NOTE: This meeting will be conducted by telephone pursuant to the authority of Texas Government Code Section 551.125. This meeting will not take place at the foregoing address. Members of the public can hear open deliberations and may interact with the Board of Directors during the period designated for public comment. The telephone numbers to do so are (972) 636-4201 and (800) 717-4201. The access code to be entered when prompted is 7673037#. The agenda packet for this meeting is available at http://www.trinityra.org/default.asp?contentID=156.

1. CALL TO ORDER BY THE PRESIDENT, KEVIN MAXWELL.
2. INVOCATION.
3. PLEDGE OF ALLEGIANCE TO THE UNITED STATES FLAG.
4. PLEDGE OF ALLEGIANCE TO THE TEXAS FLAG.
5. ROLL CALL BY THE SECRETARY, HOWARD S. SLOBODIN.

<table>
<thead>
<tr>
<th>Area No.</th>
<th>County</th>
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<tr>
<td>1</td>
<td>Tarrant</td>
<td>Megan W. Deen</td>
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<td>Cathy Altman</td>
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<tr>
<td>6</td>
<td>Navarro</td>
<td>Frank H. Steed, Jr.</td>
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</tbody>
</table>
6. CERTIFICATION OF A QUORUM BY THE SECRETARY.

7. CERTIFICATION BY THE SECRETARY OF COMPLIANCE WITH THE OPEN MEETING REQUIREMENTS OF THE GOVERNMENT CODE. TEX. GOV’T CODE § 551.001 et seq.

8. APPROVAL OF THE MINUTES OF THE REGULAR MEETING OF THE BOARD OF DIRECTORS OF THE TRINITY RIVER AUTHORITY OF TEXAS HELD FEBRUARY 26, 2020 AT TRA’S GENERAL OFFICE, BOARD ROOM, 5300 SOUTH COLLINS STREET, ARLINGTON, TARRANT COUNTY, TEXAS. Pg. 11

9. APPROVAL AND CONFIRMATION OF THE REPORT OF ACTIONS OF THE EXECUTIVE COMMITTEE SUBSEQUENT TO THE FEBRUARY 26, 2020 BOARD OF DIRECTORS MEETING. Pg. 22

10. PUBLIC COMMENT.

Any person wishing to make an oral presentation to the Board of Directors on any matter under the Authority’s jurisdiction may do so during the period allotted for public comment. Persons wishing to make public comment shall dial *5 on their telephone. Members of the public will be identified for comment by the last four digits of their telephone number. The presiding officer shall limit the length of time for each speaker to three minutes. Speakers may not trade or donate time to other speakers. Speakers and members of the public must avoid disruptive conduct that interferes with the orderly conduct of a public meeting.

11. NEW BUSINESS:

To access the story map link use any QR Code Reader Apps on the phone or tablet to scan the image or click on this hyperlink: https://arcg.is/1KC5jW
(ITEM A WAS PRESENTED TO THE ADMINISTRATION AND AUDIT COMMITTEE AT ITS MEETING ON JUNE 16, 2020.)

A. **SELECTION OF OFFICIAL AUDITOR FOR FISCAL YEAR 2020.** Pg. 31

Memorandum dated May 20, 2020 from Controller.

(1) Explanation by Henry Borbolla III and Alison A. Mackey.

(2) **Recommendation:** The Administration and Audit Committee recommends that the Board of Directors approve the following motion:

   Motion that the Board of Directors adopt Resolution No. R-1549 designating Weaver and Tidwell, L.L.P., Certified Public Accountants, as Official Auditor.

(ITEMS B THROUGH K WERE PRESENTED TO THE UTILITY SERVICES COMMITTEE AT ITS MEETING ON JUNE 17, 2020.)

B. **CENTRAL REGIONAL WASTEWATER SYSTEM — CRWS FEED 2 INTERCEPTOR — ENGINEERING SERVICES AGREEMENT.** Pg. 34

Memorandum dated June 2, 2020 from Engineer, Capital Improvement Program, PDCA.

(1) Explanation by C. Dwayne Somerville and Gary N. Oradat.

(2) **Recommendation:** The Utility Services Committee recommends that the Board of Directors approve the following motion:

   Motion that the Board of Directors:

   (a) Authorize the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and HDR Engineering, Inc., in the amount of $1,234,187 for Basic Services and $200,000 for Special Services for final design engineering services associated with the CRWS Feed 2 Interceptor for the Central Regional Wastewater System; and

   (b) Authorize the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and HDR Engineering, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost.
C. CENTRAL REGIONAL WASTEWATER SYSTEM — HEADWORKS B FINE SCREEN IMPROVEMENTS — ENGINEERING SERVICES AGREEMENT. Pg. 68

Memorandum dated June 2, 2020 from Engineer, Capital Improvement Program, PDCA.

(1) Explanation by C. Dwayne Somerville and Gary N. Oradat.

(2) Recommendation: The Utility Services Committee recommends that the Board of Directors approve the following motion:

Motion that the Board of Directors:

(a) Authorize the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Jacobs Engineering Group Inc. in the amount of $526,264 for Basic Services and $50,000 for Special Services for preliminary design engineering services associated with the Headworks B Fine Screen Improvements at the Central Regional Wastewater System; and

(b) Authorize the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Jacobs Engineering Group Inc. as are deemed prudent in his judgment provided the same do not increase the total approved cost.

D. CENTRAL REGIONAL WASTEWATER SYSTEM — BEAR CREEK INTERCEPTOR RELIEF, PHASE 1 — FIRST AMENDMENT — ENGINEERING SERVICES AGREEMENT. Pg. 92

Memorandum dated June 2, 2020 from Assistant Manager, Engineering Services, Pipeline, PDCA.

(1) Explanation by C. Dwayne Somerville and Gary N. Oradat.

(2) Recommendation: The Utility Services Committee recommends that the Board of Directors approve the following motion:

Motion that the Board of Directors authorize the General Manager to execute the First Amendment to the Engineering Services Agreement between the Trinity River Authority of Texas and Lockwood, Andrews & Newnam, Inc., increasing the amount of Basic Services from $1,701,707 to $2,555,247 and Special Services from $170,000 to $250,000 for final design engineering services associated with the Bear Creek Interceptor Relief, Phase 1 project for the Central Regional Wastewater System.
E. CENTRAL REGIONAL WASTEWATER SYSTEM — SOLIDS MANAGEMENT IMPROVEMENTS PHASE III-B — CHANGE ORDER NO. 121 — COMPROMISE AND SETTLEMENT AGREEMENT. Pg. 99

Memorandum dated June 2, 2020 from Manager, Construction Services, PDCA.

(1) Explanation by C. Dwayne Somerville and Gary N. Oradat.

(2) Recommendation: The Utility Services Committee recommends that the Board of Directors approve the following motion:

Motion that the Board of Directors authorize the General Manager to execute the Compromise and Settlement Agreement and authorize the General Manager’s execution of Change Order No. 121 between the Trinity River Authority of Texas and MWH Constructors, Inc., in the amount of $338,469, increasing the contract value from $201,606,331.92 to $201,944,800.92, and the addition of 82 calendar days to the contract completion date extending the completion of the Operational Readiness Testing Date to May 20, 2021 for the Solids Management Improvements Phase III-B project at the Central Regional Wastewater System.

F. CENTRAL REGIONAL WASTEWATER SYSTEM — TECHNICAL SERVICES FEE SCHEDULE FOR FISCAL YEAR 2021. Pg. 106

Memorandum dated June 3, 2020 from Manager, CRWS.

(1) Explanation by C. Dwayne Somerville and Patricia M. Cleveland.

(2) Recommendation: The Utility Services Committee recommends that the Board of Directors approve the following motion:

Motion that the Board of Directors:

(a) Adopt the Technical Services Fee Schedule for Contracts for the period beginning December 1, 2020 through November 30, 2021; and

(b) Authorize the General Manager to execute individual Contracts for Technical Services between the Trinity River Authority of Texas and those entities seeking services.

G. RED OAK CREEK REGIONAL WASTEWATER SYSTEM — PEAK FLOW STORAGE AND BERM IMPROVEMENTS — ENGINEERING SERVICES AGREEMENT. Pg. 119

Memorandum dated June 2, 2020 from Assistant Manager, Engineering Services, Pipeline, PDCA.

(1) Explanation by C. Dwayne Somerville and Gary N. Oradat.

(2) Recommendation: The Utility Services Committee recommends that the Board of Directors approve the following motion:
Motion that the Board of Directors

(a) Authorize the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Freese and Nichols, Inc., in the amount of $1,928,624 for Basic Services and $200,000 for Special Services for final design engineering services associated with the Peak Flow Storage and Berm Improvements at the Red Oak Regional Wastewater System; and

(b) Authorize the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Freese and Nichols, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost.

H. TARRANT COUNTY WATER SUPPLY PROJECT — FILTER MEDIA AND UNDERDRAIN REPLACEMENT — ENGINEERING SERVICES AGREEMENT.  Pg. 149

Memorandum dated June 2, 2020 from Engineer, Capital Improvement Program PDCA.

(1) Explanation by C. Dwayne Somerville and Gary N. Oradat.

(2) Recommendation: The Utility Services Committee recommends that the Board of Directors approve the following motion:

Motion that the Board of Directors:

(a) Authorize the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Hazen and Sawyer, DPC, in the amount of $934,607 for Basic Services and $100,000 for Special Services for preliminary and final design engineering services associated with the Filter Media and Underdrain Replacement at the Tarrant County Water Supply Project; and

(b) Authorize the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Hazen and Sawyer, DPC, as are deemed prudent in his judgment provided the same do not increase the total approved cost.

I. NORTHERN REGION — PROCESS ENGINEERING SUPPORT — ENGINEERING SERVICES AGREEMENT.  Pg. 182

Memorandum dated June 2, 2020 from Engineering Manager, CRWS.

(1) Explanation by C. Dwayne Somerville and Patricia M. Cleveland.

(2) Recommendation: The Utility Services Committee recommends that the Board of Directors approve the following motion:
Motion that the Board of Directors:

(a) Authorize the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Black & Veatch Corporation in the amount of $489,772 for Basic Services and $50,000 for Special Services for engineering services associated with the Northern Region Process Engineering Support; and

(b) Authorize the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Black and Veatch Corporation as are deemed prudent in his judgment provided the same do not increase the total approved cost.

J. GEOGRAPHIC INFORMATION SYSTEM LICENSE AND MAINTENANCE IMPROVEMENT — GIS MAINTENANCE AND ENTERPRISE LICENSE AGREEMENT — ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE. **Pg. 201**

Memorandum dated June 2, 2020 from Manager, Geospatial Services, TSBP.

(1) **Explanation by C. Dwayne Somerville and Glenn C. Clingenpeel.**

(2) **Recommendation:** The Utility Services Committee recommends that the Board of Directors approve the following motion:

Motion that the Board of Directors authorize the General Manager to execute the Enterprise License Agreement, in substantially the form presented, between the Trinity River Authority of Texas and Environmental Systems Research Institute in the amount of $315,000.

K. PROJECTMATES PROJECT MANAGEMENT SYSTEM — CONTRACT RENEWAL. **Pg. 214**

Memorandum dated June 1, 2020 from Chief Information Officer.

(1) **Explanation by C. Dwayne Somerville and Douglas L. Short.**

(2) **Recommendation:** The Utility Services Committee recommends that the Board of Directors approve the following motion:

Motion that the Board of Directors authorize the General Manager to execute the Consulting Services Agreement between the Trinity River Authority of Texas and Systemates, Inc., in the amount of $589,318 for Projectmates Construction Management Software Services.
(ITEMS L THROUGH P WERE NOT PRESENTED TO A COMMITTEE AND ARE STANDING REPORTS AND MAY BE APPROVED IN ONE ACTION.)

L. SUMMARY REPORT OF TRINITY RIVER AUTHORITY DEBT — SUMMARY REPORT OF JUNE 2020 CAPITAL CONTRACTS.  Pg. 228

Memorandum dated June 1, 2020 from Controller.

(1) Explanation by Henry Borbolla III and Alison A. Mackey.

(2) Recommendation: This item is presented as a status report only; no action is necessary.

M. SUMMARY REPORT OF GENERAL MANAGER-APPROVED AGREEMENTS.  Pg. 238

Memorandum dated June 12, 2020 from General Manager.

(1) Explanation by J. Kevin Ward.

(2) Recommendation: This item is presented as a status report only; no action is necessary.

N. SUMMARY REPORT OF CHANGE ORDERS.  Pg. 240

Memorandum dated June 1, 2020 from Manager, Construction Services, PDCA.

(1) Explanation by C. Dwayne Somerville and Gary N. Oradat.

(2) Recommendation: This item is presented as a status report only; no action is necessary.

O. SUMMARY REPORT OF QUANTITY OVERRUNS.  Pg. 245

Memorandum dated June 1, 2020 from Manager, Construction Services, PDCA.

(1) Explanation by C. Dwayne Somerville and Gary N. Oradat.

(2) Recommendation: This item is presented as a status report only; no action is necessary.

P. SUMMARY REPORT — GENERAL MANAGER - APPROVED PIPELINE EMERGENCY REPAIRS — EMERGENCY PIPELINE REPAIR CONTRACT.  Pg. 247

Memorandum dated June 1, 2020 from General Manager.

(1) Explanation by J. Kevin Ward.

(2) Recommendation: This item is presented as a status report only; no action is necessary.
ITEMS Q AND R INVOLVE LITIGATION, POTENTIAL LITIGATION, AND/OR ACQUISITION OF REAL PROPERTY AND ARE EXEMPT FROM THE OPEN MEETING REQUIREMENTS CONTAINED IN CHAPTER 551 OF THE TEXAS GOVERNMENT CODE. THE TRINITY RIVER AUTHORITY OF TEXAS RESERVES THE RIGHT TO CONVOKE AN EXECUTIVE, OR CLOSED, SESSION ON THE FOREGOING ITEMS SUBJECT TO THE REQUIREMENTS OF THE TEXAS GOVERNMENT CODE CHAPTER 551, SUBCHAPTER E. ANY FINAL DECISION, ACTION OR VOTE MUST BE MADE IN OPEN SESSION.]

Q. CONDEMNATION STATUS REPORT. Pg. 250

Memorandum dated April 6, 2020 from General Counsel.

(1) Explanation by Howard S. Slobodin.

(2) Recommendation: This item is presented as a status report only; no action is necessary.

R. SELECTED MATTERS PENDING BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY — STATUS REPORT. Pg. 253

Memorandum dated May 25, 2020 from General Counsel.

(1) Explanation by J. Kevin Ward, Howard S. Slobodin, and Michael J. Booth.

(2) Recommendation: This item is presented as a status report only; no action is necessary.

S. BID AWARDS.

AUTHORITY PROJECTS — BIDS FOR EQUIPMENT, SUPPLIES, SPARE PARTS AND SERVICES. Pg. 256

Memorandum dated May 25, 2020 from Purchasing Manager, Administrative Services.

(1) Explanation by the President, Kevin Maxwell.

(2) Recommendation: The President recommends that the Board of Directors approve the following motion:

Motion that the Board of Directors accept the following vendors for Equipment, Supplies, Spare Parts and Services for Authority Projects:

<table>
<thead>
<tr>
<th>BID ITEM</th>
<th>VENDOR</th>
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<tr>
<td>Central Regional Wastewater System</td>
<td>Clear Edge Filtration</td>
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<td>Filter Press Cloths</td>
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<tr>
<td>Huntsville Regional Water Supply System</td>
<td>Denali Water Solution, LLC</td>
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<td>Sludge Removal and Disposal (HRWSS)</td>
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## Northern Region Projects

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<td>Aqua-Aerobics Filter Parts</td>
<td>Aqua-Aerobic Systems, Inc.</td>
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<tr>
<td>Internal Pipeline Cleaning and CCTV Inspection</td>
<td>Aims Companies</td>
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<tr>
<td>Rock, Gravel, Flex Base, and Sand</td>
<td>CJA Enterprises LLP</td>
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12. **OTHER BUSINESS:**

13. **ADJOURNMENT:**
MINUTES
OF THE
TRINITY RIVER AUTHORITY OF TEXAS
REGULAR MEETING OF THE BOARD OF DIRECTORS

Trinity River Authority of Texas
Board Room
5300 South Collins Street
Arlington, Tarrant County, Texas
February 26, 2020
10:30 a.m.

Pursuant to Article III, Section 2 of the Revised Bylaws of the Trinity River Authority of Texas, and as directed by the General Manager pursuant to instruction from the President, the Regular Meeting of the Board of Directors of the Trinity River Authority of Texas was called to order at 10:30 a.m. on Wednesday, February 26, 2020, at the Trinity River Authority of Texas' General Office, Board Room, 5300 South Collins Street, Arlington, Tarrant County, Texas, by the President, Kevin Maxwell.

Director Maxwell gave the invocation.

Director Leonard led the meeting in the Pledges of Allegiance.

The Secretary, Howard S. Slobodin, then called roll. In calling roll, the Secretary announced that when the Directors acknowledged their presence, they would be considered to be in compliance with TEX. WATER CODE § 49.060. The following members of the Board of Directors were present:

Director Cathy Altman
Director Whitney D. Beckworth
Director Henry Borbolla III
Director Steven L. Roberts
Director Jerry F. House
Director Tommy G. Fordyce
Director Megan W. Deen
Director John W. Jenkins
Director Jess A. Laird
Director David B. Leonard
Director Victoria K. Lucas
Director Kevin Maxwell
Director D. Joe McCleskey
Director Lisa A. Hembry
Director Manny Rachal
Director Amir A. Rupani
Director Lewis H. McMaham
Director Cary Cole Camp
Director Brenda K. Walker
Director C. Dwayne Somerville
Director David G. Ward
Director Frank H. Steed, Jr.
Director Edward C. Williams III
The following members of the Board of Directors were absent:

Director William O. Rodgers
Director Robert F. McFarlane

Members of the Staff present were:

J. Kevin Ward, General Manager
Howard S. Slobodin, General Counsel and Secretary
Stacie M. Dowell, Assistant General Counsel
Alison A. Mackey, Chief Financial Officer
Jim R. Sims, Executive Manager, Southern Region
Patricia M. Cleveland, Executive Manager, Northern Region
John Bennett, Deputy Executive Manager, Northern Region
Gary N. Orod, Executive Manager, PDCA
Tom Davies, Deputy Executive Manager, PDCA
Matt Jalbert, Manager, Engineering Services, PDCA
Glenn C. Clingenpeel, Executive Manager, TSBP
Taylor L. Huynh, Executive Manager, Administrative Services
Doug Short, Chief Information Officer
Amy M. Stelter, Manager, Governmental Relations
Beverly Murphy, Internal Auditor
Vanassa L. Joseph, Communications Manager
Anthony Li, Manager, Cash and Capital Projects
Kelly Davis, Assistant Manager, Engineering Services, Pipeline, PDCA
Tania Ho, Assistant Manager, Engineering Services, Facilities, PDCA
Dusty Brannum, Engineer, Capital Improvement Program, PDCA
Steven Metzler, Manager, Construction Services
Carol Claybrook, Executive Coordinator to the General Manager
Remy Brown, Outreach and Communications Associate
Amber Faulkner, Executive Assistant, PDCA

Consultants present were:

Michael J. Booth, Authority Counsel
Jeff Gulbas, McCall, Parkhurst & Horton L.L.P.
Boyd London, Hilltop Securities, Inc.
Esther Flores, Hilltop Securities, Inc.
Jeff Caffey, Plummer Associates, Inc.
Layne Parsons, Black & Veatch Corporation
Bob Pence, Freese and Nichols, Inc.
David Dryden, Teague Nall and Perkins, Inc.
Scott Wilhelm, Teague Nall and Perkins, Inc.
Jonathan Bengfort, Teague Nall and Perkins, Inc.
Chris Patin, CDM Smith
Sherri van der Wege, Tetra Tech
Meredith McCall, Pacheco Koch Consulting Engineers, Inc.
Raj Mehta, Jacobs Engineering Group, Inc.
CERTIFICATION BY THE SECRETARY OF COMPLIANCE WITH THE OPEN MEETING REQUIREMENTS.

The Secretary certified the Authority's compliance with the open meeting requirements of the Government Code. TEx. GOV'T. CODE § 551.001 et seq. The "Open Meeting Submission" for the Board of Directors of the Trinity River Authority of Texas with notation of confirmation of receipt by the Secretary of State's office, and a copy of the "Notice of Open Meeting" with the County Clerk's notation of receipt are attached to the original Minutes.

APPROVAL OF THE MINUTES OF THE LAST BOARD MEETING.

The Minutes of the last meeting of the Board of Directors of the Trinity River Authority of Texas held December 3, 2019 were approved as written.

New Business:

A. INVESTMENT OFFICERS' REPORT.

Upon the motion of Director Borbolla seconded by Director Leonard, the Board of Directors unanimously approved the Investment Officers' Report of the Trinity River Authority of Texas for the Fourth Quarter of Fiscal Year 2019.

B. RENEWAL AGREEMENT FOR INVESTMENT ADVISORY SERVICES — HILLTOP SECURITIES ASSET MANAGEMENT, LLC.

Upon the motion of Director Borbolla, seconded by Director Leonard, the Board of Directors unanimously authorized the General Manager to execute the Renewal Agreement for Investment Advisory Services between the Trinity River Authority of Texas and Hilltop Securities Asset Management, LLC.

C. POLICY AMENDMENTS — PURCHASING AND PROCUREMENT, VEHICLES, TUITION REIMBURSEMENT, LAND RIGHTS ACQUISITION AND ADMINISTRATIVE OVERHEAD CHARGES.

Upon the motion of Director Borbolla, seconded by Director McCleskey, the Board of Directors unanimously adopted Resolution No. R-1543 approving the amended Purchasing and Procurement Policy as presented, and also approved the revisions to the Vehicles Policy, Tuition Reimbursement Policy, Land Rights Acquisition Policy and Administrative Overhead Charges Policy, also as presented.
D. WATER SALES SPECIAL REVENUE FUND — COMMITTED FUND BALANCES — RESOLUTION NO. R-1545.

Upon the motion of Director Borbolla, seconded by Director Leonard, the Board of Directors unanimously rescinded Resolution No. R-1454 and adopted Resolution No. R-1545 committing water sales revenues accounted for in the Water Sales Special Revenue Fund in the fashion therein stated, consistent with the requirements of Statement No. 54 of the Governmental Accounting Standards Board.

E. HYDROELECTRIC SPECIAL REVENUE FUND — CREATION AND CLASSIFICATION OF HYDROELECTRIC SPECIAL REVENUE FUND — RESOLUTION NO. R-1544.

Upon the motion of Director Borbolla, seconded by Director Jenkins, the Board of Directors unanimously adopted Resolution No. R-1544 committing hydroelectric revenues to be accounted for in the Hydroelectric Special Revenue Fund in the fashion therein stated, consistent with the requirements of Statement No. 54 of the Governmental Accounting Standards Board.

F. CENTRAL REGIONAL WASTEWATER SYSTEM — DENTON CREEK REGIONAL WASTEWATER SYSTEM — RED OAK CREEK REGIONAL WASTEWATER SYSTEM — TARRANT COUNTY WATER SUPPLY PROJECT — MOUNTAIN CREEK REGIONAL WASTEWATER SYSTEM — WALKER-CALLOWAY SYSTEM — ISSUANCE OF REVENUE AND/OR REFUNDING REVENUE BONDS.

Upon the motion of Director Borbolla, seconded by Director Leonard, the Board of Directors unanimously:

(a) Adopted Resolution No. R-1535 authorizing the issuance, sale, and delivery of Trinity River Authority of Texas Mountain Creek Regional Wastewater System Revenue Bonds, and approving and authorizing instruments and procedures relating thereto;

(b) Adopted Resolution No. R-1536 authorizing the issuance, sale, and delivery of Trinity River Authority of Texas Regional Wastewater System Revenue Bonds, and approving and authorizing instruments and procedures relating thereto;

(c) Adopted Resolution No. R-1537 authorizing the issuance, sale, and delivery of Trinity River Authority of Texas Denton Creek Regional Wastewater Treatment System Revenue Bonds, and approving and authorizing instruments and procedures relating thereto;

(d) Adopted Resolution No. R-1538 authorizing the issuance, sale, and delivery of Trinity River Authority of Texas Red Oak Creek System Revenue Bonds, and approving and authorizing instruments and procedures relating thereto;

(e) Adopted Resolution No. R-1539 authorizing the issuance, sale, and delivery of Trinity River Authority of Texas Tarrant County Water Project Improvement Revenue Bonds, and approving and authorizing instruments and procedures relating thereto; and

(f) Adopted Resolution No. R-1540 authorizing and providing for the issuance, sale, and delivery of Trinity River Authority of Texas Walker-Calloway System Revenue Bonds and approving and authorizing instruments and procedures relating thereto.
G. LAKE LIVINGSTON PROJECT — ETEC HYDROELECTRIC POWER PLANT — EMERGENCY ACTION PLAN.

Upon the motion of Director Williams, seconded by Director Leonard, the Board of Directors unanimously agreed to table this item.

H. LIVINGSTON REUSE WATER SALE — CITY OF DALWORTHINGTON GARDENS — ELKINS LAKE.

Upon the motion of Director Jenkins, seconded by Director McCleskey, the Board of Directors unanimously authorized the General Manager to execute the Return Flows Water Supply Contract between the Trinity River Authority of Texas and the City of Dalworthington Gardens, Texas, in substantially the form presented.

I. CENTRAL REGIONAL WASTEWATER SYSTEM — BEAR CREEK INTERCEPTOR RELIEF, PHASE 1 — ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Williams, seconded by Director Jenkins, the Board of Directors unanimously:

(a) Authorized the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Lockwood, Andrews & Newnam, Inc., in the amount of $1,701,707 for Basic Services and $170,000 for Special Services for final design engineering services associated with Bear Creek Interceptor Relief, Phase 1 for the Central Regional Wastewater System; and

(b) Authorized the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Lockwood, Andrews & Newnam, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost.

J. CENTRAL REGIONAL WASTEWATER SYSTEM — BEAR CREEK INTERCEPTOR SEGMENT 09BC-1 — SECOND AMENDMENT — ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Williams, seconded by Director Jenkins, the Board of Directors unanimously authorized the General Manager to execute the Second Amendment to the Engineering Services Agreement between the Trinity River Authority of Texas and Plummer Associates, Inc., increasing the amount of Basic Services from $2,196,202 to $2,246,230 for engineering services associated with the Bear Creek Interceptor Segment 09BC-1 for the Central Regional Wastewater System.
K. DALLAS COUNTY UTILITY AND RECLAMATION DISTRICT — OUTFALL 002 IMPROVEMENTS — INTERLOCAL AGREEMENT AND ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Jenkins, the Board of Directors unanimously:

(a) Authorized the General Manager to execute the Interlocal Agreement between the Trinity River Authority of Texas and the Dallas County Utility and Reclamation District for the final design and advertisement services of Outfall 002 Improvements for the Central Regional Wastewater System;

(b) Authorized the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Plummer Associates, Inc., in the amount of $236,921 for Basic Services and $35,000 for Special Services for final design engineering services associated with the Dallas County Utility and Reclamation District Outfall 002 Improvements for the Central Regional Wastewater System; and

(c) Authorized the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Plummer Associates, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost.

L. DENTON CREEK REGIONAL WASTEWATER SYSTEM — 25HC-4 AND 25HC-5 HENRIETTA CREEK RELIEF INTERCEPTOR — ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Williams, the Board of Directors unanimously:

(a) Authorized the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Teague Nall and Perkins, Inc., in the amount of $814,643 for Basic Services and $135,000 for Special Services for final design engineering services associated with the 25HC-4 and 25HC-5 Henrietta Creek Relief Interceptor for the Denton Creek Regional Wastewater System; and

(b) Authorized the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Teague Nall and Perkins, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost.

M. DENTON CREEK REGIONAL WASTEWATER SYSTEM — HENRIETTA CREEK RELIEF INTERCEPTOR, HC-1 — FIRST AMENDMENT — ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Jenkins, the Board of Directors unanimously authorized the General Manager to execute the First Amendment to the Engineering Services Agreement between the Trinity River Authority of Texas and Schrickel, Rollins and Associates, Inc., increasing the amount of Basic Services from $505,000 to $648,200 for the construction administration engineering services associated with Henrietta Creek Relief Interceptor, HC-1 for the Denton Creek Regional Wastewater System.
N. TARRANT COUNTY WATER SUPPLY PROJECT — MURPHY DRIVE PUMP STATION
GROUND STORAGE TANK NO. 4 REHABILITATION — ENGINEERING SERVICES
AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Leonard, the Board of Directors
unanimously:

(a) Authorized the General Manager to execute the Engineering Services Agreement
between the Trinity River Authority of Texas and Jones & Carter, Inc., in the amount of
$249,547 for Basic Services and $30,000 for Special Services for preliminary and final
design engineering services associated with the Murphy Drive Pump Station Ground
Storage Tank No. 4 Rehabilitation for the Tarrant County Water Supply Project; and

(b) Authorized the General Manager to execute amendments to the compensation provisions
of the Engineering Services Agreement between the Trinity River Authority of Texas and
Jones & Carter, Inc., as are deemed prudent in his judgment provided the same do not
increase the total approved cost.

O. TARRANT COUNTY WATER SUPPLY PROJECT — PROCESS CONTROL SYSTEM
NETWORK ASSESSMENT — ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Williams, the Board of Directors
unanimously:

(a) Authorized the General Manager to execute the Engineering Services Agreement
between the Trinity River Authority of Texas and CDM Smith Inc. in the amount of
$194,000 for Basic Services and $50,000 for Special Services for engineering services
associated with the Process Control System Network Assessment for the Tarrant County
Water Supply Project; and

(b) Authorized the General Manager to execute amendments to the compensation provisions
of the Engineering Services Agreement between the Trinity River Authority of Texas and
CDM Smith Inc. as are deemed prudent in his judgment provided the same do not
increase the total approved cost.

P. TEN MILE CREEK REGIONAL WASTEWATER SYSTEM — EFFLUENT OUTFALL
RELOCATION — ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Jenkins, the Board of Directors
unanimously:

(a) Authorized the General Manager to execute the Engineering Services Agreement
between the Trinity River Authority of Texas and Halff Associates, Inc., in the amount of
$154,500 for Basic Services and $15,000 for Special Services for final design
engineering services associated with the Effluent Outfall Relocation for the Ten Mile
Creek Regional Wastewater System; and

(b) Authorized the General Manager to execute amendments to the compensation provisions
of the Engineering Services Agreement between the Trinity River Authority of Texas and
Halff Associates, Inc., as are deemed prudent in his judgment provided the same do not
increase the total approved cost.
Q. TEN MILE CREEK REGIONAL WASTEWATER SYSTEM — PLANT REHABILITATION A — ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Williams, the Board of Directors unanimously:

(a) Authorized the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and AECOM Technical Services, Inc., in the amount of $1,198,952 for Basic Services and $120,000 for Special Services for preliminary and final design engineering services associated with the Plant Rehabilitation A at the Ten Mile Creek Regional Wastewater System treatment plant; and

(b) Authorized the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and AECOM Technical Services, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost.

R. ON-CALL SURVEYING SERVICES — SURVEYING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Leonard, the Board of Directors unanimously:

(a) Authorized the General Manager to execute the Surveying Services Agreement between the Trinity River Authority of Texas and Teague Nall and Perkins, Inc., in the amount of $250,000 for Basic Services and $50,000 for Special Services for on-call surveying services; and

(b) Authorized the General Manager to execute amendments to the compensation provisions of the Surveying Services Agreement between the Trinity River Authority of Texas and Teague Nall and Perkins, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost.

S. LAKE LIVINGSTON PROJECT — SPILLWAY GATE REPAIR AND COATING — CONTRACT AWARD AND ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Williams, the Board of Directors unanimously:

(a) Authorized the General Manager to execute the contract between the Trinity River Authority of Texas and Blasco Texas, Inc., in the amount of $10,876,359 for the construction of the Spillway Gate Repair and Coating at the Lake Livingston Project;

(b) Authorized the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Freese and Nichols, Inc., in the amount of $456,090 for Basic Services and $45,625 for Special Services for construction administration engineering services associated with the Spillway Gate Repair and Coating at the Lake Livingston Project; and
(c) Authorized the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Freese and Nichols, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost.

T. SUMMARY REPORT OF BUDGET AMENDMENTS.

This item was presented as a status report only; no action was necessary.

U. APPOINTMENTS TO RIGHT-OF-WAY COMMITTEES.

Upon the motion of Director Leonard, seconded by Director Jenkins, the Board of Directors unanimously confirmed the President's appointment of Victoria K. Lucas as Chair of the Denton Creek Regional Wastewater System Right-of-Way Committee; Lewis H. McManus as member of the Denton Creek Regional Wastewater System Right-of-Way Committee; and Lisa A. Hembry as member of the Walker-Calloway Branch Outfall Trunk Sewer System Right-of-Way Committee.

V. CENTRAL REGIONAL WASTEWATER SYSTEM — CUSTOMER ADVISORY COMMITTEE APPOINTMENTS.

Upon the motion of Director Leonard, seconded by Director Somerville, the Board of Directors unanimously confirmed the President's appointment of Lisa A. Hembry and Megan W. Deen to serve as representatives of the Board on the Central Regional Wastewater System Customer Advisory Committee.

W. SUMMARY REPORT OF FEBRUARY 2020 CAPITAL CONTRACTS.

This item was presented as a status report only; no action was necessary.

X. SUMMARY REPORT OF GENERAL MANAGER-APPROVED AGREEMENTS.

This item was presented as a status report only; no action was necessary.

Y. SUMMARY REPORT OF CHANGE ORDERS.

This item was presented as a status report only; no action was necessary.

Z. SUMMARY REPORT OF FIELD ORDERS APPROVED BY THE GENERAL MANAGER.

This item was presented as a status report only; no action was necessary.

AA. SUMMARY REPORT OF QUANTITY OVERRUNS.

This item was presented as a status report only; no action was necessary.
BB. SUMMARY REPORT — GENERAL MANAGER-APPROVED PIPELINE EMERGENCY REPAIRS — EMERGENCY PIPELINE REPAIR CONTRACT.

This item was presented as a status report only; no action was necessary.

CC. DENTON CREEK REGIONAL WASTEWATER SYSTEM — DENTON CREEK PRESSURE SYSTEM — AIR RELEASE VALVE REPLACEMENT, PHASE 1 — AUTHORIZATION FOR LAND ACQUISITION BY EMINENT DOMAIN.

Upon the motion of Director Leonard, seconded by Director Jenkins, the Board of Directors unanimously adopted Resolution No. R-1541, authorizing the General Manager, or his designated representative, and his staff, consultants and attorneys, to do all such acts as may be necessary to invoke eminent domain proceedings as described by Texas law against the owners of the required parcels of land generally located along the south side of State Highway 114, east of Trophy Lake Drive and west of Davis Boulevard, in the town of Westlake, in Denton and Tarrant counties, Texas, and specifically located in the Charles Medlin Survey, Abstract No. 823, and the William H. Pea Survey, Abstract No. 1045, in order to acquire all required interests in real property for the public purpose of constructing, operating and maintaining the necessary Denton Creek Regional Wastewater System, Denton Creek Pressure System – Air Release Valve Replacement, Phase 1.

DD. CENTRAL REGIONAL WASTEWATER SYSTEM — ALTERNATE PLANT ACCESS AND LEVEE IMPROVEMENTS — AUTHORIZATION FOR LAND ACQUISITION BY EMINENT DOMAIN.

Upon the motion of Director Leonard, seconded by Director Jenkins, the Board of Directors unanimously adopted Resolution No. R-1542, authorizing the General Manager, or his designated representative, and his staff, consultants and attorneys, to do all such acts as may be necessary to invoke eminent domain proceedings as described by Texas law against the owners of the required parcels of land generally located along the south side of Interstate 30, south of the CRWS Plant, in the city of Grand Prairie, Dallas County, Texas, and specifically located in the J. McLaughlin Survey, Abstract No. 846, and the W. McLaughlin Survey, Abstract No. 892, in order to acquire all required interests in real property for the public purpose of constructing, operating and maintaining the necessary Central Regional Wastewater System, Alternate Plant Access and Levee Improvements Project.

EE. CONDEMNATION STATUS REPORT.

This item was presented as a status report only; no action was necessary.

FF. SELECTED MATTERS PENDING BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY — STATUS REPORT.

This item was presented as a status report only; no action was necessary.
GG. **BID AWARD.**

**CENTRAL REGIONAL WASTEWATER SYSTEM — BID FOR CHAIN AND FLIGHT SYSTEM COMPONENTS.**

Upon the motion of Director Jenkins, seconded by Director McCleskey, the Board of Directors unanimously accepted the following vendor for Chain and Flight System Components for Central Regional Wastewater System:

<table>
<thead>
<tr>
<th>BID ITEM</th>
<th>VENDOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Regional Wastewater System</td>
<td>Hartwell Environmental Corporation</td>
</tr>
</tbody>
</table>

**Other Business:** None

**Adjournment:** 11:55 a.m.

There being no further business, the Board of Directors adjourned upon unanimous vote.


[Signature]

HOWARD S. SLOBODIN, Secretary  
Board of Directors  
Trinity River Authority of Texas  

2·26·20  
Date
REPORT OF ACTIONS TAKEN BY THE
EXECUTIVE COMMITTEE OF THE BOARD OF DIRECTORS
OF THE TRINITY RIVER AUTHORITY OF TEXAS
SINCE FEBRUARY 26, 2020

TO THE BOARD OF DIRECTORS,
TRINITY RIVER AUTHORITY OF TEXAS:

I. Section 1 of Article V of the Revised Bylaws, as amended, of the Trinity River Authority of Texas provides:

“There shall be an Executive Committee, chaired by the Chairman of the Executive Committee, composed of the Chairman of the Executive Committee, the President, the Vice President and four other members of the Board, nominated and elected by the members of the Board at the same time the elective officers of the Authority are elected. The President shall act as Vice Chairman of the Executive Committee and shall preside at the meetings in the event of the inability or failure of the Chairman of the Executive Committee to do so. In the event of the inability or failure of both the Chairman of the Executive Committee and the President of the Authority, the Vice President of the Authority shall so act. Members of the Executive Committee may be removed therefrom for due cause at any time by the Board. Vacancies on the Committee shall be filled from the Board by the President subject to ratification by the Board of Directors at the next regular or special meeting for which notice for such action has been given. The Committee shall make its own rules of procedure, keep a record of its proceedings and submit a report of its actions at each meeting of the Board of Directors for its approval. In accordance with provisions of SECTION 3(b) of the act of the Texas Legislature creating the Authority, the Executive Committee will perform the functions of the Board between meetings, except as its powers may be restricted from time to time by the Board of Directors. Nothing herein shall preclude the Board from authorizing, on an advance basis, the Executive Committee from taking certain specified actions, including approving the Annual Financial Report and the actions specified in ARTICLE VI, SECTION 2, of the Bylaws, as revised.”

II. The last meeting of the Board of Directors of the Trinity River Authority of Texas was the regular meeting held on February 26, 2020. Since then the Executive Committee has taken the following actions which are hereby reported to the Board of Directors of the Authority:

(MEETING OF THE EXECUTIVE COMMITTEE ON APRIL 28, 2020)

The Committee was called to order by the Chairman, Director David B. Leonard. The Secretary, Howard S. Slobodin, called the roll as follows:

Director David B. Leonard, Chairman Present
Director Kevin Maxwell, President Present
Director Tommy G. Fordyce, Vice-President Present
Director John W. Jenkins, Member Present
Director Amir A. Rupani, Member Present
Director C. Dwayne Somerville, Member Present
Director Henry Borbolla III, Member Present
III. New Business:

A. APPROVAL AND FILING OF COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEAR 2019.

Upon the motion of Director Borbolla, seconded by Director Maxwell, the Executive Committee of the Board of Directors unanimously approved the Comprehensive Annual Financial Report of the Trinity River Authority of Texas, including the Supplemental Reports and Opinion, for the Fiscal Year Ended November 30, 2019 and that the Annual Filing Affidavit be executed by the President.

B. INVESTMENT OFFICERS’ REPORT.

Upon the motion of Director Borbolla, seconded by Director Jenkins, the Executive Committee of the Board of Directors unanimously approved the Investment Officers’ Report of the Trinity River Authority of Texas for the First Quarter of Fiscal Year 2020.

C. CENTRAL REGIONAL WASTEWATER SYSTEM — HEADWORKS A FINE SCREEN FACILITY — CONTRACT AWARD, ENGINEERING SERVICES AGREEMENT, AND MATERIALS TESTING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Maxwell, the Executive Committee of the Board of Directors unanimously:

(a) Authorized the General Manager to execute the contract between the Trinity River Authority of Texas and MWH Constructors, Inc., in the amount of $26,661,796 for the construction of the Headworks A Fine Screen Facility for the Central Regional Wastewater System treatment plant;

(b) Authorized the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Garver, LLC, in the amount of $1,716,870 for Basic Services and $80,000 for Special Services for construction administration engineering services associated with the Headworks A Fine Screen Facility for the Central Regional Wastewater System treatment plant;

(c) Authorized the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Garver, LLC, as are deemed prudent in his judgment provided the same do not increase the total approved cost; and

(d) Authorized the General Manager to execute the Materials Testing Services Agreement between the Trinity River Authority of Texas and Alliance Geotechnical Group, Inc., in the amount of $593,000 for construction materials testing services associated with the Headworks A Fine Screen Facility for the Central Regional Wastewater System treatment plant.
D. **CENTRAL REGIONAL WASTEWATER SYSTEM — METER STATION REHABILITATION GROUP 1 — FIRST AMENDMENT — ENGINEERING SERVICES AGREEMENT.**

Upon the motion of Director Somerville, seconded by Director Jenkins, the Executive Committee of the Board of Directors unanimously authorized the General Manager to execute the First Amendment to the Engineering Services Agreement between the Trinity River Authority of Texas and Kimley-Horn and Associates, Inc., increasing the amount of Basic Services from $919,500 to $1,184,600 for preliminary and final design engineering services associated with the Meter Station Rehabilitation Group 1 for the Central Regional Wastewater System.

E. **CENTRAL REGIONAL WASTEWATER SYSTEM — MOUNTAIN CREEK INTERCEPTOR, SEGMENT 30MC-1 — SECOND AMENDMENT — ENGINEERING SERVICES AGREEMENT.**

Upon the motion of Director Somerville, seconded by Director Borbolla, the Executive Committee of the Board of Directors unanimously authorized the General Manager to execute the Second Amendment to the Engineering Services Agreement between the Trinity River Authority of Texas and Carollo Engineers, Inc., increasing the amount of Basic Services from $1,454,824 to $1,554,824 for final design engineering services associated with the Mountain Creek Interceptor, Segment 30MC-1 project for the Central Regional Wastewater System.

F. **CENTRAL REGIONAL WASTEWATER SYSTEM — SOLIDS MANAGEMENT IMPROVEMENTS PHASE III-B — CHANGE ORDER NO. 107 — WEATHER DELAY ADMINISTRATION — JANUARY 2020.**

Upon the motion of Director Somerville, seconded by Director Jenkins, the Executive Committee of the Board of Directors unanimously authorized the General Manager to execute Change Order No. 107 between the Trinity River Authority of Texas and MWH Constructors, Inc., to increase the contract amount from $201,171,752.42 to $201,251,752.42, and extend the contract duration by five calendar days to account for weather delays associated with the Solids Management Improvements Phase III-B project at the Central Regional Wastewater System.

