topographic mapping.
- D. Conduct office and field utility investigations to obtain utility records and visually identify existing utility facilities. Incorporate utility investigation findings into topographic mapping.
- E. Obtain public domain aerial photography for the new alignment area and incorporate into topographic mapping.
- F. Prepare topographic base mapping of the new alignment area, incorporating right-of-way, utility and aerial photography information, suitable to serve as base mapping for the preparation of plan and profile drawings.

Subtask 520 - Geotechnical Investigations

The purpose of this subtask is to perform a field and laboratory investigation as necessary to develop understanding of the excavation and backfill requirements for the trench for the revised alignment. This subtask includes the following activities:

- A. Provide three borings along the new alignment, at intervals no greater than approximately 1,000 feet.
- B. Conduct geotechnical investigation in conformance with the geotechnical scope for the overall RTM project.
- C. Prepare a supplement or addendum to the geotechnical report prepared for the overall RTM project, documenting field and laboratory efforts. Provide related recommendations for design and construction of the RTM, or provide a statement that recommendations already contained in the geotechnical report for the overall RTM project apply to the new alignment as well.

Subtask 530 - Environmental Compliance

The purpose of this subtask is to obtain the required environmental clearance for the revised alignment. This subtask includes the following activities:

- A. Conduct environmental investigations for the new alignment area.
- B. Prepare a memorandum addendum to the Final Supplemental Mitigated Negative Declaration (SMND) to reflect the new RTM alignment and document that there is no increase in potential impacts.
- C. Coordinate with the City of Fresno to gain approval of the memorandum.

Subtask 540 - Utility Location Confirmation

The purpose of this subtask is to locate utilities proximate to the revised alignment. This subtask includes the following activities:

- A. Locate existing underground utilities by pothole excavation methods at 10 locations.
- B. Conduct field surveys to precisely determine locations of potholed utility facilities.

Subtask 550 - Construction Documents

The purpose of this subtask is to prepare construction documents for the revised alignment. This subtask includes the following activities:

- A. Revise one partial plan and profile (P&P) sheet to eliminate the original alignment and incorporate portion of new alignment.
- B. Prepare two new P&P sheets to incorporate remainder of new alignment.
- C. Prepare revised / new traffic control plans for new alignment area.
- D. Update corrosion control detail sheets to include additional test station locations as necessary.
- E. Incorporate revised / new plans into 90% complete construction document submittal for RTM Segment C.

TASK 600 - DESIGN SERVICES FOR TEMPORARY TRAFFIC CONTROL PLANS FOR SEGMENTS B AND C

The original scope of services for the project included the preparation of basic temporary traffic handling plans, consisting of general traffic control requirements. The City has subsequently determined that detailed traffic control plans are required to be included in the Contract Documents. With the exception of the required time elements, the temporary traffic control plans should be developed to a level so that the City Traffic Division can issue permits using the plans, and they must be reviewed by Caltrans as required and required permits obtained. Accordingly, this will require coordination with and review of the plans by the City Traffic Division. The temporary traffic control plans will be included in the construction documents (90%) phase and the bid documents (100%) phase, and additional services required during the bidding phase will be provided.

Subtask 610 - Construction Documents Phase (90%)

The purpose of this subtask is to prepare 90% temporary traffic control plans. This subtask includes the following activities:

- A. Attend meetings with the City Traffic Division, the County of Fresno, and Caltrans to determine the traffic control requirements.
- B. Prepare detailed 90% temporary traffic control plans for Segment B.
- C. Prepare detailed 90% temporary traffic control plans for Segment C.

- D. Apply for encroachment permit from Caltrans for temporary traffic control, including changeable message signs, in Caltrans' right-of-way.

Assumptions and Clarifications

- a. Temporary traffic control plans for Segment B are estimated to consist of fifteen (15) sheets.
- b. Temporary traffic control plans for Segment C are estimated to consist of twenty (20) sheets.
- c. For Segment B, one two-hour meeting with Caltrans, one two hour meeting with the County, and one two-hour meeting with the City Traffic Division are included.
- d. For Segment C, one two hour meeting with the County and two two-hour meetings with the City Traffic Division are included.

Deliverables

- a. Electronic files of all temporary traffic control plans in PDF format.
- b. Completed Caltrans encroachment permit application with required attachments.
- c. Ten (10) sets of full-sized drawings Segment B.
- d. Ten (10) sets of full-sized drawings Segment C.
- e. Four (4) sets of half-sized drawings for Segment B.
- f. Four (4) sets of half-sized drawings for Segment C.

