

**AGREEMENT SUMMARY  
BROKEN ARROW MUNICIPAL AUTHORITY  
LYNN LANE WWTP MISCELLANEOUS IMPROVEMENTS  
PROFESSIONAL CONSULTANT AGREEMENT  
LYNN LANE WWTP  
EAST CLARIFIER REHABILITATION & BELT FILTER PRESS BUILDING ADDITION  
PROJECT NO. 2154220 & 2154200**

**1.0 Professional Consulting Firm:**

1.1 Name: Carollo Engineers, Inc.

1.2 Telephone No.: 405-840-7785

1.3 Address: 211 N. Robinson Ave., Suite 1300, North Tower  
Oklahoma City, OK 73012

**2.0 Project Name/Location:** Lynn Lane WWTP Miscellaneous Improvements, Broken Arrow, OK

**3.0 Statement of Purpose:** CONSULTANT understands that the OWNER has retained their professional services in order to prepare Construction Documents for construction of improvements to the belt press building under Project No. 2154200 and rehabilitation of the east clarifier under Project 2154220 at the Lynn Lane WWTP. These documents shall include, but not be limited to, the following: provide the bid document quantities; construction plans detailing the intent of the project; standard details and standard drawings associated with the project specifics; construction specifications; general conditions, and special conditions. CONSULTANT understands that the OWNER has retained their professional services for services during bidding for both Projects 2154220 and 2154200 and these projects will be prepared and bid separately. CONSULTANT understands that OWNER has retained their professional services for construction administration and preparation of as built documentation for Project 2154200 only and that construction administration and preparation of as built documentation for Project 2154220 may be authorized as part of a future amendment to this agreement.

**4.0 Agreement Summary:**

Element	Project 2154200	Project 2154220
Engineering Report	\$35,000	None
Design Phase	\$193,500	\$115,500
Bidding Services	\$17,500	\$12,500
Construction Administration	\$30,000	\$10,000
Post Construction	\$15,000	Future Amendment
Subtotal Basic Services	\$291,000	\$138,000
Additional Services	\$25,000	Future Amendment
Total Basic and Additional Services	\$316,000	\$138,000
Construction Cost (median – See Note 1)	\$2,066,252	\$1,019,331

1. Construction Cost Opinion is based upon conceptual design information and which has an accuracy range of +40% to -15%. See Attachment A for additional details regarding construction cost opinion.

**5.0 Agreement Approved by the Owner on:** \_\_\_\_\_ 2021

**AGREEMENT  
FOR  
PROFESSIONAL CONSULTANT SERVICES  
BETWEEN  
BROKEN ARROW MUNICIPAL AUTHORITY  
AND  
CAROLLO ENGINEERS INC.**

**FOR  
LYNN LANE WWTP  
EAST CLARIFIER REHABILITATION & BELT FILTER PRESS BUILDING ADDITION  
PROJECT NO. 2154220 & 2154200**

This AGREEMENT, including Attachment A through Attachment E, between the Broken Arrow Municipal Authority (OWNER) and Carollo Engineers, Inc., (CONSULTANT);

**W I T N E S S E T H:**

WHEREAS, OWNER intends to conduct improvements to the belt filter press building east secondary clarifier (PROJECT) for which, OWNER has requested that CONSULTANT provide certain professional services as required and,

WHEREAS, CONSULTANT is qualified and capable to provide the professional services required;

NOW, therefore, in consideration of the promises contained in this AGREEMENT, OWNER and CONSULTANT agree as follows:

**ARTICLE 1 - EFFECTIVE DATE**

This AGREEMENT shall be effective upon signature of both parties.

**ARTICLE 2 - GOVERNING LAW**

This AGREEMENT shall be governed by the laws of the State of Oklahoma and venue for any action concerning this Agreement shall be in the District Court of Tulsa County, Oklahoma.

**ARTICLE 3 - SERVICES TO BE PERFORMED BY CONSULTANT**

CONSULTANT shall perform the SERVICES described in Attachment A, Scope of Services. CONSULTANT and OWNER agree CONSULTANT'S work performed under this AGREEMENT are performed as an independent contractor. If construction phase services are included, the CONSULTANT shall be the OWNER'S representative to observe, record and report with respect to all services that are required or authorized by the construction documents.

**ARTICLE 4 – ORGANIZATION OF SUBMITAL DOCUMENTS**

CONSULTANT shall prepare the documents as described in Attachment B as part of this Agreement.

**ARTICLE 5 - COMPENSATION**

OWNER shall pay CONSULTANT in accordance with Attachment C, Compensation.

**ARTICLE 6 - OWNER'S RESPONSIBILITIES**

OWNER shall be responsible for all matters described in Attachment D, OWNER'S Responsibilities and Special Conditions.

**ARTICLE 7 - STANDARD OF CARE**

CONSULTANT shall perform the SERVICES undertaken in a manner consistent with the prevailing accepted standard for similar services with respect to projects of comparable function and complexity, and with the applicable state laws, as well as the specific codes, regulations, design criteria and construction specifications adopted by the owner and other governing policies published and generally considered authoritative by CONSULTANT'S profession that are in effect at the time of performance of these SERVICES. CONSULTANT is obligated to perform professional services in accordance with the foregoing standard with respect to the laws, codes, regulations, design criteria and construction specifications that are applicable pursuant to this AGREEMENT.

## **ARTICLE 8 - LIABILITY**

8.1 General. Having considered the potential liabilities that may exist during the performance of these SERVICES, the benefits of the PROJECT, and CONSULTANT'S fee for the SERVICES; and in consideration of the promises contained in this AGREEMENT, OWNER and CONSULTANT agree to allocate and limit such liabilities in accordance with Article 10.

8.2 Indemnification. CONSULTANT agrees to defend, indemnify, and hold harmless OWNER, and its agents and employees, from and against legal liability for all claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are caused by the negligent or intentional acts, errors, or omissions of CONSULTANT, its agents or employees. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of OWNER and CONSULTANT, or their agents or employees, then they shall be borne by each party in proportion to each entity's own negligence.

8.3 Consequential Damages. OWNER shall not be liable to CONSULTANT for any special, indirect, or consequential damages resulting in any way from the performance of the SERVICES such as, but not limited to, loss of use, loss of revenue, or loss of anticipated profits.

8.4 Survival. Upon completion of all SERVICES, obligations, and duties provided for in this AGREEMENT, or if this AGREEMENT is terminated for any reason, the terms and conditions of this Article 8 shall survive.

## **ARTICLE 9 - INSURANCE**

During the performance of the SERVICES under this AGREEMENT, CONSULTANT shall maintain the following insurance:

- (1) General Liability Insurance, with a combined single limit of \$1,000,000 for each occurrence and \$1,000,000 in the aggregate;
- (2) Automobile Liability Insurance, with a combined single limit of not less than \$1,000,000 for each person, not less than \$1,000,000 for each accident and not less than \$1,000,000 for property damage; and
- (3) Professional Liability Insurance, with a limit of \$1,000,000 annual aggregate.

CONSULTANT shall furnish OWNER certificates of insurance, which shall include a provision that such insurance shall not be canceled without at least thirty (30) days written notice to OWNER. All PROJECT sub-consultants shall be required to name OWNER and CONSULTANT as certificate holders on their certificate of insurance for the PROJECT, and shall be required to indemnify OWNER and CONSULTANT to the same extent. CONSULTANT shall be held responsible to submit certificates of insurance for sub-consultants to OWNER prior to the sub-consultant's release to commence work.

## **ARTICLE 10 - LIMITATIONS OF RESPONSIBILITY**

CONSULTANT shall not be responsible for: (1) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the construction of the PROJECT; or (2) procuring permits, certificates, and licenses required for any construction

unless such responsibilities are specifically assigned to CONSULTANT in Attachment A, Scope of Services.

#### **ARTICLE 11 - LIMITATIONS OF RESPONSIBILITIES FOR ACTS OF OTHERS**

CONSULTANT shall not at any time supervise, direct, control or have authority over any work performed by any employee, contractor or other agent of OWNER. CONSULTANT shall not be responsible for the acts or omissions of any employee, contractor or other agent associated with the PROJECT except for its own employees, subcontractors and other agents.

#### **ARTICLE 12 - OPINIONS OF COST AND SCHEDULE**

Since CONSULTANT has no control over the cost of labor, materials, or equipment furnished by others, or over the resources provided by others to meet PROJECT schedules, CONSULTANT'S opinion of probable costs and of PROJECT schedules shall be made on the basis of experience and qualifications as a professional. CONSULTANT does not guarantee that proposals, bids, or actual PROJECT costs will conform to OWNER'S cost estimates or that actual schedules will conform to OWNER'S projected schedules.