G. **CENTRAL REGIONAL WASTEWATER SYSTEM — SOLIDS MANAGEMENT IMPROVEMENTS PHASE III-B — CHANGE ORDER NO. 109 — DRY POLYMER RE-SEQUENCING.**

Upon the motion of Director Somerville, seconded by Director Maxwell, the Executive Committee of the Board of Directors unanimously ratified the General Manager’s execution of the change order between the Trinity River Authority of Texas and MWH Constructors, Inc., in the amount of $90,508 for Dry Polymer Re-sequencing, increasing the contract value from $201,286,724.42 (through Change Order No. 108) to $201,377,232.42 and no extension to the contract completion date.

Upon the motion of Director Somerville, seconded by Director Jenkins, the Executive Committee of the Board of Directors unanimously authorized the General Manager to execute Change Order No. 111 between the Trinity River Authority of Texas and MWH Constructors, Inc., to increase the contract amount from $201,394,732.42 to $201,458,732.42, and extend the contract duration by four calendar days to account for weather delays associated with the Solids Management Improvements Phase III-B project at the Central Regional Wastewater System.

I. CENTRAL REGIONAL WASTEWATER SYSTEM — DEWATERING SERVICES AGREEMENT — RENDA ENVIRONMENTAL, INC.

Upon the motion of Director Somerville, seconded by Director Rupani, the Executive Committee of the Board of Directors unanimously authorized the General Manager to execute the Temporary Dewatering Services Agreement between the Trinity River Authority of Texas and Renda Environmental, Inc.

J. MOUNTAIN CREEK REGIONAL WASTEWATER SYSTEM — PEAK FLOW STORAGE — CONTRACT AWARD, ENGINEERING SERVICES AGREEMENT, MATERIALS TESTING SERVICES AGREEMENT, AND INTERLOCAL AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Jenkins, the Executive Committee of the Board of Directors unanimously:

(a) Authorized the General Manager to execute the contract between the Trinity River Authority of Texas and Heritage Constructors, Inc., in the amount of $7,555,638 for the construction of the Peak Flow Storage at the Mountain Creek Regional Wastewater System treatment plant;

(b) Authorized the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Garver, LLC, in the amount of $709,129 for Basic Services and $70,000 for Special Services for construction administration engineering services associated with the Peak Flow Storage at the Mountain Creek Regional Wastewater System treatment plant;

(c) Authorized the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Garver, LLC, as are deemed prudent in his judgment provided the same do not increase the total approved cost;
(d) Authorized the General Manager to execute the Materials Testing Services Agreement between the Trinity River Authority of Texas and Professional Service Industries, Inc., in the amount of $180,000 for construction materials testing services associated with the Peak Flow Storage at the Mountain Creek Regional Wastewater System treatment plant; and

(e) Authorized the General Manager to execute the Interlocal Agreement between the Trinity River Authority of Texas and the City of Midlothian for reimbursement from the City up to an amount of $86,349 for treatability testing of industrial discharge into the Mountain Creek Regional Wastewater System.

K. MOUNTAIN CREEK REGIONAL WASTEWATER SYSTEM — PLANT EXPANSION FROM 3.0 MGD TO 9.0 MGD — ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Fordyce, the Executive Committee of the Board of Directors unanimously:

(a) Authorized the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Garver, LLC, in the amount of $11,812,805 for Basic Services and $1,000,000 for Special Services for preliminary and final design engineering services associated with the Plant Expansion from 3.0 MGD to 9.0 MGD at the Mountain Creek Regional Wastewater System treatment plant; and

(b) Authorized the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Garver, LLC, as are deemed prudent in his judgment provided the same do not increase the total approved cost.

L. RED OAK CREEK REGIONAL WASTEWATER SYSTEM — RED OAK CREEK RELIEF INTERCEPTOR SEGMENT RO-2 — CONTRACT AWARD, ENGINEERING SERVICES AGREEMENT, AND MATERIALS TESTING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Maxwell, the Executive Committee of the Board of Directors unanimously:

(a) Authorized the General Manager to execute the contract between the Trinity River Authority of Texas and Flow-Line Construction in the amount of $5,669,672 for the construction of Red Oak Creek Relief Interceptor Segment RO-2 for the Red Oak Creek Regional Wastewater System;
(b) Authorized the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and BW2 Engineers, Inc., in the amount of $196,780 for Basic Services and $30,000 for Special Services for construction administration engineering services associated with Red Oak Creek Relief Interceptor Segment RO-2 for the Red Oak Creek Regional Wastewater System;

(c) Authorized the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and BW2 Engineers, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost; and

(d) Authorized the General Manager to execute the Materials Testing Services Agreement between the Trinity River Authority of Texas and D&S Engineering Labs, LLC, in the amount of $100,000 for construction materials testing services associated with Red Oak Creek Relief Interceptor Segment RO-2 for the Red Oak Creek Regional Wastewater System.

M. RED OAK CREEK REGIONAL WASTEWATER SYSTEM — RED OAK CREEK INTERCEPTOR REHABILITATION, SEGMENT 40RO-1, PHASE 2 — SECOND AMENDMENT — ENGINEERING SERVICES AGREEMENT.

Upon the motion of Director Somerville, seconded by Director Jenkins, the Executive Committee of the Board of Directors unanimously authorized the General Manager to execute the Second Amendment to the Engineering Services Agreement between the Trinity River Authority of Texas and CH2M Hill Engineers, Inc., increasing the amount of Basic Services from $699,303 to $789,249 for final design engineering services associated with the Red Oak Creek Interceptor Rehabilitation, Segment 40RO-1, Phase 2 for the Red Oak Creek Regional Wastewater System.

N. TARRANT COUNTY WATER SUPPLY PROJECT — LAKE ARLINGTON RAW WATER PUMP STATION SHARED OPERATIONS IMPROVEMENTS — INTERLOCAL AGREEMENT WITH THE CITY OF ARLINGTON FOR CONSTRUCTION SERVICES COST SHARING.

Upon the motion of Director Somerville, seconded by Director Fordyce, the Executive Committee of the Board of Directors unanimously authorized the General Manager to execute the Interlocal Agreement between the Trinity River Authority of Texas and the City of Arlington in the amount of $22,295,260 for the construction improvements, engineering construction support, construction management and inspection services associated with the Lake Arlington Raw Water Pump Station Shared Operations Improvements for the Tarrant County Water Supply Project.
O. JOE POOL LAKE WATERSHED PROTECTION PLAN, PHASE II — WATERSHED MODELING SUBCONTRACT AWARD.

Upon the motion of Director Jenkins, seconded by Director Maxwell, the Executive Committee of the Board of Directors unanimously authorized the General Manager to execute an Interlocal Agreement between the Trinity River Authority and Texas A&M AgriLife Extension for developing a watershed modeling suite for the Joe Pool Lake watershed in an amount not to exceed $90,000.

P. MIDDLE TRINITY BASIN FLOOD MITIGATION — AUTHORIZATION FOR FUNDING APPLICATION AND CONTRACT EXECUTION — RESOLUTION NO. R-1547.

Upon the motion of Director Jenkins, seconded by Director Maxwell, the Executive Committee of the Board of Directors unanimously adopted Resolution No. R-1547 authorizing the General Manager of the Trinity River Authority of Texas to execute and submit Flood Infrastructure Fund abridged and final applications and execute a grant contract for funding with the Texas Water Development Board, and further authorizing the General Manager to execute routine amendments thereto during the grant term.

Q. CENTRAL REGIONAL WASTEWATER SYSTEM — BEAR CREEK INTERCEPTOR SEGMENT 09BC-1 (PHASE 2) PROJECT — RIGHT-OF-WAY ACQUISITION.

Upon the motion of Director Maxwell, seconded by Director Borbolla, the Executive Committee of the Board of Directors unanimously:

(a) Adopted Resolution No. R-1546 affirming the appraisal, approving the value, affirming that the price accurately represents the fair market value and authorizing the General Manager, or his designated representative, to negotiate the purchase of the necessary land rights on Parcel # 7 from the property owner at the appraised value or within the approved negotiating range, and to execute all necessary documents to close said transaction for the Central Regional Wastewater System, Bear Creek Interceptor Segment 09BC-1 (Phase 2) Project; and

(b) Approved the requested negotiating range for the land rights acquisitions necessary for the Central Regional Wastewater System, Bear Creek Interceptor Segment 09BC-1 (Phase 2) Project as follows:

Parcel # 7: Curnes Partners, LP from $87,660 to $110,000.
R. BID AWARDS.

NORTHERN REGION PROJECTS — BIDS FOR EQUIPMENT, SUPPLIES, SPARE PARTS AND SERVICES.

Upon the motion of Director Jenkins, seconded by Director Somerville, the Executive Committee of the Board of Directors unanimously authorized the General Manager to accept the following vendors for Equipment, Supplies, Spare Parts, and Services for Northern Region Projects:

<table>
<thead>
<tr>
<th>BID ITEM</th>
<th>VENDOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Regional Wastewater System</td>
<td></td>
</tr>
<tr>
<td>Gas Feeders Parts</td>
<td>Hartwell Environmental Corporation</td>
</tr>
<tr>
<td>Inspection, Preventative Maintenance and Repairs of Rail System</td>
<td>Lone Star Railroad Contractors, Inc.</td>
</tr>
<tr>
<td>Collection System Group</td>
<td></td>
</tr>
<tr>
<td>Manholes Rings and Lids</td>
<td>Apsco Supply</td>
</tr>
<tr>
<td>Northern Region Projects</td>
<td></td>
</tr>
<tr>
<td>Inspection, Routine Maintenance and New Installations of Security Systems Equipment</td>
<td>Secure Cam, Inc.</td>
</tr>
<tr>
<td>Laboratory Consumable Supplies</td>
<td>Midland Scientific, Inc.</td>
</tr>
<tr>
<td>Tarrant County Water Supply Project</td>
<td></td>
</tr>
<tr>
<td>Lake Arlington Raw Water Pump Repair</td>
<td>Odessa Pumps</td>
</tr>
<tr>
<td>Ten Mile Creek Regional Wastewater System</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Pump Parts (Fairbanks Morse)</td>
<td>DXP Enterprises</td>
</tr>
<tr>
<td>Region Projects</td>
<td></td>
</tr>
<tr>
<td>Granular Activated Carbon (HRWSS)</td>
<td>Calgon Carbon Corporation</td>
</tr>
</tbody>
</table>
IV. Other Business:

V. Adjournment:

There being no further business, the Executive Committee adjourned upon unanimous vote.


Prepared by:

[Signature]

HOWARD S. SLOBODIN, Secretary
Board of Directors
Trinity River Authority of Texas

Date: 5-5-20
DATE:     May 20, 2020

FILE:    0800

TO:     BOARD OF DIRECTORS

VIA:    (3) ADMINISTRATION AND AUDIT COMMITTEE
        (2) J. KEVIN WARD, General Manager
        (1) ALISON A. MACKEY, CPA, Chief Financial Officer

RE:     Selection of Official Auditor for Fiscal Year 2020

BACKGROUND: Texas Water Code Section 49.191 requires that the Authority fiscal accounts and records be audited annually by a firm licensed by the Texas State Board of Public Accountancy at the expense of the Authority.

The Comprehensive Annual Financial Report (CAFR) summarizes all financial transactions and the financial status of each fund. The CAFR has a broad and varied readership that includes the Board of Directors, Authority customers, bond rating agencies, investors, governmental agencies, and interested citizens. The audit of the CAFR is also a requirement of certain bond and contract provisions.

STAFF ANALYSIS: Management issued a Request for Qualifications for Professional Auditing Services in June 2017 for the audit of the Authority’s financial statements for the fiscal year ended November 30, 2017. A management team within the Financial Services department reviewed and evaluated each proposal received. On management’s recommendation, the Board of Directors appointed the firm of Weaver and Tidwell, L.L.P. (Weaver) as the Authority’s designated external auditor of the fiscal year ended November 30, 2017. At the same time, the Board extended the option of Weaver acting in that capacity for four subsequent fiscal years. The Authority needs to appoint an auditor for the fiscal year ending November 30, 2020 at this time.

Weaver is recognized as a national leader in governmental accounting and has demonstrated its expertise in that area. Weaver has served the audit needs of the Authority well and has completed previous audits of the Authority on time and within budget. Weaver has an experienced audit team familiar with the Authority and direct experience auditing other water districts. This renewal option would be the third reappointment under this contract.

Resolution No. R-1549 designating Weaver as the Official Auditor of the Authority for the fiscal year ending November 30, 2020 is presented as Exhibit A.
RECOMMENDATION: Management recommends that the Administration and Audit Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors adopt Resolution No. R-1549 designating Weaver and Tidwell, L.L.P., Certified Public Accountants, as Official Auditor.

Respectfully submitted,

CHRISTINE J. EPPS, CPA
Controller

CJE/dlg

Exhibit A – Resolution No. R-1549
EXHIBIT A
RESOLUTION NO. R-1549

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE TRINITY RIVER AUTHORITY OF TEXAS DESIGNATING WEAVER AND TIDWELL, L.L.P., CERTIFIED PUBLIC ACCOUNTANTS, AS OFFICIAL AUDITOR

Preamble

WHEREAS, Texas Water Code Section 49.191 provides that a district created by authority of Article XVI, Section 59, of the Texas Constitution shall have its fiscal accounts and records audited annually by a certified public accountant or public accountant holding a permit from the Texas State Board of Public Accountancy. If said audit is performed by an independent public accountant, it shall be completed within 160 days after the close of the Authority’s fiscal year; and

WHEREAS, the State Auditor has requested that if the Board of Directors of the Trinity River Authority of Texas does not elect to have the accounts of the Authority audited by the State Auditor, that a Resolution designating an official auditor for the Authority be adopted.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE TRINITY RIVER AUTHORITY OF TEXAS:

1. That Weaver and Tidwell, L.L.P., Certified Public Accountants, be designated the Authority’s Official Auditor to audit the accounts, books, and financial records of the Trinity River Authority of Texas for the fiscal year ending November 30, 2020.

2. That a copy of the resolution be provided to the State Auditor, State of Texas; to the Texas Commission on Environmental Quality; and to Weaver and Tidwell, L.L.P., Certified Public Accountants.

ADOPTED this the 24th day of June, 2020.

______________________________
KEVIN MAXWELL, President
Board of Directors
Trinity River Authority of Texas

ATTEST:

______________________________
HOWARD S. SLOBODIN, Secretary
Board of Directors
Trinity River Authority of Texas
BACKGROUND: The Central Regional Wastewater System (CRWS) provides regional wastewater collection and treatment services to 20 cities in the Dallas-Fort Worth metropolitan area, as well as the DFW International Airport. Its collection system is comprised of five major interceptor systems: Bear Creek, Elm Fork, West Fork (WF), Jefferson Tunnel, and Mountain Creek (MC). The Mountain Creek Interceptor System (MCIS) includes approximately 47 miles of pipeline that serve the southern portion of the CRWS service area, while the West Fork Interceptor System includes approximately 46 miles of pipeline that serve the western portion of the CRWS service area.

A second feed into the CRWS facility has been considered for many years due to the increasing flows in the MCIS. The debate has centered around whether to construct a new pipeline or to rehabilitate a portion of the 72-inch West Fork Interceptor Relief (WFIR-1) pipeline which was abandoned in 2007.

In 2011, an Engineering Services Agreement (ESA) was awarded to HDR Engineering, Inc. (HDR), to further examine the rehabilitation of the pipeline, as well as the rehabilitation of Junction Box 1C (JB-1C) on the CRWS site. HDR performed a condition assessment of the inactive 72-inch WFIR-1 interceptor. The 3,700 linear feet (LF) WFIR-1 segment parallels the existing 110-inch WF-1 interceptor from the north side of Interstate Highway 30 (IH-30) to the headworks of the treatment plant and was placed out of service when the WF-1 interceptor was activated in 2007.

The results of the condition assessment determined the existing unlined reinforced concrete pipeline, originally installed in 1976, was a candidate for rehabilitation and could serve as a secondary feed to the plant. Therefore, design of the 72-inch rehabilitation was awarded to HDR in October 2014 as part of the 10WF-1 West Fork Interceptor and CRWS Feed 2 Interceptor Rehabilitation project. However, the timing of the rehabilitation project was dependent upon the completion of the upstream capacity improvements in the 30MC-1 Relief Interceptor. That project would not only include a new pipeline, but also a significant junction
structure to interconnect the 110-inch WF-1 pipeline, the rehabilitated 72-inch WFIR-1 pipeline and the new 30MC-1 pipeline. Unfortunately, delays in the 30MC-1 project resulted in continued corrosion of the inactive WFIR-1 interceptor to a point that the existing pipeline is no longer a candidate for rehabilitation. As a result, the only option was to construct a new pipeline which would serve as the secondary feed.

Currently, the 110-inch WF-1 conveys all CRWS flows to the plant, except for the flows in the Elm Fork Interceptor System. The proposed 96-inch CRWS Feed 2 Interceptor will replace the 72-inch pipeline which was previously thought to be a candidate for rehabilitation. It has also been decided to have this new pipeline be dedicated to convey the increasing flows from MCIS. This direction would eliminate the need for a significant and complex junction structure as previously described. The end result would be a dedicated feed for MCIS (CRWS Feed 2), a dedicated feed for the Elm Fork System, and a dedicated feed for the Bear Creek, West Fork and Jefferson Tunnel systems (WF-1). The CRWS Feed 2 pipeline will begin at the downstream limits of 30MC-1 (currently under design by Carollo Engineers, Inc. (Carollo)) near IH-30 and terminate at JB-1C.

At its April 2020 meeting, the Board of Directors approved two items which are related to this proposed action with HDR. The first was to approve an amendment to the ESA with Kimley-Horn and Associates, Inc. (Kimley-Horn), to move 550 LF of proposed 90-inch 30MC-1 pipeline from the Carollo project to Kimley-Horn as part of their Meter Station Rehabilitation project. The second was to approve additional funding to Carollo’s contract to allow the 90-inch 30MC-1 project to be designed and bid as a “stand alone” project. It was explained that Kimley-Horn would design the connection to the upstream end of 30MC-1, while HDR would design the connection to the downstream end of 30MC-1 near IH-30. The amended project limits allow for improved construction sequencing and cost savings by eliminating long-term bypass pumping and a complex connection to the WF-1 interceptor under live flow conditions.

STAFF ANALYSIS: Authority management has negotiated an ESA (Exhibit A) with HDR to provide final design engineering services for this project. As outlined in the ESA, total compensation for Basic Engineering Services will be in a lump sum amount of $1,234,187. Additional engineering services that may be required for unanticipated conditions shall be compensated on a personnel time plus expenses basis in an amount not to exceed $200,000 as Special Services. Funding for this ESA will be provided by the CRWS Extendable Commercial Paper/2018/2019 Bond Fund.

In performance of these engineering services, HDR intends to subcontract with historically underutilized businesses to achieve a 25 percent participation goal.

RECOMMENDATION: Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:
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Motion that the Board of Directors:

(a) Authorize the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and HDR Engineering, Inc., in the amount of $1,234,187 for Basic Services and $200,000 for Special Services for final design engineering services associated with the CRWS Feed 2 Interceptor for the Central Regional Wastewater System; and

(b) Authorize the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and HDR Engineering, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost.

Respectfully submitted,

BLAYNE J. JOHNSON, P.E.
Engineer, Capital Improvement Program,
Planning, Design and Construction Administration

BJJ/anf

Exhibit A – Engineering Services Agreement
EXHIBIT A

ENGINEERING SERVICES AGREEMENT
FOR THE
TRINITY RIVER AUTHORITY OF TEXAS

STATE OF TEXAS §

COUNTY OF TARRANT §§

THIS AGREEMENT is made and entered into as of June 24, 2020, by and between the TRINITY RIVER AUTHORITY OF TEXAS, with its principal office at 5300 South Collins Street, Arlington, Tarrant County, Texas 76018 (AUTHORITY) and the firm of HDR ENGINEERING, INC., with its principal office at 17111 Preston Road, Suite 300, Dallas, Dallas County, Texas 75248 (ENGINEER).

WITNESSETH:

WHEREAS, the AUTHORITY owns and operates the Central Regional Wastewater System (CRWS) that receives wastewater from the cities of Arlington, Bedford, Carrollton, Cedar Hill, Colleyville, Coppell, Dallas, Duncanville, Euless, Farmers Branch, Fort Worth, Grand Prairie, Grapevine, Hurst, Irving, Keller, Mansfield, North Richland Hills, and Southlake; the town of Addison; and the Dallas/Fort Worth International Airport; and

WHEREAS, the Mountain Creek Interceptor System is one of the five major interceptor systems that conveys wastewater flows from the CRWS contracting parties to the CRWS plant for treatment; and

WHEREAS, current flows in the West Fork and Mountain Creek Interceptor Systems require additional pipeline conveyance capacity in the service areas; and

WHEREAS, the AUTHORITY’s 30MC-1 90-inch diameter interceptor design contract was amended to eliminate considerable bypass pumping costs and a live flow connection to the AUTHORITY’S 110-inch diameter WF-1 interceptor; and

WHEREAS, the AUTHORITY desires to construct and operate 3,600 linear feet (LF) of corrosion-resistant, 96-inch diameter interceptor that will convey the Mountain Creek Interceptor System wastewater flows from the 30MC-1 interceptor’s downstream endpoint to the AUTHORITY’S junction box JB-1C (PROJECT); and

WHEREAS, the AUTHORITY desires to obtain engineering services in connection with the PROJECT; and

WHEREAS, the ENGINEER represents that it is qualified and capable of performing the engineering services proposed herein, is acceptable to the AUTHORITY, and is willing to enter into an AGREEMENT with the AUTHORITY to perform such services.
NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein, AUTHORITY and ENGINEER agree as follows:

ARTICLE I

RETAINER

The AUTHORITY agrees to retain the ENGINEER and the ENGINEER agrees to perform engineering services in connection with the PROJECT. The AUTHORITY agrees to pay and the ENGINEER agrees to accept fees as specified hereinafter as full and final compensation for the services authorized and accomplished.

It is understood and agreed that no professional services of any nature shall be undertaken under this AGREEMENT by the ENGINEER until ENGINEER is instructed in writing by the AUTHORITY’S General Manager or his designated representative to commence with the work.

ARTICLE II

PROFESSIONAL QUALITY

ENGINEER shall be responsible for the professional quality, technical accuracy, timely completion, and coordination of all designs, drawings, documents, estimates, specifications, reports, studies and other material (collectively the PROJECT DOCUMENTS) and services furnished by the ENGINEER under this AGREEMENT. Approval by the AUTHORITY of PROJECT DOCUMENTS, services, and incidental engineering services shall not in any way relieve the ENGINEER of responsibility for the technical accuracy of the engineering services performed. The AUTHORITY’S review, approval or acceptance of, or payment for any of the services described herein shall not be construed to operate as a waiver of any rights under this AGREEMENT or of any cause of action arising out of the performance of this AGREEMENT.

ARTICLE III

BASIC ENGINEERING SERVICES

ENGINEER agrees to perform BASIC ENGINEERING SERVICES in connection with the PROJECT as hereinafter stated, in accordance with the stipulations in this AGREEMENT. The ENGINEER shall perform BASIC ENGINEERING SERVICES necessary for the development of the PROJECT as follows:

A. TASK I – PROJECT START-UP

(1) Plan and participate in a PROJECT start-up meeting with AUTHORITY to confirm PROJECT scope, personnel, lines of communication, security protocols, and schedule;
(2) Prepare meeting summary (meeting minutes) of the PROJECT start-up meeting and distribute to participants;

(3) Review existing materials and reports, including those obtained from the AUTHORITY, and perform field investigations to establish the final interceptor alignment. The data reviewed will be used in the development of the PROJECT documents and will include, but not be limited to, the following:

(a) Latest system Infiltration/Inflow Assessment;
(b) Available wastewater flow data;
(c) AUTHORITY pipeline numbering system and geographic information system (GIS) mapping;
(d) AUTHORITY details, specifications, design manuals, and guidelines;
(e) Property ownership and tax plat information;
(f) Existing survey data; and
(g) Existing utility, roadway, and site record drawings; and

(4) Contact and coordinate with utility companies to inform them of the PROJECT, update record information, coordinate survey and base mapping information, identify possible conflicts, and establish critical issues for design, PROJECT schedule, and construction. Note areas for potential conflict of lines to be resolved during surveying and design.

B. TASK II – PROJECT MANAGEMENT AND QUALITY ASSURANCE

ENGINEER shall manage professional services to complete the PROJECT. These services will include preparation of PROJECT controls including progress reports, action items log, decision log, design team meetings, technical review committee workshops, schedule and cash flow projections, and invoicing. ENGINEER shall provide professional services in this Task as follows:

(1) Prepare a PROJECT planning document to define PROJECT team, lines of communications, deliverables, schedule, and budgeting for internal use in executing the PROJECT on schedule and within budget and establishing the contents of the PROJECT start-up meeting;

(2) Develop a work plan and PROJECT task schedule; prepare the PROJECT work plan, a document to be used by all participants in the PROJECT to ensure a common understanding of PROJECT goals, scope, and tasks. It will address, but shall not be limited to:

(a) PROJECT definition;
(b) PROJECT resources;
(c) PROJECT schedule;
(d) PROJECT budget;
(e) PROJECT instructions;
(f) Risk Assessment and Management Plan;
(g) Quality Management Plan;
(h) Client Service Plan;
(i) Change Management Plan;
(j) Communications Plan;
(k) Health and Safety Plan;
(l) PROJECT closeout Plan;
(m) Key Personnel Succession Plan; and
(n) Start-up and Commissioning Plan;

(3) Conduct a Project Quality Management (PQM) meeting with the AUTHORITY. The PQM meeting is a facilitated session where key stakeholders participate in a consensus-building exercise to confirm the PROJECT goals and define the critical success factors; the processes, activities, and tasks needed to achieve success of the PROJECT and assign responsibilities for carrying out the tasks. This meeting will be included in the PROJECT start-up meeting;

(4) Schedule and direct regular coordination meetings with the ENGINEER’S design team to manage PROJECT task assignments, action items, and to prepare for monthly progress meetings with the AUTHORITY. ENGINEER will maintain an Action Item Log and Decision Log to monitor PROJECT activity. Coordinate with subconsultants to confirm all PROJECT elements are compatible, integrated, and meet AUTHORITY performance requirements. ENGINEER’S PROJECT Manager shall be the primary client contact and lead communicator to ENGINEER’S staff;

(5) Schedule and conduct up to five monthly progress meetings and two site meetings with the AUTHORITY. In addition to reviewing progress at each meeting, review PROJECT deliverable status, current schedule, outstanding action items, PROJECT bottlenecks that could impact schedule, PROJECT budget status, decisions made, and PROJECT enhancements requested.
Prepare agenda and meeting materials, direct and document meetings to review progress, and facilitate the exchange of ideas and information. Prepare draft meeting minutes to include action lists, decision lists, and PROJECT enhancement lists within four business days to submit to the AUTHORITY for review and approval. Final minutes will be issued within four business days of receipt of review comments or immediately after four days if there are no comments received;

(6) Schedule and conduct up to two task-specific meetings with the AUTHORITY and provide meeting minutes which include action lists, decision lists, and PROJECT enhancement lists;

(7) Furnish the AUTHORITY, when requested, the engineering data necessary for applications for routine permits, submittals, and approvals required by local, state, and federal authorities, and assist AUTHORITY in consultations with appropriate authorities. Coordinate and meet one time with applicable regulatory agencies, which may include but are not limited to the Texas Commission on Environmental Quality, Environmental Protection Agency, and the City of Grand Prairie;

(8) Develop a cash flow projection and schedule for the PROJECT, which will be continuously updated throughout completion of the PROJECT;

(9) Prepare monthly PROJECT Summary Reports and submit with monthly invoice. The report shall contain the following elements:

(a) Summary of work completed to date;
(b) PROJECT budget summary;
(c) PROJECT schedule;
(d) Summary of actions and decisions needed from the AUTHORITY; and
(e) Upcoming PROJECT activities;

(10) Quality Assurance (QA): provide QA/quality control (QC) plan to the AUTHORITY and conduct QA/QC reviews of the deliverables;

(11) QC Review Meetings: plan and participate in five QC review meetings with the AUTHORITY. The meetings will be held at draft Preliminary Design Report (PDR), draft Environmental Evaluation, 60 percent, 90 percent, and 100 percent completion stages. ENGINEER will provide four review sets of the draft and final PDR, and half-scale plans, specifications, and PDF electronic copy at a minimum of ten working days before the review meetings. A meeting memorandum will be prepared documenting major revisions and decisions made during each of the meetings. The meeting locations will be at the AUTHORITY’S offices;
(12) 100 Percent Document Review: provide four review sets of half-scale plans and specifications a minimum of 30 working days before the scheduled advertisement date. AUTHORITY will confirm that 90 percent review comments have been incorporated as appropriate and review design completed after the 90 percent review meeting. AUTHORITY will provide comments to the ENGINEER no later than 15 working days before the schedule advertisement date;

(13) Incorporate the AUTHORITY’S Design and Construction Guidelines when conducting the work defined herein, using the version current at the time of contract execution, or identify in writing where deviations therefrom are proposed; and

(14) Assist the AUTHORITY in the preparation of documents for customer advisory and AUTHORITY Board meetings for this PROJECT. Items may include, but not be limited to:

(a) Presentation slides;
(b) PROJECT site photos;
(c) Bid recommendations; and
(d) Construction documents.

C. TASK III – TOPOGRAPHIC SURVEY

(1) Provide ground surveying services to obtain all field information needed for design of the PROJECT, based on approximately 3,600 LF of pipeline. Establish horizontal and vertical survey controls starting from node 10M (AUTHORITY’S JB-1C to AUTHORITY’S 30MC-1 connection;

(2) Prepare permit-to-survey letters and obtain permission from the owner of each affected property to perform necessary surveys [up to seven]. If property owners do not respond to the initial letter, ENGINEER shall attempt to make contact with landowners by other means, and send a follow-up request letter via certified U.S. Mail, return receipt requested. ENGINEER shall furnish the return receipt to the AUTHORITY as evidence of its compliance with this paragraph, if requested;

(3) Establish horizontal and vertical controls for the PROJECT. The horizontal control shall be based on the Texas State Plane Coordinate System, North Central Zone North American Datum NAD-83 Coordinates and the vertical control being based on North American Vertical Datum NAVD-88. Provide survey notes on design drawings and electronic files with clear location and description of benchmarks and horizontal control points. Benchmarks shall be documented and retraceable;

(4) Prepare planimetric detail based on the survey showing existing visible elements within 100 feet (minimum) of either side of the existing/proposed AUTHORITY
permanent easement (250-foot survey width minimum) including, but not limited to, the following:

(a) Existing pavement, curbs, sidewalks, barrier free ramps, and similar objects;

(b) Lane striping;

(c) Driveways;

(d) Existing storm sewer inlets, manholes, junction boxes, outfalls, and erosion control;

(e) Alignment of existing gas pipelines and gas line easements;

(f) Culverts and bridges;

(g) Railroads;

(h) Guardrails;

(i) Utility manholes, vaults, water valves, water meters, sprinkler heads, telephone poles, power poles, utility markers, other public utilities, and franchise utilities;

(j) Traffic signal poles, cabinets, and other signal equipment;

(k) Signs, excluding temporary signs;

(l) Trees, including diameter and species;

(m) Buildings;

(n) Retaining walls;

(o) Fence limits and material types;

(p) Flowlines of creeks;

(q) Flowlines of manholes, inlets, culverts, and other utility structures;

(r) Property corners;

(s) Field sketches of manholes and meter stations; and

(t) Other applicable physical features that could impact design;
(5) Staking of the existing and proposed easements and the proposed alignment shall be completed once during the design phase of the PROJECT. Provide staking of the centerline of the proposed wastewater interceptor at 50-foot intervals and at points of intersection, points of tangency and points of curvature, after the design of the proposed wastewater interceptor is completed, and as described in Task VIII. If additional staking is requested by the AUTHORITY during design, additional compensation may be considered as a SPECIAL SERVICE;

(6) Stake bore holes for the geotechnical and/or subsurface utility engineering (SUE) and vertically and horizontally locate the bore holes no more than two weeks after drilling is completed;

(7) Based on the ground survey, generate one-foot contours along the alignment corridor;

(8) Utilize aerial photography provided by the AUTHORITY with a one-foot resolution along the proposed alignment corridors;

(9) Prepare composite base map of all features located in the field through the survey;

(10) Provide detail notes at each manhole invert. ENGINEER will provide the XYZ coordinates on existing rim, flowlines, and natural ground elevation at each manhole;

(11) Prepare a property ownership and limits exhibit for the PROJECT using information derived from shapefiles obtained from the relevant Central Appraisal District’s GIS system;

(12) Locate and confirm property lines for the various tracts and parcels crossed by the intended alignment. Prepare a title map that can be used to confirm the limits of the AUTHORITY’S existing easement and to quantify the anticipated number of easement parcels associated with the various alignment options being considered;

(13) Where needed or requested, up to two creek cross sections will be derived to the edges of water in the creek. ENGINEER shall identify areas where existing interceptor is threatened by creek erosion. If flowlines are needed, then that information will be acquired by traditional survey methods. These flowline determination efforts would be considered an additional service to be authorized by the AUTHORITY as a SPECIAL SERVICE;

(14) Perform SUE Quality Level B in general accordance with the recommended practices and procedures described in American Society of Civil Engineers (ASCE) Publication CI/ASCE 38-02 (Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data). Utilize geophysical prospecting equipment to designate the horizontal position of existing underground utilities
that are within the existing proposed design corridor. This level of work includes acquiring as-built documentation from utility companies and making contact with their representatives. The limits of investigation will be 100 feet extended in both directions from the extents of the proposed AUTHORITY easement. The Quality Level B field findings will be surveyed and will be delivered in the form of a CAD base file; and

(15) Perform up to six Level A SUE test holes to confirm the horizontal and vertical location of existing utilities (e.g. gas lines, water lines, and communication lines) that cross the alignment of the proposed interceptor main. To the extent possible, the test holes will be performed as close as possible to anticipated crossing location. The test hole work will be coordinated with the applicable utility company and any necessary permissions or permits will be acquired. The location and results of the test holes will be surveyed and incorporated into PROJECT’S base CAD file and the relevant information will be reflected in the plan sheets and specifications. Submit a separate summary report signed and sealed by a licensed professional engineer of the findings. The report should include site photos, ground elevation, and depth to top of utility elevation, horizontal location coordinates, and type of material of existing utility.

D. TASK IV – GEOTECHNICAL INVESTIGATION

(1) Provide for and coordinate geotechnical investigation required for the preliminary design of the PROJECT;

(2) Drill, classify, and perform pertinent tests on soils at up to six locations. Spacing of the borings shall be no greater than 500-feet. Four borings will be to a minimum depth of 40 feet below existing grade (at least five feet below the proposed flow line of the pipe), one boring will be a minimum depth of 60 feet below existing grade at the 30MC-1 connection point, and one boring will be a minimum depth of 80 feet below existing grade at JB-1C. Two piezometers will be installed into two boreholes after analysis. If number of borings required exceeds the stated amount, additional compensation may be considered as a SPECIAL SERVICE;

(3) Geotechnical testing will be performed to provide design data and recommendations for excavation techniques, structural elements, and any bores associated with the PROJECT. At a minimum, the following soil tests will be performed: ASTM D 1586 “Standard Test Method for Standard Penetration Test and Split-Barrel Sampling of Soil”, ASTM D 2850 “Standard Test Method for Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils”;

(4) Arrange for and provide access to private property necessary for soil borings. In the event access is denied, the ENGINEER shall make an additional request of each landowner by certified U.S. Mail, return receipt requested. If access is still denied or ENGINEER is unable to reach a landowner by other methods, ENGINEER shall furnish evidence of compliance with this Section to the AUTHORITY; and
(5) Prepare a report containing recommendations regarding surface conditions, soil and geologic conditions along proposed pipeline alignment, excavation considerations, and anticipated settlement, compaction, fill and trench protection requirements. The report shall include information required to perform all of the calculations for the pipe trench details. Provide four copies of geotechnical investigation summary report and one electronic copy of report for AUTHORITY’S records, in PDF format. ENGINEER shall include soil boring information in the final Contract Documents. The final geotechnical report shall be offered to interested contractors during the bid phase.

E. TASK V – ENVIRONMENTAL EVALUATION

(1) Collect data in support of evaluating alignment alternatives, and identify requisite permits anticipated to be needed prior to construction of the PROJECT. Potential permits may include but not be limited to, the following:

(a) Clean Water Act Section 404;
(b) Clean Water Act Section 401;
(c) Rivers and Harbors Act Section 10;
(d) Rivers and Harbors Act Section 14 (also known as Section 408);
(e) National Environmental Policy Act;
(f) Endangered Species Act;
(g) Bald and Golden Eagle Protection Act;
(h) Migratory Bird Treaty Act;
(i) Section 106 of the National Historic Preservation Act;
(j) Texas Antiquities Code;
(k) Coastal Management Zone;
(l) Corridor Development Certificate (Associated with Trinity River);
(m) Fresh Water Mussel Survey;
(n) Tree Ordinance;
(o) Urban Forestry;
(p) Executive Orders; and
(q) Federal Emergency Management Agency Coordination – or Local Floodplain Administrator;

(2) Perform an environmental evaluation for this PROJECT to include, but not be limited to, the following tasks:

(a) Obtain background data including, but not limited to, floodplain maps, national wetlands inventory maps, United States Geological Survey (USGS) topographic maps, current and historical aerial photography, and other readily available data;

(b) Conduct a field visit for assessing the existing and proposed alignments and alternatives; and

(c) Prepare environmental opportunities and constraints map for the proposed alignment and alternatives;

(3) Prepare an environmental evaluation technical memorandum (TM) summarizing the findings from the data review and on-site investigation for inclusion in the PDR (Task VII). The memorandum shall identify potential environmental constraints and include maps that identify major constraints. The memorandum will also identify regulatory requirements or resources (if any) that may require additional study for local, state, or federal permitting. Environmental evaluation TM to be included and submit in conjunction with the PDR to the AUTHORITY (Task VII); and

(4) This Task includes identification of required permits for the recommended alternatives. Based on the findings from subtasks (1) and (2) above, ENGINEER will perform the following tasks:

(a) Prepare a permit acquisition plan for those permits associated with the PROJECT. The plan will include a list of local, state, and federal regulatory permits expected to be required to construct the PROJECT;

(b) Schedule expected agency review fees and other information necessary for PROJECT permitting and a permitting checklist; and

(c) Identify additional study requirements, permit compliance activities, and tentative timelines for preparing the necessary local, state, and federal permits prior to construction. ENGINEER will advise the AUTHORITY of additional approvals and related studies identified. Preparation of requisite permits and subsequent agency coordination identified in the permit acquisition plan may be considered as a SPECIAL SERVICE.
F. TASK VI – LEGAL DESCRIPTION, PLAT PREPARATION, AND PERMITTING

(1) Provide ownership research and obtain copies of deeds, easements, subdivision plats, and right of way maps as required to establish the existing interests in property necessary to the construction of the PROJECT;

(2) Establish the location of existing easements and property lines;

(3) Prepare legal descriptions and exhibits for up to two permanent easements and two temporary construction easements, and establish on the ground the location of the improvements on 50-foot intervals, at all property lines, and at all points of curvature and tangency. The legal descriptions and exhibits shall be prepared in accordance with the AUTHORITY’S “Standard for Land Title Surveys and Preparation of Legal Descriptions and Plats.” If additional easements are required for the PROJECT, additional compensation may be requested as a SPECIAL SERVICE;

(4) For each parcel, furnish GIS data compatible with Esri ArcGIS (.shp file). GIS data files must contain both graphic spatial features and attribute database tables. These items should be contained in a single Esri shape-file. ENGINEER may furnish equivalent data in .dwg or .dxf format;

(5) Prepare each parcel plat map with no less than two X/Y coordinates defined on the Texas State Plane Coordinate System, North Central Zone NAD-83 Coordinates;

(6) Assist the AUTHORITY during the land rights acquisition phase by reestablishing on the ground the location of existing and new easements and improvements on 50-foot intervals, and at all points of curvature and tangency, for the purpose of coordination with property owners. Easements shall be re-staked for the foregoing purpose, if requested by the AUTHORITY;

(7) Prepare a right of way strip map at one-inch equals 20 feet horizontal scale to be included in the PROJECT plans. The strip map shall include parcel numbers, ownership, types of existing and proposed easements, area, bearings, and distances; and

(8) Provide a consecutive list of all crossings of property, easements, utility lines, highways, roads, railroads, and public rights of way by engineering station. The list should specify the station number where a PROJECT improvement enters and exits any of the foregoing features.

G. TASK VII – PRELIMINARY DESIGN PHASE

(1) Define the average and maximum build-out flow conditions based on information provided by the AUTHORITY;
(2) Provide a PDR (30 percent design) that evaluates up to three options for the selected alignment to accommodate the needed hydraulic improvements to this segment. Each of these options will assess the structural viability and constructability of alignment based upon construction methods and existing known soil conditions;

(3) Prepare drawings, exhibits, and aerial photographs showing the PROJECT and related interceptors and appurtenances. Each proposed alternative option will be shown on a separate exhibit, to be used during planning and presentations;

(4) Determine the pipeline configuration needed to transport the projected flows;

(5) Review the alignment of the existing pipeline and/or other applicable pipeline improvement(s) in areas to be paralleled and pertinent information regarding land boundaries and ownership in the potentially affected areas;

(6) Develop preliminary pipeline profiles for alternative options. At a minimum the profiles shall be developed based on topographic information obtained from USGS topographic maps along the proposed pipeline routes. The profiles will be reviewed with the AUTHORITY and the alternatives compared to determine advantages and disadvantages of the proposed alternatives based on the profile characteristics. Investigation of subsurface features (e.g., other utilities, pipelines, and structures) may be required in developing the profiles;

(7) Review erosion protection and bank stabilization measures to protect the AUTHORITY’S infrastructure within the limits of the PROJECT;

(8) Develop a listing of potential permitting and regulatory approvals associated with the proposed alignments. These may include archeological study requirements, environmental reviews, and permitting from the United States Army Corps of Engineers, Texas Department of Transportation, cities, utilities, and other major regulatory review;

(9) Prepare preliminary opinion of probable construction cost (OPCC) for up to three alternative options and other proposed improvements. Estimate of land costs will utilize information furnished by the AUTHORITY;

(10) Furnish preliminary alignments to the AUTHORITY and assist the AUTHORITY in identification of the number and location of land parcels affected by the proposed pipeline alignments;

(11) Submit one advance copy of the draft PDR, cost opinion, and associated drawings to the AUTHORITY;

(12) Prepare and participate in one PDR workshop. The objective of the workshop is to present and discuss the findings of the evaluation including information gained from the draft PDR and Draft Environmental Assessment; and
(13) Incorporate comments from the AUTHORITY and submit four copies and two electronic copies (on compact disc (CD) in bookmarked, searchable PDF format) of a draft PDR, cost opinion and associated drawings, and submit four copies and two electronic copies (on CD in bookmarked, searchable PDF format) of the final PDR to the AUTHORITY.