Subtask 620 - Bid Documents (100%)

The purpose of this subtask is to prepare a final set of temporary traffic control plans that include the incorporation of all City review comments deemed applicable and all approval signatures. This subtask includes the following activities:

- A. Attend meetings with the City Traffic Division, the County of Fresno, and Caltrans to address particular issues related to the specified traffic control requirements and clarify plan comments.
- B. Finalize any outstanding issues with Caltrans and obtain encroachment permit.
- C. Prepare detailed 100% temporary traffic control plans for Segment B.
- D. Prepare detailed 100% temporary traffic control plans for Segment C.

Assumptions and Clarifications

- a. For Segment B, one two-hour meeting with Caltrans, one two hour meeting with the County, and one two-hour meeting with the City Traffic Division are included
- b. For Segment C, one two hour meeting with the County and two two-hour meetings with the City Traffic Division are included

Deliverables

- a. Electronic files of all temporary traffic control plans in PDF format.
- b. Ten (10) sets of full-sized drawings Segment B.
- c. Ten (10) sets of full-sized drawings Segment C.
- d. Four (4) sets of half-sized drawings for Segment B.
- e. Four (4) sets of half-sized drawings for Segment C.

Subtask 630 - Bidding Phase Support

The purpose of this task is to complete engineering bid period services related to the temporary traffic control plans, including response to bidder questions and preparation of related addenda content. The bidding phase support services will culminate with the development of conformed documents for the temporary traffic control plans. This subtask includes the following activities:

- A. Answer bidder technical questions related to the temporary traffic control plans, and provide related addenda content to the City for inclusion in project addenda.
- B. Prepare conformed drawings for the temporary traffic control plans (updated design drawings to include revisions contained in the addenda).

Assumptions and Clarifications

- a. The scope and budget assume three (3) addenda will be prepared for both Segments B and C.
- b. The scope and budget assume that three (3) drawings need to be modified at two (2) hours for each drawing for both Segments B and C.

Deliverables

- a. Electronic files of all construction record documents (AutoCAD and PDF format).
- b. Fifteen (15) sets of full-sized temporary traffic control drawings for both Segments B and C.
- c. Nine (9) sets of half-sized temporary traffic control drawings for both Segments B and C.

TASK 700 - ADDITIONAL UTILITY CONFIRMATION FOR SEGMENTS B AND C

The original scope of services for the project included potholing for each of the utilities identified on the schematic plans prepared by others. The schematic plans did not include any services. As the design has progressed, it has been determined that potholes for each of the services that have subsequently been identified are required.

Subtask 710 - Pothole Existing Services

The purpose of this subtask is to pothole the existing services along Segments B and C. This subtask includes the following activities:

- A. Prepare pothole plans identifying the services to be potholed that have the potential to impact the pipe alignments.
- B. Utilize vacuum excavation to obtain horizontal and vertical locations of the identified services.
- C. Prepare a summary sheet for each potholed service.

Assumptions and Clarifications

- a. The scope and budget assume sixty four (64) additional potholes are required, but a total of fifty seven (57) will be paid out of the Optional Supplemental Services under the original agreement.

Deliverables

- a. None.

Subtask 720 - Survey the Potholed Locations for the Services

The purpose of this subtask is to locate the locations of the potholes performed under Subtask 710 by ground survey methods. This subtask includes the following activities:

- A. Perform the required surveying to determine the locations of the potholes.
- B. Provide traffic control for the pothole surveys.
- C. Transfer the surveyed locations of the each potholed service into the CAD basemaps.

Assumptions and Clarifications

- a. Each of the potholes performed for Subtask 710 will be surveyed and added to the CAD basemaps.

Deliverables

- a. None.

Subtask 730 - Update the Crossing Utility Tables

The purpose of this subtask is to update the crossing utilities tables included in the plans to incorporate the potholed services. This subtask includes the following activities:

- A. Update the tables included in the plans.

Assumptions and Clarifications

- a. None.

Deliverables

a. None.

TASK 800 - TECHNICAL SUPPORT REGARDING WELDED STEEL PIPE VERSUS DUCTILE IRON PIPE

The City has requested the preparation of a technical memorandum to compare the use of welded steel pipe to ductile iron pipe. Preparation of the technical memorandum will require research into the characteristics, the design life, the availability, and the costs and installation of the pipe materials.