#### **ARTICLE 13 - REUSE OF DOCUMENTS**

All documents, including, but not limited to, drawings, specifications, and details, reports, etc. prepared by CONSULTANT pursuant to this AGREEMENT are instruments of service in respect to the PROJECT. They are not intended or represented to be suitable for reuse by CONSULTANT or others on extensions of the PROJECT or on any other project. Any reuse or adaptation without prior written verification by the OWNER for the specific purpose intended will be at CONSULTANT'S sole risk and without liability or legal exposure to the OWNER. CONSULTANT shall defend, indemnify, and hold harmless the OWNER against all claims, losses, damages, injuries, and expenses, including attorney's fees, arising out of or resulting from such reuse.

#### **ARTICLE 14 - OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY**

Except as otherwise provided herein, engineering documents, drawings, and specifications prepared by CONSULTANT as part of the SERVICES shall become the property of OWNER. CONSULTANT shall retain its rights in its standard drawing details, specifications, data bases, computer software, and other proprietary property. Rights to intellectual property developed, utilized, or modified in the performance of the SERVICES shall remain the property of CONSULTANT, but shall be provided to the OWNER, at no additional expense to the OWNER.

#### **ARTICLE 15 - TERMINATION**

This AGREEMENT may be terminated by either party upon written notice in the event of substantial failure by the either party to perform in accordance with the terms of this AGREEMENT. The non-performing party shall have fifteen (15) calendar days from the date of the termination notice to cure or to submit a plan for cure acceptable to the other party.

OWNER may suspend performance of this AGREEMENT for OWNER'S convenience upon written notice to CONSULTANT. Upon restart, an equitable adjustment may be made to CONSULTANT'S compensation, if the period of suspension has created an economic hardship for the CONSULTANT.

#### **ARTICLE 16 - DELAY IN PERFORMANCE**

Neither OWNER nor CONSULTANT shall be considered in default of this AGREEMENT for delays in performance caused by circumstances beyond the reasonable control of the non-performing party. For purposes of this AGREEMENT, such circumstances include, but are not limited to, abnormal weather conditions such as floods, earthquakes, fire; civil disturbances such as war, riots, or other civil epidemic; power outages, strikes, lockouts, work slowdowns, or other labor disturbances; sabotage; judicial restraint, and inability to procure permits, licenses, or authorizations from any local, state, or federal agency for any of the supplies, materials, accesses, or services required to be provided by either OWNER or CONSULTANT under this AGREEMENT.

Should such circumstances occur, the non-performing party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of this AGREEMENT.

#### **ARTICLE 17 - WAIVER**

A waiver by either OWNER or CONSULTANT of any breach of this AGREEMENT shall be in writing. Such a waiver shall not affect the waiving party's rights with respect to any other or further breach.

#### **ARTICLE 18 - SEVERABILITY**

The invalidity, illegality, or unenforceability of any provision of this AGREEMENT or the occurrence of any event rendering any portion or provision of this AGREEMENT void shall in no way affect the validity or enforceability of any other portion or provision of this AGREEMENT. Any void provision shall be deemed severed from this AGREEMENT, and the balance of this AGREEMENT shall be construed and enforced as if this AGREEMENT did not contain the particular portion or provision held to be void. The parties further agree to amend this AGREEMENT to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this Article shall not prevent this entire AGREEMENT from being void should a provision which is of the essence of this AGREEMENT be determined void.

#### **ARTICLE 19 - INTEGRATION**

This AGREEMENT represents the entire and integrated AGREEMENT between OWNER and CONSULTANT. It supersedes all prior and contemporaneous communications, representations, and agreements, whether oral or written, relating to the subject matter of this AGREEMENT.

#### **ARTICLE 20 - SUCCESSORS AND ASSIGNS**

To the extent permitted by Article 22, OWNER and CONSULTANT each binds itself and its successors and assigns to the other party to this AGREEMENT.

#### **ARTICLE 21 - ASSIGNMENT**

Neither OWNER nor CONSULTANT shall assign its duties under this AGREEMENT without the prior written consent of the other party. Unless otherwise stated in the written consent to an assignment, no assignment will release or discharge the assignor from any obligation under this AGREEMENT. Nothing contained in this Article shall prevent CONSULTANT from employing independent sub-consultants, associates, and sub-contractors to assist in the performance of the SERVICES. However, third party entities must comply with Article 9.

#### **ARTICLE 22 - THIRD PARTY RIGHTS**

Nothing in this AGREEMENT shall be construed to give any rights or benefits to anyone other than OWNER and CONSULTANT. The services to be performed by CONSULTANT are intended solely for the benefit of OWNER. No person or entity not a signatory to this AGREEMENT shall be entitled to rely on CONSULTANT's performance of its services hereunder, and no right to assert a claim against CONSULTANT by assignment of indemnity rights or otherwise shall accrue to a third party as a result of this AGREEMENT or the performance of CONSULTANT's services hereunder.

#### **ARTICLE 23 - COMPLETION**

CONSULTANT shall complete the services within the time frame outlined on Attachment E, Schedule, subject to conditions which are beyond the control of the CONSULTANT.

## **ARTICLE 24 - IMMIGRATION COMPLIANCE**

24.1 Consultant shall demonstrate that he:

24.1.1 Has complied, and shall at all times during the term of this Contract, comply in all respects with all immigration-related laws, statutes, ordinances and regulations including without limitation, the Immigration and Nationality Act, as amended, the Immigration Reform and Control Act of 1986, as amended, and the Oklahoma Taxpayer and Citizen Protection Act of 2007 (Oklahoma HB 1804) and any successor laws, ordinances or regulations (collectively, the Immigration Laws"); and

24.1.2 Has properly maintained, and shall at all times during the term of this Contract, maintain any and all employee records required by the U.S. Department of Homeland Security ("DHS"), including, without limitation, properly completed and maintained Form I-9s for each of the Consultants employees; and

24.1.3 Has verified the employment eligibility for all employees hired on or after July 1, 2008 through DHS's E-Verify system, and shall at all times continue to verify the employment eligibility of all employees hired during the term of this Contract; and

24.1.4 Has required, and will at all times during the term of this Contract, require any sub-contractor utilized, hired or sub-contracted for by Consultant for the completion or undertaking of any duties, tasks or responsibilities under this Contract, to comply the requirements and obligations imposed by the Immigration Laws and set forth in Paragraph (I), parts (a), (b) and (c), above, with regards to each of the sub-contractor's employees.

24.2 Consultant will indemnify, defend and hold harmless BAMA against any loss, cost, liability, expense (including, without limitation, costs and expenses of litigation and reasonable attorney's fees) demands, claims, actions, causes of action, liabilities, suits, damages, including special and consequential damages that arise from or in connection with, directly or indirectly, Consultants failure, deliberate or negligent, to fulfill its obligations and representations regarding verifying the employment eligibility of its employees and the employees of any subcontractor utilized by Contractor as set forth more fully in Paragraph 24.1 above.

## **ARTICLE 25 - COMMUNICATIONS**

Any communication required by this AGREEMENT shall be made in writing to the address specified below:

OWNER: Broken Arrow Municipal Authority  
485 N. Poplar Street  
Broken Arrow, OK 74012  
Contact: Mr. Roger D. Hughes, P.E.  
Engineering Division Manager

CONSULTANT: Carollo Engineers, Inc.  
211 N. Robinson Ave., Suite 1300, North Tower  
Oklahoma City, OK 73102  
(405) 840-7785

Contact Name: Thomas O. Crowley, PE  
Vice President

Nothing contained in this Article shall be construed to restrict the transmission of routine communications between representatives of OWNER and CONSULTANT.

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IN WITNESS WHEREOF, the General Manager of the Broken Arrow Municipal Authority in Broken Arrow, Oklahoma has hereunto set his hand, for and on behalf of the Broken Arrow Municipal Authority and the CONSULTANT has signed, or caused his name to be signed, and seal affixed by proper authority, the day and year first above written and these presents have been executed in triplicate counterparts.

**OWNER:**

Broken Arrow Municipal Authority

**CONSULTANT:**

Carollo Engineers, Inc.

By:

Michael L. Spurgeon, General  
Manager

Date:

By:

Thomas O. Crowley, P.E.

Thomas O. Crowley, PE  
Vice President

Date:

03-24-21

(CORPORATE SEAL, IF APPLICABLE)

Attest:

Secretary [Seal]

Date:

Attest:

Wayne Miller, PE

Wayne Miller, PE  
Vice President

Date:

3/24/2021

Approved as to form:

Assistant City Attorney

Assistant City Attorney

**VERIFICATION**

State of Oklahoma )  
County of Oklahoma ) §

Before me, a Notary Public, on this 24<sup>th</sup> day of March, 2021, personally appeared Thomas O. Crowley, known to be to be the Vice President of Carollo Engineers, Inc., and to be the identical person who executed the within and foregoing instrument, and acknowledged to me that he/she executed the same as his/her free and voluntary act and deed for the uses and purposes therein set forth.