H. TASK VIII – DETAILED DESIGN

(1) Prepare plans and specifications for the PROJECT. The PROJECT is based on the preparation of plans and specifications for approximately 3,600 LF of 96-inch pipe. The plans will also include: connection of the proposed 96-inch interceptor into JB-1C; odor control improvements to JB-1C; and connection site plan and detail to activate entire CRWS Feed 2 and 30MC-1 interceptors. The new pipe sizing will be based on the projected 2060 flows provided by the AUTHORITY. Pipeline design will be based on the recommended alignment in the PDR;

(2) Pipeline drawings will include plan and profiles at one-inch equals 20 feet scale horizontally and one-inch equals four feet vertically on 22- x 34-inch paper size (half size plans will have one-inch equals 40 feet horizontal scale);

(3) Incorporate details from the AUTHORITY and prepare special details as necessary;

(4) Prepare technical specifications for the PROJECT to incorporate into the contract documents provided by the AUTHORITY, including, but not limited to:

(a) Pipe materials;

(b) Permanent access fences and signage; and

(c) Pipeline crossing highways, streets, railroads, by boring, tunneling, or open cut;

(5) Incorporate the AUTHORITY’S Design and Construction Guidelines (https://guidelines.trinityra.org) when conducting the work defined herein, using the version current at the time of contract execution, or identify in writing where deviations therefrom are proposed;

(6) Prepare general notes for Contractor’s preparation of Stormwater Pollution Prevention Plan;

(7) Prepare structural design drawings for siphons, junction boxes, and/or aerial crossing (if necessary);

(8) Provide recommendation for the material of the proposed interceptor and manhole structures to meet the AUTHORITY’S guidelines;
(9) Prepare the drawings to be included in the construction plans; including, but not limited to, the following:

(a) Cover sheet;
(b) General notes;
(c) PROJECT layout, including temporary and permanent access areas, laydown, and staging areas for the PROJECT;
(d) Survey control;
(e) Erosion control plan, notes and details;
(f) Bank stabilization plan, notes and details;
(g) Demolition plan/profile (if necessary);
(h) Structural design sheets;
(i) Plan sheet reference;
(j) Right of way strip map;
(k) Pipeline plan/profile sheets;
(l) Details and connections;
(m) Wastewater bypass pumping criteria, requirements, and details (if necessary);
(n) The ENGINEER shall consider identifying and evaluating the need for Traffic Control Plan (TCP) for the construction of the PROJECT. If TCP is needed, the ENGINEER shall provide these plans and be compensated under SPECIAL SERVICES. Any other TCP permits and/or coordination with the public agency shall be considered under this task; and
(o) Geotechnical bore log(s);

(10) Prepare specifications for TCPs;

(11) Prepare survey northing and easting coordinates in electronic format (Texas State Plane, NAD 83) of all the AUTHORITY’S proposed structures, include the surface coordinate adjustment factor, and detailed datum information used for uploading into the AUTHORITY’S GIS;

(12) Review information provided in the geotechnical report for design of the PROJECT. Prepare a TM, including design calculations, sealed by a licensed
Texas Board Professional Engineer that summarizes the trench and embedment design for installation of flexible and rigid pipe. Design parameters shall include, but are not limited to, the following:

(a) Maximum allowable deflection;

(b) Pipe stiffness;

(c) Native soil strength (E’n);

(d) Embedment strength (E’b); and

(e) Depth of cover;

(13) Incorporate the general notes, details, foundation design, and detailing and special specifications into the PROJECT documents;

(14) Prepare an OPCC for review by AUTHORITY. The OPCC will be updated for the 60 percent, 90 percent, and 100 percent QC review meetings;

(15) Prepare and submit plans and specifications for the 60 percent, 90 percent, and 100 percent design reviews, at the level of completion sufficient to the level of design at the time of the submittal. Each such submittal will include the various discipline plans, technical specifications, and details as appropriate to the level of design at the time of the submittal;

(16) Submit plans and specifications and other documents to the AUTHORITY for delivery to applicable regulatory agencies for approval and affected cities, including three sealed sets of plans and specifications at least 30 days prior to advertisement for bid;

(17) Provide AutoCAD or other electronic files in a format suitable for the AUTHORITY’S use;

(18) Address all comments from the AUTHORITY and other regulatory agencies and prepare 100 percent plans and specifications for bidding purposes;

(19) Manage the quality of the PROJECT deliverables throughout the development of the PROJECT. Specific activities that ENGINEER may employ with approval of the AUTHORITY to manage the quality of the PROJECT include the following:

(a) Peer review planning concepts by members of ENGINEER’S senior staff; and

(b) Constructability review; and

(20) Participate in a final alignment walk-through during the detailed design phase at a time specified by the AUTHORITY.
I. TASK IX – COMPETITIVE SEALED PROPOSAL (CSP)

Upon completion of the design services and approval of the final PROJECT documents by the AUTHORITY and required regulatory agencies, ENGINEER will provide the following services for the Detailed Design Task for the PROJECT improvements assuming CSP:

(1) Assist the AUTHORITY with advertisement of the PROJECT (assumed four week proposal period). Help establish proposal dates to avoid conflicts with similar projects bidding at or near the same time. Provide a Request for Proposals to the AUTHORITY for publication in legal notices for the PROJECT;

(2) Provide the AUTHORITY with up to eight half-size sets of design drawings, eight sets of design specifications, and one electronic copy of all documents (on CD in bookmarked, searchable PDF format) for the PROJECT. The procurement construction documents will be signed and stamped by authorized representatives of the ENGINEER holding current registration in the State of Texas in the respective drawing discipline;

(3) Post electronic procurement sets, including plans and specifications, to an electronic bid distribution system for Contract Document sales to prospective offerors and notification of plan rooms;

(4) Respond to questions related to the distribution of documents, construction contract provisions, proposal requirements, and technical questions regarding the PROJECT up to four days prior to proposal opening;

(5) Prepare, post, and distribute addenda addressing additions, deletions, modifications, or interpretations to the Contract Documents up to two days prior to proposal opening;

(6) Assist the AUTHORITY in conducting one non-mandatory pre-proposal conference for the PROJECT with potential offerors, and prepare minutes and responses. Responses to the pre-proposal conference will be in the form of addenda issued after the conference. ENGINEER will assist in conducting a tour of the PROJECT site after the conference;

(7) Assist the AUTHORITY in receiving and recording proposals at the formal proposal opening for the PROJECT, evaluate the information contained in the proposal documents for conformance with requirements of the construction Contract Documents, prepare initial monetary offer tabulation, and compare proposal costs with estimated costs and available budget;

(8) Evaluate the information provided by the offerors as a part of the proposal package. Review the proposals for conformance with the proposal requirements and conduct reference checks. Prepare a memo identifying any deficiencies in Proposal as to meeting submission requirements. Prepare a summary of
findings for the AUTHORITY related to the proposal documents. Up to six proposals will be reviewed. Review of additional proposals shall be compensated as a SPECIAL SERVICE;

(9) Conduct a proposal evaluation workshop with the AUTHORITY to present the summary of findings to the AUTHORITY, discuss with Selection Committee the interview evaluations, answer questions, facilitate discussions, and develop scoring;

(10) Assist AUTHORITY in conducting up to four interviews with Offerors. All interviews are assumed to be conducted on the same day. Conduct a post-interview evaluation workshop with AUTHORITY to finalize evaluations, assist in finalization of evaluation and scoring of the proposals from the proposers interviewed by facilitating discussions and answering questions, and assist in the selection of the best value proposal by answering final questions from Selection Committee during its final deliberations. Additional interviews beyond initial four interviews shall be compensated as a SPECIAL SERVICE;

(11) At the conclusion of the AUTHORITY’S evaluation scoring, the AUTHORITY Selection Committee will recommend award of the contract consistent with the requirements of the construction Contract Documents;

(12) Negotiations assistance shall be compensated as a SPECIAL SERVICE; and

(13) Prepare conformed and executed documents for construction of the PROJECT. The AUTHORITY will provide instructions for preparation of documents for execution and construction. Furnish up to two full-size drawings, ten half-size drawings, and 12 specification sets (four executed and eight conformed) to the AUTHORITY. Furnish up to five full-size drawings, five half-size drawings, and five specification sets (two executed and three conformed) to the Contractor for the PROJECT. A total of six copies of the executed specifications will be prepared and stamped “Executed” for the PROJECT. Provide three CDs with a copy of the final conformed documents in electronic format (bookmarked, searchable PDF) for the PROJECT.

ARTICLE IV
SPECIAL ENGINEERING SERVICES

Various SPECIAL SERVICES incidental to the PROJECT, but not within the scope of the BASIC ENGINEERING SERVICES covered by ARTICLE III preceding, which may be performed or arranged for separately by the AUTHORITY, or may be added to the ENGINEER’S responsibilities by mutual agreement and written authorization include, but are not necessarily limited to, the following:

(1) Perform additional video inspection and/or pipeline cleaning;
Perform additional subsurface excavation in the event such excavation is required to locate existing facilities;

Prepare legal descriptions and plats in excess of those provided in ARTICLE III;

Perform geotechnical assessments to determine soil, water table, or trenching characteristics;

Complete redrawing of construction plan sheets, if required as a result of changes made in the scope of the construction contract after submission of final plans to AUTHORITY;

Observe on-site conditions to evaluate exposed conditions, dewatering techniques, or changed conditions;

Coordinate with landowners for right of entry or other PROJECT related requirements;

Provide additional full-size and/or half-size final plan sets and specifications for the PROJECT in excess of the number required under ARTICLE III;

Provide additional borings which may be occasioned by the depth to rock being deeper than anticipated or because of changes in geological conditions which necessitate additional evaluation to properly define the stratigraphic conditions; and

Provide any other services otherwise excluded in this AGREEMENT but customarily furnished in accordance with generally accepted engineering practices.

ARTICLE V

SERVICES BY THE AUTHORITY

The AUTHORITY and its representatives will render services inclusive of the following:

Provide available criteria and full information as to the AUTHORITY’S requirements for the PROJECT;

Assist the ENGINEER by placing at his disposal all available written data pertinent to the PROJECT;

Examine documents submitted by the ENGINEER and render a decision pertaining thereto promptly, to avoid unreasonable delay in the progress of the ENGINEER’S services;

Furnish information required as expeditiously as possible for the orderly progress of the work;
(5) The General Manager of the AUTHORITY or his designated representative shall appoint, in writing, a representative that the ENGINEER shall be entitled to rely upon regarding decisions made by the AUTHORITY. All subsequent communication to the AUTHORITY shall be deemed made when conveyed in writing to the representative at the location specified in ARTICLE XV, NOTICES; and

(6) The services, information, and reports required by this ARTICLE, inclusive, shall be furnished at the AUTHORITY'S expense, and the AUTHORITY will apprise the ENGINEER of any known inaccuracies or inconsistencies in the information provided.

ARTICLE VI

COMPENSATION

A. BASIC ENGINEERING SERVICES

For and in consideration of the BASIC ENGINEERING SERVICES (ARTICLE III) to be rendered by the ENGINEER, the AUTHORITY shall pay, and the ENGINEER shall receive compensation as hereinafter set forth. All remittance by the AUTHORITY for such compensation shall either be mailed or electronically delivered to the financial institution identified by ENGINEER.

Compensation for BASIC ENGINEERING SERVICES shall be paid by the AUTHORITY to the ENGINEER for all services required for work stated under ARTICLE III, in the following lump sum amounts:

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task I</td>
<td>Project Start-Up</td>
<td>$19,707</td>
</tr>
<tr>
<td>Task II</td>
<td>Project Management and Quality Assurance</td>
<td>$68,679</td>
</tr>
<tr>
<td>Task III</td>
<td>Topographic Survey</td>
<td>$58,245</td>
</tr>
<tr>
<td>Task IV</td>
<td>Geotechnical Investigation</td>
<td>$92,757</td>
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<tr>
<td>Task V</td>
<td>Environmental Evaluation</td>
<td>$36,619</td>
</tr>
<tr>
<td>Task VI</td>
<td>Legal Descriptions, Plat Preparation and Permitting</td>
<td>$17,600</td>
</tr>
<tr>
<td>Task VII</td>
<td>Preliminary Design Phase</td>
<td>$144,858</td>
</tr>
<tr>
<td>Task VIII</td>
<td>Detailed Design</td>
<td>$732,996</td>
</tr>
<tr>
<td>Task IX</td>
<td>Competitive Sealed Proposal (CSP)</td>
<td>$62,726</td>
</tr>
</tbody>
</table>

B. SPECIAL SERVICES

For and in consideration of the SPECIAL SERVICES set forth in ARTICLE IV, herein, the AUTHORITY shall pay and the ENGINEER shall receive compensation for personnel time plus expenses in an amount not to exceed Two Hundred Thousand Dollars ($200,000) to be paid as follows:
For all the ENGINEER’S personnel time applied to the SPECIAL SERVICES, compensation shall be based on "Direct Salary" times a multiplier of 2.95, in accordance with Attachment A.

All direct non-labor expenses, including mileage, travel and lodging expenses, but excluding subcontract expenses, applied to the SPECIAL SERVICES, shall be paid at invoice or internal office cost plus a ten percent service charge. Subcontract expenses shall be paid at direct cost plus a five percent service charge. Compensation for subcontract personnel time must also comply with the limits set forth in Attachment A, unless approved in writing by the AUTHORITY prior to the rendition of subcontract services.

C. METHOD OF BILLING

For services performed by ENGINEER for AUTHORITY compensated as lump sum amounts, ENGINEER shall submit statements monthly or less frequently reflecting ENGINEER’S requested compensation for that portion of the BASIC ENGINEERING SERVICES completed by ENGINEER.

For services performed by ENGINEER for AUTHORITY compensated as personnel time plus expenses, ENGINEER shall submit statements monthly or less frequently reflecting ENGINEER’S requested compensation for that portion of the SPECIAL SERVICES completed by ENGINEER. Along with each separate request for payment of these services, ENGINEER shall submit to the AUTHORITY documentation substantiating all of the actual costs for which ENGINEER has requested compensation, including but not limited to the following:

1. The name of each individual performing services, individual’s billing category, the individual's direct salary, and the number of hours associated with each individual's performance of services for the period of time identified with any billing invoice; and

2. A copy of any invoices paid directly by the ENGINEER for any outside services or product which relate to the PROJECT, and which are requested by ENGINEER to be reimbursed by AUTHORITY.

All records pertaining to services for which payment has been made based upon ENGINEER’S actual costs times a multiplier shall be subject to audit by the AUTHORITY in accordance with ARTICLE VII. ENGINEER may be required to furnish additional records and/or data in addition to the above, as a response to AUTHORITY’S auditing process specified in ARTICLE VII.

D. TIME OF PAYMENT OF COMPENSATION

The ENGINEER shall submit a request for partial payments for services on a monthly basis, as evidenced by monthly statements submitted by the ENGINEER to the AUTHORITY. Final payment for services authorized shall be due upon completion of these services.

Should the AUTHORITY fail to make payment to the ENGINEER, the sum named in any partial or final statement, and when payment is past due for more than thirty days, then the
AUTHORITY shall pay to the ENGINEER, in addition to the sum shown as due by such statement, interest thereon at the rate of five percent per annum from the date due, as provided herein until fully paid, which shall fully compensate ENGINEER for any injury arising from such delay in payment.

However, in the event that the sum shown as due to the ENGINEER by such statement shall be disputed, questioned, or objected to by the AUTHORITY, then said rate of five percent per annum from the date due shall only apply to that portion or amount of payment which is finally and mutually agreed upon by AUTHORITY and ENGINEER to be rightfully due and owing to the ENGINEER.

ARTICLE VII

AUDIT OF RECORDS

All records of the ENGINEER of a financial or timekeeping basis which have been used to determine the fees earned by the ENGINEER and billed to AUTHORITY on the basis of "Salary Cost" times a multiplier shall be open to inspection and subject to audit and/or reproduction by AUTHORITY'S agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of cost of the services at the conclusion of the scope of all services to be performed under this AGREEMENT. The relationship between Direct Salary and Salary Cost has been identified on Attachment A and is not subject to an audit or a redetermination of any kind. In addition, this ARTICLE shall apply to Subcontractors and Direct Purchases only to the extent of invoices received by ENGINEER and evidence of payment for such invoices in the possession of ENGINEER. In its audits, the AUTHORITY may require inspection and copying from time to time and at reasonable times and places of any and all information, materials and data of every kind and character that may in AUTHORITY'S judgment have any bearing on or pertain to the payments subject to this audit. The AUTHORITY or its designee shall be afforded access to all of the ENGINEER'S records pursuant to the provisions of this ARTICLE at the conclusion of the term of the AGREEMENT and for a period of three years after final payment.

ARTICLE VIII

LIABILITY AND INSURANCE MATTERS

During the term of this AGREEMENT, ENGINEER shall, to the fullest extent permitted by law, maintain, and shall require its subcontractors to maintain:

(1) Professional liability insurance in an amount and with carriers satisfactory to AUTHORITY. If the professional liability insurance is written on a “claims made” form, a policy shall: 1) be in force until acceptance of the PROJECT improvements by the AUTHORITY; 2) be in force for a period of three years after acceptance of the PROJECT improvements by the AUTHORITY; and, 3) have a retroactive date on or prior to the effective of this AGREEMENT;

(2) Public liability, commercial general liability and umbrella policies (all including blanket contractual liability coverage for all liabilities assumed in this
AGREEMENT, including all indemnification obligations set forth in ARTICLE XIV) and automobile insurance for bodily injury, and property damage, and workers’ compensation coverage on all of ENGINEER’S or its subcontractors’ employees working on the PROJECT;

(3) All insurance policies referenced in paragraph (2) above, except workers’ compensation coverage, shall, to the fullest extent permitted by law, name and cover the AUTHORITY as an additional insured, by policy declaration, with coverage being primary, and all said insurance policies shall include a waiver of subrogation, and shall be in amounts and with carriers satisfactory to AUTHORITY;

(4) ENGINEER shall furnish to the AUTHORITY certificates (and upon request endorsements and policies) reflecting that the above-required insurance coverages are in full force and effect prior to ENGINEER’S execution of this AGREEMENT and also thereafter within seven days of the AUTHORITY’S request. Policies shall not be subject to endorsements, exclusions, limitations, conditions or restrictions inconsistent with the insurance requirements to be fulfilled by the ENGINEER, and all policies shall be written through companies duly approved to transact that class of insurance in the State of Texas. The AUTHORITY prior to the effective date of this AGREEMENT must approve all said insurance in writing. Said certificates of insurance shall be attached hereto as “Attachment B” and shall be incorporated herein for all purposes; and

(5) Approval, disapproval or failure to act by AUTHORITY regarding any insurance required by this AGREEMENT shall not relieve ENGINEER of full responsibility or liability, if any, for liabilities and damages as set forth in the AGREEMENT. Neither shall the insolvency or denial of liability by any insurance company relieve the ENGINEER of liability.

ARTICLE IX

ASSIGNMENT

Neither this AGREEMENT, nor any right privilege or cause of action arising hereunder may be assigned by ENGINEER, or any of ENGINEER’S subcontractors, in whole or in part for any purpose and whether in settlement of litigation or not, and any purported assignment shall be void and unenforceable without the written consent of the AUTHORITY. The AUTHORITY and the ENGINEER each binds itself and its successors and assigns to the other party with respect to all covenants of this AGREEMENT.

ARTICLE X

TERMINATION

In connection with all the engineering services outlined or contemplated above, it is agreed that the AUTHORITY or the ENGINEER may cancel or terminate this AGREEMENT upon thirty days written notice to the other, with the provision and understanding that
immediately upon receipt of notice of such cancellation from either party to the other, all work and labor being performed under this AGREEMENT shall immediately cease, pending final cancellation at the end of such thirty day period, and further provided that the ENGINEER shall be compensated in accordance with the terms of this AGREEMENT for all work accomplished prior to the receipt of notice of such termination. All completed or partially completed PROJECT DOCUMENTS prepared under this AGREEMENT shall then be delivered to the AUTHORITY, which it may use without restraint. All rights, duties, liabilities, and obligations accrued prior to such termination shall survive termination. ENGINEER shall be liable for any damages suffered by the AUTHORITY as a result of ENGINEER’S termination of this AGREEMENT.

ARTICLE XI

PROJECT DOCUMENTS

All PROJECT DOCUMENTS are and shall become the property of the AUTHORITY, which it may use without restraint. The ENGINEER is not responsible and is hereby released from responsibility for the AUTHORITY’S use of the documents for any purpose other than for this PROJECT. The ENGINEER may retain a set of reproducible record copies of drawings and other documents; however, ENGINEER shall not provide to, or use this work product on behalf of, any person or entity without the express written consent of the AUTHORITY.

ARTICLE XII

PRIVATE LAND ENTRY

ENGINEER shall not enter any property owned by others on the AUTHORITY’S behalf to survey, to perform soil tests, or for other reasons related to the performance of services under this AGREEMENT until the ENGINEER has secured the landowner’s permission to so enter and perform such activities.

ARTICLE XIII

LAWS AND ORDINANCES

ENGINEER shall at all times observe and comply with all federal, state, and local laws, ordinances, rules, regulations, and orders of any public authority, which in any manner affect this AGREEMENT or the PROJECT. ENGINEER agrees, moreover, not to discriminate against any employee or applicant for employment because of race, religion, color, sex, age, disability, or national origin. ENGINEER agrees to comply with the Immigration Reform and Control Act of 1986 and the Americans with Disabilities Act of 1990. The ENGINEER agrees that the indemnification provisions of ARTICLE XIV INDEMNIFICATION below encompass any failure by the ENGINEER to comply with this ARTICLE.
ARTICLE XIV

INDEMNIFICATION

To the fullest extent permitted by law, ENGINEER DOES HEREBY COVENANT AND CONTRACT TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS THE AUTHORITY ALL OF ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, from and against any and all liability, claims, suits, demands, causes of action, damages, expenses and costs, including all expenses of litigation, and/or settlement of any character, type or description (including expert/consultant fees and attorneys’ fees, and expenses of alternative dispute resolution) arising out of or in connection with and to the extent attributable to the intentional acts or omissions of ENGINEER or its agents, subcontractors, consultants or employees in the execution or performance of this AGREEMENT, provided that the claims, suits, losses, damages, causes of action, expenses, fees or liability of whatever nature arise in whole or in part from the negligence or other act or omission of ENGINEER or any of its officers, officials, agents, subcontractors, consultants, employees or invitees. ENGINEER contracts to indemnify and protect AUTHORITY from any liability, claims, suits, losses, damages, attorneys’ fees or causes of action due to ENGINEER’S negligence, joint or concurrent negligence, error or omission to the extent that said liability, claims, suits, losses, damages, attorneys’ fees or causes of action arise out of or in connection with the acts or omissions of ENGINEER or its agents, subcontractors, consultants, or employees. This obligation shall not be defeated by the contributory, joint or concurrent negligence or fault of the AUTHORITY, but shall be limited proportionately to the extent of that negligence or fault, as ultimately adjudged by the finder of fact.

ENGINEER agrees that the AUTHORITY has sole discretion and control over the selection and retention of any attorneys, experts or consultants, in fulfillment of ENGINEER’S defense and indemnification obligations hereunder.

ARTICLE XV

NOTICES

All notices and communications under this AGREEMENT to be delivered to the AUTHORITY shall be sent to the address of the AUTHORITY as follows, unless and until the ENGINEER is otherwise notified:

Trinity River Authority of Texas
P.O. Box 240
Arlington, Texas 76004-0240

Attention: Mr. Gary N. Oradat, P.E.
Executive Manager
Planning, Design and Construction Administration
All notices and communications under this AGREEMENT to be delivered to the ENGINEER shall be sent to the address of the ENGINEER as follows, unless and until the AUTHORITY is otherwise notified:

HDR Engineering, Inc.
17111 Preston Road, Suite 300
Dallas, TX 75248

Attention: Mr. Ramon F. Miguez, P.E.
Principal

ARTICLE XVI

INDEPENDENT CONTRACTOR

The services performed hereunder by the ENGINEER shall be subject to AUTHORITY’S inspection and approval, but the detailed manner and method of doing said services shall be under the control of the ENGINEER. In the performance of services hereunder, ENGINEER shall be deemed an independent contractor, and any of its employees performing services required hereunder shall be deemed solely employees of ENGINEER or its subcontractor, and not employees of the AUTHORITY.

ARTICLE XVII

SUBCONTRACTORS

In fulfilling its duties pursuant to this AGREEMENT, it is anticipated that the ENGINEER may subcontract to individuals, corporations, organizations, governments or governmental subdivisions or agencies, partnerships, associations, or other legal entities. Such subcontracts may be entered into only with written approval from the AUTHORITY.

The AUTHORITY encourages ENGINEER to provide equal opportunity to historically underutilized business enterprises, and ENGINEER agrees that qualified historically underutilized business enterprises, including minority-owned and female-owned businesses, and labor-surplus firms located in the PROJECT area shall have the maximum practicable opportunity to participate in the performance of AUTHORITY contracts and subcontracts. ENGINEER agrees that it will attempt to achieve at least twenty-five percent participation by historically underutilized business enterprises in the performance of this PROJECT, and will routinely submit evidence to AUTHORITY on the degree to which this goal is met. ENGINEER shall include this ARTICLE in all its contracts and in all their subcontracts directly related to this PROJECT.

ARTICLE XVIII

PRIOR AGREEMENTS SUPERSEDED

This AGREEMENT constitutes the sole and only Agreement of the parties hereto and supersedes any prior understanding or oral or written Agreements between the parties.
regarding the subject matter of this AGREEMENT, and any and all changes, modifications or alterations of this AGREEMENT must be in writing and approved by both AUTHORITY and ENGINEER.

ENGINEER releases and waives any and all causes of action of whatever nature, or any other legal theory arising out of any prior understanding or oral or written Agreements between the parties, or any subsequent oral understanding or Agreements between the parties, regarding the subject matter of this AGREEMENT, from any and all liability damages of any kind known or unknown, whether in contract or tort.

**ARTICLE XIX**

**LEGAL CONSTRUCTION**

In case any one or more of the provisions contained in this AGREEMENT shall be for any reason held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and this AGREEMENT shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein. The validity of this AGREEMENT and of any of its terms or provisions, as well as the rights and duties hereunder, shall be governed by the laws of the State of Texas. All amounts due under this AGREEMENT, including damages for its breach, shall be paid in Tarrant County, Texas, said Tarrant County, Texas being the place of performance as agreed to by the parties to this AGREEMENT. In the event that any legal proceeding is brought to enforce this AGREEMENT or any provision hereof, the same shall be brought in Tarrant County, Texas.

Nothing in this AGREEMENT is intended to waive any governmental immunity available to AUTHORITY under Texas law or waive any defenses of ENGINEER or AUTHORITY under Texas law. This AGREEMENT shall not be construed for the benefit of any third party, nor does it create or grant any right or cause of action in favor of any third party against AUTHORITY or ENGINEER.

**ARTICLE XX**

**REPRESENTATIONS**

ENGINEER represents that no officer, employee, or agent of the AUTHORITY has sought or received compensation in any way with respect to the consideration or execution of this AGREEMENT, and in no event will ENGINEER pay a fee to, or in any other manner compensate AUTHORITY officers, employees, or agents in connection with the approval or performance of this AGREEMENT. ENGINEER expressly warrants and represents that no promise or agreement which is not herein expressed has been made to ENGINEER in executing this AGREEMENT and ENGINEER is not relying upon any such statement or representation of AUTHORITY, its officials, officers, agents or employees in entering into this AGREEMENT. ENGINEER is relying on its own judgment in entering into this AGREEMENT and has been represented by independent legal counsel in this matter.

A breach of any provision contained in this ARTICLE shall result in automatic termination of this AGREEMENT. Upon such termination, the AUTHORITY may use all PROJECT
DOCUMENTS prepared under this AGREEMENT as provided in ARTICLE X, TERMINATION, and ENGINEER shall be liable for all damages to the AUTHORITY occasioned by a termination under this ARTICLE.

ARTICLE XXI

TERM OF AGREEMENT AND TIME OF PERFORMANCE

This AGREEMENT shall be effective the ______ day of __________________, 202__, and ENGINEER shall complete BASIC ENGINEERING SERVICES within Fifteen Months after receipt of first written authorization to proceed with Tasks in ARTICLE III. This AGREEMENT shall continue in full force and effect until September 30, 2021. AUTHORITY may, on its own determination, extend the term of this AGREEMENT by written agreement with ENGINEER. All payments and liabilities accrued prior to termination shall survive the termination.

IN WITNESS WHEREOF, the parties acting under authority of their respective governing bodies have caused this AGREEMENT to be executed in several counterparts, each of which is deemed to be an original, as of the day and date written above.

[SIGNATURES ON THE FOLLOWING PAGE]
PROCUREMENT VERIFICATION

The solicitation and contractor selection process used in the procurement of this Agreement complies with Texas law and Authority policy.

HOWARD S. SLOBODIN
General Counsel
VERIFICATION REQUIRED BY TEXAS GOVERNMENT CODE CHAPTER 2270

By signing below, the signatory hereby verifies that the firm it represents:

1. Does not boycott Israel; and,
2. Will not boycott Israel during the term of the contract.

SIGNED BY:

Print Name & Title: ________________________________________________________________

Firm Name: ________________________________________________________________

Date Signed: ________________________________________________________________

NOTARIZATION

THE STATE OF _________  )
COUNTY OF _________  )

BEFORE ME, the undersigned notary public on this day personally appeared ______________, on behalf of ______________ (Company), who, being duly sworn, stated under oath that he/she has read the foregoing verification required by Texas Government Code Section 2270.002 and said statements contained therein are true and correct.

SWORN TO AND SUBSCRIBED before me on the_______day of __________, 202__.

________________________________
NOTARY PUBLIC IN AND
FOR THE STATE OF ______________

The following definitions apply to Texas Government Code Section 2270.001:

(1) "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and

(2) "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

State law requires any firm entering into an agreement or contract with the Authority to complete the foregoing verification. TEX. GOV’T CODE § 2270.002.
Attachment A

HDR Engineering, Inc.

HOURLY BILLING RATES

June 2020

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>BILLING RATE RANGES*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clerical</td>
<td>$110 – $175</td>
</tr>
<tr>
<td>Engineer-In-Training</td>
<td>$110 – $140</td>
</tr>
<tr>
<td>Senior Draftsperson</td>
<td>$155 – $180</td>
</tr>
<tr>
<td>Environmental Scientist</td>
<td>$150 – $190</td>
</tr>
<tr>
<td>Project Engineer</td>
<td>$135 – $280</td>
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<tr>
<td>Project Manager</td>
<td>$275 – $350</td>
</tr>
<tr>
<td>Principal</td>
<td>$295 – $360</td>
</tr>
</tbody>
</table>

*The above billing rates are based upon Direct Salary (or Raw Labor) times a multiplier of 2.95.
BACKGROUND: The Trinity River Authority owns and operates the Central Regional Wastewater System (CRWS), which includes a wastewater treatment plant in Dallas, Texas, which is currently rated for an annual average flow capacity of 189 million gallons per day. Increasing quantities of non-dispersibles (e.g. rags) continue to be received at the plant and have accumulated in several areas. These accumulations decrease the efficiency of the treatment processes.

The current screening facilities at influent Pump Station Nos. 6 and 6A capture large quantities of non-dispersibles, but significant quantities of materials still make it through into the plant. This causes clogging of pipes and equipment and requires frequent manual removal. Staff has observed increasing wear on the existing Primary Clarifier Nos. 5 through 8, and managed recurrent equipment breakdowns and maintenance needs. In the future, non-dispersible materials could disrupt operations and could potentially damage the future solids thermal hydrolysis facilities. Garver, LLC, completed a Master Plan Screening Evaluation in 2018, with recommended improvements for screening facilities to improve screening efficiency and reliability. These recommendations were prioritized and capital projects were created to manage the needs.

The first of these recommendations to be implemented was the preliminary design of the new Headworks A (North Plant) Fine Screen Facility in August 2018. The final design of this project was approved in February 2019. During design, management determined that pre-purchasing the screening equipment would allow the design to be finalized and reduce the construction timeframe. The project was approved by the Board of Directors for construction in April 2020. Now proposed by management is the Headworks B Fine Screen Improvements project, a continuation of the recommended fine screening improvements.

The Authority desires to proceed forward with Jacobs Engineering Group Inc. (Jacobs) for preliminary design for the Headworks B Fine Screen Improvements. These improvements include replacing the existing four half-inch climber screens with eight fine screens. The pre-purchase of the fine screens for Headworks B has not yet been determined at this time.
The improvements also include new washer compactors, screening conveyance, channel gates, odor control improvements, instrumentation, and associated electrical work.

As part of the preliminary design, Jacobs will update the Authority’s hydraulic model to reflect the addition of fine screens. In addition, Jacobs will undertake computational fluid dynamics modeling through the Headworks B facility, to determine the flow conditions through the existing channels. This same evaluation was also conducted on the new Headworks A Fine Screen Facility.

STAFF ANALYSIS: Authority management has negotiated an Engineering Services Agreement (ESA) with Jacobs (Exhibit A) to provide preliminary design engineering services for this project. As outlined in the ESA, total compensation for Basic Engineering Services will be in a lump sum amount of $526,264. Additional engineering services that may be required for unanticipated conditions shall be compensated on a personnel time plus expenses basis in an amount not to exceed $50,000 as Special Services. Funding for this ESA will be provided by the CRWS Extendable Commercial Paper/2018/2019 Bond Fund.

In performance of these engineering services, Jacobs intends to subcontract with historically underutilized businesses to achieve a 25 percent participation goal.

RECOMMENDATION: Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors:

(a) Authorize the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Jacobs Engineering Group Inc. in the amount of $526,264 for Basic Services and $50,000 for Special Services for preliminary design engineering services associated with the Headworks B Fine Screen Improvements at the Central Regional Wastewater System; and

(b) Authorize the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Jacobs Engineering Group Inc. as are deemed prudent in his judgment provided the same do not increase the total approved cost.

Respectfully submitted,

DUSTY D. BRANNUM, P.E.
Engineer, Capital Improvements Program
Planning, Design and Construction Administration

DDB/anf

Exhibit A – Engineering Services Agreement
EXHIBIT A

ENGINEERING SERVICES AGREEMENT
FOR THE
TRINITY RIVER AUTHORITY OF TEXAS

STATE OF TEXAS

COUNTY OF TARRANT

THIS AGREEMENT is made and entered into as of June 24, 2020, by and between the TRINITY RIVER AUTHORITY OF TEXAS, with its principal office at 5300 South Collins Street, Arlington, Tarrant County, Texas 76018 (AUTHORITY) and the firm of Jacobs Engineering Group Inc., with its principal office at 1999 Bryan Street, Suite 1200, Dallas, Dallas County, Texas 75201 (ENGINEER).

WITNESSETH:

WHEREAS, the AUTHORITY owns and operates the Central Regional Wastewater System (CRWS) that receives wastewater from the cities of Arlington, Bedford, Carrollton, Cedar Hill, Colleyville, Coppell, Dallas, Duncanville, Euless, Farmers Branch, Fort Worth, Grand Prairie, Grapevine, Hurst, Irving, Keller, Mansfield, North Richland Hills, and Southlake; the town of Addison; and the Dallas/Fort Worth International Airport; and

WHEREAS, the AUTHORITY recently completed the CRWS Master Plan Screening Evaluation, which prioritized multiple screening projects; and

WHEREAS, increasing non-dispersible loads entering the treatment plant disrupt operations and escalate maintenance activities; and

WHEREAS, the AUTHORITY desires to implement the recommendations to address this need by designing and constructing new screens in Headworks B (PROJECT); and

WHEREAS, the AUTHORITY desires to obtain engineering services in connection with the PROJECT; and

WHEREAS, the ENGINEER represents that it is qualified and capable of performing the engineering services proposed herein, is acceptable to the AUTHORITY, and is willing to enter into an AGREEMENT with the AUTHORITY to perform such services.

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein, AUTHORITY and ENGINEER agree as follows:
ARTICLE I

RETAINER

The AUTHORITY agrees to retain the ENGINEER and the ENGINEER agrees to perform engineering services in connection with the PROJECT. The AUTHORITY agrees to pay and the ENGINEER agrees to accept fees as specified hereinafter as full and final compensation for the services authorized and accomplished.

It is understood and agreed that no professional services of any nature shall be undertaken under this AGREEMENT by the ENGINEER until ENGINEER is instructed in writing by the AUTHORITY’S General Manager or his designated representative to commence with the work.

ARTICLE II

PROFESSIONAL QUALITY

ENGINEER shall be responsible for the professional quality, technical accuracy, timely completion, and coordination of all designs, drawings, documents, estimates, specifications, reports, studies and other material (collectively the PROJECT DOCUMENTS) and services furnished by the ENGINEER under this AGREEMENT. Approval by the AUTHORITY of PROJECT DOCUMENTS, services, and incidental engineering services shall not in any way relieve the ENGINEER of responsibility for the technical accuracy of the engineering services performed. The AUTHORITY’S review, approval or acceptance of, or payment for any of the services described herein shall not be construed to operate as a waiver of any rights under this AGREEMENT or of any cause of action arising out of the performance of this AGREEMENT.

ARTICLE III

BASIC ENGINEERING SERVICES

ENGINEER agrees to perform BASIC ENGINEERING SERVICES in connection with the PROJECT as hereinafter stated, in accordance with the stipulations in this AGREEMENT. The ENGINEER shall perform BASIC ENGINEERING SERVICES necessary for the development of the PROJECT as follows:

A. TASK I – PROJECT START-UP

(1) Prepare a PROJECT planning document to define PROJECT team, lines of communications, deliverables, schedule, and budgeting for internal use in executing the PROJECT on schedule and within budget while establishing the contents of the PROJECT start-up meeting;

(2) Plan and participate in a PROJECT start-up meeting with AUTHORITY to confirm PROJECT scope, personnel, lines of communication, security protocols, and schedule;
(3) Prepare meeting summary (meeting minutes) of the PROJECT start-up meeting and distribute to participants; and

(4) ENGINEER’S PROJECT Manager shall be the primary client contact and lead communicator to ENGINEER’S staff.

B. TASK II – PROJECT MANAGEMENT AND QUALITY ASSURANCE

Manage professional services to complete the PROJECT. These services will include preparation of PROJECT controls including progress reports, action items log, decision log, design team meetings, technical review committee workshops, schedule and cash flow projections, and invoicing. ENGINEER shall provide professional services in this Task as follows:

(1) Conduct a PROJECT Quality Management (PQM) meeting with the AUTHORITY. The PQM meeting is a facilitated session where key stakeholders participate in a consensus-building exercise to confirm the PROJECT goals and define the critical success factors; the processes, activities, and tasks needed to achieve success of the PROJECT and assign responsibilities for carrying out the tasks. This meeting will be combined with the PROJECT start-up meeting;

(2) Schedule and direct regular coordination meetings with the ENGINEER’S design team to coordinate PROJECT task assignments, action items, and to prepare for monthly progress meetings with the AUTHORITY. ENGINEER will maintain an Action Item Log and Decision Log to monitor PROJECT activity. Coordinate with subconsultants to confirm all PROJECT elements are compatible, integrated, and meet AUTHORITY performance requirements;

(3) Schedule and conduct up to four progress meetings with the AUTHORITY. In addition to reviewing progress at each meeting, review PROJECT deliverable status, current schedule, outstanding action items, PROJECT bottlenecks that could impact schedule, PROJECT budget status, decisions made, and PROJECT enhancements requested. Prepare agenda and meeting materials, direct and document meetings to review progress, and facilitate the exchange of ideas and information. Prepare draft meeting minutes to include action lists, decision lists, and PROJECT enhancement lists within six business days to submit to the AUTHORITY for review and approval. Final minutes will be issued within four business days of receipt of review comments or immediately after four days if there are no comments received;

(4) Schedule and conduct up to two task-specific meetings with the AUTHORITY and provide meeting minutes which include action lists, decision lists, and PROJECT enhancement lists. These task-specific meetings will include:

(a) Technology workshop for screens, screenings conveyance, washer/compactor configuration, and gates. Workshop focus is to determine the design around either step or perforated plate screens; number and placement of washer/compactors; screw, belt, or sluiceway
conveyance; and gates and accessories. In the workshop the AUTHORITY will determine equipment selection; and

(b) Odor control and treatment technology choice workshop to determine the odor control strategy, the adopted odor treatment technology, and the adopted heating, ventilation, and air conditioning strategies for Headworks B. In the workshop, the AUTHORITY will determine its choice of foul air scrubber technology;

(5) Furnish the AUTHORITY, when requested, the engineering data necessary for applications for routine permits, submittals, and approvals required by local, state, and federal authorities, and assist AUTHORITY in consultations with appropriate authorities. Coordinate with applicable regulatory agencies, which may include, but are not limited to the Texas Commission on Environmental Quality (TCEQ);

(6) Develop a schedule for the PROJECT, which will be continuously updated throughout completion of the PROJECT;

(7) Prepare monthly PROJECT Summary Reports and submit with monthly invoice. The report shall contain the following elements:

(a) Summary of work completed to date;

(b) PROJECT budget summary;

(c) PROJECT schedule;

(d) Summary of actions and decisions needed from the AUTHORITY; and

(e) Upcoming PROJECT activities;

(8) Quality Assurance (QA): provide QA/quality control (QC) plan to the AUTHORITY and conduct QA/QC reviews of the deliverables;

(9) QC Review Meetings: plan and participate in one QC review meeting with the AUTHORITY. The meeting will be held at the 30 percent PROJECT completion stage. ENGINEER will provide copies of internal markups of plans and specifications with the review sets. A meeting memorandum will be prepared documenting major revisions and decisions made during the meeting;

(10) Schedule and conduct a PROJECT closeout meeting with the AUTHORITY, including providing a summary report and final invoice to the AUTHORITY; and

(11) Incorporate the AUTHORITY’S Design and Construction Guidelines when conducting the work defined herein, using the version current at the time of contract execution, or identify in writing where deviations therefrom are proposed.
C. **TASK III – HYDRAULIC MODELING**

Apply the existing hydraulic model to confirm the present hydraulic design of the existing Pump Station Nos. 6 and 6A (PS 6/6A) connection to the effluent of Headworks B and the effluent of Headworks A. Update the hydraulic model for integration of the new screens and channel configuration, new Headworks A facility, and new valve vault between PS 6/6A and Headworks B. The evaluation will include:

1. Confirmation of design flows provided in the 2018 CRWS Master Plan as the basis for hydraulic design for the PROJECT. Flows to be summarized and assessed for the PROJECT include minimum, average, and peak day flows. Three simulations are included;

2. Update the existing Replica hydraulic and controls simulation model to develop the existing hydraulic profile from the PS 6/6A to the effluent of Headworks B and Headworks A to serve as a baseline for the PROJECT. AUTHORITY will provide existing hydraulic models and existing hydraulic profile documents to serve as references for this evaluation that include the hydraulic grade line at Headworks A. AUTHORITY will provide information on any in-house hydraulic revisions which have been incorporated in the existing plant’s process stream;

3. Calibrate the updated Replica model with available plant flow and level data to confirm the model accurately reflects plant hydraulics;

4. Develop a final hydraulic profile. The hydraulic analysis shall be interlinked with the selected improvements for the PROJECT and hydraulic criteria to develop the recommended hydraulic profile through the new facilities. The hydraulic evaluation will include simulations with the screens 50 percent blinded. Six simulations are to be completed;

5. Document the analysis, including identified performance challenges throughout the headworks, in a Hydraulic Model Technical Memorandum (TM). ENGINEER will deliver eight hard copy reports and two electronic copies in bookmarked, searchable PDF format of the TM for AUTHORITY review; and

6. Address comments from the AUTHORITY and finalize the TM. The final TM will be delivered as part of the Preliminary Design Report (PDR).