Subtask 810 - Required Research

The purpose of this subtask is to perform the research required for the preparation of the TM. This subtask includes the following activities:

- A. Research the characteristics of the two pipe materials, including thickness of the metal portion and thickness of the mortar, standard lay lengths, and allowable joint deflections.
- B. Research the availability and lead times for the two pipe materials, including fittings.
- C. Research any issues with the health codes relative to joints in the new potable water mains at crossings of sanitary sewers and storm drains.
- D. Research the necessity or desirability of CLSM with the two pipe materials.
- E. Research the corrosion protection/monitoring differences between the two pipe materials.
- F. Research the construction costs of the two pipe materials.
- G. Research expected construction production rates for the two pipe materials.
- H. Research the expected design lives of the two pipe materials.

Subtask 820 - Technical Memorandum Preparation

The purpose of this subtask is to analyze the research performed during Subtask 810 and prepare the technical memorandum. This subtask includes the following activities:

- A. Analyze the research performed.
- B. Prepare the technical memorandum.
- C. Submit the technical memorandum for review.
- D. Follow up with the City to discuss any issues and provide any requested clarifications.

TASK 900 - SEGMENT B PIPE SIZE AND MATERIAL CHANGE

Plans and specifications for Segment B were prepared at the 60% level, and submitted to the City. The 60% plans were based on the provided schematic design done by others. The City has now determined that they may change the pipe size on Segment B, and they have requested scope and fees to revise the plans as required to show a different pipe size and pipe material.

Subtask 910 - Plan Revisions

The purpose of this subtask is to revise the already-prepared plans to show a different pipe size and pipe material. This subtask includes the following activities:

- A. Perform the required design to reflect a different pipe size, including any health code issues where existing sanitary sewers and storm drains are crossed, revising the pipe alignment and profile as required due to differences in allowable joint deflections and available fittings, and revising the quantity and locations of pipe appurtenances as required.
- B. Revise the already-prepared pipeline plan and profile drawings to incorporate the design discussed above.
- C. Prepare/revise construction details as required to accommodate the pipe material change.
- D. Prepare/revise the corrosion protection/monitoring details as required to accommodate the pipe material change.

Assumptions and Clarifications

- a. The total number of plan and profile sheets and general pipe alignment will remain the same as the already-prepared 60% plans.

Deliverables

- a. Plans will be submitted along the with the 90% submittal included under the original agreement.

Subtask 920 - Technical Specification Revisions

The purpose of this subtask is to revise the already-prepared technical specifications to accommodate the different pipe size and material. This subtask includes the following activities:

- A. Revise the already-prepared technical specifications to incorporate the different pipe size and material.

Assumptions and Clarifications

- a. None.

Deliverables

- a. Technical specifications will be submitted along the with the 90% submittal included under the original agreement.

SECOND AMENDMENT TO AGREEMENT

THIS SECOND AMENDMENT TO AGREEMENT ("Amendment") made and entered into as of this 1 day of November 2016, amends the Agreement entered into between the CITY OF FRESNO, a municipal corporation (the "City"), and BLAIR, CHURCH, & FLYNN CONSULTING ENGINEERS, a California corporation (the "Consultant"). The City and Consultant are collectively referred to as Parties.

RECITALS

WHEREAS, the City and the Consultant entered into an Agreement on June 12, 2015 ("Agreement"), to obtain professional design services for the City's Phase 2 Regional Transmission Mains (the "Project"); and

WHEREAS, the Agreement was amended on September 1, 2016, to modify the Scope of Services described in Exhibit A-1 of Amendment and increase the Consultant's compensation by \$999,996, resulting in an adjusted total Consultant fee of \$3,836,191 ("First Amendment"); and

WHEREAS, the City and the Consultant desire to extend the time of completion to June 30, 2018; and

WHEREAS, with entry into this Amendment, the Consultant agrees that the Consultant has no claim, demand or dispute against the City.

AGREEMENT

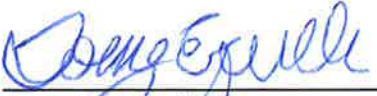
NOW THEREFORE, the parties agree that the aforesaid Agreement be amended as follows:

1. The recitals to this Amendment are incorporated and made a part of this Amendment.
2. Time to complete the Project under the Agreement is extended to June 30, 2018.
3. Except as otherwise provided herein, the Agreement entered into by CITY and CONSULTANT, dated June 12, 2015, and the First Amendment remain in full force and effect.


* * * * *

IN WITNESS WHEREOF, the Parties have executed this Amendment at Fresno, California, the day and year first above written.