My Commission Expires:

4/16/23

Ivette E Garcia

Notary Public







**ATTACHMENT A  
TO  
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES  
BETWEEN  
BROKEN ARROW MUNICIPAL AUTHORITY (OWNER)  
AND  
CAROLLO ENGINEERS INC. (CONSULTANT)  
FOR  
LYNN LANE WWTP  
EAST CLARIFIER REHABILITATION & BELT FILTER PRESS BUILDING ADDITION  
PROJECT NO. 2154220 & 2154200**

**SCOPE OF SERVICES**

The following scope of services shall be made a part of the AGREEMENT dated the \_\_\_ day of \_\_\_, 2021.

**1.0 PROJECT UNDERSTANDING**

- 1.1 CONSULTANT understands that the OWNER has retained their professional services to prepare construction documents for bidding purposes for miscellaneous improvements to the Lynn Lane WWTP which involve improvements to the belt filter press building (Project No. 2154200) and replacement of the east clarifier effluent launder (Project No. 2154220). These documents shall include, but not be limited to, the following: a design manual including all numerical calculations supporting the intent of the design, as well as providing the basis for bid document quantities; construction plans detailing the intent of the project; standard details and standard drawings associated with the project specifics; construction specifications; general conditions, and special conditions.
- 1.2 The CONSULTANT is required to keep the OWNER apprised of the PROJECT costs and advise the OWNER of necessary cost reduction measures, if required, during the PROJECT.
- 1.3 Furthermore, the CONSULTANT understands that the OWNER has \$1,725,000 budgeted for the Project No. 2154200 that includes all professional consultant fees and project construction monies. The CONSULTANT understands that the OWNER has \$370,000 budgeted for the Project No. 2154220 that includes professional consultant fees and will apply for a future OWRB Loan for project construction monies. The budget is based upon the following estimated construction costs:

Element	Construction Cost (millions)			Notes
	High	Mid	Low	
BFP Replacement	\$1,914,800	\$1,367,662	\$1,162,600	1, 2
Polymer System Replacement	\$978,100	\$698,590	\$593,900	1
<b>Subtotal Project 2154200</b>	<b>\$2,892,900</b>	<b>\$2,066,252</b>	<b>\$1,756,500</b>	
Project 2154220	\$1,427,100	\$1,019,331	866,500	1
<b>TOTAL All projects</b>	<b>\$4,318,400</b>	<b>\$3,085,582</b>	<b>\$ 2,622,000</b>	

Notes:

1. AACE Class IV Estimate has an accuracy range of +40% to -15%.
2. BFP replacement includes removal of existing BFP for salvage purposes.
3. Polymer system replacement includes relocation of electrical equipment to cut in new door at the belt filter

- building for access to the polymer system for tote delivery.
4. All estimates include escalation to midpoint, insurance, bonds, OH& Profit, contingency, and local and state sales taxes.

## **2.0 PROJECT SCOPE - GENERAL**

- 2.1 General: Project 2154200 consists of the following elements:
  - 2.1.1 Removal of existing Roediger Belt Filter Press and control panel from the existing press building for surplus/salvage purposes.
  - 2.1.2 Evaluation of dewatering alternatives (screw press vs BDP belt filter press) and design of selected alternatives to replace Roediger press.
  - 2.1.3 Design of selected dewatering alternative to integrate selected alternative into current space occupied by Roediger Belt Filter Press and control panel. Includes structural, mechanical (platform and piping only), electrical, and instrumentation and control system modifications to the belt press building to incorporate the new press alternative subject to the limitations described in Section 2.3.
  - 2.1.4 Demolition of existing dry polymer system and installation of new tote-based liquid polymer activation and feed system with polymer injection ring. Includes installation of a new exterior roll up door and access ramp into containment area for forklift access. It is anticipated that existing electrical equipment currently mounted on the interior side at the proposed location for the new exterior roll-up door will need to be relocated prior to installation of the new door. Design of the new polymer system will be subject to the limitations described in Section 2.3.
- 2.2 General: Project 2154220 consists of the following elements:
  - 2.2.1 Rehabilitation of existing East secondary clarifier to demolish existing cast in place concrete effluent launder and chlorine diffuser ring and install new stainless steel effluent launders and diffuser.
  - 2.2.2 Miscellaneous minor repairs of the existing east secondary clarifier.
  - 2.2.3 Improvements will be subject to the assumptions provided in Section 2.3.
- 2.3 Assumptions:-
  - 2.3.1 Project 2154200 Belt Filter Press – Structural modifications to the existing building will not be necessary to remove or install the new press alternative in the existing location. This excludes modification to existing platform system as this may be necessary to incorporate the new press alternative.
  - 2.3.2 Project 2154200 Belt Filter Press – Non-potable system. No changes will be required to the existing non-potable water system to accommodate the new press.
  - 2.3.3 Project 2154200 Belt Filter Press – Press feed system. No changes will be required to the sludge feed pumps to supply the new press.
  - 2.3.4 Project 2154220 Belt Filter Press – OWNER will provide CONSULTANT with solids projections and anticipated range of solids inlet conditions for purposes of sizing and evaluating press alternatives. OWNER will provide CONSULTANT with design goals for new dewatering system for purposes of evaluating press alternatives.
  - 2.3.5 Project 2154200 Belt Filter Press – Existing Motor Control Center (MCC) Modifications. Replacement of existing MCC will not be necessary

to incorporate the new press. The new press vendor control panel will be fed from the existing MCC with new conduit and wires. All press equipment will be fed and controlled from the manufacturers control panel.

- 2.3.6 Project 2154200 Belt Filter Press – Existing Belt Press Building HVAC and Drain, Waste, Vent Piping (DWV). No modifications will be made to the existing press building HVAC or DWV piping to incorporate new press alternative and polymer feed system.
- 2.3.7 Project 2154200 Belt Filter Press – Modifications to the connection of the selected press alternative will involve the modification to the sheet metal to divert dewatered cake to the conveyor. No major structural or mechanical modifications such as the purchase and installation of a new compressor will be necessary to incorporate the selected press alternative.
- 2.3.8 Project 2154200 Polymer Storage and Feed System: OWNER will provide CONSULTANT with historical polymer usage information for the sizing of the polymer storage and feed system.
- 2.3.9 Project 2154220 East Clarifier Rehab: Replacement of mechanism will not be required.
- 2.3.10 Project 2154220 East Clarifier Rehabilitation: Rehabilitation will be limited to replacement of the concrete effluent launder and chlorine diffuser ring. No yard piping improvements, electrical improvements, instrumentation and control or mechanical improvements will be required.
- 2.3.11 Project 2154220 East Clarifier Rehabilitation: A detailed condition assessment will not be required since the goal of the project is to demolish and replace the existing effluent weir and associated launder and NOT to rehabilitate the clarifier.
- 2.3.12 Site Survey: Site topographical survey will not be required.
- 2.3.13 Geotechnical: Geotechnical investigations will not be required. OWNER will provide previous geotechnical reports for similar investigations at the Site.
- 2.3.14 Fire Protection: Improvements to the existing fire protection system at the belt filter press building will not be required.
- 2.3.15 Building Code: Consultant to assist with acquiring City required permits for this project if necessary.
- 2.3.16 Specifications: The CONSULTANTS Standard Technical Specifications Division 1 through 17 will be utilized and incorporated with OWNER's Standard Front End (DIVISION 0) Documents.
- 2.3.17 Project 2154220 and Project 2154200 will be provided with separate design documents, bidding services, and construction administration services as these will be bid and awarded separately.
- 2.3.18 Project 2154200 will require an Engineering Report for ODEQ review and approval while Project 2154220 will not.

2.3.19 Design phase services, construction phase services and associated meetings for Projects 2154220 and Project 2154200 will be conducted concurrently.

2.3.20 Construction administration services and post construction services for Project 2154220 will be provided under a future amendment once construction monies are secured.

### **3.0 DETAILED SCOPE OF SERVICES**

#### **3.1 PROJECT DELIVERY AND COMMUNICATION:**

##### **General**

CONSULTANT will provide project delivery services necessary for the administration of Projects 2154220 and Project 2154200, including efforts required for proper resource allocation, schedule development and monitoring, budget review and control, client correspondence and coordination, internal quality assurance/quality control (QA/QC) activities and other project administrative and customary activities required for timely completion of the work. CONSULTANT will prepare and submit invoices in a form that is acceptable to the OWNER.