D. **TASK IV – PRELIMINARY DESIGN PHASE SERVICES**

Provide the following preliminary design phase services:

1. Review and evaluate the existing Headworks B facilities utilizing the 2018 CRWS Master Plan, available construction documents, and field observations;

2. Meet up to two times with the AUTHORITY to discuss operational considerations, staff requirements, system preferences, and prioritization of PROJECT needs. Conduct up to two field investigations to visually inspect equipment, observe facilities, and interview plant staff;
(3) Develop a Preliminary Power Study for the PROJECT improvements. A draft of the study will be submitted as the TM, and a final version incorporated into the PDR;

(4) Odor Control Study:
   (a) Review existing reports and sampling data to understand current conditions within the existing Headworks B facility;
   (b) Based upon current proposed concepts related to planned improvements at Headworks B, perform an assessment of needed odor control to comply with TCEQ regulations and use National Fire Protection Association 820 guidelines. As part of this assessment, required ventilation rates will be determined for the facility to calculate odor loads to be treated;
   (c) Evaluate up to three different odor control technologies such as bioscrubbers, biofilters, or activated carbon;
   (d) Consider utilization of existing odor control equipment in addition to the installation of a new odor control system constructed to serve Headworks B. Develop cost estimates for each alternative. Cost estimates will include capital and operating and maintenance costs which will be used to establish present worth values to assist in alternative selection;
   (e) Plan view drawings will be developed showing proposed duct layouts and system locations; and
   (f) Work related to materials and coatings not related to design of the planned improvements shall be considered as SPECIAL SERVICES;

(5) Maintenance of Plant Operations (MOPO):
   (a) Review existing plant operations to identify any potential operational conflicts or interruptions that may occur during construction; and
   (b) Develop preliminary MOPO plan for construction of the PROJECT;

(6) Review current regulatory/code requirements;

(7) Permitting:
   (a) Identify relevant local, state, and federal permits required and the agencies having jurisdiction over the PROJECT; and
   (b) Develop a preliminary permitting schedule for obtaining required permits prior to construction;
(8) PDR:

(a) Prepare a PDR summarizing details of the improvements needed for the PROJECT to include the following elements:

(i) Concept level layouts of major structures, facilities, process equipment being proposed, and site plan;

(ii) Process mechanical and instrumentation diagrams;

(iii) Manufacturers equipment cut sheets of mechanical process equipment being proposed;

(iv) Preliminary MOPO plan description; and

(v) A preliminary opinion of probable construction cost (OPCC) for recommended improvements;

(b) Submit eight copies and an electronic copy (on compact disc (CD) in PDF format) of a draft PDR to the AUTHORITY;

(c) Meet with the AUTHORITY to review the comments on the PDR; and

(d) Submit eight copies and two electronic copies (on CD in bookmarked, searchable PDF format) of the final PDR to the AUTHORITY; and

(9) Preliminary Design Drawings and Specifications:

(a) Develop 30 percent level preliminary design drawings and specifications to delineate requirements for the following improvements:

(i) Design of modifications to the Headworks B building to incorporate eight fine screens into the existing four coarse screen channels;

(ii) New sluice gates upstream and downstream of each new screen;

(iii) Integration of new screenings conveyance into dumpsters on ground floor;

(iv) Relocation of grit washer/compactor equipment to ground floor;

(v) Modification of existing foul air system to incorporate changes to Headworks B facility including the recommended technology;

(vi) Electrical power distribution and standby power for all screening equipment and loads;

(vii) Appurtenances associated with the screening improvements; and
(viii) New Electrical Building. Location to be determined;

(b) Specifications at 30 percent will be a Table of Contents;

(c) Consider planned future improvements of the facility outlined in the 2018 CRWS Master Plan and incorporate these conditions, to the extent possible, into the design;

(d) Prepare drawings and specifications in accordance with pertinent local, state, and federal laws and regulations;

(e) Provide the AUTHORITY with preliminary design deliverables, including: eight half-size sets of preliminary design drawings, eight sets of preliminary design specifications, eight copies of the preliminary OPCC, and two electronic copies of all documents (on CD in bookmarked, searchable PDF format);

(f) Meet with the AUTHORITY to review the comments on the draft design drawings and specifications. Majority of AUTHORITY comments will be consolidated into one file and placed on SharePoint site prior to the meeting. Document that all comments from the AUTHORITY have been incorporated or addressed in a comment response format acceptable to the AUTHORITY; and

(g) Submit preliminary design deliverables, including: eight half-size sets of preliminary design drawings, eight sets of preliminary design specifications, eight copies of the preliminary OPCC, and two electronic copies of all documents (on CD in PDF format).

E. TASK V – LAND SURVEY

Provide the following professional services:

(1) Contract with a registered professional land surveyor to conduct a land survey at the existing Headworks B building and PROJECT site;

(2) Establish horizontal and vertical controls for the PROJECT. The horizontal control shall be based on the Texas State Plane Coordinate System, North Central Zone North American Datum NAD-83 Coordinates and the vertical control being based on North American Vertical Datum NAVD-88. Provide survey notes on design drawings and electronic files with clear location and description of benchmarks and horizontal control points. Benchmarks shall be documented and retraceable. Survey will provide geographic information system locates of plant structures according to AUTHORITY requirements;

(3) Topographic Survey:
(a) Establish a minimum of two temporary control monuments (typically a 5/8-inch iron rod with yellow plastic cap), provide coordinates (northing, easting, and elevation), and graphically show on the topographic surveying exhibit;

(b) All horizontal survey and vertical data will be surveyed relative to the existing plant control network;

(c) Location of permanent improvements on and immediately adjacent to the site;

(d) Spot elevations on a 25-foot grid or break in grade for hard surface and 50-foot grid or break in grade for natural ground;

(e) Top of curb and gutter elevations for paving on and adjacent to the site;

(f) Location of permanent improvements on and immediately adjacent to the site;

(g) Location of all sidewalks on and adjacent to the site;

(h) Location of all buildings with finish floor elevations;

(i) Location of visible utilities and appurtenances;

(j) Flowline elevations on wastewater manholes, storm drainage manholes and inlets; and

(k) Contours on one-foot intervals; and

(4) Light Detection and Ranging (LiDAR) Scanning:

(a) LiDAR Scanning:

(i) Use as many laser scan locations as required to provide a base file for design purposes and map the horizontal and vertical locations of planimetric features, which includes, but not limited to, building, curbs, sidewalks, trees, manholes, inlets, steps, finish floor elevations, and retaining walls which are visible from the scan locations;

(ii) Scan data will be acquired at medium resolution using Leica P40 or C10 scanners. Photographs will be acquired using the scanner’s integrated camera in order to make the data easier to visualize. Due to lighting restrictions, the photos may or may not enhance the point clouds. Perform the scanning with a laser scanner, which has an accuracy of plus or minus ¼-inch at 150-foot; and
(iii) Provide a Jetstream Viewer file of the point cloud data that can be opened with free Jetstream Portable software for viewing the scan data. The point cloud data will also be provided as an .RCP, .PTX or .E57 file for use by other discipline’s modeling efforts; and

(b) Existing Model Development: a 3D Builder Information Modeling (BIM) (Revit) model of the existing Headworks B facility will be developed based off the AUTHORITY’S record drawings. Data from the LiDAR point cloud will be used to confirm that the BIM model matches the field conditions.

F. TASK VI – COMPUTATIONAL FLUID DYNAMIC (CFD) MODELING

Develop a CFD model of the headworks screen channels in Headworks B to evaluate critical flow scenarios. The models will include the influent channel, screen channels, and outlet channel, as appropriate to the evaluation. The modeling will provide an evaluation of the potential hydraulic impact to flow distribution and potential for solids settling based on the geometry of existing and upgraded conditions. The model will focus on the flow distribution and potential for solids settling of a base design and up to two alternative configurations. Critical design flow conditions (no more than two; such as Peak Day and Minimum Day) will be considered.

G. TASK VII – OPERATIONS IMPACT PLAN

Provide an Operations Impact Planning document, using a Microsoft Excel worksheet and standard methodology furnished by the AUTHORITY, a projection of operations and maintenance (O&M) costs to be incurred by the AUTHORITY as a result of the proposed improvements for the year 2022. The O&M cost projection shall be provided by the ENGINEER at the conclusion of the preliminary design phase of the PROJECT. The AUTHORITY will notify the ENGINEER and will furnish an updated base worksheet if the AUTHORITY’S typical methodology is updated during the course of the PROJECT.

ARTICLE IV

SPECIAL ENGINEERING SERVICES

Various SPECIAL SERVICES incidental to the PROJECT, but not within the scope of the BASIC ENGINEERING SERVICES covered by ARTICLE III preceding, which may be performed or arranged for separately by the AUTHORITY, or may be added to the ENGINEER’S responsibilities by mutual agreement and written authorization include, but are not necessarily limited to, the following:

(1) Perform additional subsurface excavation in the event such excavation is required to locate existing facilities;

(2) Perform geotechnical assessments to determine soil, water table, or trenching characteristics;
(3) Complete redrawing of construction plan sheets, if required as a result of changes made in the scope of the construction contract after submission of final plans to AUTHORITY;

(4) Observe on-site conditions to evaluate exposed conditions, dewatering techniques, or changed conditions;

(5) Provide additional full-size and/or half-size final plan sets and specifications for the PROJECT in excess of the number required under ARTICLE III;

(6) Provide additional borings which may be occasioned by the depth to rock being deeper than anticipated or because of changes in geological conditions which necessitate additional evaluation to properly define the stratigraphic conditions;

(7) CFD additional simulation: conduct additional CFD simulations for answering “what if” scenarios;

(8) Point cloud LiDAR survey: for mechanical systems (screens, gates, etc.) in the building; and

(9) Provide any other services otherwise excluded in this AGREEMENT but customarily furnished in accordance with generally accepted engineering practices.

ARTICLE V

SERVICES BY THE AUTHORITY

The AUTHORITY and its representatives will render services inclusive of the following:

(1) Provide available criteria and full information as to the AUTHORITY’S requirements for the PROJECT;

(2) Assist the ENGINEER by placing at his disposal all available written data pertinent to the PROJECT;

(3) Examine documents submitted by the ENGINEER and render a decision pertaining thereto promptly, to avoid unreasonable delay in the progress of the ENGINEER’S services;

(4) Furnish information required as expeditiously as possible for the orderly progress of the work;

(5) The General Manager of the AUTHORITY or his designated representative shall appoint, in writing, a representative that the ENGINEER shall be entitled to rely upon regarding decisions made by the AUTHORITY. All subsequent communication to the AUTHORITY shall be deemed made when conveyed in writing to the representative at the location specified in ARTICLE XV, NOTICES; and
(6) The services, information, and reports required by this ARTICLE, inclusive, shall be furnished at the AUTHORITY’S expense, and the AUTHORITY will apprise the ENGINEER of any known inaccuracies or inconsistencies in the information provided.

ARTICLE VI

COMPENSATION

A. BASIC ENGINEERING SERVICES

For and in consideration of the BASIC ENGINEERING SERVICES (ARTICLE III) to be rendered by the ENGINEER, the AUTHORITY shall pay, and the ENGINEER shall receive compensation as hereinafter set forth. All remittance by the AUTHORITY for such compensation shall either be mailed or electronically delivered to the financial institution identified by ENGINEER.

Compensation for BASIC ENGINEERING SERVICES shall be paid by the AUTHORITY to the ENGINEER for all services required for work stated under ARTICLE III in the following lump sum amounts:

- Task I – Project Start-Up $ 9,109
- Task II – Project Management and Quality Assurance $ 48,013
- Task III – Hydraulic Modeling $ 59,622
- Task IV – Preliminary Design Phase Services $ 353,260
- Task V – Land Survey $ 28,321
- Task VI – Computational Fluid Dynamic Modeling $ 23,731
- Task VII – Operations Impact Plan $ 4,208

B. SPECIAL SERVICES

For and in consideration of the SPECIAL SERVICES set forth in ARTICLE IV, herein, the AUTHORITY shall pay and the ENGINEER shall receive compensation for personnel time plus expenses in an amount not to exceed Fifty Thousand Dollars ($50,000) to be paid as follows:

For all the ENGINEER’S personnel time applied to the SPECIAL SERVICES, compensation shall be based on "Direct Salary" times a multiplier of 2.95 in accordance with Attachment A.

All direct non-labor expenses, including mileage, travel and lodging expenses, but excluding subcontract expenses, applied to the SPECIAL SERVICES, shall be paid at invoice or internal office cost plus a ten percent service charge. Subcontract expenses shall be paid at direct cost plus a five percent service charge. Compensation for subcontract personnel time must also comply with the limits set forth in Attachment A, unless approved in writing by the AUTHORITY prior to the rendition of subcontract services.
C. METHOD OF BILLING

For services performed by ENGINEER for AUTHORITY compensated as lump sum amounts, ENGINEER shall submit statements monthly or less frequently reflecting ENGINEER'S requested compensation for that portion of the BASIC ENGINEERING SERVICES completed by ENGINEER.

For services performed by ENGINEER for AUTHORITY compensated as personnel time plus expenses, ENGINEER shall submit statements monthly or less frequently reflecting ENGINEER'S requested compensation for that portion of the BASIC ENGINEERING SERVICES or SPECIAL SERVICES completed by ENGINEER. Along with each separate request for payment of these services, ENGINEER shall submit to the AUTHORITY documentation substantiating all of the actual costs for which ENGINEER has requested compensation, including but not limited to the following:

1. The name of each individual performing services, individual's billing category, the individual's direct salary, and the number of hours associated with each individual's performance of services for the period of time identified with any billing invoice; and

2. A copy of any invoices paid directly by the ENGINEER for any outside services or product which relate to the PROJECT, and which are requested by ENGINEER to be reimbursed by AUTHORITY.

All records pertaining to services for which payment has been made based upon ENGINEER'S actual costs times a multiplier shall be subject to audit by the AUTHORITY in accordance with ARTICLE VII. ENGINEER may be required to furnish additional records and/or data in addition to the above, as a response to AUTHORITY'S auditing process specified in ARTICLE VII.

D. TIME OF PAYMENT OF COMPENSATION

The ENGINEER shall submit a request for partial payments for services on a monthly basis, as evidenced by monthly statements submitted by the ENGINEER to the AUTHORITY. Final payment for services authorized shall be due upon completion of these services.

Should the AUTHORITY fail to make payment to the ENGINEER, the sum named in any partial or final statement, and when payment is past due for more than thirty days, then the AUTHORITY shall pay to the ENGINEER, in addition to the sum shown as due by such statement, interest thereon at the rate of five percent per annum from the date due, as provided herein until fully paid, which shall fully compensate ENGINEER for any injury arising from such delay in payment.

However, in the event that the sum shown as due to the ENGINEER by such statement shall be disputed, questioned, or objected to by the AUTHORITY, then said rate of five percent per annum from the date due shall only apply to that portion or amount of payment which is finally and mutually agreed upon by AUTHORITY and ENGINEER to be rightfully due and owing to the ENGINEER.
ARTICLE VII

AUDIT OF RECORDS

All records of the ENGINEER of a financial or timekeeping basis which have been used to determine the fees earned by the ENGINEER and billed to AUTHORITY on the basis of "Salary Cost" times a multiplier shall be open to inspection and subject to audit and/or reproduction by AUTHORITY'S agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of cost of the services at the conclusion of the scope of all services to be performed under this AGREEMENT. The relationship between Direct Salary and Salary Cost has been identified on Attachment A and is not subject to an audit or a redetermination of any kind. In addition, this ARTICLE shall apply to Subcontractors and Direct Purchases only to the extent of invoices received by ENGINEER and evidence of payment for such invoices in the possession of ENGINEER. In its audits, the AUTHORITY may require inspection and copying from time to time and at reasonable times and places of any and all information, materials and data of every kind and character that may in AUTHORITY'S judgment have any bearing on or pertain to the payments subject to this audit. The AUTHORITY or its designee shall be afforded access to all of the ENGINEER'S records pursuant to the provisions of this ARTICLE at the conclusion of the term of the AGREEMENT and for a period of three years after final payment.

ARTICLE VIII

LIABILITY AND INSURANCE MATTERS

During the term of this AGREEMENT, ENGINEER shall, to the fullest extent permitted by law, maintain, and shall require its subcontractors to maintain:

(1) Professional liability insurance in an amount and with carriers satisfactory to AUTHORITY. If the professional liability insurance is written on a “claims made” form, a policy shall: 1) be in force until acceptance of the PROJECT improvements by the AUTHORITY; 2) be in force for a period of three years after acceptance of the PROJECT improvements by the AUTHORITY; and, 3) have a retroactive date on or prior to the effective of this AGREEMENT;

(2) Public liability, commercial general liability and umbrella policies (all including blanket contractual liability coverage for all liabilities assumed in this AGREEMENT, including all indemnification obligations set forth in ARTICLE XIV) and automobile insurance for bodily injury, and property damage, and workers’ compensation coverage on all of ENGINEER'S or its subcontractors' employees working on the PROJECT;

(3) All insurance policies referenced in paragraph (2) above, except workers’ compensation coverage, shall, to the fullest extent permitted by law, name and cover the AUTHORITY as an additional insured, by policy declaration, with coverage being primary, and all said insurance policies shall include a waiver of subrogation, and shall be in amounts and with carriers satisfactory to AUTHORITY;
(4) ENGINEER shall furnish to the AUTHORITY certificates (and upon request endorsements and policies) reflecting that the above-required insurance coverages are in full force and effect prior to ENGINEER’S execution of this AGREEMENT and also thereafter within seven days of the AUTHORITY’S request. Policies shall not be subject to endorsements, exclusions, limitations, conditions or restrictions inconsistent with the insurance requirements to be fulfilled by the ENGINEER, and all policies shall be written through companies duly approved to transact that class of insurance in the State of Texas. The AUTHORITY prior to the effective date of this AGREEMENT must approve all said insurance in writing. Said certificates of insurance shall be attached hereto as “Attachment B” and shall be incorporated herein for all purposes; and

(5) Approval, disapproval or failure to act by AUTHORITY regarding any insurance required by this AGREEMENT shall not relieve ENGINEER of full responsibility or liability, if any, for liabilities and damages as set forth in the AGREEMENT. Neither shall the insolvency or denial of liability by any insurance company relieve the ENGINEER of liability.

ARTICLE IX
ASSIGNMENT

Neither this AGREEMENT, nor any right privilege or cause of action arising hereunder may be assigned by ENGINEER, or any of ENGINEER’S subcontractors, in whole or in part for any purpose and whether in settlement of litigation or not, and any purported assignment shall be void and unenforceable without the written consent of the AUTHORITY. The AUTHORITY and the ENGINEER each binds itself and its successors and assigns to the other party with respect to all covenants of this AGREEMENT.

ARTICLE X
TERMINATION

In connection with all the engineering services outlined or contemplated above, it is agreed that the AUTHORITY or the ENGINEER may cancel or terminate this AGREEMENT upon thirty days written notice to the other, with the provision and understanding that immediately upon receipt of notice of such cancellation from either party to the other, all work and labor being performed under this AGREEMENT shall immediately cease, pending final cancellation at the end of such thirty day period, and further provided that the ENGINEER shall be compensated in accordance with the terms of this AGREEMENT for all work accomplished prior to the receipt of notice of such termination. All completed or partially completed PROJECT DOCUMENTS prepared under this AGREEMENT shall then be delivered to the AUTHORITY, which it may use without restraint. All rights, duties, liabilities, and obligations accrued prior to such termination shall survive termination. ENGINEER shall be liable for any damages suffered by the AUTHORITY as a result of ENGINEER’S termination of this AGREEMENT.
ARTICLE XI

PROJECT DOCUMENTS

All PROJECT DOCUMENTS are and shall become the property of the AUTHORITY, which it may use without restraint. The ENGINEER is not responsible and is hereby released from responsibility for the AUTHORITY’S use of the documents for any purpose other than for this PROJECT. The ENGINEER may retain a set of reproducible record copies of drawings and other documents; however, ENGINEER shall not provide to, or use this work product on behalf of, any person or entity without the express written consent of the AUTHORITY.

ARTICLE XII

PRIVATE LAND ENTRY

ENGINEER shall not enter any property owned by others on the AUTHORITY’S behalf to survey, to perform soil tests, or for other reasons related to the performance of services under this AGREEMENT until the ENGINEER has secured the landowner's permission to so enter and perform such activities.

ARTICLE XIII

LAWS AND ORDINANCES

ENGINEER shall at all times observe and comply with all federal, state, and local laws, ordinances, rules, regulations, and orders of any public authority, which in any manner affect this AGREEMENT or the PROJECT. ENGINEER agrees, moreover, not to discriminate against any employee or applicant for employment because of race, religion, color, sex, age, disability, or national origin. ENGINEER agrees to comply with the Immigration Reform and Control Act of 1986 and the Americans with Disabilities Act of 1990. The ENGINEER agrees that the indemnification provisions of ARTICLE XIV INDEMNIFICATION below encompass any failure by the ENGINEER to comply with this ARTICLE.

ARTICLE XIV

INDEMNIFICATION

To the fullest extent permitted by law, ENGINEER DOES HEREBY COVENANT AND CONTRACT TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS THE AUTHORITY ALL OF ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, from and against any and all liability, claims, suits, demands, causes of action, damages, expenses and costs, including all expenses of litigation, and/or settlement of any character, type or description (including expert/consultant fees and attorneys’ fees, and expenses of alternative dispute resolution) arising out of or in connection with and to the extent attributable to the intentional acts or omissions of ENGINEER or its agents, subcontractors, consultants or employees in the execution or performance of this AGREEMENT, provided that the claims, suits, losses, damages, causes of action, expenses, fees or liability of whatever nature arise in whole or in part from the negligence or other act or omission of ENGINEER or any of its officers, officials,
agents, subcontractors, consultants, employees or invitees. ENGINEER contracts to indemnify and protect AUTHORITY from any liability, claims, suits, losses, damages, attorneys’ fees or causes of action due to ENGINEER’S negligence, joint or concurrent negligence, error or omission to the extent that said liability, claims, suits, losses, damages, attorneys’ fees or causes of action arise out of or in connection with the acts or omissions of ENGINEER or its agents, subcontractors, consultants, or employees. This obligation shall not be defeated by the contributory, joint or concurrent negligence or fault of the AUTHORITY, but shall be limited proportionately to the extent of that negligence or fault, as ultimately adjudged by the finder of fact.

ENGINEER agrees that the AUTHORITY has sole discretion and control over the selection and retention of any attorneys, experts or consultants, in fulfillment of ENGINEER’S defense and indemnification obligations hereunder.

ARTICLE XV

NOTICES

All notices and communications under this AGREEMENT to be delivered to the AUTHORITY shall be sent to the address of the AUTHORITY as follows, unless and until the ENGINEER is otherwise notified:

Trinity River Authority of Texas
P.O. Box 240
Arlington, Texas 76004-0240

Attention: Mr. Gary N. Oradat, P.E.
Executive Manager
Planning, Design and Construction Administration

All notices and communications under this AGREEMENT to be delivered to the ENGINEER shall be sent to the address of the ENGINEER as follows, unless and until the AUTHORITY is otherwise notified:

Jacobs Engineering Group Inc.
1999 Bryan Street, Suite 1200
Dallas, Texas 75201-3136

Attention: Mr. Raj Mehta, P.E.
Vice President

ARTICLE XVI

INDEPENDENT CONTRACTOR

The services performed hereunder by the ENGINEER shall be subject to AUTHORITY’S inspection and approval, but the detailed manner and method of doing said services shall be under the control of the ENGINEER. In the performance of services hereunder, ENGINEER shall be deemed an independent contractor, and any of its employees performing services
required hereunder shall be deemed solely employees of ENGINEER or its subcontractor, and not employees of the AUTHORITY.

ARTICLE XVII

SUBCONTRACTORS

In fulfilling its duties pursuant to this AGREEMENT, it is anticipated that the ENGINEER may subcontract to individuals, corporations, organizations, governments or governmental subdivisions or agencies, partnerships, associations, or other legal entities. Such subcontracts may be entered into only with written approval from the AUTHORITY.

The AUTHORITY encourages ENGINEER to provide equal opportunity to historically underutilized business enterprises, and ENGINEER agrees that qualified historically underutilized business enterprises, including minority-owned and female-owned businesses, and labor-surplus firms located in the PROJECT area shall have the maximum practicable opportunity to participate in the performance of AUTHORITY contracts and subcontracts. ENGINEER agrees that it will attempt to achieve at least twenty-five percent participation by historically underutilized business enterprises in the performance of this PROJECT, and will routinely submit evidence to AUTHORITY on the degree to which this goal is met. ENGINEER shall include this ARTICLE in all its contracts and in all their subcontracts directly related to this PROJECT.

ARTICLE XVIII

PRIOR AGREEMENTS SUPERSEDED

This AGREEMENT constitutes the sole and only Agreement of the parties hereto and supersedes any prior understanding or oral or written Agreements between the parties regarding the subject matter of this AGREEMENT, and any and all changes, modifications or alterations of this AGREEMENT must be in writing and approved by both AUTHORITY and ENGINEER.

ENGINEER releases and waives any and all causes of action of whatever nature, or any other legal theory arising out of any prior understanding or oral or written Agreements between the parties, or any subsequent oral understanding or Agreements between the parties, regarding the subject matter of this AGREEMENT, from any and all liability damages of any kind known or unknown, whether in contract or tort.

ARTICLE XIX

LEGAL CONSTRUCTION

In case any one or more of the provisions contained in this AGREEMENT shall be for any reason held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and this AGREEMENT shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein. The validity of this AGREEMENT and of any of its terms or provisions, as well as the rights and duties hereunder, shall be governed by the laws of the State of Texas. All amounts
due under this AGREEMENT, including damages for its breach, shall be paid in Tarrant County, Texas, said Tarrant County, Texas being the place of performance as agreed to by the parties to this AGREEMENT. In the event that any legal proceeding is brought to enforce this AGREEMENT or any provision hereof, the same shall be brought in Tarrant County, Texas.

Nothing in this AGREEMENT is intended to waive any governmental immunity available to AUTHORITY under Texas law or waive any defenses of ENGINEER or AUTHORITY under Texas law. This AGREEMENT shall not be construed for the benefit of any third party, nor does it create or grant any right or cause of action in favor of any third party against AUTHORITY or ENGINEER.

ARTICLE XX

REPRESENTATIONS

ENGINEER represents that no officer, employee, or agent of the AUTHORITY has sought or received compensation in any way with respect to the consideration or execution of this AGREEMENT, and in no event will ENGINEER pay a fee to, or in any other manner compensate AUTHORITY officers, employees, or agents in connection with the approval or performance of this AGREEMENT. ENGINEER expressly warrants and represents that no promise or agreement which is not herein expressed has been made to ENGINEER in executing this AGREEMENT and ENGINEER is not relying upon any such statement or representation of AUTHORITY, its officials, officers, agents or employees in entering into this AGREEMENT. ENGINEER is relying on its own judgment in entering into this AGREEMENT and has been represented by independent legal counsel in this matter.

A breach of any provision contained in this ARTICLE shall result in automatic termination of this AGREEMENT. Upon such termination, the AUTHORITY may use all PROJECT DOCUMENTS prepared under this AGREEMENT as provided in ARTICLE X, TERMINATION, and ENGINEER shall be liable for all damages to the AUTHORITY occasioned by a termination under this ARTICLE.

ARTICLE XXI

TERM OF AGREEMENT AND TIME OF PERFORMANCE

This AGREEMENT shall be effective the ________ day of ________________, 202_, and ENGINEER shall complete BASIC ENGINEERING SERVICES within Six Months after receipt of first written authorization to proceed with Tasks in ARTICLE III. This AGREEMENT shall continue in full force and effect until December 31, 2020. AUTHORITY may, on its own determination, extend the term of this AGREEMENT by written agreement with ENGINEER. All payments and liabilities accrued prior to termination shall survive the termination.

IN WITNESS WHEREOF, the parties acting under authority of their respective governing bodies have caused this AGREEMENT to be executed in several counterparts, each of which is deemed to be an original, as of the day and date written above.

[SIGNATURES ON THE FOLLOWING PAGE]
JACOBS ENGINEERING GROUP INC.

RAJ MEHTA P.E., Vice President

TRINITY RIVER AUTHORITY OF TEXAS

J. KEVIN WARD, General Manager

ATTEST:

HOWARD S. SLOBODIN, Secretary
Board of Directors
(SEAL)

PROCUREMENT VERIFICATION

The solicitation and contractor selection process used in the procurement of this Agreement complies with Texas law and Authority policy.

HOWARD S. SLOBODIN
General Counsel

[VERIFICATION TO BE COMPLETED BY ENGINEER ON FOLLOWING PAGE]
VERIFICATION REQUIRED BY TEXAS GOVERNMENT CODE CHAPTER 2270

By signing below, the signatory hereby verifies that the firm it represents:

1. Does not boycott Israel; and,
2. Will not boycott Israel during the term of the contract.

SIGNED BY:  

Print Name & Title:  

Firm Name:  

Date Signed:  

NOTARIZATION

THE STATE OF __________  )
COUNTY OF __________  )

BEFORE ME, the undersigned notary public on this day personally appeared ______________________, on behalf of ______________________ (Company), who, being duly sworn, stated under oath that he/she has read the foregoing verification required by Texas Government Code Section 2270.002 and said statements contained therein are true and correct.

SWORN TO AND SUBSCRIBED before me on the_______ day of _________, 202__.  

__________________________________
NOTARY PUBLIC IN AND
FOR THE STATE OF ______________

The following definitions apply to Texas Government Code Section 2270.001:

(1) "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and

(2) "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

State law requires any firm entering into an agreement or contract with the Authority to complete the foregoing verification. TEX. GOV’T CODE § 2270.002.
Attachment A

Jacobs Engineering Group Inc.

HOURLY BILLING RATES

JUNE 2020

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>BILLING RATE RANGES*</th>
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</thead>
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<tr>
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<td>$ 30 - $140</td>
</tr>
<tr>
<td>Technician</td>
<td>$ 55 - $120</td>
</tr>
<tr>
<td>Engineering Technician</td>
<td>$ 85 - $140</td>
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<tr>
<td>Environmental Specialist</td>
<td>$ 85 - $200</td>
</tr>
<tr>
<td>Senior Engineering Technician</td>
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<tr>
<td>Senior Support Staff</td>
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<tr>
<td>Project Engineer/Project Manager</td>
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<tr>
<td>Principal/QC/Technical Specialist/Associate Vice President</td>
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</tr>
<tr>
<td>Sr. Technical Specialist/Vice President/Senior Vice President</td>
<td>$225 - $450</td>
</tr>
</tbody>
</table>

*The above billing rates are based upon a multiplier of 2.95 times "Direct Salary."
BACKGROUND: The Central Regional Wastewater System’s (CRWS) Bear Creek Interceptor serves the cities of Keller, Southlake, North Richland Hills, Colleyville, Grapevine, Euless, Bedford, Hurst, Fort Worth, Irving, and Grand Prairie, and the D/FW International Airport. It is one of five major interceptor systems that conveys flow to the CRWS treatment plant.

In February 2020, the Authority entered into an Engineering Services Agreement (ESA) with Lockwood, Andrews & Newnam, Inc. (LAN), to perform final design for Phase 1 of the Bear Creek Interceptor Relief project. That project will ultimately replace 17,000 linear feet (LF) of severely corroded parallel 54- and 84-inch unlined reinforced concrete pipes, originally installed in 1972 and 2003, respectively. Due to the length and cost of proposed improvements, the relief interceptor will be constructed in two phases. Phase 1, currently in design, includes the downstream limits of the project from Interstate Highway 30 (IH-30) to Hunter Ferrell Road in Grand Prairie. Phase 1 also includes a critical downstream connection at the convergence of the Bear Creek and West Fork Interceptor Systems. The proposed 96-inch relief interceptor will cross the West Fork of the Trinity River through a double-barrel inverted siphon and connect to the existing 110-inch West Fork Relief Interceptor, Segment WF-G, at a large junction structure.

On March 26, 2020, the Authority experienced a pipeline collapse immediately upstream of this location on the existing 102-inch West Fork Relief Interceptor, Segment WF-G. The failed 102-inch fiberglass reinforced plastic (FRP) pipeline runs parallel to the West Fork of the Trinity River and IH-30, through a congested corridor of active and abandoned buried utilities within Texas Department of Transportation (TxDOT) right of way. Since installation in 2008, the WF-G segment has experienced erosion along a bend in the West Fork, as well as embankment slope failure along the recently completed IH-30 Westbound Frontage Roads. The Authority successfully performed an emergency repair of the pipeline by replacing approximately 100 LF of the failed 102-inch line with 110-inch FRP pipeline in concrete encasement for improved stabilization and short-term erosion protection. As part of the emergency repair, the Authority performed closed-circuit television inspection of the immediate
upstream and downstream limits of the WF-G segment to confirm the condition of the pipeline. Significant pipe deflection was observed in approximately 3,000 LF of the adjacent system.

Due to the close proximity of the existing pipeline to the West Fork of the Trinity River bank, and the limited available space within the TxDOT corridor, Authority management recommends re-aligning 5,000 LF of the West Fork Relief Interceptor, Segment WF-G, to the north side of the river. This modification will replace the 3,000 LF section of deflected interceptor.

As part of its post-repair evaluation of the pipe collapse, Authority staff approached LAN regarding the possible inclusion of the replacement project into their ongoing design effort on the Bear Creek system. As a result of those discussions, Authority staff concluded that the schedule for the design and construction of the replacement pipeline would be significantly reduced if the replacement project was included in LAN’s ongoing ESA.

STAFF ANALYSIS: Authority management has negotiated a First Amendment to the ESA (Exhibit A) with LAN to provide additional engineering services for this project. As outlined in the ESA, total compensation for Basic Engineering Services has been increased by $853,540, from $1,701,707 to $2,555,247. Compensation for Special Services has been increased by $80,000, from $170,000 to $250,000, for unanticipated conditions. Funding for this First Amendment will be provided by the CRWS Extendable Commercial Paper/2018/2019 Bond Fund.

RECOMMENDATION: Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors authorize the General Manager to execute the First Amendment to the Engineering Services Agreement between the Trinity River Authority of Texas and Lockwood, Andrews & Newnam, Inc., increasing the amount of Basic Services from $1,701,707 to $2,555,247 and Special Services from $170,000 to $250,000 for final design engineering services associated with the Bear Creek Interceptor Relief, Phase 1 project for the Central Regional Wastewater System.

Respectfully submitted,

KELLY A. DAVIS, P.E.
Assistant Manager, Engineering Services, Pipeline Planning, Design and Construction Administration

KAD/anf

Exhibit A – First Amendment - Engineering Services Agreement
EXHIBIT A

FIRST AMENDMENT
ENGINEERING SERVICES AGREEMENT
FOR THE
TRINITY RIVER AUTHORITY OF TEXAS

STATE OF TEXAS §
COUNTY OF TARRANT §

WHEREAS, the TRINITY RIVER AUTHORITY OF TEXAS (AUTHORITY) has duly executed and entered into an AGREEMENT dated February 26, 2020, with LOCKWOOD, ANDREWS & NEWMAN, INC. (ENGINEER), providing for the final design of the Bear Creek Interceptor Relief, Phase 1 (PROJECT) to which AGREEMENT reference is hereby made for all purposes; and

WHEREAS, the AUTHORITY experienced a pipeline collapse on the existing 102-inch West Fork Relief Interceptor, Segment WF-G, along Interstate Highway 30 (IH-30) parallel to the West Fork of the Trinity River; and

WHEREAS, Segment WF-G has experienced erosion along a bend in the West Fork and embankment slope failure along the recently completed IH-30 Westbound Frontage Roads; and

WHEREAS, this critical segment of the West Fork Interceptor connects to the proposed improvements of the Bear Creek Interceptor Relief, Phase 1 project at an inverted siphon under the West Fork of the Trinity River; and

WHEREAS, the AUTHORITY and ENGINEER wish to amend ARTICLE III, ARTICLE VI, and ARTICLE XXI of this AGREEMENT to extend the project limits to include the realignment of approximately 5,000 linear feet (LF) of existing 102- to 110-inch pipeline in the West Fork Relief Interceptor, Segment WF-G, between nodes 5790W and 5850W.

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein, the AUTHORITY and ENGINEER agree as of June 24, 2020, as follows:

ARTICLE I

A. THAT ARTICLE III, BASIC ENGINEERING SERVICES, TASK I – PROJECT START-UP, be amended to include the following subtask (5):

(5) Plan and participate in a secondary PROJECT start-up meeting with AUTHORITY to confirm amended PROJECT scope, prepare meeting summary, review existing materials and reports related to the West Fork Relief Interceptor, Segment WF-G, and contact and coordinate with utility companies to identify
potential utility conflicts along proposed realignment of Segment WF-G (Node 5790W to Node 5850W).

B. THAT ARTICLE III, BASIC ENGINEERING SERVICES, TASK II – PROJECT MANAGEMENT AND QUALITY ASSURANCE, be amended to include the following subtask (10):

(10) Incorporate amended PROJECT scope for the realignment of the West Fork Relief Interceptor, Segment WF-G, (Node 5790W to Node 5850W), into the project management and quality assurance tasks for the PROJECT.

C. THAT ARTICLE III, BASIC ENGINEERING SERVICES, TASK V – PERMITTING, be amended to include the following subtask (3):

(3) Incorporate amended PROJECT scope for the realignment of the West Fork Relief Interceptor, Segment WF-G, (Node 5790W to Node 5850W), into the permitting tasks for the PROJECT.

D. THAT ARTICLE III, BASIC ENGINEERING SERVICES, TASK VI – LEGAL DESCRIPTION AND PLAT PREPARATION, be amended to include the following subtask (11):

(11) Prepare legal descriptions and exhibits for an additional four permanent easements, four temporary construction easements, four temporary access easements, four permanent access easements, four temporary construction staging easements, and establish on the ground the location of the improvements on 50-foot intervals, at all property lines, and at all points of curvature and tangency. The legal descriptions and exhibits shall be prepared in accordance with the AUTHORITY’S “Standard for Land Title Surveys and Preparation of Legal Descriptions and Plats.” Incorporate additional easements into parcel plat map, right of way strip map, stationing chart, and site certificate requirements of PROJECT.

E. THAT ARTICLE III, BASIC ENGINEERING SERVICES, TASK VII – DETAILED DESIGN, be amended to include the following subtask (20):

(20) Prepare plans and specifications for the amended PROJECT. The amended PROJECT scope is based on the preparation of plans and specifications for approximately 5,000 LF of realigned 72- to 110-inch diameter pipeline within the West Fork Relief Interceptor, Segment WF-G. The plans will include two siphon designs for crossing the West Fork of the Trinity River and structural junction box design. The new pipe sizing will be confirmed at a coordination meeting with the AUTHORITY and ENGINEER. The design will be based on projected 2070 flow at downstream node manhole (MH) 5790W and at upstream node MH 5850W. Pipeline design will be based on the recommended alignment as agreed upon during an alternatives meeting conducted on April 3, 2020, at the AUTHORITY’S General Office. Plans and specifications for the amended PROJECT scope will
be incorporated into the bid documents for the Bear Creek Interceptor Relief, Phase 1 improvements and will be bid as a single construction project.

F. THAT ARTICLE III, BASIC ENGINEERING SERVICES, TASK IX – CONSTRUCTION ADVERTISEMENT PHASE, be amended to include the following subtask (13):

(13) Incorporate amended PROJECT scope for the realignment of the West Fork Relief Interceptor, Segment WF-G (Node 5790W to Node 5850W), into the construction advertisement phase tasks for the PROJECT.

ARTICLE II

A. THAT ARTICLE VI, COMPENSATION, Paragraph A - BASIC ENGINEERING SERVICES, which reads as follows:

Compensation for BASIC ENGINEERING SERVICES shall be paid by the AUTHORITY to the ENGINEER for all services required for work stated under ARTICLE III in the following lump sum amounts:

| Task I   | Project Start-Up | $63,683 |
| Task II  | Project Management and Quality Assurance | $50,805 |
| Task III | Topographic Survey | $117,704 |
| Task IV  | Geotechnical Investigation | $26,811 |
| Task V   | Permitting | $176,325 |
| Task VI  | Legal Description and Plat Preparation | $98,089 |
| Task VII | Detailed Design | $971,223 |
| Task VIII| Meter Station Design (MS 1_0B & MS 2_0B) | $141,645 |
| Task IX  | Construction Advertisement Phase | $55,425 |

be OMITTED and DELETED in its entirety, and the following substituted in its place:

Compensation for BASIC ENGINEERING SERVICES shall be paid by the AUTHORITY to the ENGINEER for all services required for work stated under ARTICLE III in the following lump sum amounts:

| Task I   | Project Start-Up | $72,341 |
| Task II  | Project Management and Quality Assurance | $124,485 |
| Task III | Topographic Survey | $117,701 |
| Task IV  | Geotechnical Investigation | $26,811 |
| Task V   | Permitting | $347,126 |
| Task VI  | Legal Description and Plat Preparation | $128,976 |
| Task VII | Detailed Design | $1,533,887 |
| Task VIII| Meter Station Design (MS 1_0B & MS 2_0B) | $141,645 |
| Task IX  | Construction Advertisement Phase | $62,275 |
B. THAT ARTICLE VI, COMPENSATION, Paragraph B – SPECIAL ENGINEERING SERVICES, which reads as follows:

For and in consideration of the SPECIAL SERVICES set forth in ARTICLE IV, herein, the AUTHORITY shall pay and the ENGINEER shall receive compensation for personnel time plus expenses in an amount not to exceed One Hundred Seventy Thousand Dollars ($170,000) to be paid as follows:

be OMITTED and DELETED in its entirety, and the following substituted in its place:

For and in consideration of the SPECIAL SERVICES set forth in ARTICLE IV, herein, the AUTHORITY shall pay and the ENGINEER shall receive compensation for personnel time plus expenses in an amount not to exceed Two Hundred Fifty Thousand Dollars ($250,000) to be paid as follows:

ARTICLE III

A. THAT ARTICLE XXI, TERM OF AGREEMENT AND TIME OF PERFORMANCE, which reads as follows:

This AGREEMENT shall be effective the 26th day of February, 2020, and ENGINEER shall complete BASIC ENGINEERING SERVICES within Twelve Months after receipt of first written authorization to proceed with Tasks in ARTICLE III. This AGREEMENT shall continue in full force and effect until April 30, 2021. AUTHORITY may, on its own determination, extend the term of this AGREEMENT by written agreement with ENGINEER. All payments and liabilities accrued prior to termination shall survive the termination.

be OMITTED and DELETED in its entirety, and the following substituted in its place:

This AGREEMENT shall be effective the 26th day of February, 2020, and ENGINEER shall complete BASIC ENGINEERING SERVICES within Sixteen Months after receipt of first written authorization to proceed with Tasks in ARTICLE III. This AGREEMENT shall continue in full force and effect until August 31, 2021. AUTHORITY may, on its own determination, extend the term of this AGREEMENT by written agreement with ENGINEER. All payments and liabilities accrued prior to termination shall survive the termination.

ARTICLE IV

This FIRST AMENDMENT is effective on _____________________, and to the extent of any conflict with the original AGREEMENT shall supersede the terms and provisions of the original AGREEMENT. However, it is the express intention of AUTHORITY and ENGINEER that this FIRST AMENDMENT and the original AGREEMENT shall be completely integrated and be construed in harmony and congruity as a single instrument.

[SIGNATURES ON THE FOLLOWING PAGE]
PROCUREMENT VERIFICATION

The solicitation and contractor selection process used in the procurement of this Agreement complies with Texas law and Authority policy.