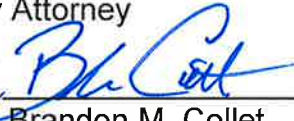
CITY OF FRESNO,
a California municipal corporation

By: 
Thomas C. Esqueda
Director
Department of Public Utilities

ATTEST:
YVONNE SPENCE, CMC
City Clerk

By:  11/1/16
Deputy

APPROVED AS TO FORM:
DOUGLAS T. SLOAN
City Attorney

By:  10/27/16
Brandon M. Collet Date
Deputy City Attorney

Addresses:

CITY:
City of Fresno
Attention: Paul Amico, PE,
Senior Project Manager
2101 G Street, Building A
Fresno, CA 93706-1620
Telephone No. (559) 621-1602
FAX. (559) 498-4126

BLAIR, CHURCH & FLYNN
CONSULTING ENGINEERS,
a California corporation

By: 

Name Karl E. Kienow

Title Vice President

(If corporation or LLC, Board Chair,
Pres. or Vice Pres.)

By: 

Name: Adam K. Holt

Title: CFO / Secretary

(If corporation or LLC, CFO, Treasurer,
Secretary, or Assistant Secretary)

CONSULTANT:
Blair, Church & Flynn Consulting Engineers
Attention: Karl Kienow, PE,
Principal
451 Clovis Avenue, Suite 200
Clovis, CA 93612
Telephone No. (559) 326-1400
FAX: (559) 326-1500

THIRD AMENDMENT TO AGREEMENT

THIS THIRD AMENDMENT TO AGREEMENT (Amendment) made and entered into as of this 14th day of March 2019, amends the Agreement entered into between the CITY OF FRESNO, a municipal corporation (City), and BLAIR, CHURCH, & FLYNN CONSULTING ENGINEERS, a California corporation (Consultant). The City and Consultant are collectively referred to as Parties.

RECITALS

WHEREAS, the City and the Consultant entered into an Agreement on June 12, 2015 (Agreement), to obtain professional design services for the City's Phase 2 Regional Transmission Mains (Project); and

WHEREAS, the Agreement was amended on September 1, 2016, to modify the Scope of Services described in **Exhibit A-1** of Amendment and increase the Consultant's compensation by \$999,996, resulting in an adjusted total Consultant fee of \$3,836,191 (First Amendment); and

WHEREAS, the Agreement was amended on November 1, 2016, to extend the Agreement to June 30, 2018 to complete Project (Second Amendment); and

WHEREAS, the City and the Consultant desire to extend the time of completion to August 31, 2019 to complete Project; and

WHEREAS, with entry into this Amendment, the Consultant agrees that the Consultant has no claim, demand, or dispute against the City.

AGREEMENT

NOW THEREFORE, the parties agree that the aforesaid Agreement be amended as follows:


1. The recitals to this Amendment are incorporated and made a part of this Amendment.
2. Time to complete the Project under the Agreement is extended to August 31, 2019.
3. Except as otherwise provided herein, the Agreement entered into by CITY and CONSULTANT, dated June 12, 2015, the First Amendment, and the Second Amendment, remain in full force and effect.


[Signatures follow on the next page.]

IN WITNESS WHEREOF, the Parties have executed this Amendment at Fresno, California, the day and year first above written.

CITY OF FRESNO,
A California municipal corporation

BLAIR, CHURCH & FLYNN
CONSULTING ENGINEERS,
a California corporation

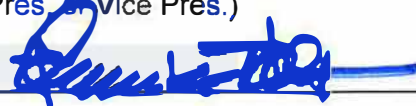
By: 
Michael Carbajal, Director
Department of Public Utilities

By: 
Name: KARL E KIENOW

APPROVED AS TO FORM:
DOUGLAS T. SLOAN
City Attorney

Title: VICE PRES
(If corporation or LLC., Board Chair,
Pres. or Vice Pres.)

By:  3/12/19
Brandon M. Collet Date
Senior Deputy City Attorney

By: 
Name: ADAM K. HOUT

ATTEST:
YVONNE SPENCE, CRM MMC
City Clerk

Title: CFO
(If corporation or LLC., CFO, Treasurer,
Secretary or Assistant Secretary)

By:  Date
Deputy Marco Martinez
3/14/19

REVIEWED BY:

Dejan Pavic, PE, Public Utilities Manager

CITY:
City of Fresno
Attention: Martin Wendels, Senior Project
Manager
2101 G Street, Building A
Fresno, CA 93706-1620
Telephone No. (559) 621-1627
Fax. (559) 498-4126

CONSULTANT:
Blair, Church & Flynn Consulting
Engineers
Attention: Karl Kienow, PE, Principal
451 Clovis, CA 93612
Telephone No. (559) 326-1400
Fax: (559) 326-1500

Attachment: Exhibit A-1