##### **Deliverables**

Major Deliverables associated with Task 3.1 are as follows:

1. Monthly Progress Reports
2. Monthly Updates to Action/Decision Logs
3. Meeting Minutes and Agendas

##### **3.1.1 Prepare Monthly Progress Reports:**

Prepare and submit to BAMA monthly project progress status reports for Task 1 services that identify:

1. The work that has been performed in the period.
2. Work activities anticipated in the next month.
3. Action items required of the BAMA for an efficient and effective delivery of CONSULTANT's services.
4. Potential project scope variances with corrective actions suggested by CONSULTANT.
5. A general assessment of CONSULTANT's ability to meet project schedule milestones, including identification of any delays beyond its control, and an estimate of the work percent completion for each task series in the Scope of Services based on earned value of the work completed.

A short narrative will be provided describing the work activities performed for each task within a given task series. BAMA will provide direction to CONSULTANT in a timely manner with respect to each variance discussed in each monthly progress status report. The monthly progress status report following the BAMA's standard template will be submitted to the BAMA with each monthly invoice.

Throughout the duration of the projects CONSULTANT will prepare and

update the action and decision logs to keep a record of action and decision items needed, when these were completed, and the goals and results of these actions and decisions. These will be updated monthly and included with the monthly progress reports.

3.1.2 Project Meetings and Workshops: The following meetings and workshops are anticipated for this project:

3.1.2.1 Project Kickoff Meeting

3.1.2.2 Project Workshop – Engineering Report/Pre-design

3.1.2.3 Project Workshop – Interim Design Review

3.1.2.4 Project Workshop – Final Design Review

3.1.2.5 Periodic Meetings with Design Team: It is anticipated that an additional three (3) meetings will be conducted with OWNER staff to discuss and review progress.

3.1.3 External Agency Coordination:

3.1.3.1 For the engineering report phase, the CONSULTANT will identify which external agencies will require review and approval of the engineering report and which agencies approvals will be required prior to or during construction. CONSULTANT will arrange to meet with said agencies as necessary to facilitate engineering report approval.

3.1.3.2 CONSULTANT will submit the draft report to the agencies for review and comment prior to issuance of final engineering report for BAMA approval. Following receipt of comments, CONSULTANT will generate a tabular response sheet containing each of the Agency comments and the CONSULTANTs draft responses for review by the BAMA.

3.2 ENGINEERING REPORT SERVICES:

**General**

CONSULTANT will provide services necessary for the preparation of a draft and final engineering report satisfying the applicable requirements of OAC 252:656-3-4 for the various design elements.

**Deliverables**

Major Deliverables associated with Task 3.2 are as follows:

1. Draft Project 2154200 Engineering Report.
  - a. One (1) Electronic Copy in searchable, bookmarked, PDF which includes all native files (MS Word and MS PowerPoint) utilized to develop report.
  - b. Five (5) bound copies for review distribution.
2. Final Project 2154200 Engineering Report.
  - a. One (1) electronic copy of comment spreadsheet summarizing all internal and external agency comments, and the Engineer's responses to these comments.
  - b. One (1) Electronic Copy in searchable, bookmarked, PDF which includes all native files (MS Word and MS PowerPoint) utilized to develop report.
  - c. Five (5) bound copies for final distribution.
  - d. Three (3) Coil bound hard copies of Engineering Report, Permit Form, and cover letter for final ODEQ submission.

- 3.2.1 Data Collection/Sitework:
  - 3.2.1.1 No geotechnical, topographical survey, stormwater modeling, or potholing services will be provided.
  - 3.2.1.2 OWNER will provide CONSULTANT with latest FEMA maps to determine 100-year flood elevation.
  - 3.2.1.3 OWNER will provide CONSULTANT with past geotechnical reports indicating the general geologic conditions at the site. .
  - 3.2.1.4 Point Survey of Critical Elevations: CONSULTANT will conduct a point survey in NAVD 88 elevation datum and State Plane North NAD 83 coordinate system of critical elevations for the project.
  
- 3.2.2 Prepare Draft and Final Engineering Report: A draft and final Engineering Report associated with the proposed improvements for Project 2154200 will be provided. Generally, the Engineering report will contain the following:
  1. One Page Executive Summary
  2. Introduction – Scope and Purpose
  3. Press Building Improvements – Polymer System
    - a. Description of Improvements
    - b. Design Criteria of Improvements
    - c. Process Flow Diagram
    - d. Process Instrumentation and Control Diagram
    - e. Preliminary Mechanical Plan
  4. Press Building Improvements – Evaluation of Solids Press Alternatives:
    - a. Solids Handling Projections
    - b. Existing system description
    - c. Existing system design criteria
    - d. Existing system process flow diagram
    - e. Alternative #1 – Replace Roediger Press with BDP Press
      - i. Proposed Improvements Description
      - ii. Proposed Improvements Design Criteria
      - iii. Process Flow Schematic
      - iv. Mechanical Plan and Section
    - f. Alternative #2 – Replace Roediger Press with Screw Press
      - i. Proposed Improvements Description
      - ii. Proposed Improvements Design Criteria
      - iii. Process Flow Schematic
      - iv. Mechanical Plan and Section
  5. Press Building Improvements – Alternatives Analysis:
    - a. Alternatives Advantages and Disadvantages – Non-Economic
    - b. Economic Comparison
      - i. Capital
      - ii. Operational
      - iii. Life Cycle
    - c. Recommendations
  6. Press Building Improvements – Electrical and Instrumentation System improvements
    - a. Existing Electrical System Description
    - b. Existing Electrical System One-line
    - c. Proposed Electrical System Modifications – One Line
    - d. Existing I&C system Network Diagram
    - e. Proposed I&C System Network Diagram
  7. Project Summary:
    - a. Anticipated Construction Cost Opinion

- b. Work Restrictions/Sequence Table
- c. Anticipated Construction Schedule

### 3.3 INTERIM DESIGN DOCUMENTS

#### **General**

CONSULTANT will provide services necessary for the preparation of interim design documents for Project 2154220 and Project 2154200 for the purposes of interim review and discussion of construction scope and design direction.

#### **Deliverables**

Major Deliverables associated with Task 3.3 are as follows:

1. Meeting Minutes from Interim Design Workshop.
2. Updated Construction Cost Opinion (AACE Level III) for Project 2154220 and 2154200.
3. Updated Construction Schedule and Work Restrictions for each project.
4. Five (5) 1/2-size sets of 2-D plan for each project.
5. Five (5) sets of Select technical specifications for each project.
6. One (1) Electronic copy of drawings and select technical specifications.

3.3.1 Prepare Interim Design Plans: CONSULTANT shall prepare the interim plans provided in Appendix 1a (project 2154200) and Appendix 1b (project 2154220). These are preliminary and will be subject to change as the design details are refined following submission and approval of the final engineering report.

3.3.2 Prepare Preliminary Specifications: CONSULTANT shall prepare the following interim specifications for review.

1. Table of Contents
2. Sequencing and Work Restrictions Table
3. Major Equipment specifications
4. General mechanical, HVAC, structural, and electrical specifications
5. Instrumentation and control strategies specification

3.3.3 Conduct Design Review Workshop: Conduct a review workshop after the Interim design documents to discuss comments, concerns and modifications with OWNER.

3.3.4 Conduct Technical Review: Concurrent with OWNER's review. CONSULTANT's in-house technical review committee will perform quality assurance and quality control. Comments from the QA/QC review will be shared with OWNER for additional input at the document review workshop and will be incorporated into the design documents as appropriate.

3.3.5 Prepare Cost Opinion: Develop Class III (-15% to +30%) level cost opinions as developed by the AACE for all design elements.

3.3.6 Prepare/Update Construction Schedule: Update estimated construction schedule based upon interim level design information.

### 3.4 FINAL DESIGN DOCUMENTS

#### **General**

CONSULTANT will provide services necessary for the preparation of final design



documents for Projects 2154220 and 2154200 for the purposes of final review, discussion of construction scope, and agency review.