HOWARD S. SLOBODIN
General Counsel
BACKGROUND: MWH Constructors, Inc. (MWH), the prime contractor for the Solids Management Improvements Phase III-B project, has made several claims in the past two years for additional cost and/or additional contract time that were discussed and rejected by construction inspection staff of the Authority. Each such claim was presented by MWH in a Proposed Change Order. Despite management's rejection of several of those claims, MWH believed they were valid and desired to discuss these items with the Authority at a later date.

Beginning in January 2020, management and MWH began discussions to resolve any outstanding items that had not been brought to finality. MWH's initial request was for $415,707 and an extension of contract time. The request for extension of time was not in dispute. Authority management and staff conducted months of internal and external meetings, field investigations including the Engineer of Record, CDM Smith Inc. (CDMS), and detailed analyses of the various documents submitted by MWH in support of its position. Having negotiated with MWH, it was mutually agreed that a “Compromise and Settlement Agreement” (CSA) was the appropriate instrument to resolve these outstanding issues. The CSA is drafted in conformance with, and contemplates consideration only as allowed by, the terms and conditions of the contract between the Authority and MWH. As described in the document, the CSA encompasses ten claims by MWH for money and/or days. Not all claims presented by MWH were ultimately deemed compensable by management, and negotiations focused on allowing MWH to recover only reasonable and justified costs and additional contract time.

During the discussions with MWH, management also engaged CDMS regarding its financial participation in the resolution of MWH's claims. CDMS agreed to issue a $77,000 credit to the Authority related to their work that contributed to one of the items. This credit was reflected on their invoice received May 29, 2020.
Subject to the Board of Directors subsequent approval, the CSA was executed by MWH and Authority management on April 27-28, 2020. It is now presented to the Board of Directors as a proposal for its consideration.

By way of background, prior to consideration of the CSA, Change Orders for this project totaled $5,925,536.92 or 3.03 percent of the contract amount (through Change Order No. 113 dated April 20, 2020). Those Change Orders had also added a total of 202 calendar days to the contract time resulting in the following amended milestones:

- **Operational Readiness Testing (ORT):** February 18, 2021
- **Substantial Completion:** May 28, 2022
- **Final Acceptance:** July 27, 2022

As described in this CSA, 82 calendar days will be added to each of these milestones.

Looking forward, upon completion of ORT, the commissioning of the facility will commence and is scheduled to be completed within 260 days. Commissioning is essentially the testing and start-up of all components of the Thermal Hydrolysis Process and other Phase III-B equipment. MWH’s contract includes $3.55 million for “Commissioning and Start-Up”. The scope of that line item is detailed in the Contract Documents. Although commissioning services are included in the CDMS contract, those services are not fully funded. However, current funding within their ESA will be sufficient for activities through ORT (as currently scheduled) and possibly the very early stages of commissioning. A better grasp of the funding will be realized by mid-2021. Upon completion of commissioning, MWH will commence with the demolition of certain structures which are no longer necessary. This work is in MWH’s contract. Currently, the ESA with CDMS does not contain any monies to fund their support services during demolition.

**STAFF ANALYSIS:** Change Order No. 121, presented, addresses the terms and conditions of the CSA, which calls for payment to MWH in the amount of $338,469, and an extension of contract time of 82 calendar days. A copy of the CSA is attached as Exhibit A.

The CSA addresses all claims, potential or actual, by MWH for additional compensation and for extensions of contract time for work performed or other costs incurred by MWH from the beginning of the construction contract’s effective date to the end of April 30, 2020. In that way, it affords finality to both parties, and clears a path forward for completion of the project. Delaying resolution of all claims to a later date creates risk, as individuals with knowledge of the circumstances may become unavailable. For instance, MWH staff departures create such a risk.

The funding source for this change order is the CRWS Extendable Commercial Paper/2018/2019 Bond Fund.
RECOMMENDATION: Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors ratify the General Manager’s execution of the Compromise and Settlement Agreement and authorize the General Manager’s execution of Change Order No. 121 between the Trinity River Authority of Texas and MWH Constructors, Inc., in the amount of $338,469, increasing the contract value from $201,606,331.92 to $201,944,800.92, and the addition of 82 calendar days to the contract completion date extending the completion of the Operational Readiness Testing Date to May 20, 2021 for the Solids Management Improvements Phase III-B project at the Central Regional Wastewater System.

Respectfully submitted,

STEVEN E. METZLER, P.E., PMP, CCM
Manager, Construction Services
Planning, Design and Construction Administration

SEM/JTJ/anf

Exhibit A – Compromise and Settlement Agreement
STATE OF TEXAS  §  
§  
COUNTY OF TARRANT  §  

COMPROMISE AND SETTLEMENT AGREEMENT

THIS COMPROMISE AND SETTLEMENT AGREEMENT (Agreement), effective on the date of the last signature set forth below, is made by and between the Trinity River Authority of Texas, a conservation and reclamation district of the State of Texas (Authority), and MWH Constructors, Inc., a Delaware corporation (MWH). The Authority and MWH are also referred to herein at times individually as a Party and collectively as the Parties hereto.

WITNESSETH:

WHEREAS, the Authority and MWH entered into an agreement pursuant to which MWH is to construct for the Authority the Central Regional Wastewater System Phase IIIB Solids Management Improvements Project consisting of new biosolids treatment, management, and related facilities (hereinafter called “Project”), said agreement (Construction Agreement) being dated and effective June 28, 2017;

WHEREAS, MWH has prosecuted work and incurred costs under the Construction Agreement; and

WHEREAS, disputes have arisen between the Authority and MWH regarding the compensation due MWH for work completed or other costs incurred by MWH under the Construction Agreement; and

WHEREAS, disputes have also arisen regarding certain requests by MWH for extensions of Contract Time (as defined in the Construction Agreement) under Article 11 of the General Conditions of the Construction Agreement; and

WHEREAS, the Parties desire to finally resolve all disputes regarding claims for additional compensation and for extensions of Contract Time that have or may have been made by MWH for work performed or other costs incurred by MWH from the beginning of the Construction Agreement’s effective date to the end of April 30, 2020, as set forth herein.

NOW, THEREFORE, in consideration of the promises, agreements, covenants and representations contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. Claims by MWH for Modifications of the Contract Sum and Additional Compensation. For and in consideration of the Authority’s payment of the sum of $338,469.00, to be delivered to MWH by the Authority within fourteen (14) days of the completed execution of this Agreement, MWH shall release, waive and agree not to assert any claim, complaint, cause of action, lawsuit, demand, or claim of liability against the Authority, known or unknown, accrued or unaccrued, of any kind or nature, whether based upon statute, the Construction Agreement, or common law, at law or in equity, including without limitation any claim or other matter that was or could have been asserted, with respect to MWH’s entitlement or claim for increases in the Contract Sum (as defined in the Construction Agreement), for all work performed or actions taken
by MWH, conditions encountered by MWH (including weather and surface or subsurface conditions), or other costs incurred by MWH from the beginning of the Construction Agreement’s effective date to the end of April 30, 2020. Without limiting the generality of the foregoing, the following claims by MWH as they relate to the modification of the Contract Sum are intended to be finally released, waived and settled by this Agreement in consideration of the compensation herein stated:

(a) Claims asserted by MWH in Preliminary Change Order No. 25 (resubmitted as Preliminary Change Order No. 188 at a cost of $150,000 and including demolition of the temporarily aerial plate press drainage piping, associated supports for the aerial line and the electrical conduits attached to the aerial piping), dated April 25, 2018, attached hereto as Exhibit A and incorporated herein by reference;

(b) Claims asserted by MWH in Preliminary Change Order No. 71 (resubmitted as Preliminary Change Order No. 189), dated November 5, 2018, attached hereto as Exhibit B and incorporated herein by reference;

(c) Claims asserted by MWH in Preliminary Change Order No. 104 (resubmitted as Preliminary Change Order No. 190), dated April 23, 2019 attached hereto as Exhibit C and incorporated herein by reference;

(d) Claims asserted by MWH in Preliminary Change Order No. 131, dated October 17, 2019 attached hereto as Exhibit D and incorporated herein by reference;

(e) Claims asserted by MWH in Preliminary Change Order No. 136, dated August 28, 2019, attached hereto as Exhibit E and incorporated herein by reference;

(f) Claims asserted by MWH in Preliminary Change Order No. 141, dated December 2, 2019, attached hereto as Exhibit F and incorporated herein by reference;

(g) Claims asserted by MWH in Preliminary Change Order No. 142, dated October 17, 2019 attached hereto as Exhibit G and incorporated herein by reference;

(h) Claims asserted by MWH in Preliminary Change Order No. 146, dated February 19, 2019 attached hereto as Exhibit H and incorporated herein by reference;

(i) Claims asserted by MWH in Preliminary Change Order No. 148, dated October 17, 2019 attached hereto as Exhibit I and incorporated herein by reference; and

(j) Claims asserted by MWH in Preliminary Change Order No. 163, dated March 9, 2020 attached hereto as Exhibit J and incorporated herein by reference.

2. Claims by MWH for Modifications of Contract Time. For and in consideration of the Authority’s payment of the consideration set forth in the preceding paragraph, MWH shall release, waive and agree not to assert any claim, complaint, cause of action, lawsuit, demand, or claim of liability against the Authority, known or unknown, accrued or unaccrued, of any kind or nature, whether based upon statute, the Construction Agreement, or common law, at law or in equity, including without limitation any claim or other matter that was or could have been asserted, with respect to MWH’s entitlement or claims for increases in the Contract Time, for all work performed or actions taken by MWH, conditions encountered by MWH (including without limitation weather and surface or subsurface conditions) from the beginning of the Construction Agreement’s effective date.
to the end of April 30, 2020. By virtue of this Agreement, the parties agree that the Contract Time shall be adjusted as follows:

(a) That the date for the completion of Operational Readiness Testing (“ORT”) shall be and is hereby extended 82 calendar days, from February 18, 2021 to May 11, 2021;

(b) That the date for “Substantial Completion” shall be and is hereby extended 82 calendar days, from May 28, 2022 to August 18, 2022; and

(c) That the date for “Final Acceptance” shall be and is hereby extended 82 calendar days, from July 27, 2022 to October 17, 2022.

MWH agrees that the modification of Contract Time contemplated in this Agreement is in full and final satisfaction of any claims by MWH for delay for all work performed by MWH or conditions encountered by MWH (including without limitation weather and surface or subsurface conditions) that was or could have been asserted by MWH from the beginning of the Construction Agreement’s effective date to the end of April 30, 2020.

3. **Coronavirus 2019 (COVID-19)**. Nothing in this Agreement shall affect MWH’s ability to seek recovery for increases in the Contract Sum, or Contract Time, or both, under the terms of the Construction Agreement, for delays and impacts incurred by MWH due to COVID-19 (“COVID-19 Delays”), regardless of whether such COVID-19 Delays occurred before or after April 30, 2020. MWH agrees hereby to provide the Authority weekly reports on claimed accumulated cost and time impacts of COVID-19 Delays until MWH commences ORT.

4. **Prospective Application**. Nothing in this Agreement shall affect MWH’s ability to seek recovery for increases in the Contract Sum or Contract Time, or both, under the Construction Agreement for occurrences subsequent to April 30, 2020. Likewise, nothing in this Agreement shall affect the Authority’s ability to seek recovery of, or for offset, of costs incurred by the Authority subsequent to April 30, 2020.

5. **Representation and Warranties**. Each of the Parties represents and warrants that the signatories below have full legal right, power, and authority to bind the respective Parties for whom they sign and that the execution, delivery, and performance of the Agreement have been duly authorized by all necessary and appropriate action.

6. **No Admission of Liability**. The Parties represent and warrant to each other that each of them specifically understands and agrees that the Parties’ settlement and compromise of the claims and disputes in this Agreement and that the existence of this Agreement or any of the terms hereunder shall not be construed as an admission of liability or of the truth of the allegations, claims, or contentions of any Party, and that there are no covenants, promises, undertakings, or understandings between the Parties outside of this Agreement, except as specifically set forth herein and in the Construction Agreement as modified by this Agreement.

7. **Amendment and Modification**. No amendment to this Agreement is effective unless it is in writing, identified as an amendment to this Agreement and signed by an authorized representative of each Party.

8. **Governing Law**. All Disputes and all issues and questions concerning the transactions contemplated by this Agreement and the construction, validity, interpretation and enforceability of this Agreement shall be governed by, and construed in accordance with, the laws of the State of Texas, without giving effect to any choice of law or conflict of law rules or provisions (whether of the State of Texas or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than the State of Texas.
9. **Binding Effect.** This Agreement shall inure to the benefit of, and shall be binding upon, the successors and assigns of the Parties.

10. **Entire Agreement.** This Agreement and the Construction Agreement as modified hereby contain the entire agreement between the Parties. There are no prior or contemporaneous written or oral agreements by the Parties that can in any way modify, alter, waive, or express the terms of this Agreement. Without limiting the generality of the foregoing, each Party understands, agrees, and acknowledges that it has not relied upon any oral or written representations made by the other Party or its representatives in connection with or relating to the execution of this Agreement, that all such oral or written representations are merged into the written terms of this Agreement, and that this Agreement shall govern any dispute, claim, or disagreement among the Parties arising out of, relating to, or in connection with this Agreement.

11. **Counterparts.** This Agreement may be executed in multiple counterparts, any one of which need not contain the signature of more than one Party, but all such counterparts taken together shall constitute one and the same instrument. Any counterpart may be executed by facsimile signature and such facsimile signature shall be deemed an original. This Agreement shall be binding upon and shall inure to the benefit of the Parties and their respective successors and assigns.

12. **Board Approval.** The effectiveness of the Authority’s execution of this Agreement is contingent upon this Agreement’s subsequent approval by the Authority’s Board of Directors.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year written below.

**Authority:**

TRINITY RIVER AUTHORITY OF TEXAS

By: [Signature]

Name: J. KEVIN WARD
Title: General Manager

Date: 4/28/2020

**MWH:**

MWH CONSTRUCTORS, INC.

By: [Signature]

Name: BLAIR M. LAVOIE
Title: President

Date: April 27, 2020
BACKGROUND: The Central Regional Wastewater System (CRWS) Technical Services Department is equipped and staffed to perform a wide variety of complex water and wastewater chemical and bacteriological testing, sampling and pretreatment inspections. The Department’s primary mission is to support the CRWS plant through analytical testing and monitoring to meet regulatory, process control and Northern Region Project industrial pretreatment program requirements.

The CRWS laboratory is certified by the Texas Commission on Environmental Quality to analyze environmental samples under the National Environmental Laboratory Accreditation Conference quality standards. While the primary mission utilizes the full range of the laboratory's technical capabilities, it does not fully utilize its production capacity in terms of the number of tests that can be performed. In order to use this excess capacity to offset costs, the CRWS laboratory contracts with Authority customers to provide analytical services, as well as providing testing to other Authority projects.

Additionally, as part of the Environmental Protection Agency's (EPA) mandated Industrial Pretreatment Program, the CRWS Technical Services Department offers inspection, sampling and analytical services to Authority customers. The scope of each individual contract is based on the contracting party’s ability to support and administer an EPA-approved pretreatment program.

The following exhibits are presented for your information:

- Exhibit A – Technical Services Fee Schedule for Fiscal Year 2021
- Exhibit B – Contract for Technical Services
- Exhibit C – Most Recent Contract Customers and Amounts
STAFF ANALYSIS: Authority management has determined that providing outside services on a fee basis is cost effective for both the Authority and its customers. It allows CRWS to maintain a full range of capabilities that would not be cost effective at low utilization levels, and it provides a necessary service to Authority customers at a competitive cost.

The laboratory fees reflect an overall increase for Fiscal Year (FY) 2021 of 1.13% percent as compared to the FY 2020 Technical Services Fee Schedule. The prices that increased were due to increase in manpower and the cost recovery for overhead not associated with CRWS testing. The decreases are due to repeat years of the calculated cost being below currently charged fees after decreases in chemical and supply costs, updating the time required to perform the test and changes in instrumentation. Fees remained unchanged for 70 tests, decreased for 14 tests and increased for 23 tests.

The industrial pretreatment fees will remain unchanged for FY 2021. Like laboratory fees, industrial pretreatment fees were updated in FY 2020 to better account for overhead not associated with CRWS activities.

RECOMMENDATION: Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors:

(a) Adopt the Technical Services Fee Schedule for Contracts for the period beginning December 1, 2020 through November 30, 2021; and

(b) Authorize the General Manager to execute individual Contracts for Technical Services between the Trinity River Authority of Texas and those entities seeking services.

Respectfully submitted,

WILLIAM L. TATUM
Manager, Central Regional Wastewater System

BT/wbc/lma

Exhibit A – Technical Services Fee Schedule for Fiscal Year 2021
Exhibit B – Contract for Technical Services
Exhibit C – Most Recent Contract Customers and Amounts
EXHIBIT A

TECHNICAL SERVICES FEE SCHEDULE
FOR
LABORATORY ANALYSES,
INDUSTRIAL INSPECTIONS
AND
INDUSTRIAL SAMPLING

FISCAL YEAR 2021
December 1, 2020 through November 30, 2021
NELAP CERTIFICATE T104704287-10-TX
## CHEMICAL ANALYSES

### Liquid Samples

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Alkalinity:</td>
<td>$13.00</td>
</tr>
<tr>
<td>Total (*) (**):</td>
<td>$13.00</td>
</tr>
<tr>
<td>Phosphorus:</td>
<td></td>
</tr>
<tr>
<td>Ortho (*)</td>
<td>$15.50</td>
</tr>
<tr>
<td>Total (*)</td>
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</tr>
<tr>
<td>Biochemical Oxygen Demand:</td>
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</tr>
<tr>
<td>5-Day (*)</td>
<td>$34.90</td>
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<tr>
<td>5-Day Carbonaceous (*)</td>
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<tr>
<td>5-Day Filtered (Dissolved)</td>
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<tr>
<td>7-Day</td>
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<tr>
<td>Extra Dilution (Each)</td>
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<tr>
<td>Solids Testing (Gravimetric):</td>
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<tr>
<td>Total (TS)</td>
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<tr>
<td>Total Dissolved (TDS) (*)</td>
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<tr>
<td>Total Suspended (TSS) (*)</td>
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<td>Volatile Suspended (VSS *) (after TSS)</td>
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<td>Chlorophyll “a”</td>
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<tr>
<td>Chlorophyll “a” and Pheophytin</td>
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<td>Chemical Oxygen Demand (*)</td>
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<tr>
<td>Chloride (*)</td>
<td>$15.40</td>
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<tr>
<td>Conductance, Specific (*) (**):</td>
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<td>Cyanide:</td>
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<td>Amenable to Chlorination (*)</td>
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<td>Fluoride, Total (**)</td>
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<td>Glycols</td>
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<td>Hardness (*) (**):</td>
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<tr>
<td>Nitrogen:</td>
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</tr>
<tr>
<td>Ammonia (*)</td>
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<tr>
<td>Ammonia by Distillation (*)</td>
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<tr>
<td>Kjeldahl, Total (*)</td>
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</tr>
<tr>
<td>Nitrate (*)</td>
<td>$15.40</td>
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<tr>
<td>Nitrite (*)</td>
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<tr>
<td>Total</td>
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<tr>
<td>Oil and Grease (*)</td>
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<td>Organic Carbon:</td>
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<td>Dissolved</td>
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<tr>
<td>Total (<strong>) (</strong>):</td>
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<td>pH (*)</td>
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<td>Nitrate (*)</td>
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<td>Nitrite (*)</td>
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<td>Total</td>
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<tr>
<td>Oil and Grease (*)</td>
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<tr>
<td>Organic Carbon:</td>
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</tr>
<tr>
<td>Dissolved</td>
<td>$23.00</td>
</tr>
<tr>
<td>Total (<strong>) (</strong>):</td>
<td>$15.75</td>
</tr>
<tr>
<td>pH (*)</td>
<td>$11.30</td>
</tr>
<tr>
<td>Solids Samples</td>
<td></td>
</tr>
<tr>
<td>Ammonia (***)</td>
<td>$28.50</td>
</tr>
<tr>
<td>Chemical Oxygen Demand</td>
<td>$35.00</td>
</tr>
<tr>
<td>Nitrogen, Kjeldahl, Total</td>
<td>$35.50</td>
</tr>
<tr>
<td>Phosphorus, Total (***):</td>
<td>$24.25</td>
</tr>
<tr>
<td>pH (***):</td>
<td>$21.00</td>
</tr>
<tr>
<td>Mercury (***):</td>
<td>$66.50</td>
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<tr>
<td>Metals Preparation</td>
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### Solid Samples

<table>
<thead>
<tr>
<th>Parameter</th>
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</thead>
<tbody>
<tr>
<td>Ammonia (***)</td>
<td></td>
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<tr>
<td>Chemical Oxygen Demand</td>
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<tr>
<td>Nitrogen, Kjeldahl, Total</td>
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</tr>
<tr>
<td>Phosphorus, Total (***):</td>
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</tr>
<tr>
<td>pH (***):</td>
<td></td>
</tr>
<tr>
<td>Mercury (***):</td>
<td></td>
</tr>
<tr>
<td>Metals Preparation</td>
<td></td>
</tr>
</tbody>
</table>

**Non-Potable Water**

**Drinking Water**

**Solids**
**MICROBIOLOGICAL ANALYSES**

<table>
<thead>
<tr>
<th>Drinking Water:</th>
<th>Wastewater:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Coliform (MMO/MUG) (**)</td>
<td>Coliform, Fecal (Membrane Filter (*))</td>
</tr>
<tr>
<td>Heterotrophic Plate Count</td>
<td>Coliform, Fecal (MPN (**))</td>
</tr>
<tr>
<td></td>
<td>Coliform, Total (MPN-Q Tray)</td>
</tr>
<tr>
<td></td>
<td>E. Coli (MPN-Q Tray) (*)</td>
</tr>
<tr>
<td></td>
<td>Streptococcus, Fecal (Membrane Filter) (*)</td>
</tr>
<tr>
<td></td>
<td>Heterotrophic Plate Count</td>
</tr>
<tr>
<td></td>
<td>Microscopic General Examination</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Drinking Water:</strong></td>
<td><strong>Wastewater:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Coliform (MMO/MUG) (**)</td>
<td>$22.00</td>
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<tr>
<td>Heterotrophic Plate Count</td>
<td>$22.00</td>
</tr>
<tr>
<td>Coliform, Fecal (Membrane Filter (*))</td>
<td>$20.00</td>
</tr>
<tr>
<td>Coliform, Fecal (MPN (**))</td>
<td>$63.00</td>
</tr>
<tr>
<td>Coliform, Total (MPN-Q Tray)</td>
<td>$21.35</td>
</tr>
<tr>
<td>E. Coli (MPN-Q Tray) (*)</td>
<td>$21.35</td>
</tr>
<tr>
<td>Streptococcus, Fecal (Membrane Filter) (*)</td>
<td>$19.00</td>
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<tr>
<td>Heterotrophic Plate Count</td>
<td>$22.00</td>
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<tr>
<td>Microscopic General Examination</td>
<td>$25.00</td>
</tr>
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**TRACE ORGANIC (GC-GC/MS) ANALYSES**

<table>
<thead>
<tr>
<th>EPA 624 (*):</th>
<th>Pesticides/PCB</th>
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</thead>
<tbody>
<tr>
<td>3-Day (unpreserved)</td>
<td>EPA 608 (*):</td>
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<tr>
<td>BTEX (only)</td>
<td>Full List</td>
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<tr>
<td>Trip Blanks</td>
<td>Chlorinated Pesticides (only)</td>
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<tr>
<td>Geosmin/MIB</td>
<td>PCB (aqueous)</td>
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<td></td>
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<tr>
<td></td>
<td>$226.50</td>
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<td>EPA 625 (*):</td>
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<tr>
<td>Total Semi-Volatiles</td>
<td>EPA 8082:</td>
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<tr>
<td>Semi-Volatile Trip Blank</td>
<td>Polychlorinated Biphenyls (PCB)</td>
</tr>
<tr>
<td></td>
<td>$165.36</td>
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</tbody>
</table>

**BY QUOTE**

- Chromium Hexavalent
- Oil and Grease (solids)
- Organophosphate Pesticide
- Phenols
- TCLP Metals
- TCLP Organic Compounds
- Total Petroleum Hydrocarbons (solids and liquids)
INDUSTRIAL PRETREATMENT SERVICES

SAMPLING

Composite Sample $ 210.00
Additional Composite Sample $ 105.00
Grab Sample $ 87.00
Additional Grab Sample $ 25.00
pH only $ 87.00
Field pH $ 29.00
Field Measurement $ 47.00
Sampling Event Cost for a Failed Sample $ 113.00
Industry Split Sample $ 29.00
Boat Fee $ 105.00
QA/QC Fee $ 23.00

PRETREATMENT ASSISTANCE

Inspection (permitted users) $ 700.00
Inspection (unpermitted users) $ 100.00
Permit Preparation (5yr permit) $2,000.00
Field Surveillance Event $1,063.00
Industrial User Survey Fee Formula

Industrial User Survey Fee Formula:
(No. of Survey Entities\textsuperscript{1} X $3.75) + (No. of identified industrial users\textsuperscript{2} X $16.00)

Formula Footnotes:
\textsuperscript{1} Users from the Texas Manufactures Guide List for Contracting Party’s jurisdiction.
\textsuperscript{2} Users that require further manufacturing process and discharge classification

PRETREATMENT SERVICES INCLUDE

- Grab Sampling
- Installation of Automatic Composite Samplers
- Field Testing Available
- Proper Field QA/QC
- Industry Split Sampling
- Sample Preservation
- Proper Chain of Custody
- Delivery to TRA Laboratory
- Sample Data Review with Report Summaries
- Appropriate Industrial User Pretreatment Classification
- Verification of Permit Application Data
- Chemical Inventory Review
- Permit Drafting
- Semiannual Report Review
- Appropriate Inspection Documentation
- Enforcement Guidance
- Consultation with Industries on Industrial Pretreatment
GENERAL SERVICE INFORMATION

1. Effective Date: December 1, 2020. All prices listed are per sample and subject to review.


3. Prices include a 10 percent charge added to the analyses cost to maintain the normal quality assurance program.

4. Standard turn-around time is considered 15 business days for most testing. Priority is half of the standard time. Customer requiring PRIORITY turn-around time will be billed at one and one-half (1 ½) times the routine rate. Customer requiring RUSH turn-around time, run immediately on the next or a special run, will be billed at two times the normal rate. It is recommended to call in advance of sample submission or inquire at the time of submission for estimated turn-around time.

5. The Laboratory will follow instructions as stated on the Chain-of-Custody submitted with samples. The Customer may be contacted by the lab representative on any variance issues and written instruction may be requested concerning the variance.

6. For EPA624 VOC 3 day analysis, do not lower the pH of the sample.

7. Sampling supplies will be provided upon request at a reasonable charge. Bacteriological sampling supplies are included in the cost of analyses.

8. Samples other than bacteriological samples should be delivered to the laboratory before 4:00 p.m. on weekdays. Samples cannot be accepted on weekends or holidays unless special arrangements are made in advance. Bacteriological samples should be delivered prior to 2:00 p.m. unless special arrangements are made in advance. For after-hour samples, please call and arrange for leaving in cold storage vault with analyses request form.

9. A monthly invoice for completed analyses is mailed the following month.

10. Laboratory hours are weekdays 7:00 a.m. to 4:30 p.m. To contact the lab about emergency samples use the number below.

11. Environmental Field, Engineering Field and Pretreatment Services office hours are Monday through Friday, 8:00 a.m. to 5:00 p.m. For after-hour emergencies, leave message with computer operator.

12. Environmental Field and Engineering Field Services are requested to be scheduled a minimum of 72 hours in advance.


FOR MORE INFORMATION, CONTACT:

METRO: (972) 263-2251 FAX: (972) 975-4414

WILLIAM B. CYRUS
Manager
Technical Services

JOHN DURBIN
Manager
Collection System Group

CRAIG HARVEY
Laboratory Division Chief

JENNIFER MOORE
Environmental Service Coordinator

JACOB RODGERS
Technical Services Engineer

CATHY SIEGER
Quality Assurance Coordinator

NELAP Accreditation
*Non-Potable Water
**Drinking Water
***Solids
EXHIBIT B
CONTRACT FOR TECHNICAL SERVICES

I. CONTRACTING PARTIES

The Receiving Agency: City of ____________________________, whose authorized address is:

__________________________________________________________________________.

The Performing Agency: Trinity River Authority of Texas, whose authorized address is 5300
South Collins, P. O. Box 240, Arlington, Texas 76004-0240, Attention: J. Kevin Ward, General Manager (or his designated representative).

II. STATEMENT OF SERVICES TO BE PERFORMED

In order to discharge the responsibilities associated with the enforcement of federal, state, and municipal regulations, the Receiving Agency requires services of a laboratory qualified to perform water and wastewater analysis, and of personnel to conduct industrial inspection and/or sampling services, such services detailed in Section A, Subsection(s) __________, below.

A. PERFORMANCE OF SERVICES

1. Non-Significant Industrial User Inspection and Classification Services:

   The Receiving Agency employs the Performing Agency and the Performing Agency agrees to perform industrial user survey services and inspections for non-significant industrial users within the parameters listed on the attached schedule sheet and in accordance with the Receiving Agency's Industrial Waste Ordinances and Sewer Ordinances Numbers ________________.

   The Performing Agency shall perform all industrial user survey activities including organization of users to be surveyed utilizing the Texas Manufacturing Guide, notification to industrial users that require completion of the Receiving Agency’s Industrial User Survey Form, industrial user inspections as needed, and proper classification and documentation of industrial users’ discharge practices. Performing Agency will provide on behalf of the Receiving Agency updates to the Texas Commission on Environmental Quality (TCEQ) when required. Industrial user survey procedures are established by the Trinity River Authority to meet industrial discharge notification requirements found in the Texas Pollutant Discharge Elimination System Permits issued to the Trinity River Authority and in accordance with 40 CFR § 403.8. Documentation associated with the industrial user survey shall be maintained as required by EPA General Pretreatment Regulations, 40 CFR § 403.12.

2. Significant Industrial User Permit and Inspection Services:

   The Receiving Agency employs the Performing Agency and the Performing Agency agrees to perform permitting and industrial inspection services for significant industrial users within the parameters listed on the attached schedule sheet.

   The Performing Agency shall perform all Industrial Pretreatment Inspections, review permit applications and prepare for submittal Permits to Discharge Industrial Wastes
to the Sanitary Sewer in accordance with procedures established by the Trinity River Authority of Texas in accordance with 40 CFR § 403.8. Industrial Pretreatment Inspections, Application reviews and permit preparations and submittals shall be in compliance with the Receiving Agency's Industrial Waste Ordinances, Sewer Ordinance Numbers _______________, and EPA General Pretreatment Regulations for Existing and New Sources. Records of Inspections, Applications and Permits shall be maintained as required by EPA General Pretreatment Regulations, 40 CFR § 403.12.

3. Industrial User Sampling Services:

The Receiving Agency employs the Performing Agency and the Performing Agency agrees to perform industrial user sampling services within the parameters listed on the attached schedule sheet and in accordance with the Receiving Agency's Industrial Waste Ordinances and Sewer Ordinance Numbers ______________.

The Performing Agency shall perform all sample collections, sample preservation, and maintenance of chain-of-custody records in accordance to the approved procedures set forth in Test Methods for Evaluating Solid Waste, EPA Manual SW-846, Methods for Chemical Analysis of Water and Wastes, EPA Manual EPA-600/4-79-020, and the Handbook for Sampling and Sample Preservation of Water and Wastewater, EPA Manual EPA-600/4-82-029. The samples shall be properly collected, preserved and delivered by the Performing Agency to the Performing Agency's laboratory located at 6500 West Singleton Blvd., Dallas, Texas. When feasible, the Performing Agency will conduct flow or time composited sampling. When composited sampling is not feasible, grab sampling will be performed.

4. Analytical Services:

The Receiving Agency employs the Performing Agency and the Performing Agency agrees to perform analytical services within the parameters listed on the attached schedule sheet.

The Receiving Agency will collect samples and deliver them to the laboratory for analysis. It is understood that these samples will be properly collected and preserved in accordance with applicable sections of A Practical Guide to Water Quality Studies of Streams, Federal Water Pollution Control Administration publication and Methods for Chemical Analysis for Water and Wastes, EPA manual, as well as the latest edition of Standard Methods for the Examination of Water and Wastewater. Additionally, requirements set by the National Environmental Laboratory Accreditation Conference will be followed as mandated by the Texas Commission on Environmental Quality for state accreditation. A chain-of-custody procedure shall be maintained in the field and the laboratory in accordance with procedures to be established by the Receiving Agency. The Receiving Agency will furnish chain-of-custody.

The Performing Agency will perform all analyses according to the approved procedures set forth in Standard Methods for the Examination of Water and Wastewater, current edition or the latest edition of Methods for Chemical Analysis of Water and Wastes, EPA manual. Additionally, requirements set by the National Environmental Laboratory Accreditation Conference will be followed as mandated by the Texas Commission on Environmental Quality for state accreditation. Samples will be analyzed by these methods on the production basis, to include appropriate analytical quality assurance procedures. Records will be kept for documentation of the Performing Agency's quality assurance program and copies will be available to the Receiving Agency upon request. Unusual interferences and problems will be reported
to the Receiving Agency at its authorized address noted above. Research into specific techniques to overcome these difficulties will be undertaken when practical, and by mutual agreement. The chain-of-custody sheet submitted with each sample will designate the particular analysis or analyses to be made of each sample submitted. The laboratory will be operated in such a manner as to ensure the legal sufficiency of the sample handling; analytical and reporting procedures; and to remedy defects in the procedures should such be discovered.

The various laboratory personnel shall be directed upon receipt of written notice from the Receiving Agency 72 hours in advance, to appear and testify in enforcement actions. In such event, travel and per diem expenses for such employees shall be paid by the Receiving Agency. Travel and per diem for court appearances hereunder shall be based on current Texas law.

Receiving Agency may deliver to Performing Agency samples for analyses separate and apart from those samples collected by the Performing Agency. When the Receiving Agency delivers samples to the Performing Agency for analyses, the Receiving Agency shall indicate the nature and extent of the analysis it desires to be conducted. Performing Agency shall not be responsible for the manner of collection or chain-of-custody or sheets which are matters entirely outside Performing Agency's control. Performing Agency shall receive, log and perform such analyses of samples in accordance with that part of the chain-of-custody procedures identified as Transfer of Custody and Storage attached hereto.

Samples analyzed to maintain the normal quality assurance program which the Performing Agency presently maintains in its laboratory will be charged to the Receiving Agency at the same rate as submitted samples.

B. TERMINATION

Either party to this Contract may terminate the Contract by giving the other party thirty days' notice in writing at their authorized address as noted previously. Upon delivery of such notice by either party to the other and before expiration of the thirty-day period, the Performing Agency will proceed promptly to cancel all existing orders, contracts, and obligations which are chargeable to this Contract. As soon as practicable after notice of termination is given, the Performing Agency will furnish Receiving Agency an invoice for work performed under this Contract through its termination. The Receiving Agency will pay the Performing Agency for the work performed less all prior payments. Copies of all completed or partially completed reports, documents, and studies prepared under this Contract will be delivered by the Performing Agency to the Receiving Agency when and if this Contract is terminated prior to the completion of the prescribed work.

C. AMENDING THE CONTRACT

The parties hereto may alter or amend this Contract upon advance written agreement of both parties to exclude work being performed or to include additional work to be performed and to adjust the consideration to be paid hereunder by virtue of alterations or amendments.

III. BASIS FOR CALCULATING REIMBURSABLE COSTS

The financial basis for calculating reimbursable costs shall be as stated in Attachment A. Said Attachment A may be revised and updated annually by the Authority. Any revisions will be incorporated by reference herein. A cost analysis shall be prepared each year by the Trinity
River Authority of Texas and shall be approved by the Trinity River Authority of Texas Board of Directors prior to effective date of said revision.

The expenditures by the Trinity River Authority of Texas of funds paid to it under this Contract shall be subject to such State or Federal audit procedures as may be required by law and by accepted practices of the state or federal auditor, or both, if requested. The Trinity River Authority of Texas shall be responsible for maintaining books of account that clearly, accurately and currently reflect financial transactions. The financial records must include all documents supporting entries on the account records which substantiate costs. The Trinity River Authority of Texas must keep the records readily available for examination for a period of three years after the close of the last expenditure.

IV. CONTRACT AMOUNT

The total costs charged by the Authority to the Receiving Agency shall not exceed dollars ($______) per annum during the term of this Contract, unless mutually agreed by the parties hereto.

V. PAYMENT FOR SERVICES

The Performing Agency shall bill the Receiving Agency monthly for services performed. Charges for these services shall be based on the attached cost schedules.

The Receiving Agency shall pay the monthly billings of the Performing Agency within thirty days of their receipt.

VI. TERM OF CONTRACT

This Contract is to begin ____________, 20___ and shall terminate ________________, 20____, subject to Section II, paragraph B of this contract.

VII. INTERLOCAL AGREEMENT

Inasmuch as the Receiving Agency and the Performing Agency are political subdivisions of this state, and inasmuch as the testing of water and wastewater are critical to the maintenance of public health and such testing is therefore, a governmental function and service, this contract is entered into pursuant to the Interlocal Cooperation Act, Chapter 791, Texas Government Code.

Receiving Agency: Performing Agency:

CITY OF ______________________ TRINITY RIVER AUTHORITY OF TEXAS

BY: ______________________ BY:________________________

TITLE:____________________ TITLE: GENERAL MANAGER

DATE:____________________ DATE:____________________

ATTEST:____________________ ATTEST:____________________
(SEAL) (SEAL)
CHAIN-OF-CUSTODY PROCEDURES

Sample Collection and Shipment

1. To the maximum extent achievable, as few people as possible should handle a sample.

2. Stream and effluent samples should be obtained using standard field sampling techniques and preservation procedures.

3. Chain-of-Custody sheets should be attached to each sample at the time it is collected. Sample containers must be appropriate for requested testing with appropriate preservation and legibly labeled. The tag or sheet contains basically laboratory (requested parameters) information; however, certain identifying items including City, City Code, Contact Name and Phone Number, Type Sample Matrix, Material Sampled, and Method of Preservation must be completed by the field personnel collecting the sample. In completing the Chain-of-Custody tag or sheet, care should be utilized to ensure that all necessary information is correctly and legibly entered onto the form. A black ballpoint with waterproof ink should be used at all times.

4. During shipment, samples should be appropriately cooled. TRA lab receiving technician will check temperature.

Transfer of Custody and Storage

1. All samples should be handled by the minimum possible number of persons.

2. All incoming samples shall be received by the laboratory technician or his alternate, and logged into a database. Information to be entered into the database shall include the client sample number, date received, source, time(s) sampled, date(s) sampled, and analyses requested and comments from the Chain of Custody.

3. Promptly after logging, the custodian technician will distribute the sample to an analyst or place the sample in the secure sample vault, which will be locked at all times except when samples are removed or returned by analysts. The sample will be tracked internally in the lab.

4. Samples shall be kept in the sample storage security area at all times when not actually being used by analysts, such as during overnight absences. The technician shall ensure that heat-sensitive samples, or other sample materials having unusual physical characteristics, or requiring special handling, are properly stored and maintained.

5. A log of sample removal and replacement will be kept in the secure sample vault and be retained as a permanent record of the laboratory.

6. The original Chain of Custody and a Sample Evaluation/Variance record shall be sent by the laboratory to the appropriate Receiving Agency control point as part of the final data report.
## MOST RECENT CONTRACT CUSTOMERS AND AMOUNTS

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BACKGROUND: The Red Oak Creek Regional Wastewater System (ROCRWS) treatment plant is currently permitted at an average daily flow of 6.0 million gallons per day (MGD) and a peak two-hour flow of 15.0 MGD. CP&Y, Inc., completed a Master Plan in May 2013 that recommended the construction of a peak flow storage facility at ROCRWS to allow the existing plant to handle increasing peak flows. A similar strategy has been used successfully by the Authority at the Central Regional Wastewater System and Ten Mile Creek Regional Wastewater System treatment plants; the Mountain Creek Regional Wastewater System is currently constructing a similar facility. Peak flow storage defers plant expansions until actual system demand warrants the next expansion, rather than the effects of inflow and infiltration. In addition, the storage will reduce the peaking factor throughout the plant's processes.

In 2018, the Authority acquired the property adjoining the treatment plant for the purpose of building a 7.0 million-gallon (MG) peak flow storage facility. The Board of Directors authorized an Engineering Services Agreement (ESA) with Freese and Nichols, Inc. (F&N), for preliminary design of the peak flow storage facility in October 2018. The new facility will include an above-ground prestressed concrete storage tank in lieu of an in-ground storage basin due to geometric and geologic constraints of the site. Limitations include the following: regulatory buffer zone requirements, 100-year floodplain elevation, shallow limestone, and the natural grade of the property sloping toward adjacent Red Oak Creek. A storage tank requires less excavation and has a smaller footprint that allows for an initial 7.0 MG storage capacity and future expansion up to 28.0 MG of storage on site. Improvements also include a new influent pump station, piping, odor control, washdown system, and electrical/instrumentation systems.

During preliminary design of the peak flow storage facility, the ROCRWS watershed experienced a large storm event in September 2018 that flooded the treatment plant. In order to determine the frequency of that event, its potential impact to the peak flow storage facility, and protect the plant from future flooding, the Authority authorized special services in the Peak Flow Storage ESA for F&N to investigate the existing floodplain of the ROCRWS facility. The hydraulic and hydrologic analysis recommended additional flood protection by raising the
existing berm and extending it to the southwest corner of the facility. In order to expedite flood protection measures for ROCRWS, the berm modifications and interior storm drainage improvements will be designed and constructed with the peak flow storage facility.

**STAFF ANALYSIS:** Authority management has negotiated another ESA with F&N (Exhibit A) to provide final design engineering services for this project. As outlined in that ESA, total compensation for Basic Engineering Services will be compensated on a lump sum basis in an amount of $1,928,624. Additional engineering services that may be required for unanticipated conditions shall be compensated on a personnel time plus expenses basis in an amount not to exceed $200,000 as Special Services. Funding for this ESA will be provided by the ROCRWS 2018/2019 Bond Series.

In performance of these engineering services, F&N intends to subcontract with historically underutilized businesses to achieve a 25 percent participation goal.

**RECOMMENDATION:** Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors:

(a) Authorize the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Freese and Nichols, Inc., in the amount of $1,928,624 for Basic Services and $200,000 for Special Services for final design engineering services associated with the Peak Flow Storage and Berm Improvements at the Red Oak Regional Wastewater System; and

(b) Authorize the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Freese and Nichols, Inc., as are deemed prudent in his judgment provided the same do not increase the total approved cost.

Respectfully submitted,

KELLY A. DAVIS, P.E.
Assistant Manager, Engineering Services, Pipeline Planning, Design and Construction Administration

KAD/anf

Exhibit A – Engineering Services Agreement
EXHIBIT A

ENGINEERING SERVICES AGREEMENT
FOR THE
TRINITY RIVER AUTHORITY OF TEXAS

STATE OF TEXAS §
COUNTY OF TARRANT §

THIS AGREEMENT is made and entered into as of June 24, 2020, by and between the TRINITY RIVER AUTHORITY OF TEXAS, with its principal office at 5300 South Collins Street, Arlington, Tarrant County, Texas 76018 (AUTHORITY) and the firm of FREESE AND NICHOLS, INC., with its principal office at 2711 North Haskell Ave, Suite 3300, Dallas, Dallas County, Texas 75204 (ENGINEER).