### **Deliverables**

Major Deliverables associated with Task 3.3 are as follows:

1. Meeting Minutes from FINAL Design Workshop.
  2. Comment Review Table from Interim Design
  3. Updated Construction Cost Opinion (AACE Level II)
  4. Updated Construction Schedule and Work Restrictions
  5. Five (5) ½-size sets of 2-D plans.
  6. Five (5) sets of Final technical specifications – All Divisions.
  7. One (1) Electronic copy of drawings and select technical specifications.
- 
- 3.4.1 Prepare Final Design Plans: CONSULTANT shall prepare the Final design plans provided in Appendix 1a (project 2154200) and Appendix 1b (project 2154220). These are preliminary and will be subject to change as the design details are refined following submission and approval of the final engineering report.
  - 3.4.2 Prepare Final Design Specifications: Engineer will complete the engineering design and prepare specifications to include the following: (1) Division 00 - Bidding Requirements, Contract Forms, General Conditions, and Supplementary Conditions, (2) Division 01 - General Requirements, and (3) Divisions 02 through 17 - Technical Specifications. Included in these specifications will be a description of known constraints on the Contractor's construction sequencing plan that identifies the requirements of the contractor to allow uninterrupted treatment and solids processing from the Lynn Lane WWTP at the minimum levels prescribed by the specifications.
  - 3.4.3 Conduct Design Review Workshop: Conduct a review workshop after the final documents have been submitted for review to discuss comments, concerns and modifications with Owner. Appropriate comments and concerns will be incorporated into the design effort leading to the submission of the Bid Set milestone
  - 3.4.4 Conduct Technical Review: Concurrent with OWNER's review. CONSULTANT's in-house technical review committee will perform quality assurance and quality control. Comments from the QA/QC review will be shared with OWNER for additional input at the document review workshop and will be incorporated into the Bid Set Documents as appropriate.
  - 3.4.5 Cross Checking: Inter- and Cross-Discipline checking of both Plans and Specifications will take place under this task. The Purpose is to capture omissions and conflicts between various design disciplines. Constructability review will be conducted as part of this task.
  - 3.4.6 Agency Review Comments: CONSULTANT shall review agency comments and modify plans and specifications prior to final bid set to incorporate applicable comments. CONSULTANT shall prepare a spreadsheet summarizing the comments of the internal and external agencies reviews and listing how the CONSULTANT addressed these comments in the Bid Set Documents. The spreadsheet shall contain:
    1. Comment

2. Comment source
3. Location of Comment
4. CONSULTANT's Response
5. Location of CONSULTANT's response/corrections/additions in final document.

3.4.7 Prepare Cost Opinion: Develop Class II (-10% to +20%) level cost opinions as developed by the AACE for all design elements.

3.3.8 Prepare/Update Construction Schedule: Update estimated construction schedule based upon interim level design information.

### 3.5 BID SET DOCUMENTS

#### **General**

Finalization of bid set plans for projects 2154220 and 215200 will occur under this task. This will generally consist of adding the elements in the future addendum (Division 1 and Division 0 specifications, general drawings, and detail drawings) and any OWNER and internal QA/QC review to produce a bid set submittal. Additional comments received because of the previous document review workshop will be incorporated into the plan sheets as appropriate.

#### **Deliverables**

Major Deliverables associated with Task 3.3 are as follows:

1. Five (5) 1/2-size sets of 2-D plans.
2. Five (5) sets of Final Specifications – All Divisions.
3. One (1) Electronic copy of drawings and specifications
4. Process Design notes and calculations.
5. Comment Review Table from Final Design Review

### 3.6 BIDDING SERVICES

3.6.1 Respond to Bidder's Questions: CONSULTANT will respond via addenda to written questions by plan holders or others regarding the technical aspects of the work, contract requirements for prospective bidders, subcontractors, and suppliers during the period of advertisement.

3.6.2 Prepare Project Addendums: CONSULTANT will prepare addenda to the contract drawings and/or specifications to clarify and modify project requirements. After an addendum has been approved/signed by the OWNER, the OWNER will issue all addenda electronically through the OWNER's electronic bidding service.

3.6.3 Bid Evaluation and Recommendation: Within 2-3 working days following the bid opening, CONSULTANT will review the apparent lowest responsible bidder and summarize findings with respect to engineering aspects of the bids to assist the award of the construction contract. The review will include review of OWNER prepared bid tabulation, verification of conformance with the technical contract requirements as presented in the bid forms, verification of the low bidder's references and a letter summarizing the results of the engineering evaluation.

### 3.7 CONSTRUCTION ADMINISTRATION SERVICES:

**General:** CONSULTANT will provide services during construction for Project 2154200 and Project 2154220 including processing of submittals, request for information, design change memoranda, and change orders. CONSULTANT will attend monthly construction meetings and provide a punch list walkthrough prior to final completion. The construction administration services assume a construction duration of 10 months for Project 2154200 and 6 months for Project 2154220. Construction Administration services will be provided on a time and materials, not to exceed, basis.

**Deliverables**

The following are the major deliverables associated with Task 3.7:

1. Conformed Documents: CONSULTANT will provide conformed drawings and specifications incorporating all addenda issued during the bidding process as to present a unified set of documents (plans and specifications) during the construction contract. The following sets will be provided:
    - a. Two (2) Full size set of plans and specifications for As Built Documentation for Contractor use.
    - b. Five (5) ½ size set of plans for Owner's use.
    - c. One (1) electronic copy (searchable PDF)
  2. Preconstruction Conference Agenda and meeting minutes
    - a. One (1) Electronic copy
- 
- 3.7.1 Prepare Conformed Documents: CONSULTANT will prepare conformed documents incorporating all changes to the contract documents incorporated by addenda during bidding services.
  - 3.7.2 Attend Monthly Construction Progress Meetings: CONSULTANT shall plan and facilitate monthly progress meetings with OWNER and representatives from the Contractor to discuss the progress of the work and resolve issues. Contractor shall prepare meeting notes and provide updated submittal logs, RFI logs, and change order logs to OWNER.
  - 3.7.3 Attend Special On-Site Meetings: CONSULTANT shall attend special on-site meetings (not conducted on the same day as the regularly scheduled meetings) at the request of the OWNER to discuss and assist in resolving construction issues. The intent of these meetings is to expedite the submittal review process and resolve contract change orders and requests for information.
  - 3.7.4 Prepare Responses to CONTRACTOR's Request for Information (RFI's): CONSULTANT will prepare written responses to the Contractor's written questions and concerns that arise during construction through the Request for Information (RFI) process. CONSULTANT shall provide clarification or direction to the contractor through written responses to these requests for information.
  - 3.7.5 Prepare Design Change Memoranda (DCM): Design Change Memoranda (DCM's) shall be initiated by the Engineer when questions and concerns arise that cannot be resolved through a close and thorough examination of the Contract Document, or for which an interpretation may result in a material change in the design or operational intent of the facility. DCM's shall include sketches and drawing/specification revisions.
  - 3.7.6 Initial Submittal Review: CONSULTANT will review the shop drawings, material samples, O&M manuals, laboratory tests, mill tests results, and

related information and provide responses within twenty-eight (28) calendar days to the contractor regarding the suitability of the proposed equipment and materials to be incorporated into the project. Items reviewed, actions taken (including allowed substitutions), and recommendations made will be maintained in a log that, along with the accepted shop drawings and related information will be turned over to the Owner following project construction.

- 3.7.7 Resubmittal Review: The Contract Documents permit the Contractor to submit up to one resubmittal to attain approval from the CONSULTANT for a particular submission. The cost of submittal review beginning with the second resubmittal shall be borne by the Contractor. Reimbursement by OWNER will be made by deducting such costs from subsequent payments to Contractor.
- 3.7.8 Evaluate Contractor Change Order Requests: CONSULTANT will review Potential Change Order (PCO's) submissions by the contractor and make recommendations to the Owner regarding the acceptance or rejection of the proposed change. This includes requests for additional time, and additional money. CONSULTANT's services related to resolution of claims (over and above reviewing the claim and making recommendation to Owner) are beyond the scope of services.
- 3.7.9 Prepare Change Order Requests: CONSULTANT will prepare change order requests to the contractor for proposed changes in the contract for construction. Change orders, including modified and/or additional drawings, specifications, and other exhibits shall be prepared to define the scope and extent of the change and solicit a price from the contractor to perform the work.
- 3.7.10 Final Walkthrough and Punchlist Development: Following completion of construction, CONSULTANT shall perform a final inspection of the work completed by the Contractor and make recommendations as appropriate for partial or final acceptance of the work. Following Contractor's completion of punch list items on Certificate of Final Completion, CONSULTANT will conduct final walkthrough to verify correction of punch list items and process final payment application.

### 3.8 POST CONSTRUCTION SERVICES – Project 2154200 Only:

#### **General:**

CONSULTANT will provide record drawings to OWNER.

#### **Deliverables:**

- 1. Electronic copy (PDF Format) of As Built drawings.
- 2. Electronic copy (DWG format) of all native CADD Files.

### 3.9 POST CONSTRUCTION SERVICES – Project 2154220 To be authorized under a future amendment.

**END OF ATTACHMENT A**

APPENDIX 1A  
PRELIMINARY DRAWING AND DRAWING DELIVERY LIST  
Project 42154200  
BELT FILTER PRESS BUILDING ADDITION  
BROKEN ARROW MUNICIPAL AUTHORITY

GENERAL DRAWINGS

1 00	G	- 01	General - Cover Sheet with Vicinity and Location Maps	
2 00	G	02	General - Index of Drawings	
3 00	G	0 01	General - Legends and Symbols	
4 00	G	0 03	General - Construction Access Plan	
5 00	G	0 04	General - Design Criteria	Design Criteria for Polymer and BFP system
6 00	GC	0 01	General - Stormwater management and Erosion Control	
7 00	GC	0 02	General - Erosion Control Details	
8 00	GM	0 01	General - Piping Schedule and Mechanical Notes	
9 00	GS	0 01	General - Structural Notes	
10 00	GE	0 01	General - Electrical Symbols	
11 00	GE	0 02	General - Electrical Abbreviations	
12 00	GE	0 03	General - Panelboard Schedules	
13 00	GI	0 01	General - Instrumentation Symbols and Abbreviations I	
14 00	GI	0 02	General - Instrumentation Symbols and Abbreviations II	
15 00	GI	0 03	General - Instrumentation Symbols and Abbreviations III	
16 00	GI	0 04	General - Equipment Tagging System	
17 00	GI	0 05	General - Control System Block Diagram	
18 00	GI	0 06	General - Fiber Optic Wiring Diagram	
19 00	GI	0 07	General - Schematic Symbols	
20 00	GI	0 08	General - Control Schematics I	Polymer Feed Pump
21 00	GI	0 09	General - Control Schematics II	Belt Press

AREA 20 - PRESS BUILDING

22	20 A	0 01	Architectural - Elevation of North Press Building	
23	20 S	0 01	Structural - Plan of Press Building	
24	20 S	0 02	Structural - Section I of Press Area	Section of Platform
25	20 S	0 04	Structural - Details I	Details of Platform Connection and Polymer Ramp
26	20 DM	0 01	Demolition Plan of Press and Polymer Room	
27	20 DM	0 02	Demolition Sections of Press and Polymer Room	
28	20 DM	0 03	Demolition photos/details I	
29	20 DE	0 01	Electrical Demolition Plan	
30	20 DE	0 02	Electrical Demolition photos/Details I	
31	20 DE	0 03	Electrical Demolition photos/Details II	
32	20 DE	0 04	Electrical Demolition photos/Details II	
33	20 M	0 02	Process Flow Schematic - Modified System	
34	20 M	0 03	Plan of Press Building - Press Area	
35	20 M	0 04	Press Area Section I	
36	20 M	0 05	Press Area Section II	
37	20 M	0 07	Polymer System Process Flow Schematic	
38	20 M	0 08	Plan of Press Building - Polymer Storage Area	
39	20 M	0 09	Polymer Area Section I	
40	20 M	0 11	Polymer Area Details I	
				Subtotal Mechanical and Structural
41	20 E	0 05	Electrical One Line Diagram - Existing System	
42	20 E	0 01	Electrical One Line Diagram - Modifications	
43	20 E	0 02	Electrical Power and Control Plan I	Relocation of Existing Electrical Equipment
44	20 E	0 04	Electrical Power and Control Plan III	Partial Plan of Polymer Area
45	20 E	0 07	Electrical Sections and Details I	
46	20 N	0 01	Process and Instrumentation Diagram - Press I	
47	20 N	0 03	Process and Instrumentation Diagram - Polymer I	

Area 100 Standard Details

48	100 A	01	Architectural Details I
49	100 A	02	Architectural Details II
50	100 S	01	Structural Details I
51	100 S	01	Structural Details II
52	100 S	01	Mechanical Details I
53	100 S	01	Mechanical Details II
54	100 S	01	Mechanical Details III
55	100 S	01	Electrical Details I
56	100 S	01	Electrical Details II
57	100 S	01	Electrical Details III
58	100 S	01	Instrumentation Details I
59	100 S	01	Instrumentation Details II

**APPENDIX 1B**  
**PRELIMINARY DRAWING AND DRAWING DELIVERY LIST**  
**Project 42154220**  
**EAST CLARIFIER REHABILITATION**  
**BROKEN ARROW MUNICIPAL AUTHORITY**

**GENERAL DRAWINGS**

1 00	G	-	01	General - Cover Sheet with Vicinity and Locati
2 00	G		0 03	General - Construction Access Plan
3 00	GS		0 01	General - Structural Notes
4 00	GH		0 01	General - Demolition Notes

**AREA 30 EAST CLARIFIER REHABILITATION**

5	30 M		01	East Clarifier Plan
6	30 M		02	East Clarifier Section I
7	30 M		03	East Clarifier Section II
8	30 M		04	East Clarifier Details I
9	30 M		05	East Clarifier Details II

**Area 100 Standard Details**

10	100 S		01	Structural Details I
11	100 S		01	Structural Details II
12	100 M		01	Mechanical Details I
13	100 M		01	Mechanical Details II

**ATTACHMENT B  
TO  
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES  
BETWEEN  
BROKEN ARROW MUNICIPAL AUTHORITY (OWNER)  
AND  
CAROLLO ENGINEERS INC. (CONSULTANT)  
FOR  
LYNN LANE WWTP  
EAST CLARIFIER REHABILITATION & BELT FILTER PRESS BUILDING ADDITION  
PROJECT NO. 2154220 & 2154200**

**ORGANIZATION OF SUBMITTAL DOCUMENTS**

The CONSULTANT shall prepare the following documents as described as a part of the AGREEMENT dated the \_\_\_\_<sup>st</sup> day of \_\_\_\_\_, 2021.

- 1.0 CONSTRUCTION PLANS:** The CONSULTANT shall submit in-full, construction plans in accordance with City requirements. Separate plans for projects 2154220 and 2154200 will be submitted since funding mechanisms are different for each project.
- 2.0 DESIGN ANALYSIS:** The CONSULTANT shall submit in-full, a design analysis containing calculations, cut sheets, and outline specifications as described. The design analysis will pertain only to project 2154200.
- 3.0 TECHNICAL SPECIFICATIONS:** The CONSULTANT shall submit in-full, in accordance with this AGREEMENT, technical specifications to be included in the bidding documents and construction contract. Separate specifications for projects 2154220 and 2154200 will be submitted since funding mechanisms are different for each project.
- 4.0 DESIGN CALCULATIONS:** The CONSULTANT shall submit in-full, in accordance with this AGREEMENT, the following documents as part of the Design Analysis for project 2154220. Design calculations for project 2154200 will be provided by the clarifier manufacturer.
  - 4.1 HVAC loading and system sizing and comparison calculations.
  - 4.2 Electrical system calculations.
  - 4.3 Structural calculations
  - 4.4 Other engineering and architectural design calculations
- 5.0 CONTRACT DOCUMENTS:** The CONSULTANT shall submit in-full, all bid documents in accordance with BAMA requirements. Separate bidding documents for projects 2154220 and 2154200 will be submitted since funding mechanisms are different for each project.



**ATTACHMENT C  
TO  
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES  
BETWEEN  
BROKEN ARROW MUNICIPAL AUTHORITY (OWNER)  
AND  
CAROLLO ENGINEERS INC. (CONSULTANT)  
FOR  
LYNN LANE WWTP  
EAST CLARIFIER REHABILITATION & BELT FILTER PRESS BUILDING ADDITION  
PROJECT NO. 2154220 & 2154200**

**COMPENSATION AND ADDITIONAL SERVICES**

The following compensation and hourly rates shall apply as a part of the AGREEMENT dated the \_\_\_\_<sup>st</sup> day of \_\_\_\_\_, 2021.

**1.0 BASIC COMPENSATION**

The basic compensation for the Professional Consultant to perform all duties and responsibilities associated with the Scope of Services as described in Attachment A shall be in accordance with the following payment breakdown:

- 1.1 Engineering Report Services: The OWNER shall pay the CONSULTANT a lump sum amount of \$35,000 for the completion of the Engineering Report for Project 2154200. This amount includes all labor, material, overhead and profit associated with the Scope of Services in Attachment A and based upon the breakdown of professional services provided in Appendix 2.
- 1.2 Design Services: The OWNER shall pay the CONSULTANT a lump sum amount of \$193,500 for the completion of the design services for Project 2154200 and a lump sum amount of \$115,500 for the completion of the design services for Project 2154220. This amount includes all labor, material, overhead and profit associated with the Scope of Services in Attachment A and based upon the breakdown of professional services provided in Appendix 2.
- 1.3 Bidding Services: The OWNER shall pay the CONSULTANT a lump sum amount of \$17,500 for the completion of the bidding services for Project 2154200 and \$12,500 for the completion of the bidding services for Project 2154220. This amount includes all labor, material, overhead and profit associated with the Scope of Services in Attachment A and based upon the breakdown of professional services provided in Appendix 2.
- 1.4 Construction Administration Services: The OWNER shall pay the CONSULTANT a time and materials, not to exceed amount of \$30,000 for the completion of the construction administration services for Project 2154200 and \$10,000 for the completion of the construction administration services for Project 2154220. This amount includes all labor, material, overhead and profit associated with the Scope of Services in Attachment A and based upon the breakdown of professional services and estimated hours and hourly rates provided in Appendix 2 and Appendix 3, respectively.
- 1.4 Construction Inspection Services: Construction Inspection services are excluded from the project scope of work.