WITNESSETH:

WHEREAS, the AUTHORITY owns and operates the Red Oak Creek Regional Wastewater System (ROCRWS) that receives wastewater from the cities of Cedar Hill, DeSoto, Glenn Heights, Lancaster, Ovilla, and Red Oak; and

WHEREAS, the AUTHORITY completed a Master Plan in May 2013 for the ROCRWS treatment plant that recommended construction of a peak flow storage facility; and

WHEREAS, construction of a peak flow storage facility will allow delay of construction of additional treatment plant capacity and reduce the plant’s peaking factor; and

WHEREAS, the AUTHORITY acquired the property adjacent to the ROCRWS treatment plant for the purpose of building a peak flow storage facility; and

WHEREAS, the ROCRWS treatment plant was damaged by floodwaters in September 2018 following a historical rain event; and

WHEREAS, the AUTHORITY performed a hydraulic and hydrologic study of the Red Oak Creek basin that recommended raising the existing berm an additional three feet and extending it to the southwest corner of the facility for flood protection; and

WHEREAS, the AUTHORITY desires to complete the final design for a peak flow storage facility, berm improvements, and interior drainage components to protect the ROCRWS treatment plant (PROJECT); and

WHEREAS, the AUTHORITY desires to obtain engineering services in connection with the PROJECT; and
WHEREAS, the ENGINEER represents that it is qualified and capable of performing the engineering services proposed herein, is acceptable to the AUTHORITY, and is willing to enter into an AGREEMENT with the AUTHORITY to perform such services.

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein, AUTHORITY and ENGINEER agree as follows:

**ARTICLE I**

**RETAINER**

The AUTHORITY agrees to retain the ENGINEER and the ENGINEER agrees to perform engineering services in connection with the PROJECT. The AUTHORITY agrees to pay and the ENGINEER agrees to accept fees as specified hereinafter as full and final compensation for the services authorized and accomplished.

It is understood and agreed that no professional services of any nature shall be undertaken under this AGREEMENT by the ENGINEER until ENGINEER is instructed in writing by the AUTHORITY’S General Manager or his designated representative to commence with the work.

**ARTICLE II**

**PROFESSIONAL QUALITY**

ENGINEER shall be responsible for the professional quality, technical accuracy, timely completion, and coordination of all designs, drawings, documents, estimates, specifications, reports, studies and other material (collectively the PROJECT DOCUMENTS) and services furnished by the ENGINEER under this AGREEMENT. Approval by the AUTHORITY of PROJECT DOCUMENTS, services, and incidental engineering services shall not in any way relieve the ENGINEER of responsibility for the technical accuracy of the engineering services performed. The AUTHORITY’S review, approval or acceptance of, or payment for any of the services described herein shall not be construed to operate as a waiver of any rights under this AGREEMENT or of any cause of action arising out of the performance of this AGREEMENT.

**ARTICLE III**

**BASIC ENGINEERING SERVICES**

ENGINEER agrees to perform BASIC ENGINEERING SERVICES in connection with the PROJECT as hereinafter stated, in accordance with the stipulations in this AGREEMENT. The ENGINEER shall perform BASIC ENGINEERING SERVICES necessary for the development of the PROJECT as follows:

A. **TASK I – PROJECT MANAGEMENT AND QUALITY ASSURANCE**

Manage professional services to complete the PROJECT. These services will include preparation of PROJECT controls including progress reports, action items log, decision
log, design team meetings, technical review committee workshops, schedule, and invoicing. ENGINEER shall provide professional services in this Task as follows:

(1) Prepare a PROJECT Work Plan, a document to be used by all participants in the PROJECT to ensure a common understanding of PROJECT goals, scope, and tasks. It will address, but is not limited to:

(a) PROJECT definition;
(b) PROJECT resources;
(c) PROJECT schedule;
(d) PROJECT budget;
(e) Quality Management Plan;
(f) Change Management Plan; and
(g) Communications Plan;

(2) Plan and participate in a PROJECT start-up meeting with AUTHORITY to confirm PROJECT scope, personnel, lines of communication, security protocols, change management, and schedule. Prepare meeting summary (meeting minutes) of the PROJECT start-up meeting and distribute to participants. ENGINEER’S PROJECT Manager shall be the primary client contact and lead communicator to ENGINEER’S staff;

(3) Schedule and direct regular coordination meetings with the ENGINEER’S design team to coordinate PROJECT task assignments, action items, and to prepare for progress meetings with the AUTHORITY. ENGINEER will maintain an Action Item Log and Decision Log to monitor PROJECT activity. Coordinate with subconsultants to confirm all PROJECT elements are compatible, integrated, and meet AUTHORITY performance requirements;

(4) Schedule and conduct up to three progress meetings with the AUTHORITY. In addition to reviewing progress at each meeting, review PROJECT deliverable status, current schedule, outstanding action items, PROJECT bottlenecks that could impact schedule, PROJECT budget status, decisions made, and PROJECT enhancements requested. Prepare agenda and meeting materials, direct and document meetings to review progress, and facilitate the exchange of ideas and information. Prepare draft meeting minutes to include action lists, decision lists, and PROJECT enhancement lists within ten business days to submit to the AUTHORITY for review and approval. Final minutes will be issued within four business days of receipt of review comments or immediately after four days if there are no comments received;
(5) Furnish the AUTHORITY, when requested, the engineering data necessary for applications for routine permits, submittals, and approvals required by local, state, and federal authorities, and assist AUTHORITY in consultations with appropriate authorities. Coordinate with applicable regulatory agencies, which may include but are not limited to the Texas Commission on Environmental Quality, Environmental Protection Agency, Texas Water Development Board, and Texas Department of Licensing and Regulation on design aspects of the PROJECT. Texas Pollutant Discharge Elimination System permitting shall be compensated as SPECIAL SERVICES;

(6) Develop a schedule of the PROJECT, which will be continuously updated throughout completion of the PROJECT;

(7) Prepare monthly PROJECT Summary Reports and submit with monthly invoice. The report shall contain the following elements:

(a) Summary of work completed to date;

(b) PROJECT budget summary, with comparison of budget versus actual;

(c) PROJECT schedule;

(d) Summary of actions and decisions needed from the AUTHORITY;

(e) Upcoming PROJECT activities; and

(f) Potential changes in scope, costs, or schedule;

(8) Quality Assurance (QA); provide QA/quality control (QC) plan to the AUTHORITY and conduct QA/QC reviews of the deliverables;

(9) Review Workshops: plan and participate in two review workshops with the AUTHORITY. The meetings will be held at approximately the 60 percent and 90 percent PROJECT completion stages. ENGINEER will provide seven review sets of half-scale plans and specifications a minimum of ten working days before the review meetings. A meeting memorandum will be prepared documenting major revisions and decisions made during each of the meetings. Document that all comments from the AUTHORITY have been incorporated or addressed in a comment response format acceptable to the AUTHORITY;

(10) 100 Percent Document Review: provide seven review sets of half-scale plans and specifications a minimum of 12 working days before the scheduled advertisement date. AUTHORITY will confirm that 90 percent review comments have been incorporated as appropriate and review design completed after the 90 percent review meeting. AUTHORITY will provide comments to the ENGINEER no later than five working days before the scheduled advertisement date;
(11) Schedule and conduct a PROJECT closeout meeting with the AUTHORITY, including providing a summary report with lessons learned and final invoice to the AUTHORITY; and

(12) Incorporate the AUTHORITY’S Design and Construction Guidelines when conducting the work defined herein, using the version current at the time of contract execution, or identify in writing where deviations therefrom are proposed.

B. TASK II – GEOTECHNICAL EXPLORATION AND LABORATORY ANALYSIS

Provide the following professional services as follows:

(1) Review available existing geotechnical reports and data in vicinity of proposed work areas;

(2) Travel to the site to select locations for exploratory borings. ENGINEER will stake the specific locations after checking underground utilities and verifying with the AUTHORITY that the locations are clear from utilities and acceptable to the AUTHORITY;

(3) Subcontract with a geotechnical company to drill exploratory borings. Samples will be collected intermittently using continuous flight augers and either split-spoon or tube samplers. For the deeper borings, limestone may be sampled using an NX-size core barrel, or tested in-situ using a Texas Department of Transportation Cone Penetration Test, as appropriate for the material. At completion, the boreholes will be backfilled with auger cuttings to the ground surface. Proposed exploratory borings shall include:

(a) Borings along the berm and flood wall – up to three borings to a 40-foot maximum depth;

(b) Boring on the creek side of the berm – one boring to a 40-foot maximum depth. Previous Boring 1801 will be used for the landside stratigraphy; and

(c) Borings within the proposed borrow area – up to six borings to a 15-foot depth, or until rock is encountered, whichever is less. It is assumed that native soils can be used for berm construction. If no suitable soils are found on site, offsite soil materials to be used within the berm will be specified to be provided by the Contractor;

(4) Provide an engineer or geologist to direct the drilling, log the borings, record field test data, and handle and transport the samples;

(5) Select samples for laboratory testing, assign tests, deliver samples to a subcontractor laboratory selected by ENGINEER, and review test results. Testing is expected to include classification tests (liquid and plastic limits and
percent passing a #200 sieve or gradation), moisture content, one-dimensional swell, and unconfined compression strength tests. Remolded soil samples from borrow area shall include shear strength evaluation of the constructed berm and foundation – two consolidated, undrained triaxial shear analyses if needed based upon soil type and depth to rock; and

(6) Prepare a Technical Memorandum (TM) of the geotechnical investigation based on interpretation of the data from the borings conducted as part of this PROJECT to include:

(a) Appendix with the boring locations, boring logs, laboratory test results, and a key to the symbols used;

(b) Evaluation of the soils within the borrow area for constructing the berm;

(c) Results of the seepage and slope stability analysis for the berm;

(d) Evaluation of potential settlement (not a detailed settlement analysis); and

(e) Geotechnical parameters for design of the flood wall.

C. TASK III – PEAK FLOW STORAGE SYSTEM AND FLOOD IMPROVEMENTS FINAL DESIGN

Prepare drawings and specifications for TASK III. The modifications and additions to the plant will include appropriate recommendations from the preliminary design documents of the ROCRWS Peak Flow Storage, including ROCRWS Treatment Plant – Hydrologic and Hydraulic TM, ROCRWS Treatment Plant, and Interior Drainage Analysis TM.

(1) Prepare plans and specifications in accordance with all pertinent local, state, and federal laws and regulations;

(2) Meet up to two times, inclusive of a field investigation, with the AUTHORITY to discuss operational considerations, staff requirements, system preferences, and prioritization of PROJECT needs. Conduct one additional field investigation to visually inspect equipment, observe facilities, and interview plant staff;

(3) Review existing plant operations to identify potential operational conflicts or interruptions that may occur during construction;

(4) Develop a sample maintenance of plant operations (MOPO) plan and identify construction constraints for the PROJECT;

(5) Consider planned future improvements of the facility and incorporate these conditions, when identified, into the design;

(6) Consider constructability of the improvements and develop an implementation plan for integrating improvements into the treatment plant;
Drawings and specifications:

(a) Develop 60 percent, 90 percent, and 100 percent level design drawings and specifications to delineate the architectural, structural, process/mechanical, electrical, automation/instrumentation, and site/civil requirements for the following improvements consistent with previously developed pre-design report recommendations:

(i) Peak flow storage basin will be an above-ground, circular prestressed concrete tank. The design will incorporate a flexbase road to and around the tank, and guardrail around the perimeter of the dome, wall manways access, and dome hatch;

(ii) Post-storage event washdown system for peak flow storage tank will be included. A high-pressure nozzle system with automatic control will be installed;

(iii) A non-potable water pressure boosting system will be designed near the cloth media filters. Suction pipe from filter effluent channel and discharge line connected to peak flow storage washdown system will be included;

(iv) A carbon adsorption odor control scrubber will be provided with necessary foul air piping, fittings and valves from peak flow storage tank;

(v) New power panel and programmable logic controllers (PLC) for power, control and monitoring of peak flow basin level, scrubber, and valves located at the peak flow basin;

(vi) A new influent pump station will be included with two pumps at 7.5 million gallons per day (MGD) capacity each. The pump station will have a total of three bay pump slots. New variable frequency drives and associated wet well level sensors will be included;

(vii) New electrically powered monorail hoist over the new influent pump station will be included;

(viii) A new electrical building will be installed for powering the new influent pump station. This will include new primary voltage distribution from the main 15kV and 25kV switchgears, two new 480V pad mount transformers, main-tie-main-main Motor Control Center (MCC), Variable Frequency Drives, low voltage transformer, panel, PLC, network equipment, instrumentation, and heating, ventilation and air conditioning equipment. An emergency generator will be included. New electrical building and
emergency generator will be sized to accommodate pump station when all three pumps are installed;

(ix) Existing influent pump station upgrades for connecting an overflow line to new influent pump station and associated isolation gates;

(x) Yard piping necessary for pumped fill from the new influent pump station to peak flow storage tank will be installed. The line will include a magnetic flow meter and associated vault structure. The drain line and overflow line from peak flow storage tank to existing Bear Creek line will be included. The drain will contain associated drain valve concrete vault;

(xi) Existing headworks improvement for diverting flow from peak flow storage fill line to existing 30-inch Headworks manifold will be included. The diversion line will contain a strap-on flow meter, isolation valve on manifold and isolation valve for drum screen No. 2;

(xii) A new berm and/or closure walls to protect the ROCRWS plant from the 100-year flood event based on the results of the Hydrologic and Hydraulic TM;

(xiii) A sump storage area or detention pond to contain interior drainage for the 100-year flood event;

(xiv) A new storm water pump station will be included with three pumps. New electrical, controls, and associated wet well level sensors will be included;

(xv) Demolition or abandonment of the existing storm water pump station;

(xvi) Yard piping necessary to intercept and divert storm water to the new detention pond and for pump drawdown to Red Oak Creek;

(xvii) Replacement of the effluent weighted gate with an automatically modulated, downward opening weir gate at the ultra-violet (UV) channel and increase the top of wall elevation of the effluent meter structure by one-foot;

(xviii) Associated electrical, grading and paving improvements and repairs required for PROJECT implementation; and

(xix) New lighting around perimeter of the peak flow storage tank, new influent pump station, and electrical building;
(b) Develop specifications, which will be prepared, where appropriate, in
genral conformance with the fifty-division format of the Construction
Specifications Institute. The specifications will include proposal
documents (Competitive Sealed Proposal (CSP) procurement), general
requirements, and technical specifications; and

(c) Conduct workshops with the AUTHORITY to deliver and review
60 percent and 90 percent draft design drawings and specifications.
ENGINEER will provide the AUTHORITY with design deliverables,
including: seven half-size sets of design drawings, design specifications,
and draft opinion of probable construction costs (OPCC), and two
electronic copies of all documents (on compact disc (CD) in PDF format);
and

(8) Specific Design Services:

(a) Structural Requirements:

(i) Design of foundation slabs and all structural components for the
new influent pump station, storm water pump station, ground
storage tank, valve vaults, electrical building, odor control
scrubber, and non-potable water booster pump station;

(ii) Design of closure walls or structural elements associated with the
new storm water pump station;

(iii) Design necessary wall penetrations and structural supports;

(iv) Design monorail required for hoist at new influent pump station;
and

(v) Pre-stressed concrete tank design will be performance specified
to be designed, signed and sealed by the tank manufacturer;

(b) Process/Mechanical Design Requirements:

(i) Evaluate, assess, and make final recommendations for
improvements;

(ii) For process improvements, provide design criteria for process and
mechanical components;

(iii) Make recommendations for manufacturer selection and equipment
model/type; and

(iv) Develop a hydraulic profile and a process flow diagram;

(c) Automation/Instrumentation Design Requirements:
(i) Prepare design plans for required supervisory control and data acquisition (SCADA) components and devices. This design will include the development of process and instrumentation diagrams for the main process improvements;

(ii) Develop control system architecture, which defines overall monitoring and control strategy by PLCs to be integrated into the existing plant SCADA system. Instrument evaluation will be limited to affected areas under this contract and to determination of incipient failure. Security and applications engineering are not part of the services provided; and

(iii) Outline the PROJECT control systems required for integration of the new PROJECT facilities into the AUTHORITY SCADA system;

(d) Electrical Design Requirements:

(i) Analyze the reliability of the existing electrical service and distribution switchgear identifying potential PROJECT equipment impacts;

(ii) Perform electrical load analysis for proposed equipment and processes. Specify/configure electrical equipment required to power the processes and operations;

(iii) Define electrical design distribution revisions, redundancy, arc flash, and new/modified MCCs;

(iv) Develop an electrical site plan showing distribution, substations, electrical rooms, MCCs, and general area classifications;

(v) Design new lighting improvements around the berm, sump storage area, new storm water pump station, the peak flow storage tank, new influent pump station, and electrical building;

(vi) Develop electrical one-line diagrams; and

(vii) Perform an Arc Flash Hazard Analysis in accordance with the latest edition of Institute of Electrical and Electronics Engineers Standard 1584 to determine the hazard risk category associated with each piece of equipment:

1) Analyze opportunities for reducing arc flash hazard risk category where appropriate; and

2) Prepare an Arc Flash Study Report that contains the one-line diagram, results from the short circuit and
coordination study results, and recommendations for reducing arc flash hazard category where appropriate;

(e) Site/Civil Design Requirements:

(i) Investigate and define existing subsurface utilities impacted by the PROJECT improvements based on existing record drawings available from the AUTHORITY. ENGINEER will endeavor to identify all subsurface utilities but cannot guarantee that the record drawings will identify all potential buried and unforeseen conflicts. Subsurface Utility Exploration shall be compensated as SPECIAL SERVICES;

(ii) Develop yard piping and paving drawings of existing and proposed conditions;

(iii) Define and make recommendations for temporary utility service required to maintain plant operations during construction;

(iv) Provide detail for proposed demolition work including an assessment of each structure with a scope for work to be performed;

(v) Provide an updated site layout plan; and

(vi) Define flood elevations and impacts; and

(f) Floodplain Hydraulic Impact analysis:

(i) Determine hydraulic impacts of proposed fill using the Hydrologic Engineering Center’s River Analysis System 2D hydraulic model developed as part of the ROCRWS Treatment Plant – Hydrologic and Hydraulic TM. The proposed grading will be input in the model and evaluated for the 100-year flood event;

(ii) If the proposed grading causes increase in the 100-year flood elevations, ENGINEER will evaluate revised grading or evaluate other mitigation alternatives to produce no adverse impacts to water surface elevations upstream or downstream of the ROCRWS site;

(iii) Coordinate with the Ellis County Floodplain Administrator to provide documentation of no adverse impacts per applicable County criteria; and

(iv) If required, development and submission of a Letter of Map Revision shall be compensated as SPECIAL SERVICES.
D. TASK IV – EFFLUENT HYDRAULICS IMPROVEMENTS TECHNICAL MEMORANDUM

Provide an Effluent Hydraulics Improvements TM to identify modifications to the effluent facilities required to discharge permitted two-hour peak flow rate of 15 MGD under the revised floodplain elevation of 516.4 feet.

(1) The TM shall include the evaluation of the following alternatives:

(a) Effluent Pump Station; and

(b) UV System and discharge piping modifications;

(2) Develop draft TM to include conceptual-level design, hydraulic calculations, and OPCC of the alternatives;

(3) Submit seven copies and an electronic copy (on CD in bookmarked searchable PDF format) of the draft TM to the AUTHORITY for review. Conduct a workshop with the AUTHORITY to review the draft TM and AUTHORITY’S comments; and

(4) Incorporate AUTHORITY’S comment and submit seven printed copies and two electronic copies (on CD in bookmarked, searchable PDF format) of the final TM.

E. TASK V – OPERATIONS IMPACT PLAN

Provide an Operations Impact Planning documents for Task III, using a Microsoft Excel worksheet and preferred methodology furnished by the AUTHORITY, a projection of operations and maintenance (O&M) costs to be incurred by the AUTHORITY as a result of the proposed improvements for the year 2023. The O&M cost projection shall be provided by the ENGINEER at the conclusion of the final design phase of the PROJECT. The AUTHORITY will notify the ENGINEER and will furnish an updated base worksheet if the AUTHORITY’S typical methodology is updated during the course of the PROJECT.

F. TASK VI – PROGRAMMABLE LOGIC CONTROL AND HUMAN MACHINE INTERFACE DESIGN (HMI)

ENGINEER shall provide services for Task III related to the PLC/HMI design as follows:

(1) Provide the following PLC/HMI design:

(a) Control narratives addressing process functions modified or added under this AGREEMENT including items required in the AUTHORITY’S Design and Construction Guidelines, including calculations and original equipment manufacturer equipment functionality;

(b) A list in the specifications of the existing, modified, and new input/output (I/O) points inclusive of hard and virtual I/O points and a description of each point. Description shall include short and long description as defined in the AUTHORITY’S Design and Construction Guidelines;
(c) Provide Mapping Table for Peer-to-Peer I/O between existing PLCs and modified remote terminal units for memory mapping;

(d) Design-phase Programming Requirements Document as described in the AUTHORITY’S Design and Construction Guidelines to include:

(i) A list of existing I/O points to be modified, description of the required modifications and function of the I/O point; and

(ii) Details such as tag names descriptions, and basic configurations of new and existing displays I/O points for issuance to the Contractor post proposal award. PLC and HMI addresses will be provided by the Contractor’s Programmer during construction;

(e) HMI Displays:

(i) List of existing displays to be modified including a description of the required modifications. ENGINEER will provide a printed copy of the existing display with hand markups with typed comments for review;

(ii) List of new displays to be prepared during design phase which will be used by the Contractor during construction. The list will provide a general description of the display including pop-ups, alarms, notification, and status; and

(iii) A completed flat graphic display of each new and modified HMI display screen including pop-ups, alarms, notifications, and status. The new and modified HMI displays shall be provided in Microsoft Graph Edit (GRF) file form using iFix and provided in searchable PDF format; and

(f) Provide logic diagrams in International Society of Automation (ISA) format. Logic diagrams of process design functions residing in existing PLC will be provided by the ENGINEER for the programming to be developed during construction, complete with functional description, alarms, and failure scenarios, defined symbol legend following ISA guidelines, and with applicable narrative excerpt adjacent to the related logic diagram elements;

(2) Control Design Review: Conduct one control design start-up meeting according to the requirements of the AUTHORITY’S Design and Construction Guidelines. In addition to the control design start-up meeting, the ENGINEER will review the following with the AUTHORITY in up to two review sessions and will provide a written response to each AUTHORITY comment and will incorporate comments as appropriate:
(a) Control narratives;

(b) I/O lists, equipment PLC, original equipment manufacturer’s equipment, and intelligent electronic devices for power, including tags and descriptions;

(c) Logic diagrams; and

(d) HMI displays; and

(3) Coordinate the HMI GRF format displays and control design deliverables to conform to the AUTHORITY’S Design and Construction Guidelines in effect as of the date of this AGREEMENT’S execution.

G. TASK VII – PROPOSAL ASSISTANCE

Upon completion of the design services and approval of the final PROJECT documents by the AUTHORITY and required regulatory agencies, ENGINEER will provide the following services for Task III – Peak Flow Storage System and Flood Improvements Final Design for the PROJECT improvements assuming CSP:

(1) Assist the AUTHORITY with advertisement of the PROJECT (assumed four-week proposal period). Help establish proposal dates to avoid conflicts with similar projects bidding at or near the same time. Provide a Request for Proposals to the AUTHORITY for publication in legal notices for the PROJECT;

(2) Provide the AUTHORITY with up to eight half-size sets of design drawings, eight sets of design specifications, and one electronic copy of all documents (on CD in bookmarked, searchable PDF format) for the PROJECT. The procurement construction documents will be signed and stamped by authorized representatives of the ENGINEER holding current registration in the State of Texas in the respective drawing discipline;

(3) Post electronic procurement sets, including plans and specifications, to an electronic bid distribution system for Contract Document sales to prospective offerors and notification of plan rooms;

(4) Respond to questions related to the distribution of documents, construction contract provisions, proposal requirements, and technical questions regarding the PROJECT up to four days prior to proposal opening;

(5) Prepare, post, and distribute addenda addressing additions, deletions, modifications, or interpretations to the Contract Documents up to two days prior to proposal opening;

(6) Assist the AUTHORITY in conducting one non-mandatory pre-proposal conference for the PROJECT with potential offerors, and prepare minutes and responses. Responses to the pre-proposal conference will be in the form of
addenda issued after the conference. ENGINEER will assist in conducting a tour of the PROJECT site after the conference;

(7) Assist the AUTHORITY in receiving and recording proposals at the formal proposal opening for the PROJECT, evaluate the information contained in the proposal documents for conformance with requirements of the construction Contract Documents, prepare initial monetary offer tabulation, and compare proposal costs with estimated costs and available budget;

(8) Evaluate the information provided by the offerors as a part of the proposal package. Review the proposals for conformance with the proposal requirements and conduct reference checks. Prepare a memo identifying any deficiencies in proposal as to meeting submission requirements. Prepare a summary of findings for the AUTHORITY related to the proposal documents. Up to six proposals will be reviewed. Review of additional proposals shall be compensated as SPECIAL SERVICES;

(9) At the conclusion of the AUTHORITY’S evaluation scoring, the AUTHORITY Selection Committee will recommend award of the contracts consistent with the requirements of the construction Contract Documents;

(10) Negotiations assistance shall be compensated as SPECIAL SERVICES; and

(11) Prepare conformed and executed documents for construction of the PROJECT. The AUTHORITY will provide instructions for preparation of documents for execution and construction. Furnish up to two full-size drawings, ten half-size drawings, and 12 specification sets (four executed and eight conformed) to the AUTHORITY. Furnish up to five full-size drawings, five half-size drawings, and five specification sets (two executed and three conformed) to the Contractor for the PROJECT. A total of six copies of the executed specifications will be prepared and stamped "Executed" for the PROJECT. Provide three CDs with a copy of the final conformed documents in electronic format (bookmarked, searchable PDF) for the PROJECT.

ARTICLE IV
SPECIAL ENGINEERING SERVICES

Various SPECIAL SERVICES incidental to the PROJECT, but not within the scope of the BASIC ENGINEERING SERVICES covered by ARTICLE III preceding, which may be performed or arranged for separately by the AUTHORITY, or may be added to the ENGINEER’S responsibilities by mutual agreement and written authorization include, but are not necessarily limited to, the following:

(1) Perform additional video inspection and/or pipeline cleaning;

(2) Perform additional subsurface excavation in the event such excavation is required to locate existing facilities;
(3) Prepare legal descriptions and plats in excess of those provided in ARTICLE III;

(4) Perform additional geotechnical assessments to determine soil, water table, or trenching characteristics;

(5) Complete Redrawing of construction plan sheets, if required as a result of changes made in the scope of the construction contract after submission of final plans to AUTHORITY;

(6) Observe on-site conditions to evaluate exposed conditions, dewatering techniques, or changed conditions;

(7) Coordinate with landowners for right of entry or other PROJECT related requirements;

(8) Provide additional full-size and/or half-size final plan sets and specifications for the PROJECT in excess of the number required under ARTICLE III;

(9) Provide additional borings which may be occasioned by the depth to rock being deeper than anticipated or because of changes in geological conditions which necessitate additional evaluation to properly define the stratigraphic conditions;

(10) Prepare the CSP documents, develop new front-end documents, review AUTHORITY comments and revisions and incorporate into CSP documents;

(11) Conduct a workshop with AUTHORITY representatives and Selection Committee to review and determine AUTHORITY procurement decisions and develop the procurement strategy, compliance with legal requirements, submission requirements and instructions and development of evaluation criteria, weighting and scoring methodology;

(12) Conduct a proposal evaluation workshop with the AUTHORITY to present the summary of findings to the AUTHORITY, discuss with Selection Committee the interview evaluations, answer questions, facilitate discussions, and assist the selection committee in assigning final scores to the proposers;

(13) Assist AUTHORITY in conducting up to four interviews with offerors. All interviews are assumed to be conducted on the same day. Conduct a post-interview evaluation workshop with AUTHORITY to finalize evaluations, assist in finalization of evaluation and scoring of the proposals from the proposers interviewed by facilitating discussions and answering questions, and assist in the selection of the best value proposal by answering final questions from Selection Committee during its final deliberations. Additional interviews beyond initial four interviews shall be compensated as a SPECIAL SERVICE; and
(14) Provide any other services otherwise excluded in this AGREEMENT but customarily furnished in accordance with generally accepted engineering practices.

ARTICLE V

SERVICES BY THE AUTHORITY

The AUTHORITY and its representatives will render services inclusive of the following:

(1) Provide available criteria and full information as to the AUTHORITY’S requirements for the PROJECT;

(2) Assist the ENGINEER by placing at his disposal all available written data pertinent to the PROJECT;

(3) Examine documents submitted by the ENGINEER and render a decision pertaining thereto promptly, to avoid unreasonable delay in the progress of the ENGINEER’S services;

(4) Furnish information required as expeditiously as possible for the orderly progress of the work;

(5) The General Manager of the AUTHORITY or his designated representative shall appoint, in writing, a representative that the ENGINEER shall be entitled to rely upon regarding decisions made by the AUTHORITY. All subsequent communication to the AUTHORITY shall be deemed made when conveyed in writing to the representative at the location specified in ARTICLE XV, NOTICES; and

(6) The services, information, and reports required by this ARTICLE, inclusive, shall be furnished at the AUTHORITY’S expense, and the AUTHORITY will apprise the ENGINEER of any known inaccuracies or inconsistencies in the information provided.

ARTICLE VI

COMPENSATION

A. BASIC ENGINEERING SERVICES

For and in consideration of the BASIC ENGINEERING SERVICES (ARTICLE III) to be rendered by the ENGINEER, the AUTHORITY shall pay, and the ENGINEER shall receive compensation as hereinafter set forth. All remittance by the AUTHORITY for such compensation shall either be mailed or electronically delivered to the financial institution identified by ENGINEER.
Compensation for BASIC ENGINEERING SERVICES shall be paid by the AUTHORITY to the ENGINEER for all services required for work stated under ARTICLE III in the following lump sum amounts:

| Task I          | Project Management and Quality Assurance | $388,432 |
| Task II         | Geotechnical Exploration and Laboratory Analysis | $44,933  |
| Task III        | Peak Flow Storage System and Flood Improvements Final Design | $1,221,645 |
| Task IV         | Effluent Hydraulics Improvements Technical Memorandum | $52,888  |
| Task V          | Operations Impact Plan | $14,643   |
| Task VI         | Programmable Logic Control and Human Machine Interface Design | $113,222 |
| Task VII        | Proposal Assistance | $92,861   |

B. SPECIAL SERVICES

For and in consideration of the SPECIAL SERVICES set forth in ARTICLE IV, herein, the AUTHORITY shall pay and the ENGINEER shall receive compensation for personnel time plus expenses in an amount not to exceed Two Hundred Thousand Dollars ($200,000) to be paid as follows:

For all the ENGINEER’S personnel time applied to the SPECIAL SERVICES, compensation shall be based on "Direct Salary" times a multiplier of 2.95 in accordance with Attachment A.

All direct non-labor expenses, including mileage, travel and lodging expenses, but excluding subcontract expenses, applied to the SPECIAL SERVICES, shall be paid at invoice or internal office cost plus a ten percent service charge. Subcontract expenses shall be paid at direct cost plus a five percent service charge. Compensation for subcontract personnel time must also comply with the limits set forth in Attachment A, unless approved in writing by the AUTHORITY prior to the rendition of subcontract services.

C. METHOD OF BILLING

For services performed by ENGINEER for AUTHORITY compensated as lump sum amounts, ENGINEER shall submit statements monthly or less frequently reflecting ENGINEER’S requested compensation for that portion of the BASIC ENGINEERING SERVICES completed by ENGINEER.

For services performed by ENGINEER for AUTHORITY compensated as personnel time plus expenses, ENGINEER shall submit statements monthly or less frequently reflecting ENGINEER’S requested compensation for that portion of the BASIC ENGINEERING SERVICES or SPECIAL SERVICES completed by ENGINEER. Along with each separate request for payment of these services, ENGINEER shall submit to the AUTHORITY documentation substantiating all of the actual costs for which ENGINEER has requested compensation, including but not limited to the following:

(1) The name of each individual performing services, individual’s billing category, the individual's direct salary, and the number of hours associated with each
individual's performance of services for the period of time identified with any billing invoice; and

(2) A copy of any invoices paid directly by the ENGINEER for any outside services or product which relate to the PROJECT, and which are requested by ENGINEER to be reimbursed by AUTHORITY.

All records pertaining to services for which payment has been made based upon ENGINEER'S actual costs times a multiplier shall be subject to audit by the AUTHORITY in accordance with ARTICLE VII. ENGINEER may be required to furnish additional records and/or data in addition to the above, as a response to AUTHORITY'S auditing process specified in ARTICLE VII.

D. TIME OF PAYMENT OF COMPENSATION

The ENGINEER shall submit a request for partial payments for services on a monthly basis, as evidenced by monthly statements submitted by the ENGINEER to the AUTHORITY. Final payment for services authorized shall be due upon completion of these services.

Should the AUTHORITY fail to make payment to the ENGINEER, the sum named in any partial or final statement, and when payment is past due for more than thirty days, then the AUTHORITY shall pay to the ENGINEER, in addition to the sum shown as due by such statement, interest thereon at the rate of five percent per annum from the date due, as provided herein until fully paid, which shall fully compensate ENGINEER for any injury arising from such delay in payment.

However, in the event that the sum shown as due to the ENGINEER by such statement shall be disputed, questioned, or objected to by the AUTHORITY, then said rate of five percent per annum from the date due shall only apply to that portion or amount of payment which is finally and mutually agreed upon by AUTHORITY and ENGINEER to be rightfully due and owing to the ENGINEER.

ARTICLE VII

AUDIT OF RECORDS

All records of the ENGINEER of a financial or timekeeping basis which have been used to determine the fees earned by the ENGINEER and billed to AUTHORITY on the basis of "Salary Cost" times a multiplier shall be open to inspection and subject to audit and/or reproduction by AUTHORITY'S agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of cost of the services at the conclusion of the scope of all services to be performed under this AGREEMENT. The relationship between Direct Salary and Salary Cost has been identified on Attachment A and is not subject to an audit or a redetermination of any kind. In addition, this ARTICLE shall apply to Subcontractors and Direct Purchases only to the extent of invoices received by ENGINEER and evidence of payment for such invoices in the possession of ENGINEER. In its audits, the AUTHORITY may require inspection and copying from time to time and at reasonable times and places of any and all information, materials and data of every kind and character that may in AUTHORITY'S judgment
have any bearing on or pertain to the payments subject to this audit. The AUTHORITY or its
designee shall be afforded access to all of the ENGINEER'S records pursuant to the provisions
of this ARTICLE at the conclusion of the term of the AGREEMENT and for a period of three
years after final payment.

ARTICLE VIII

LIABILITY AND INSURANCE MATTERS

During the term of this AGREEMENT, ENGINEER shall, to the fullest extent permitted
by law, maintain, and shall require its subcontractors to maintain:

(1) Professional liability insurance in an amount and with carriers satisfactory to
AUTHORITY. If the professional liability insurance is written on a “claims made”
form, a policy shall: 1) be in force until acceptance of the PROJECT
improvements by the AUTHORITY; 2) be in force for a period of three years after
acceptance of the PROJECT improvements by the AUTHORITY; and, 3) have a
retroactive date on or prior to the effective of this AGREEMENT;

(2) Public liability, commercial general liability and umbrella policies (all including
blanket contractual liability coverage for all liabilities assumed in this
AGREEMENT, including all indemnification obligations set forth in ARTICLE XIV)
and automobile insurance for bodily injury, and property damage, and workers’
compensation coverage on all of ENGINEER’S or its subcontractors’ employees
working on the PROJECT;

(3) All insurance policies referenced in paragraph (2) above, except workers’
compensation coverage, shall, to the fullest extent permitted by law, name and
cover the AUTHORITY as an additional insured, by policy declaration, with
coverage being primary, and all said insurance policies shall include a waiver of
subrogation, and shall be in amounts and with carriers satisfactory to
AUTHORITY;

(4) ENGINEER shall furnish to the AUTHORITY certificates (and upon request
endorsements and policies) reflecting that the above-required insurance
coverages are in full force and effect prior to ENGINEER’S execution of this
AGREEMENT and also thereafter within seven days of the AUTHORITY’S
request. Policies shall not be subject to endorsements, exclusions, limitations,
conditions or restrictions inconsistent with the insurance requirements to be
fulfilled by the ENGINEER, and all policies shall be written through companies
duly approved to transact that class of insurance in the State of Texas. The
AUTHORITY prior to the effective date of this AGREEMENT must approve all
said insurance in writing. Said certificates of insurance shall be attached hereto
as “Attachment B” and shall be incorporated herein for all purposes; and

(5) Approval, disapproval or failure to act by AUTHORITY regarding any insurance
required by this AGREEMENT shall not relieve ENGINEER of full responsibility
or liability, if any, for liabilities and damages as set forth in the AGREEMENT.
Neither shall the insolvency or denial of liability by any insurance company relieve the ENGINEER of liability.

**ARTICLE IX**

**ASSIGNMENT**

Neither this AGREEMENT, nor any right privilege or cause of action arising hereunder may be assigned by ENGINEER, or any of ENGINEER’S subcontractors, in whole or in part for any purpose and whether in settlement of litigation or not, and any purported assignment shall be void and unenforceable without the written consent of the AUTHORITY. The AUTHORITY and the ENGINEER each binds itself and its successors and assigns to the other party with respect to all covenants of this AGREEMENT.

**ARTICLE X**

**TERMINATION**

In connection with all the engineering services outlined or contemplated above, it is agreed that the AUTHORITY or the ENGINEER may cancel or terminate this AGREEMENT upon thirty days written notice to the other, with the provision and understanding that immediately upon receipt of notice of such cancellation from either party to the other, all work and labor being performed under this AGREEMENT shall immediately cease, pending final cancellation at the end of such thirty day period, and further provided that the ENGINEER shall be compensated in accordance with the terms of this AGREEMENT for all work accomplished prior to the receipt of notice of such termination. All completed or partially completed PROJECT DOCUMENTS prepared under this AGREEMENT shall then be delivered to the AUTHORITY, which it may use without restraint. All rights, duties, liabilities, and obligations accrued prior to such termination shall survive termination. ENGINEER shall be liable for any damages suffered by the AUTHORITY as a result of ENGINEER’S termination of this AGREEMENT.

**ARTICLE XI**

**PROJECT DOCUMENTS**

All PROJECT DOCUMENTS are and shall become the property of the AUTHORITY, which it may use without restraint. The ENGINEER is not responsible and is hereby released from responsibility for the AUTHORITY’S use of the documents for any purpose other than for this PROJECT. The ENGINEER may retain a set of reproducible record copies of drawings and other documents; however, ENGINEER shall not provide to, or use this work product on behalf of, any person or entity without the express written consent of the AUTHORITY.

**ARTICLE XII**

**PRIVATE LAND ENTRY**

ENGINEER shall not enter any property owned by others on the AUTHORITY’S behalf to survey, to perform soil tests, or for other reasons related to the performance of services under
this AGREEMENT until the ENGINEER has secured the landowner's permission to so enter and perform such activities.

ARTICLE XIII

LAWS AND ORDINANCES

ENGINEER shall at all times observe and comply with all federal, state, and local laws, ordinances, rules, regulations, and orders of any public authority, which in any manner affect this AGREEMENT or the PROJECT. ENGINEER agrees, moreover, not to discriminate against any employee or applicant for employment because of race, religion, color, sex, age, disability, or national origin. ENGINEER agrees to comply with the Immigration Reform and Control Act of 1986 and the Americans with Disabilities Act of 1990. The ENGINEER agrees that the indemnification provisions of ARTICLE XIV INDEMNIFICATION below encompass any failure by the ENGINEER to comply with this ARTICLE.

ARTICLE XIV

INDEMNIFICATION

To the fullest extent permitted by law, ENGINEER DOES HEREBY COVENANT AND CONTRACT TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS THE AUTHORITY ALL OF ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, from and against any and all liability, claims, suits, demands, causes of action, damages, expenses and costs, including all expenses of litigation, and/or settlement of any character, type or description (including expert/consultant fees and attorneys’ fees, and expenses of alternative dispute resolution) arising out of or in connection with and to the extent attributable to the intentional acts or omissions of ENGINEER or its agents, subcontractors, consultants or employees in the execution or performance of this AGREEMENT, provided that the claims, suits, losses, damages, causes of action, expenses, fees or liability of whatever nature arise in whole or in part from the negligence or other act or omission of ENGINEER or any of its officers, officials, agents, subcontractors, consultants, employees or invitees. ENGINEER contracts to indemnify and protect AUTHORITY from any liability, claims, suits, losses, damages, attorneys’ fees or causes of action due to ENGINEER’S negligence, joint or concurrent negligence, error or omission to the extent that said liability, claims, suits, losses, damages, attorneys’ fees or causes of action arise out of or in connection with the acts or omissions of ENGINEER or its agents, subcontractors, consultants, or employees. This obligation shall not be defeated by the contributory, joint or concurrent negligence or fault of the AUTHORITY, but shall be limited proportionately to the extent of that negligence or fault, as ultimately adjudged by the finder of fact.

ENGINEER agrees that the AUTHORITY has sole discretion and control over the selection and retention of any attorneys, experts or consultants, in fulfillment of ENGINEER’S defense and indemnification obligations hereunder.

ARTICLE XV
NOTICES

All notices and communications under this AGREEMENT to be delivered to the AUTHORITY shall be sent to the address of the AUTHORITY as follows, unless and until the ENGINEER is otherwise notified:

Trinity River Authority of Texas
P.O. Box 240
Arlington, Texas 76004-0240

Attention: Mr. Gary N. Oradat, P.E.
Executive Manager
Planning, Design and Construction Administration

All notices and communications under this AGREEMENT to be delivered to the ENGINEER shall be sent to the address of the ENGINEER as follows, unless and until the AUTHORITY is otherwise notified:

Freese and Nichols, Inc.
2711 North Haskell Ave, Ste. 3300
Dallas, TX 75204

Attention: Mr. David Jackson, P.E.
Vice President

ARTICLE XVI

INDEPENDENT CONTRACTOR

The services performed hereunder by the ENGINEER shall be subject to AUTHORITY’S inspection and approval, but the detailed manner and method of doing said services shall be under the control of the ENGINEER. In the performance of services hereunder, ENGINEER shall be deemed an independent contractor, and any of its employees performing services required hereunder shall be deemed solely employees of ENGINEER or its subcontractor, and not employees of the AUTHORITY.

ARTICLE XVII

SUBCONTRACTORS

In fulfilling its duties pursuant to this AGREEMENT, it is anticipated that the ENGINEER may subcontract to individuals, corporations, organizations, governments or governmental subdivisions or agencies, partnerships, associations, or other legal entities. Such subcontracts may be entered into only with written approval from the AUTHORITY.

The AUTHORITY encourages ENGINEER to provide equal opportunity to historically underutilized business enterprises, and ENGINEER agrees that qualified historically underutilized business enterprises, including minority-owned and female-owned businesses,
and labor-surplus firms located in the PROJECT area shall have the maximum practicable
opportunity to participate in the performance of AUTHORITY contracts and subcontracts.
ENGINEER agrees that it will attempt to achieve at least twenty-five percent participation by
historically underutilized business enterprises in the performance of this PROJECT, and will
routinely submit evidence to AUTHORITY on the degree to which this goal is met. ENGINEER
shall include this ARTICLE in all its contracts and in all their subcontracts directly related to this
PROJECT.