- 1.5 Project Closeout Phase Payment: The OWNER shall pay the CONSULTANT time and materials, not to exceed, amount of \$15,000 for preparation of record drawings in electronic media (AutoCAD 2018 or earlier version) and PDF format for Project 2154200. This amount includes all labor, material, overhead and profit associated with the Scope of Services in Attachment A and based upon the breakdown of professional services hours and hourly rates provided in Appendix 2 and Appendix 3, respectively.
- 1.6 The OWNER may negotiate other professional services fees with the CONSULTANT at the OWNER'S discretion.

## 2.0 ADDITIONAL SERVICES BASED ON TIME

The hourly rates set forth in Appendix 3 include all salaries, benefits, overhead and other indirect costs including federal, state, and local taxes, plus profit and effective as of January 1, 2021 for engineering services.

**Definition:** Additional Engineering Services are defined as those not included in Basic Services, but that may be provided during the Project duration. If requested by the OWNER, Additional Engineering Services shall be provided by CONSULTANT for additional compensation as agreed to by CONSULTANT and the OWNER. Additional Engineering Services may include, but are not necessarily limited to, the following:

1. Plotting, computing, and/or filing descriptions of easements and rights-of-way.
2. Assistance to OWNER in obtaining rights-of-way, easements, and property.
3. Assistance to OWNER in obtaining grants, loans, or other means of financing.
4. Additional copies of contract drawings, specifications, and other documents above the number specified to be furnished.
5. Assistance to OWNER as expert witness in arbitration or litigation arising from development or construction of Project.
6. Model tests of equipment such as pumps, valves, and hydraulic structures.
7. Revision of contract drawings after a definite plan has been approved by the Owner.
8. Additional Permitting work beyond that defined in the Basic Scope of Work.
9. Preparation for and attendance at meetings, at the request of CITY, to present information regarding the Project, in addition to those included in the above Scope of Services.
10. Preparation of construction cost estimate(s) and/or schedule(s) not otherwise provided in above Scope of Services.
11. Special drainage studies necessary to define the flood plain and/or alterations of the flood plain. Design of on-site flood protection structures, drainage structures, or drainage site plans.
12. Process pilot testing, if required.
13. Consultation or other services not otherwise provided in this Agreement.
14. Witnessing of equipment factory testing.
15. Specialty inspections required for electrical, instrumentation, structural or mechanical items beyond those provided in Basic Services.
16. Submittal reviews, RFI responses, DCM preparation, and Change order preparation beyond those included in Basic Services.
17. ESDC for construction duration greater than 10 months on Project 2154200.
18. Resident expectation hours exceed those provided in Basic Services.
19. Update of Hydraulic model for use in design.
20. Field Services: Subsurface Utility Exploration, Geotechnical borings, Topographical surveys, and other fieldwork beyond those provided in Basic Services.

Compensation for Additional Services: Included in the not to exceed total compensation is an allowance for Additional Services in an amount not to exceed \$25,000 for Project 2154200. This allowance is to be used and paid to the CONSULTANT in the manner established in this Contract, unless other compensation means are agreed to in writing by the OWNER. The Additional Services compensation may only be used after the Engineer has performed Additional Services upon prior written authorization by the OWNER. Invoices submitted for Additional Services shall represent only hours actually worked on this project by the Engineer's employees and the Engineer's consultant's employees and shall be accounted for separately for each Additional Service performed.

### **3.0 REPRODUCTION**

All charges for reproduction shall be included in Basic Compensation Fee of the Professional Consultant. No separate payment will be made for these expenses.

### **4.0 MILEAGE**

All direct costs shall be included in the Basic Compensation of the Professional Consultant. No separate payment will be made for these expenses.

### **5.0 DIRECT COSTS**

All direct costs shall be included in the Basic Compensation of the Professional Consultant. No separate payment will be made for these expenses.

### **6.0 ADJUSTMENT CLAUSE**

The rates and costs described in this AGREEMENT shall not be revised annually, unless mutually agreed upon by both parties.

**Appendix 2**  
**Engineering Fee Summary - Current Contract**

		<b>Project 2154200</b>		<b>Project 2154220</b>		<b>TOTAL</b>	
Task	Description						
	Engineering Report Services	\$35,000	1.69%	\$0	0%	\$35,000	
	Interim Design	\$72,500		\$35,500	3%	\$108,000	
	Final Design	\$100,500		\$61,500	6%	\$162,000	
	Bidding Documents	\$20,500		\$18,500	2%	\$39,000	
	Subtotal Design	\$193,500	9.37%	\$115,500	11%	\$309,000	
	Bidding Services	\$17,500	0.85%	\$12,500		\$30,000	
	Construction Administration**	\$30,000	1.45%	\$10,000		\$40,000	
	As Builts**	\$15,000	0.73%	*		\$15,000	
	Total Basic Services	\$291,000	14.09%	\$138,000	14%	\$429,000	
	Total Construction Estimate	\$2,065,200		\$1,019,331			
	Additional Services	\$25,000		\$0		\$25,000	
	Total Contract Amounut	\$316,000		\$138,000		\$454,000	

\* Engineering Services will be authorized under future amendment.

\*\* Items to be billed as time and materials not to exceed in accordance with rate schedule provided in Appendix 3 and estimated hour breakdown as provided in the following page.

**APPENDIX 2**  
**Estimated Work Effort - TIME AND MATERIALS**  
**Preliminary and Final Design**

**Miscellaneous Improvements**  
**Lynn Lane WWTP**  
**Broken Arrow Municipal Authority (BAMA)**

Task No.	Subtasks	Description	Estimated Effort, Hours												Carollo Costs		consultant C			
			Engineers/Scientists				Technicians				Support Staff				Carollo Subtotal	Direct Costs	Labor	Carollo Subtotal	Subconsult nat SubTotal	Total Subtask
			Project Director/ Quality Control Manager	Project Manager/Senior Professional	Lead Project Professional	Engineer V-VI (Professional)	Engineer III-IV (Staff Professional)	Engineer I-II (EIT)	Senior Technicians	Technicians	Document Processing / Clerical	Resident Inspector	Special Inspectors							
			\$ 284.00	\$ 259.00	\$ 240.00	\$ 203.00	\$ 190.00	\$ 155.00	\$ 155.00	\$ 122.00	\$ 103.00	\$ 120.00	\$ 145.00		Hours	\$ 12.50				
3 7		CONSTRUCTION ADMINISTRATION SERVICES (PROJECT 2154200)																		\$30,000
3 7 .1		Attend Monthly Construction progress Meetings		12			12								24	\$300	\$5,390	\$5,690	\$0	\$5,690
3 7 .2		Attend Special On-site Meetings													0	\$0	\$0	\$0	\$0	\$0
3 7 .3		Prepare Responses to Request for Information (RFI's)		4			16								20	\$250	\$4,080	\$4,330	\$0	\$4,330
3 7 .4		Prepare Design Change Memoranda (DCM)		4			8			4					16	\$200	\$3,040	\$3,240	\$0	\$3,240
3 7 .5		Initial Submittal Review		4			16	32		4					56	\$700	\$9,530	\$10,230	\$0	\$10,230
3 7 .6		Resubmittal Review													0	\$0	\$0	\$0	\$0	\$0
3 7 .7		Evaluate Contractor Change Order Requests		4			8								12	\$150	\$2,560	\$2,710	\$0	\$2,710
3 7 .8		Prepare Change Order Request and Change Orders		4			4								8	\$100	\$1,800	\$1,900	\$0	\$1,900
3 7 .9		Final Walkthrough and Final Completion		4			4								8	\$100	\$1,800	\$1,900	\$0	\$1,900
		<b>SUBTOTAL</b>	-	36	-	-	68	32	-	8	-	-	-		144	\$1,800	\$28,200	\$30,000	\$0	\$30,000
3 8		POST CONSTRUCTION SERVICES (PROJECT 2154200)																		\$15,000
5.2.1		As-Built drawings						16	12	77					105	\$1,310	\$13,690	\$15,000	\$0	\$15,000
		<b>SUBTOTAL</b>	0	0	0	0	0	16	12	76.6	0	0	0		104.6	\$1,310	\$13,690	\$15,000	\$0	\$15,000
3 7		CONSTRUCTION ADMINISTRATION SERVICES (PROJECT 2154220)																		\$10,000
3 7 .1		Attend Monthly Construction progress Meetings		2			2								4	\$50	\$900	\$950	\$0	\$950
3 7 .2		Attend Special On-site Meetings													0	\$0	\$0	\$0	\$0	\$0
3 7 .3		Prepare Responses to Request for Information (RFI's)		2			4								6	\$80	\$1,280	\$1,360	\$0	\$1,360
3 7 .4		Prepare Design Change Memoranda (DCM)		2			2			2					6	\$80	\$1,110	\$1,190	\$0	\$1,190
3 7 .5		Initial Submittal Review		2			4	8		2					16	\$200	\$2,770	\$2,970	\$0	\$2,970
3 7 .6		Resubmittal Review					1	4							5	\$70	\$810	\$880	\$0	\$880
3 7 .7		Evaluate Contractor Change Order Requests		2			2								4	\$50	\$900	\$950	\$0	\$950
3 7 .8		Prepare Change Order Request and Change Orders		2			1								3	\$40	\$710	\$750	\$0	\$750
3 7 .9		Final Walkthrough and Final Completion		2			2								4	\$50	\$900	\$950	\$0	\$950
		<b>SUBTOTAL</b>	-	14	-	-	18	12	-	4	-	-	-		48	\$620	\$9,380	\$10,000	\$0	\$10,000

**APPENDIX 3**  
**Fee Schedule through December 31, 2021**  
**Preliminary and Final Design**

**Miscellaneous Improvements**  
**Lynn Lane WWTP**  
**Broken Arrow Municipal Authority**

<b><u>Category</u></b>	<b><u>Hourly Rate</u></b>
<b>Engineers/Scientists</b>	
Engineer I-II (EIT)	\$ 155.00
Engineer III-IV (Staff Professional)	\$ 190.00
Engineer V-VI (Professional)	\$ 203.00
Lead Project Professional	\$ 240.00
Project Manager/Senior Professional	\$ 259.00
Project Director/ Quality Control Manager	\$ 284.00
<b>Technicians</b>	
Technicians	\$ 122.00
Senior Technicians	\$ 155.00
<b>Support Staff</b>	
Document Processing / Clerical	\$ 103.00
Resident Inspector	\$ 120.00
Special Inspector	\$ 145.00
<b>Project Equipment and Communication Expenses</b>	
<b>(PECE) Charge Per Direct Labor Hour</b>	<b>\$ 12.50</b>
<b>Other Direct Expenses</b>	
Travel and Subsistence	at cost
Mileage Charge Per Mile	\$ 0.560
Subconsultant	Cost + 10%
Other Direct Costs	Cost + 10%
Expert Witness	Rate x 2.0

This fee schedule is revised in January and July of every year.  
Invoice for each month will be prepared based on the fee schedule in effect during the month.

**ATTACHMENT D  
TO  
AGREEMENT FOR CONSULTING SERVICES  
BETWEEN  
BROKEN ARROW MUNICIPAL AUTHORITY (OWNER)  
AND  
CAROLLO ENGINEERS INC. (CONSULTANT)  
FOR  
LYNN LANE WWTP  
EAST CLARIFIER REHABILITATION & BELT FILTER PRESS BUILDING ADDITION  
PROJECT NO. 2154220 & 2154200**

**OWNER'S RESPONSIBILITIES AND SPECIAL CONDITIONS**

The following list of special OWNER'S responsibilities and contract special conditions shall be made a part of this AGREEMENT dated the \_\_\_\_<sup>st</sup> day of \_\_\_\_\_, 2021.

**1.0 OWNER'S RESPONSIBILITIES**

- 1.1 OWNER shall furnish to CONSULTANT all available information pertinent to the PROJECT including previous reports and any other data relative to design and construction of the PROJECT;
- 1.2 OWNER shall furnish to CONSULTANT all public utility information available relative to the design and construction of the PROJECT.
- 1.3 OWNER shall furnish to CONSULTANT list of codes adopted by the municipality as well as subdivision regulations, design criteria and construction standards and specifications that may be pertinent to the design and construction of the PROJECT;
- 1.4 OWNER shall be responsible for all permit fees and for all reproduction costs associated with the bidding of the final approved construction documents required for the construction of this PROJECT;
- 1.5 OWNER shall be responsible for all land/easement acquisition costs and filing of the required legal documents, if necessary; and
- 1.6 OWNER shall examine all studies, reports, sketches, estimates, specifications, plan drawings, proposals, and other documents presented by the CONSULTANT and render in writing decisions pertaining thereto within a reasonable time so as not to delay the SERVICES of the CONSULTANT.
- 1.7 OWNER shall be responsible for payment of all quality assurance testing during construction.

**2.0 SPECIAL CONDITIONS**

- 2.1 None.

**ATTACHMENT E  
TO  
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES  
BETWEEN  
CITY OF BROKEN ARROW(OWNER)  
AND  
CAROLLO ENGINEERS INC. (CONSULTANT)  
FOR  
LYNN LANE WWTP  
EAST CLARIFIER REHABILITATION & BELT FILTER PRESS BUILDING ADDITION  
PROJECT NO. 2154220 & 2154200**

**PROJECT SCHEDULE**

The following schedule shall be made a part of the AGREEMENT dated the\_\_day of \_\_\_\_\_, 2021.

**1.0 SCHEDULE ASSUMPTIONS:**

- 1.1 An engineering report will not be required for Project 2154220 but will be required for 2154200.
- 1.2 OWNER review comments on engineering report for Project 2154200 will be provided within 2 weeks of receipt.
- 1.3 OWNER review comments on interim and final design documents for both projects 2154220 and 2154200 will be provided within 2 weeks of receipt.
- 1.4 AGENCY review comments on final design documents for projects 2154220 and 2154200 will be received within 4 weeks of receipt.
- 1.5 Bidding services will be conducted over a period of 12 weeks for both Project 2154220 and 2154200.
- 1.6 Construction administration services will be conducted over the following time periods:
  - 1.6.1 Project 2154200 - 10 months of Construction Activity.
  - 1.6.2 Project 2154220 – 6 months of construction activity.

**2.0 DETAILED SCHEDULE:**

- 2.1 Detailed schedule for the study, design and bidding phase services is provided in Appendix 4a for Project 2154220 and Appendix 4b for Project 2154200.



**Appendix 4a**  
**Preliminary Schedule through Bidding Phase Services**  
**Project 2154200**  
**Belt Filter Press Building Addition**  
**Lynn Lane WWTP**  
**Broken Arrow Municipal Authority**

Bid Opening: February/March 2022

Task Code	Task Description	Duration Weeks	Months Following NTP															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3.1	Project Meetings/Workshops																	
	Project Kickoff Meeting		★															
	Project Meeting #1 - Review Alternatives			★														
	Engineer Report Review					★												
	Interim Design Review						★											
	Final Design Review									★								
3.2	Engineering Report Services																	
	Prepare Data Collection TM	4	■	■														
	Data Analysis/Sitework	4	■	■														
	Prepare and Evaluate Press Alternatives	8	■	■	■	■												
	Prepare Draft Engineering Report	4		■	■	■	■											
	Review Engineering Report	2			■	■												
	Prepare Final Engineering Report	4				■	■	■	■									
3.3	Interim Design Documents																	
	Prepare Interim Design Submittal	12		■	■	■	■	■	■	■	■	■	■	■				
	Prepare Cost Opinion	2					■	■										
	Prepare Est Construction Schedule	2					■	■										
	Conduct Technical Review	4						■	■	■	■							
3.4	Final Design Documents																	
	Prepare Final Design Submittal	12					■	■	■	■	■	■	■	■	■	■	■	■
	Prepare Cost Opinion	2								■	■							
	Prepare Construction Schedule	2								■	■							
	Conduct Interdiscipline Cross Checking	4						■	■	■	■							
	Agency Review of Final Design	4									■	■	■	■				
3.5	Bid Set Preparation																	
	Incorporate Owner and Agency Comments	4								■	■	■	■					
	Final Package for Bidding	2										■	■					
3.6	Bidding Services																	
	Advertise Project	8								■	■	■	■	■	■	■	■	■
	Prebid Meeting																	
	Bidding Period	4											■	■	■	■		
	Bid Evaluation	2													■	■		

**Appendix 4a**  
**Preliminary Schedule through Bidding Phase Services**  
**Project 2154220**  
**East Clarifier Rehab**  
**Lynn Lane WWTP**  
**Broken Arrow Municipal Authority**

**Clarifier Bid Opening: October 15, 2021**

			Months Following NTP																	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			
Task Code	Task Description	Duration Weeks																		
3.1	Project Meetings/Workshops																			
	Project Kickoff Meeting		★																	
	Interim Design Review			★																
	Final Design Review					★														
3.3	Interim Design Documents																			
	Prepare Interim Design Submittal	6																		
	Prepare Cost Opinion	2																		
	Prepare Est Construction Schedule	2																		
	Conduct Technical Review	4																		
3.4	Final Design Documents																			
	Prepare Final Design Submittal	8																		
	Prepare Cost Opinion	2																		
	Prepare Construction Schedule	2																		
	Conduct Interdiscipline Cross Checking	4																		
	Agency Review of Final Design	8																		
3.5	Bid Set Preparation																			
	Incorporate Owner and Agency Comments	4																		
3.6	Bidding Services																			
	Advertise Project	4																		
	Prebid Meeting																			
	Bidding Period	4																		
	Bid Evaluation	2																		