ARTICLE XVIII

PRIOR AGREEMENTS SUPERSEDED

This AGREEMENT constitutes the sole and only Agreement of the parties hereto and
supersedes any prior understanding or oral or written Agreements between the parties
regarding the subject matter of this AGREEMENT, and any and all changes, modifications or
alterations of this AGREEMENT must be in writing and approved by both AUTHORITY and
ENGINEER.

ENGINEER releases and waives any and all causes of action of whatever nature, or any
other legal theory arising out of any prior understanding or oral or written Agreements between
the parties, or any subsequent oral understanding or Agreements between the parties,
regarding the subject matter of this AGREEMENT, from any and all liability damages of any kind
known or unknown, whether in contract or tort.

ARTICLE XIX

LEGAL CONSTRUCTION

In case any one or more of the provisions contained in this AGREEMENT shall be for
any reason held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality,
or unenforceability shall not affect any other provision hereof and this AGREEMENT shall be
construed as if such invalid, illegal, or unenforceable provision had never been contained
herein. The validity of this AGREEMENT and of any of its terms or provisions, as well as the
rights and duties hereunder, shall be governed by the laws of the State of Texas. All amounts
due under this AGREEMENT, including damages for its breach, shall be paid in Tarrant County,
Texas, said Tarrant County, Texas being the place of performance as agreed to by the parties
to this AGREEMENT. In the event that any legal proceeding is brought to enforce this
AGREEMENT or any provision hereof, the same shall be brought in Tarrant County, Texas.

Nothing in this AGREEMENT is intended to waive any governmental immunity available
to AUTHORITY under Texas law or waive any defenses of ENGINEER or AUTHORITY under
Texas law. This AGREEMENT shall not be construed for the benefit of any third party, nor does
it create or grant any right or cause of action in favor of any third party against AUTHORITY or
ENGINEER.

ARTICLE XX

REPRESENTATIONS
ENGINEER represents that no officer, employee, or agent of the AUTHORITY has sought or received compensation in any way with respect to the consideration or execution of this AGREEMENT, and in no event will ENGINEER pay a fee to, or in any other manner compensate AUTHORITY officers, employees, or agents in connection with the approval or performance of this AGREEMENT. ENGINEER expressly warrants and represents that no promise or agreement which is not herein expressed has been made to ENGINEER in executing this AGREEMENT and ENGINEER is not relying upon any such statement or representation of AUTHORITY, its officials, officers, agents or employees in entering into this AGREEMENT. ENGINEER is relying on its own judgment in entering into this AGREEMENT and has been represented by independent legal counsel in this matter.

A breach of any provision contained in this ARTICLE shall result in automatic termination of this AGREEMENT. Upon such termination, the AUTHORITY may use all PROJECT DOCUMENTS prepared under this AGREEMENT as provided in ARTICLE X, TERMINATION, and ENGINEER shall be liable for all damages to the AUTHORITY occasioned by a termination under this ARTICLE.

ARTICLE XXI

TERM OF AGREEMENT AND TIME OF PERFORMANCE

This AGREEMENT shall be effective the ________ day of ________________, 2020, and ENGINEER shall complete BASIC ENGINEERING SERVICES within Twelve Months after receipt of first written authorization to proceed with Tasks in ARTICLE III. This AGREEMENT shall continue in full force and effect until June 30, 2021. AUTHORITY may, on its own determination, extend the term of this AGREEMENT by written agreement with ENGINEER. All payments and liabilities accrued prior to termination shall survive the termination.

IN WITNESS WHEREOF, the parties acting under authority of their respective governing bodies have caused this AGREEMENT to be executed in several counterparts, each of which is deemed to be an original, as of the day and date written above.

[SIGNATURES ON THE FOLLOWING PAGE]
PROCUREMENT VERIFICATION

The solicitation and contractor selection process used in the procurement of this Agreement complies with Texas law and Authority policy.

HOWARD S. SLOBODIN
General Counsel

[VERIFICATION TO BE COMPLETED BY ENGINEER ON FOLLOWING PAGE]
VERIFICATION REQUIRED BY TEXAS GOVERNMENT CODE CHAPTER 2270

By signing below, the signatory hereby verifies that the firm it represents:

1. Does not boycott Israel; and,
2. Will not boycott Israel during the term of the contract.

SIGNED BY: __________________________
Print Name & Title: __________________________
Firm Name: __________________________
Date Signed: __________________________

NOTARIZATION

THE STATE OF _________  )
COUNTY OF _________  )

BEFORE ME, the undersigned notary public on this day personally appeared __________________________, on behalf of __________________________ (Company), who, being duly sworn, stated under oath that he/she has read the foregoing verification required by Texas Government Code Section 2270.002 and said statements contained therein are true and correct.

SWORN TO AND SUBSCRIBED before me on the_______ day of _________, 202__.

__________________________________
NOTARY PUBLIC IN AND
FOR THE STATE OF ______________

The following definitions apply to Texas Government Code Section 2270.001:

(1) "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and

(2) "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

State law requires any firm entering into an agreement or contract with the Authority to complete the foregoing verification. TEX. GOV’T CODE § 2270.002.
## Attachment A

FREESE AND NICHOLS, INC.

HOURLY BILLING RATES

June 2020

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>BILLING RATE RANGES</th>
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<tr>
<td>Professional 2</td>
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<tr>
<td>Intern / Coop</td>
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</tr>
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</table>

*The above billing rates are based upon "Direct Salary Cost" times a multiplier of 2.95.*
BACKGROUND: The Authority owns and operates the Tarrant County Water Supply Project (TCWSP). That system includes raw water pumping and conveyance facilities, a water treatment plant in Euless, Texas, and treated water pumping and conveyance facilities. The plant is currently rated for a maximum treatment capacity of 87 million gallons per day. The TCWSP treatment plant uses a mixed media filtration system of sand and anthracite. Source water is passed through beds of that media for treatment.

The TCWSP FY2015 Triennial Evaluation Update proposed replacing the existing filter media and replacement of the underdrains prior to converting to biofiltration. The purpose for converting to biofiltration is to improve water quality/stability. Biofiltration uses biological activity as part of granular filtration and can decrease the likelihood of bacteria from regrowing. The filter media was last replaced in 2004, and is nearing the end of its useful life. The long-term plan for the filter basins is to convert to biological filtration, but the current underdrain system will not support biological filtration. Therefore, as part of this project, the underdrains will be redesigned and replaced. During the TCWSP FY2017 Triennial Evaluation, it was noted that the filter valves and actuators are aging, with some over 30 years old, and are in need of replacement. The scope of the project includes replacement of the media and underdrains for all 24 existing filters, evaluation of the steel piping for repair or replacement in the piping gallery, and evaluation of valves and actuators for replacement.

STAFF ANALYSIS: Authority management has negotiated an Engineering Services Agreement (ESA) (Exhibit A) with Hazen and Sawyer, DPC (Hazen), to provide preliminary and final design engineering services for this project. As outlined in the ESA, total compensation for Basic Engineering Services will be in a lump sum amount of $934,607. Additional engineering services that may be required for unanticipated conditions shall be compensated on a personnel time plus expenses basis in an amount not to exceed $100,000 as Special Services. Funding for this ESA will be provided by the TCWSP 2019 Bond Series.
In performance of these engineering services, Hazen intends to subcontract with historically underutilized businesses to achieve a 25 percent participation goal.

RECOMMENDATION: Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors:

(a) Authorize the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Hazen and Sawyer, DPC, in the amount of $934,607 for Basic Services and $100,000 for Special Services for preliminary and final design engineering services associated with the Filter Media and Underdrain Replacement at the Tarrant County Water Supply Project; and

(b) Authorize the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Hazen and Sawyer, DPC, as are deemed prudent in his judgment provided the same do not increase the total approved cost.

Respectfully submitted,

ANDREW ALDRIDGE, P.E.
Engineer, Capital Improvement Program
Planning, Design and Construction Administration

ABA/anf

Exhibit A – Engineering Services Agreement
EXHIBIT A

ENGINEERING SERVICES AGREEMENT
FOR THE
TRINITY RIVER AUTHORITY OF TEXAS

STATE OF TEXAS §
COUNTY OF TARRANT §§

THIS AGREEMENT is made and entered into as of June 24, 2020, by and between the TRINITY RIVER AUTHORITY OF TEXAS, with its principal office at 5300 South Collins Street, Arlington, Tarrant County, Texas 76018 (AUTHORITY) and the firm of HAZEN AND SAWYER, DPC, with its principal office at 500 West 7th Street, Suite 702, Fort Worth, Tarrant County, Texas 76102 (ENGINEER).

WITNESSETH:

WHEREAS, the AUTHORITY owns and operates the Tarrant County Water Supply Project (TCWSP) that supplies water to the cities of Bedford, Colleyville, Euless, and portions of Grapevine and North Richland Hills; and

WHEREAS, the TCWSP utilizes multi-media filtration and the age and condition of the media are critical to the quality of treated water; and

WHEREAS, the TCWSP FY2015 Triennial Evaluation Update proposed replacing the filter media and underdrains prior to converting to biofiltration; and

WHEREAS, the filter media is approaching the end of its anticipated life; and

WHEREAS, the AUTHORITY desires to replace the filter media and underdrains of 24 filters (PROJECT); and

WHEREAS, the AUTHORITY desires to obtain engineering services in connection with the PROJECT; and

WHEREAS, the ENGINEER represents that it is qualified and capable of performing the engineering services proposed herein, is acceptable to the AUTHORITY, and is willing to enter into an AGREEMENT with the AUTHORITY to perform such services.

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein, AUTHORITY and ENGINEER agree as follows:
ARTICLE I

RETAINER

The AUTHORITY agrees to retain the ENGINEER and the ENGINEER agrees to perform engineering services in connection with the PROJECT. The AUTHORITY agrees to pay and the ENGINEER agrees to accept fees as specified hereinafter as full and final compensation for the services authorized and accomplished.

It is understood and agreed that no professional services of any nature shall be undertaken under this AGREEMENT by the ENGINEER until ENGINEER is instructed in writing by the AUTHORITY’S General Manager or his designated representative to commence with the work.

ARTICLE II

PROFESSIONAL QUALITY

ENGINEER shall be responsible for the professional quality, technical accuracy, timely completion, and coordination of all designs, drawings, documents, estimates, specifications, reports, studies and other material (collectively the PROJECT DOCUMENTS) and services furnished by the ENGINEER under this AGREEMENT. Approval by the AUTHORITY of PROJECT DOCUMENTS, services, and incidental engineering services shall not in any way relieve the ENGINEER of responsibility for the technical accuracy of the engineering services performed. The AUTHORITY’S review, approval or acceptance of, or payment for any of the services described herein shall not be construed to operate as a waiver of any rights under this AGREEMENT or of any cause of action arising out of the performance of this AGREEMENT.

ARTICLE III

BASIC ENGINEERING SERVICES

ENGINEER agrees to perform BASIC ENGINEERING SERVICES in connection with the PROJECT as hereinafter stated, in accordance with the stipulations in this AGREEMENT. The ENGINEER shall perform BASIC ENGINEERING SERVICES necessary for the development of the PROJECT as follows:

A. TASK I – PROJECT START-UP

(1) Prepare a PROJECT planning document to define PROJECT team, lines of communications, deliverables, schedule, and budgeting for internal use in executing the PROJECT on schedule and within budget and establishing the contents of the PROJECT start-up meeting;

(2) Plan and participate in a PROJECT start-up meeting with AUTHORITY to confirm PROJECT scope, personnel, lines of communication, security protocols, and schedule;
(3) Prepare meeting summary (meeting minutes) of the PROJECT start-up meeting and distribute to invitees/participants; and

(4) ENGINEER'S Project Manager shall be the primary client contact and lead communicator to ENGINEER'S staff.

B. TASK II – PROJECT MANAGEMENT AND QUALITY ASSURANCE

Manage professional services to complete the PROJECT. These services will include preparation of PROJECT controls including progress reports, action items log, decision log, design team meetings, technical review committee workshops, schedule and cash flow projections, and invoicing. ENGINEER shall provide professional services in this Task as follows:

(1) Conduct a PROJECT Quality Management (PQM) meeting with the AUTHORITY. The PQM meeting is a facilitated session where key stakeholders participate in a consensus-building exercise to confirm the PROJECT goals and define the critical success factors; the processes, activities, and tasks needed to achieve success of the PROJECT and assign responsibilities for carrying out the tasks. This meeting will be combined with the PROJECT start-up meeting;

(2) Schedule and direct regular coordination meetings with the ENGINEER'S design team to coordinate PROJECT task assignments, action items, and to prepare for progress meetings with the AUTHORITY. ENGINEER shall maintain an Action Item Log and Decision Log to monitor PROJECT activity. Coordinate with subconsultants to confirm all PROJECT elements are compatible, integrated, and meet AUTHORITY performance requirements;

(3) Schedule and conduct up to three progress meetings with the AUTHORITY. In addition to reviewing progress at each meeting, review PROJECT deliverable status, current schedule, outstanding action items, PROJECT bottlenecks that could impact schedule, PROJECT budget status, decisions made, and PROJECT enhancements requested. Prepare agenda and meeting materials, direct and document meetings to review progress, and facilitate the exchange of ideas and information. Prepare draft meeting minutes to include action lists, decision lists, and PROJECT enhancement lists within five business days to submit to the AUTHORITY for review and approval. Final minutes will be issued within four business days of receipt of review comments or immediately after four days if there are no comments received;

(4) Schedule and conduct one task-specific meeting with the AUTHORITY and provide meeting minutes which include action lists, decision lists, and PROJECT enhancement lists;

(5) Furnish the AUTHORITY, when requested, the engineering data necessary for applications for routine permits, submittals, and approvals required by local, state, and federal authorities, and assist AUTHORITY in consultations with appropriate such authorities;
(6) Develop a cash flow projection and schedule for the PROJECT, which will be continuously updated throughout completion of the PROJECT;

(7) Prepare monthly PROJECT Summary Reports and submit with monthly invoice. The report shall contain the following elements:

(a) Summary of work completed to date;
(b) PROJECT budget summary, with comparison of budget versus actual;
(c) PROJECT schedule;
(d) Summary of actions and decisions needed from the AUTHORITY;
(e) Upcoming PROJECT activities; and
(f) Potential changes in scope, costs, or schedule;

(8) Quality Assurance (QA): provide QA/quality control (QC) plan to the AUTHORITY and conduct QA/QC reviews of the deliverables;

(9) QC Review Meetings: plan and participate in four QC review meetings with the AUTHORITY. The meetings will be held after the Assessment Technical Memorandum (TM), 30 percent, 60 percent, and 90 percent PROJECT completion stages. ENGINEER will provide copies of internal markups of plans and specifications with the review sets. A meeting memorandum will be prepared documenting major revisions and decisions made during each of the meetings;

(10) 100 Percent Document Review: provide plans and specifications for AUTHORITY to confirm that 90 percent review comments have been incorporated as appropriate and review design completed after the 90 percent review meeting;

(11) Schedule and conduct a PROJECT closeout meeting with the AUTHORITY, including providing a summary report with lessons learned and final invoice to the AUTHORITY; and

(12) Incorporate the AUTHORITY’S Design and Construction Guidelines (https://guidelines.trinityra.org) when conducting the work defined herein, using the version current at the time of contract execution, or identify in writing where deviations therefrom are proposed.
C. TASK III – ASSESSMENT OF PIPING SYSTEM

Assess the filter piping system inside the filter pipe gallery and verify with field tests the integrity of the existing piping system. Use the assessment results to develop recommendations for modifications, upgrades, and/or additions to the piping system.

(1) Previous studies and reports will be made available for additional informational purposes only. This does not alleviate the ENGINEER’S responsibility to confirm data for design and construction. Research, collect, and review data on the existing system including, but not limited to, the following:

(a) Previous master plans, studies, and reports;

(b) Existing plans;

(c) Existing piping and filter equipment;

(d) Performance history for filter operation processes;

(e) Equipment maintenance records and operations and maintenance (O&M) manuals;

(f) Contractor submittals relevant to areas being rehabilitated; and

(g) Other data and materials;

(2) Meet up to two times with the AUTHORITY to discuss operational considerations, staff requirements, system preferences, and prioritization of PROJECT needs. Conduct up to two field investigations to visually inspect equipment, observe facilities, and interview plant staff. Field investigations may happen concurrently with meetings discussing operational considerations;

(3) Perform visual field investigation of the filter gallery piping to identify location, pipe material, and number of current and previous leaks. Based on the review of previous testing, perform additional ultrasonic pipe thickness testing during visual inspection. AUTHORITY is to have plant personnel knowledgeable about history of pipe leaks in filter gallery available for discussion. ENGINEER may use AUTHORITY’S ladders, but ENGINEER will provide scaffolding and safety equipment as necessary for the investigation. Results from field investigation will be analyzed to determine any patterns in leaks, such as location and age of piping to determine area(s) for further investigation. Field inspection for both visual and additional thickness testing shall be with two engineers for maximum of two days;

(4) In areas where leaks are present, or in similar age/material that has had leaks, ENGINEER will perform visual pipe inspection of interior lining of piping that is accessible from the 24-inch blind flange in filter piping. The lining condition and extent of damage will be determined with attention to areas where welding
repairs have been made. The filters to be inspected shall be agreed upon by the
AUTHORITY and the ENGINEER. The AUTHORITY shall dewater piping,
remove/reinstall blind flanges, and provide lighting, as required, for access and
visual inspection. Field inspection shall be with two engineers for maximum of
two days;

(5) Identify system deficiencies and problem areas, and develop strategies to
mitigate, repair and/or replace piping sections to eliminate existing leaks and
reduce rate of corrosion to further extend the useful life of the filter piping system,
where applicable; and

(6) A TM will be developed describing the piping system, issues of concern, potential
causes of piping system failures, the impact of the plant process changes on
piping system, and a recommended plan of action to achieve improved system
performance within desired parameters. ENGINEER will submit eight copies and
one electronic copy (on compact disc (CD) in bookmarked, searchable PDF
format) of the draft TM, and after review will provide eight final copies and two
electronic copies (on CD in bookmarked, searchable PDF format) of TMs to the
AUTHORITY.

D. TASK IV – PRELIMINARY DESIGN PHASE SERVICES

Provide the following preliminary design phase services:

(1) Review and evaluate the existing treatment plant and treatment process utilizing
the TCWSP 2016 Master Plan, available construction documents, and field
observations;

(2) Meet up to two times with the AUTHORITY to discuss operational considerations,
staff requirements, system preferences, and prioritization of PROJECT needs.
Conduct up to two field investigations to visually inspect equipment, observe
facilities, and interview plant staff. Field investigations may happen concurrently
with meetings discussing operational considerations;

(3) Create a hydraulic model for flow through the filters:

(a) Model development: extend the current Infoworks hydraulic model of
TCWSP’s clearwells from the 96-inch filtered water pipeline, through the
filters and to the ozone effluent channel. Model shall be developed based
on record drawings provided by the AUTHORITY;

(b) Model Calibration: calibrate hydraulic model using field data from field
testing to include the following:

(i) Develop Field Testing Plan for taking hydraulic measurements for
model calibration. Plan will include plant flow conditions, data
collection points, and frequency from the supervisory control and
data acquisition (SCADA) system, field data collection of
pressures and water surface elevations measurements location and frequencies. A draft Field Testing Plan will be submitted with follow-up meeting to coordinate field test with TCWSP personnel. Final Field Test Plan will be submitted prior to performing field test;

(ii) Assist the AUTHORITY during field testing with taking hydraulic measurements and coordinating field testing. ENGINEER will have two engineers onsite for eight hours of field testing;

(iii) Rental of any field equipment shall be compensated as SPECIAL SERVICES; and

(iv) Survey of hydraulic control points and measurement locations will be performed prior to field test and is included in Task VI-Survey; and

(c) Using the calibrated Infoworks model, evaluate flow distribution between filters and available filtering head to provide recommendations for improving flow distribution and increasing available filtering head:

(i) Model runs will be at the following flowrates: average treatment capacity of 35 million gallons per day (MGD); and maximum treatment capacity of 91 MGD;

(ii) Coordinate Infoworks hydraulic model with biofiltration model for headloss through filter media and proposed filter media design;

(iii) Provide electronic Infoworks files of existing and proposed conditions to the AUTHORITY; and

(iv) Modeling results and recommendations will be included in the preliminary design report (PDR);

(4) Backwash Hydraulic Evaluation: evaluate backwash hydraulics with raising the wash troughs, new media size and new underdrain system to confirm backwash pump, and flow control valve operation over the new backwash flow range;

(5) Biofiltration Model:

(a) Develop biofiltration model to assist in media size selection for optimizing hydraulic and future biofiltration performance;

(b) Historical Data Review: review design and historical operating data for the biofilters. The AUTHORITY shall provide the following data:

(i) Operating data from abiotic (non-biological) filters for period of Biofiltration Demonstration Pilot in 2014 including flow, settled
water and filtered water turbidity, total organic carbon (TOC),
dissolved organic carbon (DOC), nutrients (if added), temperature,
pH, and filter headloss; and

(ii) Operating data from biological filters and engineered biological
filters for period of Biofiltration Demonstration Pilot in 2014
including flow, settled water and filtered water turbidity, TOC,
DOC, nutrients (if added), temperature, pH, and filter headloss;

(c) Model Calibration and Validation: once review of the information is
completed, the ENGINEER will develop a detailed biofilter model that
reflects the existing process configuration in HazenBAF (Matlab platform).
Historical data will be used to calibrate the model and to validate
performance. The ENGINEER shall use an iterative procedure to perform
calibration for two main periods of operation:

(i) Abiotic operation calibration: dynamic calibration will be employed
to match data from warm and cold weather periods from the
abiotic dataset;

(ii) Biological filtration calibration: dynamic calibration will be
employed to match data from warm and cold weather periods from
the biological dataset; and

(iii) Long term dynamic validation: long term dynamic validation will be
completed to match data from up to one year of historical data;

(d) Model Scenarios: perform evaluations for the biofilters to understand the
impact of the following parameters on headloss development and effluent
TOC as related to abiotic and biological operation: media type (anthracite
versus granular activated carbon (GAC)), media size, and media depth;

(e) HazenBAF, the biofiltration model, is proprietary and shall remain the
property of the ENGINEER. The AUTHORITY will be provided with
model input and output data and results; and

(f) Modeling results and recommendations shall be included in the PDR;

(6) Revise/update manganese action plan to help prevent accumulation of
manganese on new filter media for conversion to biofiltration at later date;

(7) Maintenance of Plant Operations (MOPO):

(a) Review existing plant operations to identify any potential operational
conflicts or interruptions that may occur during construction; and

(b) Develop preliminary MOPO plan for construction of the PROJECT;
(8) Review current regulatory/code requirements;

(9) Permitting:

(a) Identify relevant local, state, and federal permits required and the agencies having jurisdiction over the PROJECT; and

(b) Develop a preliminary permitting schedule for obtaining required permits prior to construction;

(10) PDR:

(a) Prepare a PDR summarizing details of the improvements needed for the PROJECT to include the following elements:

(i) Evaluation of media types (anthracite versus GAC), depth of media (for particulate removal, filter head and biological filtration performance), and media design;

(ii) Evaluation of capital cost and qualitative backwash performance benefits of raising wash water troughs. Field testing, which may include floc retention testing of different backwash protocols (air only versus combined air/water backwash) to show benefit of raising troughs shall be compensated as SPECIAL SERVICES;

(iii) Evaluation of filter underdrain options, which include comparison of underdrain configuration, headloss, manufacturer’s stated flow distribution, underdrain height, material of construction, and budget cost information. Computational fluid dynamics modeling of underdrain and filter flume shall be compensated as SPECIAL SERVICES;

(iv) Evaluation of valve and actuator types and manufacturers for filter valve replacement including up to three valve types and four actuator type/manufacturers;

(v) Concept level layouts of major structures, facilities, process equipment being proposed, and site plan;

(vi) Process mechanical and instrumentation diagrams;

(vii) Manufacturers’ equipment cut sheets of mechanical process equipment being proposed;

(viii) Results of the evaluation and priority ranking;

(ix) Preliminary MOPO plan description; and
(x) A 30 percent level opinion of probable construction cost (OPCC) for recommended improvements;

(b) Submit eight copies and an electronic copy (on CD in bookmarked, searchable PDF format) of a draft PDR to the AUTHORITY; and

(c) Submit eight copies and two electronic copies (on CD in bookmarked, searchable PDF format) of the final PDR to the AUTHORITY; and

(11) Preliminary Design Drawings and Specifications:

(a) Develop 30 percent level preliminary design drawings and specifications to delineate requirements for the following improvements:

(i) Filter media replacement: replace media;

(ii) Underdrain modifications: replace the entire underdrain;

(iii) Filter piping, valving, and actuator modifications: replace and/or install at new locations as appropriate based on evaluation;

(iv) Wash trough modifications; and

(v) Hydraulic modifications for improved flow distribution to filters;

(b) Consider planned future improvements of the facility and incorporate these conditions, to the extent possible, into the design;

(c) Prepare drawings and specifications in accordance with pertinent local, state, and federal laws and regulations;

(d) Specifications will be provided for only the major process mechanical equipment;

(e) Conduct a workshop with the AUTHORITY to review the draft preliminary design and the PDR. Provide the AUTHORITY with preliminary design deliverables, including: eight half-size sets of preliminary design drawings, eight sets of preliminary design specifications, one copy of the preliminary OPCC, and one electronic copy of all documents (on CD in bookmarked, searchable PDF format) ten working days prior to the workshop;

(f) Document that all comments from the AUTHORITY have been incorporated or addressed in a comment response format acceptable to the AUTHORITY; and

(g) Submit eight copies and two electronic copies (on CD in bookmarked, searchable PDF format) of the final PDR to the AUTHORITY.
E. TASK V – ASBESTOS AND LEAD SURVEY AND SPECIFICATION PREPARATION

Provide the following professional services:

(1) Coordinate with a third-party licensed asbestos consultant to conduct a survey at the existing Filter Building in areas only where proposed project work will occur. The asbestos consultant will provide a report with the findings of the survey. The findings of the supplementary survey will be considered in addition to previous asbestos surveys conducted for the building;

(2) Provide, based on the finding of the asbestos survey, the asbestos abatement specifications that will be developed by the third-party asbestos consultant for incorporation into the construction Contract Documents;

(3) Coordinate with a third-party licensed lead consultant to conduct a survey at the existing Filter Building in areas only where proposed project work will occur. The lead consultant will provide a report with the findings of the survey. The findings of the supplementary survey will be considered in addition to previous lead surveys conducted for the building; and

(4) Provide, based on the findings of the lead inspection, the lead abatement specifications that will be developed by the third-party lead consultant for incorporation into the construction Contract Documents.

F. TASK VI – SURVEY

Provide the following professional services:

(1) Contract with a registered professional land surveyor to provide elevations of the filter basins, wash troughs, or other items as needed for the modeling or design. Establish vertical controls for the PROJECT. The horizontal control shall be based on the Texas State Plane Coordinate System, North Central Zone North American Datum NAD-83 Coordinates and the vertical control being based on North American Vertical Datum NAVD-88. Provide survey notes on design drawings and electronic files with clear location and description of benchmarks and horizontal control points. Benchmarks shall be documented and retraceable. The following elevations are included:

(a) Ozone effluent channel top wall and channel invert (up to six locations);

(b) Filter top of wall (up to 12 elevations);

(c) Filter washtrough weirs (six filters with 12 elevations per filter); and

(d) Filter gallery finished floor (up to six elevations); and
(2) Contract with a registered professional land surveyor to provide a terrestrial based 3D laser scan of the filter pipe gallery. Scanning will be performed at multiple vertical levels to capture as much as possible of visible faces with minimum of 1/8-inch spacing. 3D panoramic imagery will also be captured during the scan. Scanned deliverables will be registered with existing plant control. Surveyor shall provide an RCP file for import into Revit and TruView files that can be viewed using a readily available web browser.

G. TASK VII – FINAL DESIGN PHASE SERVICES

Prepare drawings and specifications for the PROJECT. The modifications and additions to the plant will include appropriate recommendations from the PDR or preliminary design documents. ENGINEER shall provide the following final design phase services:

(1) Prepare plans and specifications in accordance with all pertinent local, state, and federal laws and regulations;

(2) Meet up to two times with the AUTHORITY to discuss operational considerations, staff requirements, system preferences, and prioritization of PROJECT needs. Conduct up to two field investigations to visually inspect equipment, observe facilities, and interview plant staff. Field investigations may happen concurrently with meetings discussing operational considerations;

(3) Review existing plant operations to identify any potential operational conflicts or interruptions that may occur during construction;

(4) Develop a MOPO plan for construction of the PROJECT;

(5) Consider planned future improvements of the facility and incorporate these conditions, to the extent possible, into the design;

(6) Consider constructability of the improvements and develop an implementation plan for integrating improvements into the treatment plant;

(7) Drawings and specifications:

   (a) Develop 60 percent, 90 percent, and 100 percent level design drawings and specifications to delineate the structural, process/mechanical, electrical, automation/instrumentation, and site/civil requirements for the following improvements:

      (i) Filter media replacement: replace media;

      (ii) Underdrain modifications: replace the entire underdrain;

      (iii) Filter piping, valving, and actuator modifications: replace and/or install at new locations as appropriate based on evaluation;
(iv) Wash trough modifications; and

(v) Hydraulic modifications for improved flow distribution to filters;

(b) Develop specifications, which will be prepared, where appropriate, in general conformance with the fifty-division format of the Construction Specifications Institute. The specifications will include bidding documents, general requirements, and technical specifications;

(c) Submit eight copies and one electronic copy (on CD in bookmarked, searchable PDF format) of draft design drawings (half size) and specifications to the AUTHORITY ten days prior to the review meeting;

(d) Meet with the AUTHORITY to review the comments on the 60 percent and 90 percent draft design drawings and specifications and OPCC. Document that all comments from the AUTHORITY have been incorporated or addressed in a comment response format acceptable to the AUTHORITY; and

(e) Submit eight copies and one electronic copy (on CD in bookmarked, searchable PDF format) of 100 percent review sets of half-scale plans and specifications a minimum of 20 working days before the scheduled advertisement date. AUTHORITY will confirm that 90 percent review comments have been incorporated as appropriate and review design completed after the 90 percent review meeting. AUTHORITY will provide comments to the ENGINEER no later than ten working days before the scheduled advertisement date; and

(8) Specific Design Services:

(a) Structural Requirements:

(i) Evaluate existing filter basins and boxes for concrete repair. Design/specify the repair;

(ii) Design of trough modifications; and

(iii) Design of pipe system supports as appropriate;

(b) Process/Mechanical Design Requirements:

(i) Develop a revised hydraulic profile;

(ii) Evaluate, assess, and make final recommendations for improvements;

(iii) For process improvements, provide design criteria for process and mechanical components; and
(iv) Make recommendations for manufacturer selection and equipment model/type;

(c) Automation/Instrumentation Design Requirements:

(i) Prepare design plans for all required SCADA components and devices. This design will include the development of process and instrumentation diagrams (P&IDs) (approximately four) for the main process improvements; including a typical filter P&ID for each of the two filter buildings and a P&ID drawing for each filter building for common equipment such as master backwash and air scour systems;

(ii) Develop control system architecture, which defines overall monitoring and control strategy by programmable logic controllers (PLCs), all integrated into the existing plant SCADA system. Instrument evaluation will be limited to affected areas under this contract and to determination of incipient failure. Security and applications engineering are not part of the services provided;

(iii) Outline the PROJECT control systems required for integration of the new PROJECT facilities into the AUTHORITY SCADA system;

(iv) Prepare design plans and specifications for replacement of all filter PLC panels to comply with AUTHORITY’S TCWSP PLC platform standards; and

(v) Prepare design plans and specifications for replacement of filter field instrumentation;

(d) Electrical Design Requirements:

(i) Analyze the reliability of electrical supply and potential equipment impacts;

(ii) Define electrical design distribution revisions, redundancy, arc flash, and new/modified motor control centers; and

(iii) Develop electrical one-line diagrams; and

(e) Site/Civil Design Requirements: provide detail for proposed demolition work including an assessment of each structure with a scope for work to be performed.
H. TASK VIII – OPERATIONS IMPACT PLAN

ENGINEER shall provide an Operations Impact Planning document, using a Microsoft Excel worksheet and preferred methodology furnished by the AUTHORITY, a projection of O&M costs to be incurred by the AUTHORITY as a result of the proposed improvements for the year 2021. The O&M cost projection shall be provided by the ENGINEER at the conclusion of the final design phase of the PROJECT. The AUTHORITY will notify the ENGINEER and will furnish an updated base worksheet if the AUTHORITY’S typical methodology is updated during the course of the PROJECT.

I. TASK IX – PROGRAMMABLE LOGIC CONTROL AND HUMAN MACHINE INTERFACE DESIGN (HMI)

ENGINEER shall provide services related to the PLC/HMI design as follows:

(1) Provide the following preliminary PLC/HMI design:

(a) Control narratives addressing process functions modified or added under this AGREEMENT including items required in the AUTHORITY’S Design and Construction Guidelines, including calculations and original equipment manufacturer equipment functionality;

(b) A list in the specifications of the existing, modified, and new input/output (I/O) points inclusive of hard and virtual I/O points for PLC (remote terminal unit (RTU)-1,26,30,31,32,33,34,35,36) and a description of each point. Description shall include short and long description as defined in the AUTHORITY’S Design and Construction Guidelines;

(c) Provide Mapping Table for Peer-to-Peer I/O between PLC (RTU-1,26,30,31,32,33,34,35,36) and existing PLCs for memory mapping;

(d) Design-phase Programming Requirements Document as described in the AUTHORITY’S Design and Construction Guidelines to include:

   (i) A list of existing I/O points to be modified, description of the required modifications and function of the I/O point; and

   (ii) Details such as tag names descriptions, and basic configurations of new and existing displays I/O points for issuance to the Contractor post bid award. PLC and HMI addresses will be provided by the Contractor’s Programmer during construction;

(e) HMI Displays:

   (i) List of existing displays to be modified including a description of the required modifications. ENGINEER will provide a printed copy of the existing display with hand markups with typed comments for review;
(ii) List of new displays to be prepared during design phase which will be used by the Contractor during construction. The list will provide a general description of the display including pop-ups, alarms, notification, and status; and

(iii) A completed flat graphic display of each new and modified HMI display screen including pop-ups, alarms, notifications, and status. The new and modified HMI displays shall be provided in Microsoft Graph Edit (GRF) file form using iFix and provided in searchable PDF format; and

(f) Provide logic diagrams in International Society of Automation (ISA) format. Logic diagrams of process design functions residing in PLCs (RTU-1,26,30,31,32,33,34,35,36) will be provided by the ENGINEER for the programming to be developed during construction, complete with functional description, alarms, failure scenarios, defined symbol legend following ISA standards, and with applicable narrative excerpt adjacent to the related logic diagram elements;

(2) Control Design Review: conduct a control design start-up meeting, which will occur during other scheduled meetings, according to the requirements of the AUTHORITY’S Design and Construction Guidelines. In addition to the control design start-up meeting, the ENGINEER will review the following with the AUTHORITY in up to three review sessions, which will occur during other scheduled meetings, and will provide a written response to each AUTHORITY comment and will incorporate comments as appropriate:

(a) Control narratives;

(b) I/O lists for PLC (RTU-1,26,30,31,32,33,34,35,36), equipment PLC, original equipment manufacturer’s equipment, and intelligent electronic devices for power, including tags and descriptions;

(c) Logic diagrams; and

(d) HMI displays; and

(3) Coordinate the HMI GRF format displays and control design deliverables to conform to the AUTHORITY’S Design and Construction Guidelines.

J. TASK X – PROPOSAL ASSISTANCE

Upon completion of the design services and approval of the final PROJECT documents by the AUTHORITY and required regulatory agencies, ENGINEER shall provide the following services for Task VII, to the AUTHORITY for proposal phases for the PROJECT improvements assuming Competitive Sealed Proposals (CSP). Alternative
project delivery (such as Construction Manager At-Risk procurement) shall be compensated as SPECIAL SERVICES:

(1) Assist the AUTHORITY with advertisement of the PROJECT (assumed four-week proposal period for the PROJECT). Help establish proposal dates to avoid conflicts with similar projects bidding at or near the same time. Provide a Request for Proposals to the AUTHORITY for publication in legal notices for the PROJECT;

(2) Provide the AUTHORITY with up to eight half-size sets of design drawings, eight sets of design specifications, and one electronic copy of all documents (on CD in bookmarked, searchable PDF format) for the PROJECT. The procurement construction documents will be signed and stamped by authorized representatives of the ENGINEER holding current registration in the State of Texas in the respective drawing discipline;

(3) Post electronic procurement sets, including plans and specifications, to an electronic bid distribution system for Contract Document sales to prospective offerors and notification of plan rooms;

(4) Respond to questions related to the distribution of documents, construction contract provisions, proposal requirements, and technical questions regarding the PROJECT up to four days prior to proposal opening;

(5) Prepare, post, and distribute addenda addressing additions, deletions, modifications, or interpretations to the Contract Documents up to two days prior to proposal opening;

(6) Assist the AUTHORITY in conducting one non-mandatory pre-proposal conference for the PROJECT with potential offerors, and prepare minutes and responses. Responses to the pre-proposal conference will be in the form of addenda issued after the conference. ENGINEER will assist in conducting a tour of the PROJECT site after the conference;

(7) Assist the AUTHORITY in receiving and recording proposals at the formal proposal opening for the PROJECT, evaluate the information contained in the proposal documents for conformance with requirements of the construction Contract Documents, prepare initial monetary offer tabulation, and compare proposal costs with estimated costs and available budget;

(8) Evaluate the information provided by the offerors as a part of the proposal package. Review the proposals for conformance with the proposal requirements and conduct reference checks. Prepare a memo identifying any deficiencies in proposal as to meeting submission requirements. Prepare a summary of findings for the AUTHORITY related to the proposal documents. Up to six proposals will be reviewed. Review of additional proposals shall be compensated as SPECIAL SERVICES;
(9) Conduct a proposal evaluation workshop with the AUTHORITY to present the summary of findings to the AUTHORITY, discuss with Selection Committee the interview evaluations, answer questions, facilitate discussions, and develop scoring;

(10) Assist AUTHORITY in conducting up to four interviews with Offerors. All interviews are assumed to be conducted on the same day. Conduct a post-interview evaluation workshop with AUTHORITY to finalize evaluations, assist in finalization of evaluation and scoring of the proposals from the proposers interviewed by facilitating discussions and answering questions, and assist in the selection of the best value proposal by answering final questions from Selection Committee during its final deliberations. Additional interviews beyond initial four interviews shall be compensated as SPECIAL SERVICES;

(11) At the conclusion of the AUTHORITY’S evaluation scoring, the AUTHORITY Selection Committee will recommend award of the contract consistent with the requirements of the construction Contract Documents;

(12) Negotiations assistance shall be compensated as SPECIAL SERVICES; and

(13) Prepare conformed and executed documents for construction of the PROJECT. The AUTHORITY will provide instructions for preparation of documents for execution and construction. Furnish up to two full-size drawings, ten half-size drawings, and twelve specification sets (four executed and eight conformed) to the AUTHORITY. Furnish up to five full-size drawings, five half-size drawings, and five specification sets (two executed and three conformed) to the Contractor for the PROJECT. A total of six copies of the executed specifications will be prepared and stamped “Executed” for the PROJECT. Provide three CDs with a copy of the final conformed documents in electronic format (bookmarked, searchable PDF) for the PROJECT.

ARTICLE IV

SPECIAL ENGINEERING SERVICES

Various SPECIAL SERVICES incidental to the PROJECT, but not within the scope of the BASIC ENGINEERING SERVICES covered by ARTICLE III preceding, which may be performed or arranged for separately by the AUTHORITY, or may be added to the ENGINEER’S responsibilities by mutual agreement and written authorization include, but are not necessarily limited to, the following:

(1) Perform additional video inspection and/or pipeline cleaning;

(2) Perform additional subsurface excavation in the event such excavation is required to locate existing facilities;

(3) Perform geotechnical assessments to determine soil, water table, or trenching characteristics;
(4) Complete redrawing of construction plan sheets, if required as a result of changes made in the scope of the construction contract after submission of final plans to AUTHORITY;

(5) Observe on-site conditions to evaluate exposed conditions, dewatering techniques, or changed conditions;

(6) Provide additional full-size and/or half-size final plan sets and specifications for the PROJECT in excess of the number required under ARTICLE III;

(7) Provide additional borings which may be occasioned by the depth to rock being deeper than anticipated or because of changes in geological conditions which necessitate additional evaluation to properly define the stratigraphic conditions; and

(8) Provide any other services otherwise excluded in this AGREEMENT but customarily furnished in accordance with generally accepted engineering practices.

ARTICLE V

SERVICES BY THE AUTHORITY

The AUTHORITY and its representatives will render services inclusive of the following:

(1) Provide available criteria and full information as to the AUTHORITY’S requirements for the PROJECT;

(2) Assist the ENGINEER by placing at his disposal all available written data pertinent to the PROJECT;

(3) Examine documents submitted by the ENGINEER and render a decision pertaining thereto promptly, to avoid unreasonable delay in the progress of the ENGINEER’S services;

(4) Furnish information required as expeditiously as possible for the orderly progress of the work;

(5) The General Manager of the AUTHORITY or his designated representative shall appoint, in writing, a representative that the ENGINEER shall be entitled to rely upon regarding decisions made by the AUTHORITY. All subsequent communication to the AUTHORITY shall be deemed made when conveyed in writing to the representative at the location specified in ARTICLE XV, NOTICES; and

(6) The services, information, and reports required by this ARTICLE, inclusive, shall be furnished at the AUTHORITY’S expense, and the AUTHORITY will apprise
the ENGINEER of any known inaccuracies or inconsistencies in the information provided.

ARTICLE VI

COMPENSATION

A. BASIC ENGINEERING SERVICES

For and in consideration of the BASIC ENGINEERING SERVICES (ARTICLE III) to be rendered by the ENGINEER, the AUTHORITY shall pay, and the ENGINEER shall receive compensation as hereinafter set forth. All remittance by the AUTHORITY for such compensation shall either be mailed or electronically delivered to the financial institution identified by ENGINEER.

Compensation for BASIC ENGINEERING SERVICES shall be paid by the AUTHORITY to the ENGINEER for all services required for work stated under ARTICLE III in the following lump sum amounts:

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task I</td>
<td>Project Start-Up</td>
<td>$ 10,463</td>
</tr>
<tr>
<td>Task II</td>
<td>Project Management and Quality Assurance</td>
<td>$ 104,269</td>
</tr>
<tr>
<td>Task III</td>
<td>Assessment of Piping System</td>
<td>$ 43,098</td>
</tr>
<tr>
<td>Task IV</td>
<td>Preliminary Design Phase Services</td>
<td>$ 314,563</td>
</tr>
<tr>
<td>Task V</td>
<td>Asbestos and Lead Survey and Specification Preparation</td>
<td>$ 9,020</td>
</tr>
<tr>
<td>Task VI</td>
<td>Survey</td>
<td>$ 23,370</td>
</tr>
<tr>
<td>Task VII</td>
<td>Final Design Phase Services</td>
<td>$ 324,195</td>
</tr>
<tr>
<td>Task VIII</td>
<td>Operations Impact Plan</td>
<td>$ 3,645</td>
</tr>
<tr>
<td>Task IX</td>
<td>Programmable Logic Control and Human Machine Interface Design</td>
<td>$ 29,430</td>
</tr>
<tr>
<td>Task X</td>
<td>Proposal Assistance</td>
<td>$ 72,554</td>
</tr>
</tbody>
</table>

B. SPECIAL SERVICES

For and in consideration of the SPECIAL SERVICES set forth in ARTICLE IV, herein, the AUTHORITY shall pay and the ENGINEER shall receive compensation for personnel time plus expenses in an amount not to exceed one hundred thousand Dollars ($100,000) to be paid as follows:

For all the ENGINEER’S personnel time applied to the SPECIAL SERVICES, compensation shall be based on "Direct Salary” times a multiplier of 2.95 in accordance with Attachment A.

All direct non-labor expenses, including mileage, travel and lodging expenses, but excluding subcontract expenses, applied to the SPECIAL SERVICES, shall be paid at invoice or internal office cost plus a ten percent service charge. Subcontract expenses shall be paid at direct cost plus a five percent service charge. Compensation for subcontract personnel time must also comply with the limits set forth in Attachment A, unless approved in writing by the AUTHORITY prior to the rendition of subcontract services.
C. METHOD OF BILLING

For services performed by ENGINEER for AUTHORITY compensated as lump sum amounts, ENGINEER shall submit statements monthly or less frequently reflecting ENGINEER’S requested compensation for that portion of the BASIC ENGINEERING SERVICES completed by ENGINEER.

For services performed by ENGINEER for AUTHORITY compensated as personnel time plus expenses, ENGINEER shall submit statements monthly or less frequently reflecting ENGINEER’S requested compensation for that portion of the BASIC ENGINEERING SERVICES and/or SPECIAL SERVICES completed by ENGINEER. Along with each separate request for payment of these services, ENGINEER shall submit to the AUTHORITY documentation substantiating all of the actual costs for which ENGINEER has requested compensation, including but not limited to the following:

(1) The name of each individual performing services, individual’s billing category, the individual's direct salary, and the number of hours associated with each individual's performance of services for the period of time identified with any billing invoice; and

(2) A copy of any invoices paid directly by the ENGINEER for any outside services or product which relate to the PROJECT, and which are requested by ENGINEER to be reimbursed by AUTHORITY.

All records pertaining to services for which payment has been made based upon ENGINEER’S actual costs times a multiplier shall be subject to audit by the AUTHORITY in accordance with ARTICLE VII. ENGINEER may be required to furnish additional records and/or data in addition to the above, as a response to AUTHORITY’S auditing process specified in ARTICLE VII.

D. TIME OF PAYMENT OF COMPENSATION

The ENGINEER shall submit a request for partial payments for services on a monthly basis, as evidenced by monthly statements submitted by the ENGINEER to the AUTHORITY. Final payment for services authorized shall be due upon completion of these services.

Should the AUTHORITY fail to make payment to the ENGINEER, the sum named in any partial or final statement, and when payment is past due for more than thirty days, then the AUTHORITY shall pay to the ENGINEER, in addition to the sum shown as due by such statement, interest thereon at the rate of five percent per annum from the date due, as provided herein until fully paid, which shall fully compensate ENGINEER for any injury arising from such delay in payment.

However, in the event that the sum shown as due to the ENGINEER by such statement shall be disputed, questioned, or objected to by the AUTHORITY, then said rate of five percent per annum from the date due shall only apply to that portion or amount of payment which is
finally and mutually agreed upon by AUTHORITY and ENGINEER to be rightfully due and owing to the ENGINEER.

ARTICLE VII

AUDIT OF RECORDS

All records of the ENGINEER of a financial or timekeeping basis which have been used to determine the fees earned by the ENGINEER and billed to AUTHORITY on the basis of "Salary Cost" times a multiplier shall be open to inspection and subject to audit and/or reproduction by AUTHORITY'S agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of cost of the services at the conclusion of the scope of all services to be performed under this AGREEMENT. The relationship between Direct Salary and Salary Cost has been identified on Attachment A and is not subject to an audit or a redetermination of any kind. In addition, this ARTICLE shall apply to Subcontractors and Direct Purchases only to the extent of invoices received by ENGINEER and evidence of payment for such invoices in the possession of ENGINEER. In its audits, the AUTHORITY may require inspection and copying from time to time and at reasonable times and places of any and all information, materials and data of every kind and character that may in AUTHORITY'S judgment have any bearing on or pertain to the payments subject to this audit. The AUTHORITY or its designee shall be afforded access to all of the ENGINEER'S records pursuant to the provisions of this ARTICLE at the conclusion of the term of the AGREEMENT and for a period of three years after final payment.

ARTICLE VIII

LIABILITY AND INSURANCE MATTERS

During the term of this AGREEMENT, ENGINEER shall, to the fullest extent permitted by law, maintain, and shall require its subcontractors to maintain:

(1) Professional liability insurance in an amount and with carriers satisfactory to AUTHORITY. If the professional liability insurance is written on a "claims made" form, a policy shall: 1) be in force until acceptance of the PROJECT improvements by the AUTHORITY; 2) be in force for a period of three years after acceptance of the PROJECT improvements by the AUTHORITY; and, 3) have a retroactive date on or prior to the effective of this AGREEMENT;

(2) Public liability, commercial general liability and umbrella policies (all including blanket contractual liability coverage for all liabilities assumed in this AGREEMENT, including all indemnification obligations set forth in ARTICLE XIV) and automobile insurance for bodily injury, and property damage, and workers' compensation coverage on all of ENGINEER'S or its subcontractors' employees working on the PROJECT;

(3) All insurance policies referenced in paragraph (2) above, except workers’ compensation coverage, shall, to the fullest extent permitted by law, name and cover the AUTHORITY as an additional insured, by policy declaration, with
coverage being primary, and all said insurance policies shall include a waiver of subrogation, and shall be in amounts and with carriers satisfactory to AUTHORITY;

(4) ENGINEER shall furnish to the AUTHORITY certificates (and upon request endorsements and policies) reflecting that the above-required insurance coverages are in full force and effect prior to ENGINEER’S execution of this AGREEMENT and also thereafter within seven days of the AUTHORITY’S request. Policies shall not be subject to endorsements, exclusions, limitations, conditions or restrictions inconsistent with the insurance requirements to be fulfilled by the ENGINEER, and all policies shall be written through companies duly approved to transact that class of insurance in the State of Texas. The AUTHORITY prior to the effective date of this AGREEMENT must approve all said insurance in writing. Said certificates of insurance shall be attached hereto as “Attachment B” and shall be incorporated herein for all purposes; and

(5) Approval, disapproval or failure to act by AUTHORITY regarding any insurance required by this AGREEMENT shall not relieve ENGINEER of full responsibility or liability, if any, for liabilities and damages as set forth in the AGREEMENT. Neither shall the insolvency or denial of liability by any insurance company relieve the ENGINEER of liability.

ARTICLE IX

ASSIGNMENT

Neither this AGREEMENT, nor any right privilege or cause of action arising hereunder may be assigned by ENGINEER, or any of ENGINEER’S subcontractors, in whole or in part for any purpose and whether in settlement of litigation or not, and any purported assignment shall be void and unenforceable without the written consent of the AUTHORITY. The AUTHORITY and the ENGINEER each binds itself and its successors and assigns to the other party with respect to all covenants of this AGREEMENT.

ARTICLE X

TERMINATION

In connection with all the engineering services outlined or contemplated above, it is agreed that the AUTHORITY or the ENGINEER may cancel or terminate this AGREEMENT upon thirty days written notice to the other, with the provision and understanding that immediately upon receipt of notice of such cancellation from either party to the other, all work and labor being performed under this AGREEMENT shall immediately cease, pending final cancellation at the end of such thirty day period, and further provided that the ENGINEER shall be compensated in accordance with the terms of this AGREEMENT for all work accomplished prior to the receipt of notice of such termination. All completed or partially completed PROJECT DOCUMENTS prepared under this AGREEMENT shall then be delivered to the AUTHORITY, which it may use without restraint. All rights, duties, liabilities, and obligations accrued prior to
such termination shall survive termination. ENGINEER shall be liable for any damages suffered by the AUTHORITY as a result of ENGINEER'S termination of this AGREEMENT.

ARTICLE XI

PROJECT DOCUMENTS

All PROJECT DOCUMENTS are and shall become the property of the AUTHORITY, which it may use without restraint. The ENGINEER is not responsible and is hereby released from responsibility for the AUTHORITY'S use of the documents for any purpose other than for this PROJECT. The ENGINEER may retain a set of reproducible record copies of drawings and other documents; however, ENGINEER shall not provide to, or use this work product on behalf of, any person or entity without the express written consent of the AUTHORITY.

ARTICLE XII

PRIVATE LAND ENTRY

ENGINEER shall not enter any property owned by others on the AUTHORITY'S behalf to survey, to perform soil tests, or for other reasons related to the performance of services under this AGREEMENT until the ENGINEER has secured the landowner's permission to so enter and perform such activities.

ARTICLE XIII

LAWS AND ORDINANCES

ENGINEER shall at all times observe and comply with all federal, state, and local laws, ordinances, rules, regulations, and orders of any public authority, which in any manner affect this AGREEMENT or the PROJECT. ENGINEER agrees, moreover, not to discriminate against any employee or applicant for employment because of race, religion, color, sex, age, disability, or national origin. ENGINEER agrees to comply with the Immigration Reform and Control Act of 1986 and the Americans with Disabilities Act of 1990. The ENGINEER agrees that the indemnification provisions of ARTICLE XIV INDEMNIFICATION below encompass any failure by the ENGINEER to comply with this ARTICLE.

ARTICLE XIV

INDEMNIFICATION

To the fullest extent permitted by law, ENGINEER DOES HEREBY COVENANT AND CONTRACT TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS THE AUTHORITY ALL OF ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, from and against any and all liability, claims, suits, demands, causes of action, damages, expenses and costs, including all expenses of litigation, and/or settlement of any character, type or description (including expert/consultant fees and attorneys' fees, and expenses of alternative dispute resolution) arising out of or in connection with and to the extent attributable to the intentional
acts or omissions of ENGINEER or its agents, subcontractors, consultants or employees in the execution or performance of this AGREEMENT, provided that the claims, suits, losses, damages, causes of action, expenses, fees or liability of whatever nature arise in whole or in part from the negligence or other act or omission of ENGINEER or any of its officers, officials, agents, subcontractors, consultants, employees or invitees. ENGINEER contracts to indemnify and protect AUTHORITY from any liability, claims, suits, losses, damages, attorneys’ fees or causes of action due to ENGINEER’S negligence, joint or concurrent negligence, error or omission to the extent that said liability, claims, suits, losses, damages, attorneys’ fees or causes of action arise out of or in connection with the acts or omissions of ENGINEER or its agents, subcontractors, consultants, or employees. This obligation shall not be defeated by the contributory, joint or concurrent negligence or fault of the AUTHORITY, but shall be limited proportionately to the extent of that negligence or fault, as ultimately adjudged by the finder of fact.

ENGINEER agrees that the AUTHORITY has sole discretion and control over the selection and retention of any attorneys, experts or consultants, in fulfillment of ENGINEER’S defense and indemnification obligations hereunder.

ARTICLE XV

NOTICES

All notices and communications under this AGREEMENT to be delivered to the AUTHORITY shall be sent to the address of the AUTHORITY as follows, unless and until the ENGINEER is otherwise notified:

Trinity River Authority of Texas
P.O. Box 240
Arlington, Texas 76004-0240

Attention: Mr. Gary N. Oradat, P.E.
Executive Manager
Planning, Design and Construction Administration

All notices and communications under this AGREEMENT to be delivered to the ENGINEER shall be sent to the address of the ENGINEER as follows, unless and until the AUTHORITY is otherwise notified:

Hazen and Sawyer, DPC
500 West 7th Street, Suite 702
Fort Worth, Texas 76102

Attention: Mr. Scott A. Hardy, P.E., PMP
Senior Associate & Fort Worth Operations Manager
ARTICLE XVI

INDEPENDENT CONTRACTOR

The services performed hereunder by the ENGINEER shall be subject to AUTHORITY’S inspection and approval, but the detailed manner and method of doing said services shall be under the control of the ENGINEER. In the performance of services hereunder, ENGINEER shall be deemed an independent contractor, and any of its employees performing services required hereunder shall be deemed solely employees of ENGINEER or its subcontractor, and not employees of the AUTHORITY.

ARTICLE XVII

SUBCONTRACTORS

In fulfilling its duties pursuant to this AGREEMENT, it is anticipated that the ENGINEER may subcontract to individuals, corporations, organizations, governments or governmental subdivisions or agencies, partnerships, associations, or other legal entities. Such subcontracts may be entered into only with written approval from the AUTHORITY.

The AUTHORITY encourages ENGINEER to provide equal opportunity to historically underutilized business enterprises, and ENGINEER agrees that qualified historically underutilized business enterprises, including minority-owned and female-owned businesses, and labor-surplus firms located in the PROJECT area shall have the maximum practicable opportunity to participate in the performance of AUTHORITY contracts and subcontracts. ENGINEER agrees that it will attempt to achieve at least twenty-five percent participation by historically underutilized business enterprises in the performance of this PROJECT, and will routinely submit evidence to AUTHORITY on the degree to which this goal is met. ENGINEER shall include this ARTICLE in all its contracts and in all their subcontracts directly related to this PROJECT.

ARTICLE XVIII

PRIOR AGREEMENTS SUPERSEDED

This AGREEMENT constitutes the sole and only Agreement of the parties hereto and supersedes any prior understanding or oral or written Agreements between the parties regarding the subject matter of this AGREEMENT, and any and all changes, modifications or alterations of this AGREEMENT must be in writing and approved by both AUTHORITY and ENGINEER.

ENGINEER releases and waives any and all causes of action of whatever nature, or any other legal theory arising out of any prior understanding or oral or written Agreements between the parties, or any subsequent oral understanding or Agreements between the parties, regarding the subject matter of this AGREEMENT, from any and all liability damages of any kind known or unknown, whether in contract or tort.
ARTICLE XIX
LEGAL CONSTRUCTION

In case any one or more of the provisions contained in this AGREEMENT shall be for any reason held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and this AGREEMENT shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein. The validity of this AGREEMENT and of any of its terms or provisions, as well as the rights and duties hereunder, shall be governed by the laws of the State of Texas. All amounts due under this AGREEMENT, including damages for its breach, shall be paid in Tarrant County, Texas, said Tarrant County, Texas being the place of performance as agreed to by the parties to this AGREEMENT. In the event that any legal proceeding is brought to enforce this AGREEMENT or any provision hereof, the same shall be brought in Tarrant County, Texas.

Nothing in this AGREEMENT is intended to waive any governmental immunity available to AUTHORITY under Texas law or waive any defenses of ENGINEER or AUTHORITY under Texas law. This AGREEMENT shall not be construed for the benefit of any third party, nor does it create or grant any right or cause of action in favor of any third party against AUTHORITY or ENGINEER.

ARTICLE XX
REPRESENTATIONS

ENGINEER represents that no officer, employee, or agent of the AUTHORITY has sought or received compensation in any way with respect to the consideration or execution of this AGREEMENT, and in no event will ENGINEER pay a fee to, or in any other manner compensate AUTHORITY officers, employees, or agents in connection with the approval or performance of this AGREEMENT. ENGINEER expressly warrants and represents that no promise or agreement which is not herein expressed has been made to ENGINEER in executing this AGREEMENT and ENGINEER is not relying upon any such statement or representation of AUTHORITY, its officials, officers, agents or employees in entering into this AGREEMENT. ENGINEER is relying on its own judgment in entering into this AGREEMENT and has been represented by independent legal counsel in this matter.

A breach of any provision contained in this ARTICLE shall result in automatic termination of this AGREEMENT. Upon such termination, the AUTHORITY may use all PROJECT DOCUMENTS prepared under this AGREEMENT as provided in ARTICLE X, TERMINATION, and ENGINEER shall be liable for all damages to the AUTHORITY occasioned by a termination under this ARTICLE.

ARTICLE XXI
TERM OF AGREEMENT AND TIME OF PERFORMANCE

This AGREEMENT shall be effective the ________ day of ________________, 202__, and ENGINEER shall complete BASIC ENGINEERING SERVICES within Twelve Months after
receipt of first written authorization to proceed with Tasks in ARTICLE III. This AGREEMENT shall continue in full force and effect until June 30, 2021. AUTHORITY may, on its own determination, extend the term of this AGREEMENT by written agreement with ENGINEER. All payments and liabilities accrued prior to termination shall survive the termination.

IN WITNESS WHEREOF, the parties acting under authority of their respective governing bodies have caused this AGREEMENT to be executed in several counterparts, each of which is deemed to be an original, as of the day and date written above.

[SIGNATURES ON THE FOLLOWING PAGE]
HAZEN AND SAWYER, DPC

CHAMINDRA DASSANAYAKE, P.E.
Vice President

TRINITY RIVER AUTHORITY OF TEXAS

J. KEVIN WARD
General Manager

ATTEST:

HOWARD S. SLOBODIN, Secretary
Board of Directors
(SEAL)

PROCUREMENT VERIFICATION

The solicitation and contractor selection process used in the procurement of this Agreement complies with Texas law and Authority policy.

HOWARD S. SLOBODIN
General Counsel

[VERIFICATION TO BE COMPLETED BY ENGINEER ON FOLLOWING PAGE]
VERIFICATION REQUIRED BY TEXAS GOVERNMENT CODE CHAPTER 2270

By signing below, the signatory hereby verifies that the firm it represents:

1. Does not boycott Israel; and,

2. Will not boycott Israel during the term of the contract.

SIGNED BY: ________________________________________________________________

Print Name & Title: __________________________________________________________

Firm Name: _________________________________________________________________

Date Signed: ________________________________________________________________

NOTARIZATION

THE STATE OF ___________  )
COUNTY  OF ___________  )

BEFORE ME, the undersigned notary public on this day personally appeared
________________________, on behalf of ____________________ ________ (Company), who,
being duly sworn, stated under oath that he/she has read the foregoing verification required by Texas
Government Code Section 2270.002 and said statements contained therein are true and correct.

SWORN TO AND SUBSCRIBED before me on the_______day of _________, 20___.

__________________________________
NOTARY PUBLIC IN AND
FOR THE STATE OF _______________

The following definitions apply to Texas Government Code Section 2270.001:

(1) "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and

(2) "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

State law requires any firm entering into an agreement or contract with the Authority to complete the foregoing verification. TEX. GOV’T CODE § 2270.002.
Attachment A

Hazen and Sawyer, DPC

HOURLY BILLING RATES

June 2020

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>BILLING RATE RANGES*</th>
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</thead>
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<tr>
<td>Vice President/Partner</td>
<td>$250 - $320</td>
</tr>
<tr>
<td>Associate Vice President/Principal</td>
<td>$200 - $280</td>
</tr>
<tr>
<td>Senior Associate/Sr. Project Manager</td>
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<tr>
<td>Associate/Engineer-Senior/Project Engineer</td>
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<tr>
<td>Senior Principal Engineer</td>
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<tr>
<td>Principal Engineer</td>
<td>$120 - $160</td>
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<tr>
<td>Assistant Engineer/Project Engineer</td>
<td>$90 - $130</td>
</tr>
<tr>
<td>CAD Designer/ Sr. Tech</td>
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</tr>
<tr>
<td>Administrative</td>
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</tr>
</tbody>
</table>

* The above billing rates are based upon Direct Salary (or Raw Labor) costs times a multiplier of 2.95.
DATE: June 2, 2020

FILE: 0202.802

TO: BOARD OF DIRECTORS

VIA: (3) UTILITY SERVICES COMMITTEE
(2) J. KEVIN WARD, General Manager
(1) PATRICIA M. CLEVELAND, Executive Manager, Northern Region

RE: Northern Region
Process Engineering Support
Engineering Services Agreement

BACKGROUND: Wastewater treatment includes physical, chemical, and biological processes. Ongoing process engineering support provides additional capability to optimize treatment efficiency for the Northern Region’s five wastewater treatment operating projects. Northern Region desires to extend those services from June 2020 through June 2022. Process engineering support will also be utilized to troubleshoot any unpredicted process-related issues that may occur, by evaluating operational data, performing special sampling efforts and applying process models.

As previously experienced at Northern Region wastewater operating projects, discharge from industries in the collection system can inhibit the biological treatment process. In 2018, industrial discharges to the Central Regional Wastewater System (CRWS) created a nitrite lock that lasted for approximately one year. During this treatment process inhibition, CRWS was at an elevated risk of violating discharge permit limits, and required additional costly chemical treatment to maintain permit compliance. The process engineering support like that now proposed was used to assist with evaluating operational data to identify inhibition thresholds, which leads to reduced treatment ability. The consultant also recommended operational adjustments for treatment optimization and cost savings. Authority management recommends the continuation of process engineering assistance to address future industrial discharge impacts or upsets to the highly advanced treatment processes.

The process engineering support proposed also includes advanced operator training. Training consultants include individuals with professional industrial backgrounds that have been providing operator training at Northern Region wastewater operating projects for over 30 years. Training is currently even more critical as major process modifications are nearing completion and being brought online, such as thermal hydrolysis and anaerobic digestion. Specifically, regarding the CRWS treatment plant, the process engineering support includes a study of the Return Activated Sludge (RAS) system capacity. The 2017 CRWS Master Plan identified the RAS capacity as currently the most limiting component of the biological treatment process. The RAS capacity study will identify current limiting factors and recommend
improvements to maintain permit at all flow ranges, including high wet weather conditions, as well as drought low flow conditions, in order to optimize treatment efficiency and provide economic value in regards to energy savings.

**STAFF ANALYSIS:** Historically, the Authority has utilized Black & Veatch Corporation (B&V) in this role, and B&V was instrumental in assisting the operations staff in providing process models, protocols and confirmation of interferences related to industrial discharges. Authority management has negotiated an Engineering Services Agreement (ESA) (**Exhibit A**) with B&V to provide Northern Region process engineering support services. As outlined in the ESA, total compensation for Basic Engineering Services will be based on personnel time plus expenses not to exceed $489,772. Additional engineering services that may be required for unanticipated conditions shall be compensated on a personnel time plus expenses basis in an amount not to exceed $50,000 as Special Services. Funding for this ESA will be provided by the Central Regional Wastewater System, Denton Creek Regional Wastewater System, Mountain Creek Regional Wastewater System, Red Oak Creek Regional Wastewater System, and Ten Mile Creek Regional Wastewater System Projects Fiscal Years 2020, 2021, and 2022 Operations and Maintenance Budgets.

**RECOMMENDATION:** Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors:

(a) Authorize the General Manager to execute the Engineering Services Agreement between the Trinity River Authority of Texas and Black & Veatch Corporation in the amount of $489,772 for Basic Services and $50,000 for Special Services for engineering services associated with the Northern Region Process Engineering Support; and

(b) Authorize the General Manager to execute amendments to the compensation provisions of the Engineering Services Agreement between the Trinity River Authority of Texas and Black and Veatch Corporation as are deemed prudent in his judgment provided the same do not increase the total approved cost.

Respectfully submitted,

JAMES W. MCDONALD
Engineering Manager, CRWS

JWM./lma

**Exhibit A – Engineering Services Agreement**
EXHIBIT A

ENGINEERING SERVICES AGREEMENT
FOR THE
TRINITY RIVER AUTHORITY OF TEXAS

STATE OF TEXAS §
COUNTY OF TARRANT §

THIS AGREEMENT is made and entered into as of June 24, 2020, by and between the TRINITY RIVER AUTHORITY OF TEXAS, with its principal office at 5300 South Collins Street, Arlington, Tarrant County, Texas 76018 (AUTHORITY) and the firm of BLACK & VEATCH CORPORATION, with its principal office at 1300 Summit Avenue, Suite 400, Fort Worth, Tarrant County, Texas 76102 (ENGINEER).

WITNESSETH:

WHEREAS, the AUTHORITY owns and operates the Central Regional Wastewater System (CRWS) that receives wastewater from the cities of Addison, Arlington, Bedford, Carrollton, Cedar Hill, Colleyville, Coppell, Dallas, Duncanville, Euless, Farmers Branch, Fort Worth, Grand Prairie, Grapevine, Hurst, Irving, Keller, Mansfield, North Richland Hills, Southlake, and the Dallas/Fort Worth International Airport; and

WHEREAS, the AUTHORITY owns and operates the Denton Creek Regional Wastewater System (DCRWS) that receives or will receive wastewater from the cities of Fort Worth, Haslet, Keller, Roanoke, and Southlake; the towns of Argyle, Flower Mound, Northlake, and Westlake; and the Circle T Municipal Utility District Nos. 1 & 3; and

WHEREAS, the AUTHORITY owns and operates the Mountain Creek Regional Wastewater System (MCRWS) that receives wastewater from the cities of Grand Prairie, Mansfield, Midlothian, and Venus; and

WHEREAS, the AUTHORITY owns and operates the Red Oak Creek Regional Wastewater System (ROCRWS) that receives wastewater from the cities of Cedar Hill, DeSoto, Glenn Heights, Lancaster, Ovilla, and Red Oak; and

WHEREAS, the AUTHORITY owns and operates the Ten Mile Creek Regional Wastewater System (TMCRWS) that receives wastewater from the cities of Cedar Hill, DeSoto, Duncanville, Ferris, and Lancaster; and

WHEREAS, the AUTHORITY desires Process Engineering Support Services for the foregoing five advanced wastewater treatment operating projects (PROJECT); and

WHEREAS, the AUTHORITY desires to obtain engineering services in connection with the PROJECT; and
WHEREAS, the ENGINEER represents that it is qualified and capable of performing the engineering services proposed herein, is acceptable to the AUTHORITY, and is willing to enter into an AGREEMENT with the AUTHORITY to perform such services.

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein, AUTHORITY and ENGINEER agree as follows:

ARTICLE I

RETAINER

The AUTHORITY agrees to retain the ENGINEER and the ENGINEER agrees to perform engineering services in connection with the PROJECT. The AUTHORITY agrees to pay and the ENGINEER agrees to accept fees as specified hereinafter as full and final compensation for the services authorized and accomplished.

It is understood and agreed that no professional services of any nature shall be undertaken under this AGREEMENT by the ENGINEER until ENGINEER is instructed in writing by the AUTHORITY’S General Manager or his designated representative to commence with the work.

ARTICLE II

PROFESSIONAL QUALITY

ENGINEER shall be responsible for the professional quality, technical accuracy, timely completion, and coordination of all designs, drawings, documents, estimates, specifications, reports, studies and other material (collectively the PROJECT DOCUMENTS) and services furnished by the ENGINEER under this AGREEMENT. Approval by the AUTHORITY of PROJECT DOCUMENTS, services, and incidental engineering services shall not in any way relieve the ENGINEER of responsibility for the technical accuracy of the engineering services performed. The AUTHORITY’S review, approval or acceptance of, or payment for any of the services described herein shall not be construed to operate as a waiver of any rights under this AGREEMENT or of any cause of action arising out of the performance of this AGREEMENT.

ARTICLE III

BASIC ENGINEERING SERVICES

ENGINEER agrees to perform BASIC ENGINEERING SERVICES in connection with the PROJECT as hereinafter stated, in accordance with the stipulations in this AGREEMENT. The ENGINEER shall perform BASIC ENGINEERING SERVICES necessary for the development of the PROJECT as follows:

A. TASK I – PROJECT MANAGEMENT

(1) Schedule and conduct meetings as requested by the AUTHORITY. In each meeting review progress, analysis, findings, PROJECT deliverable status,
current schedule, and outstanding action items. Prepare agenda and meeting materials, direct and document meetings to review progress, and facilitate the exchange of ideas and information. Prepare draft meeting minutes to include action lists and decision lists;

(2) Furnish the AUTHORITY, when requested, the engineering data necessary for applications for uprating or amendments to permits, submittals, and approvals required by local, state, and federal authorities, and assist AUTHORITY in consultations with appropriate authorities; and

(3) Provide invoicing, printing, and exhibits.

B. TASK II – CONSTRUCTION ACTIVITY PROCESS SUPPORT

Analyze the impact of simultaneous construction projects on the treatment process. Determine the combined impacts of several projects at once on process disruptions. Determine impacts such as increased operating costs, decreased process stability, increased effluent concentration discharge, or a combination of these factors. Apply process modeling to conduct sensitivity analyses for various operating configurations, and to complete operational troubleshooting simulations to evaluate critical infrastructure and potential impacts on process operation. Utilize pertinent operational data to identify potential process upset triggers and develop potential operational solutions.

C. TASK III – OPERATOR TRAINING COURSES (LIQUIDS AND SOLIDS)

Assist in conducting a training course on-site at CRWS. Assist with the development and delivery of two sets of three-day courses on liquids process components and up to 12 days for anaerobic digestion focused training courses. Training courses shall include biological nutrient removal, anaerobic digestion, and any other liquids and solids process related topics.

D. TASK IV – ONGOING DATA ANALYSIS, TRENDING, AND OPTIMIZATION

Assist with the compilation and evaluation of the large amount of process-related data collected on a daily basis. Evaluate data for trends, correlations, and performance indicators. Develop sampling and testing protocols to evaluate current and future conditions. Provide support for on-site SUMO process modeling activities and improvements.

E. TASK V – PROCESS TROUBLESHOOTING

Perform process optimization and troubleshooting for AUTHORITY’S Northern Region wastewater treatment operating projects. This Task provides services to address any unforeseen process-related issues that may occur, including industrial discharge impacts. Troubleshooting efforts will rely on the application of process modeling, operational data evaluation and any special sampling evaluation. Provide on-site testing support and up to three on-site troubleshooting workshops.
F. TASK VI – CRWS RETURN ACTIVATED SLUDGE (RAS) CAPACITY STUDY

Utilizing historical data, hydraulic and computational fluid dynamic (CFD) modeling, investigate CRWS RAS capacity limitations, define bottlenecks and recommend potential improvements.

1) Hydraulic Modeling – Develop a hydraulic model of the three RAS pump stations (13, 13A, and 13B). Utilize model to define capacity and recommended operation from the RAS collection channels through the aeration basin distribution boxes. Evaluate RAS interconnecting piping to recommend improvements to interconnect Aeration Basins 7-12 with Aeration Basins 1-6;

2) CFD Modeling – Perform hydraulic calculations and computational fluid dynamics modeling of the secondary clarifiers. Evaluate sludge settling and collection in combination with the traveling bridge siphon capacity together with Subtask 1 to define RAS capacity bottlenecks;

3) Process Impact Evaluation – Leverage the AUTHORITY’S existing CRWS treatment plant process model and the results of Subtasks 1 and 2 above to define the secondary system process capacity. A review of historical data and further development of the solids flux curve along with a State Point Analysis will be utilized to redefine clarifier loading capacities; and

4) Conduct three online workshops and one in-person workshop. The three online workshops will review the findings of each subtask listed above. The in-person workshop will review potential improvements to address capacity bottlenecks. Discuss capacity impacts, capital costs, and potential implementation phasing at the in-person workshop. Summarize recommendations from the three subtasks along with the recommended improvements presented at the in-person workshop in a technical memorandum (TM). Detail the findings, design alternatives, and cost estimates in the TM, and deliver electronically. The impacts of selective wasting to the recommended capacities of this Task will be included to define potential capacity with further improvements.

G. TASK VII – CRWS ENHANCED SETTLING SLUDGE AUGMENTATION RESEARCH PLAN

Develop a research plan to further the enhanced sludge settling characteristics of the CRWS treatment plant activated sludge. Develop potential solutions to increase the wet weather and organic loading rate capacities and reliability of the CRWS treatment plant. As part of the research plan development, perform initial field testing, including settling velocity and sieve analysis, to further define sludge characteristics, such as development of sludge density and velocity profiles. Define a path forward for the CRWS treatment plant to implement demonstration testing for assessment of technologies, such as hydrocyclones to further augment the enhanced sludge settling characteristics. Document alternatives for further enhancement of settling characteristics including capacity impacts, technology alternatives, and interaction with the RAS Capacity findings from TASK VI. Develop a projected capital cost for any full-scale solutions. Develop a
demonstration plan for identified alternatives, including demonstration testing costs, testing requirements, and schedule. Document the research and demonstration plan with a TM and submit electronically.

ARTICLE IV
SPECIAL ENGINEERING SERVICES

Various SPECIAL SERVICES incidental to the PROJECT, but not within the scope of the BASIC ENGINEERING SERVICES covered by ARTICLE III preceding, which may be performed or arranged for separately by the AUTHORITY, or may be added to the ENGINEER'S responsibilities by mutual agreement and written authorization include, but are not necessarily limited to, the following:

1. Perform additional analysis and data trending for process related conditions;
2. Perform structural, mechanical, or electrical engineering services;
3. Observe on-site conditions to evaluate exposed conditions, dewatering techniques, or changed conditions; and
4. Provide any other services otherwise excluded in this AGREEMENT but customarily furnished in accordance with generally accepted engineering practices.

ARTICLE V
SERVICES BY THE AUTHORITY

The AUTHORITY and its representatives will render services inclusive of the following:

1. Provide available criteria and full information as to the AUTHORITY'S requirements for the PROJECT;
2. Assist the ENGINEER by placing at his disposal all available written data pertinent to the PROJECT;
3. Examine documents submitted by the ENGINEER and render a decision pertaining thereto promptly, to avoid unreasonable delay in the progress of the ENGINEER'S services;
4. Furnish information required as expeditiously as possible for the orderly progress of the work;
5. The General Manager of the AUTHORITY or his designated representative shall appoint, in writing, a representative that the ENGINEER shall be entitled to rely upon regarding decisions made by the AUTHORITY. All subsequent
communication to the AUTHORITY shall be deemed made when conveyed in writing to the representative at the location specified in ARTICLE XV, NOTICES; and

(6) The services, information, and reports required by this ARTICLE, inclusive, shall be furnished at the AUTHORITY’S expense, and the AUTHORITY will apprise the ENGINEER of any known inaccuracies or inconsistencies in the information provided.

ARTICLE VI

COMPENSATION

A. BASIC ENGINEERING SERVICES

For and in consideration of the BASIC ENGINEERING SERVICES (ARTICLE III) to be rendered by the ENGINEER, the AUTHORITY shall pay, and the ENGINEER shall receive compensation as hereinafter set forth. All remittance by the AUTHORITY for such compensation shall either be mailed or electronically delivered to the financial institution identified by ENGINEER.

Compensation for BASIC ENGINEERING SERVICES, ARTICLE III, Tasks I through VII shall be based on personnel time plus expenses in an amount not to exceed as follows:

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task I</td>
<td>Project Management</td>
<td>$27,007</td>
</tr>
<tr>
<td>Task II</td>
<td>Construction Activity Process Support</td>
<td>$36,031</td>
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<td>Task III</td>
<td>Operator Training Courses (Liquids and Solids)</td>
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<td>Task IV</td>
<td>Ongoing Data Analysis, Trending, and Optimization</td>
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<td>Task V</td>
<td>Process Troubleshooting</td>
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<td>Task VI</td>
<td>CRWS Return Activated Sludge (RAS) Capacity Study</td>
<td>$188,668</td>
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<tr>
<td>Task VII</td>
<td>CRWS Enhanced Settling Sludge Augmentation Research Plan</td>
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</tbody>
</table>

For all the ENGINEER’S personnel time applied to the BASIC ENGINEERING SERVICES, compensation shall be based on "Salary Cost" times a multiplier of 3.05, in accordance with Attachment A. "Salary Cost" used herein is defined as the cost of salaries of engineers, draftsmen, stenographers, surveymen, clerks, laborers, etc., for time directly chargeable to the PROJECT plus social security contributions, unemployment, excise and payroll taxes, employment compensation insurance, retirement benefits, medical and insurance benefits, sick leave, vacation, and holiday pay applicable thereto.

All direct non-labor expenses, including mileage, travel and lodging expenses, but excluding subcontract expenses, applied to the BASIC ENGINEERING SERVICES, shall be paid at invoice or internal office cost plus a ten percent service charge. Subcontract expenses shall be paid at direct cost plus a five percent service charge. Compensation for subcontract personnel time must also comply with the limits set forth in Attachment A, unless approved in writing by the AUTHORITY prior to the rendition of subcontract services.
B. SPECIAL SERVICES

For and in consideration of the SPECIAL SERVICES set forth in ARTICLE IV, herein, the AUTHORITY shall pay and the ENGINEER shall receive compensation for personnel time plus expenses in an amount not to exceed Fifty Thousand Dollars ($50,000) to be paid as follows:

For all the ENGINEER'S personnel time applied to the SPECIAL SERVICES, compensation shall be based on "Salary Cost" times a multiplier of 3.05, in accordance with Attachment A. "Salary Cost" used herein is defined as the cost of salaries of engineers, draftsmen, stenographers, surveymen, clerks, laborers, etc., for time directly chargeable to the PROJECT plus social security contributions, unemployment, excise and payroll taxes, employment compensation insurance, retirement benefits, medical and insurance benefits, sick leave, vacation, and holiday pay applicable thereto.

All direct non-labor expenses, including mileage, travel and lodging expenses, but excluding subcontract expenses, applied to the SPECIAL SERVICES, shall be paid at invoice or internal office cost plus a ten percent service charge. Subcontract expenses shall be paid at direct cost plus a five percent service charge. Compensation for subcontract personnel time must also comply with the limits set forth in Attachment A, unless approved in writing by the AUTHORITY prior to the rendition of subcontract services.

C. METHOD OF BILLING

For services performed by ENGINEER for AUTHORITY compensated as lump sum amounts, ENGINEER shall submit statements monthly or less frequently reflecting ENGINEER'S requested compensation for that portion of the BASIC ENGINEERING SERVICES completed by ENGINEER.

For services performed by ENGINEER for AUTHORITY compensated as personnel time plus expenses, ENGINEER shall submit statements monthly or less frequently reflecting ENGINEER'S requested compensation for that portion of the BASIC ENGINEERING SERVICES or SPECIAL SERVICES completed by ENGINEER. Along with each separate request for payment of these services, ENGINEER shall submit to the AUTHORITY documentation substantiating all of the actual costs for which ENGINEER has requested compensation, including but not limited to the following:

(1) The name of each individual performing services, individual's billing category, the individual's direct salary, and the number of hours associated with each individual's performance of services for the period of time identified with any billing invoice; and

(2) A copy of any invoices paid directly by the ENGINEER for any outside services or product which relate to the PROJECT, and which are requested by ENGINEER to be reimbursed by AUTHORITY.

All records pertaining to services for which payment has been made based upon ENGINEER'S actual costs times a multiplier shall be subject to audit by the AUTHORITY in
accordance with ARTICLE VII. ENGINEER may be required to furnish additional records and/or data in addition to the above, as a response to AUTHORITY'S auditing process specified in ARTICLE VII.

D. TIME OF PAYMENT OF COMPENSATION

The ENGINEER shall submit a request for partial payments for services on a monthly basis, as evidenced by monthly statements submitted by the ENGINEER to the AUTHORITY. Final payment for services authorized shall be due upon completion of these services.

Should the AUTHORITY fail to make payment to the ENGINEER, the sum named in any partial or final statement, and when payment is past due for more than thirty days, then the AUTHORITY shall pay to the ENGINEER, in addition to the sum shown as due by such statement, interest thereon at the rate of five percent per annum from the date due, as provided herein until fully paid, which shall fully compensate ENGINEER for any injury arising from such delay in payment.

However, in the event that the sum shown as due to the ENGINEER by such statement shall be disputed, questioned, or objected to by the AUTHORITY, then said rate of five percent per annum from the date due shall only apply to that portion or amount of payment which is finally and mutually agreed upon by AUTHORITY and ENGINEER to be rightfully due and owing to the ENGINEER.

ARTICLE VII

AUDIT OF RECORDS

All records of the ENGINEER of a financial or timekeeping basis which have been used to determine the fees earned by the ENGINEER and billed to AUTHORITY on the basis of "Salary Cost" times a multiplier shall be open to inspection and subject to audit and/or reproduction by AUTHORITY'S agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of cost of the services at the conclusion of the scope of all services to be performed under this AGREEMENT. The relationship between Direct Salary and Salary Cost has been identified on Attachment A and is not subject to an audit or a redetermination of any kind. In addition, this ARTICLE shall apply to Subcontractors and Direct Purchases only to the extent of invoices received by ENGINEER and evidence of payment for such invoices in the possession of ENGINEER. In its audits, the AUTHORITY may require inspection and copying from time to time and at reasonable times and places of any and all information, materials and data of every kind and character that may in AUTHORITY'S judgment have any bearing on or pertain to the payments subject to this audit. The AUTHORITY or its designee shall be afforded access to all of the ENGINEER'S records pursuant to the provisions of this ARTICLE at the conclusion of the term of the AGREEMENT and for a period of three years after final payment.
ARTICLE VIII

LIABILITY AND INSURANCE MATTERS

During the term of this AGREEMENT, ENGINEER shall, to the fullest extent permitted by law, maintain, and shall require its subcontractors to maintain:

(1) Professional liability insurance in an amount and with carriers satisfactory to AUTHORITY. If the professional liability insurance is written on a “claims made” form, a policy shall: 1) be in force until acceptance of the PROJECT improvements by the AUTHORITY; 2) be in force for a period of three years after acceptance of the PROJECT improvements by the AUTHORITY; and, 3) have a retroactive date on or prior to the effective of this AGREEMENT;

(2) Public liability, commercial general liability and umbrella policies (all including blanket contractual liability coverage for all liabilities assumed in this AGREEMENT, including all indemnification obligations set forth in ARTICLE XIV) and automobile insurance for bodily injury, and property damage, and workers’ compensation coverage on all of ENGINEER’S or its subcontractors' employees working on the PROJECT;

(3) All insurance policies referenced in paragraph (2) above, except workers’ compensation coverage, shall, to the fullest extent permitted by law, name and cover the AUTHORITY as an additional insured, by policy declaration, with coverage being primary, and all said insurance policies shall include a waiver of subrogation, and shall be in amounts and with carriers satisfactory to AUTHORITY;

(4) ENGINEER shall furnish to the AUTHORITY certificates (and upon request endorsements and policies) reflecting that the above-required insurance coverages are in full force and effect prior to ENGINEER’S execution of this AGREEMENT and also thereafter within seven days of the AUTHORITY’S request. Policies shall not be subject to endorsements, exclusions, limitations, conditions or restrictions inconsistent with the insurance requirements to be fulfilled by the ENGINEER, and all policies shall be written through companies duly approved to transact that class of insurance in the State of Texas. The AUTHORITY prior to the effective date of this AGREEMENT must approve all said insurance in writing. Said certificates of insurance shall be attached hereto as “Attachment B” and shall be incorporated herein for all purposes; and

(5) Approval, disapproval or failure to act by AUTHORITY regarding any insurance required by this AGREEMENT shall not relieve ENGINEER of full responsibility or liability, if any, for liabilities and damages as set forth in the AGREEMENT. Neither shall the insolvency or denial of liability by any insurance company relieve the ENGINEER of liability.
ARTICLE IX

ASSIGNMENT

Neither this AGREEMENT, nor any right privilege or cause of action arising hereunder may be assigned by ENGINEER, or any of ENGINEER’S subcontractors, in whole or in part for any purpose and whether in settlement of litigation or not, and any purported assignment shall be void and unenforceable without the written consent of the AUTHORITY. The AUTHORITY and the ENGINEER each binds itself and its successors and assigns to the other party with respect to all covenants of this AGREEMENT.

ARTICLE X

TERMINATION

In connection with all the engineering services outlined or contemplated above, it is agreed that the AUTHORITY or the ENGINEER may cancel or terminate this AGREEMENT upon thirty days written notice to the other, with the provision and understanding that immediately upon receipt of notice of such cancellation from either party to the other, all work and labor being performed under this AGREEMENT shall immediately cease, pending final cancellation at the end of such thirty day period, and further provided that the ENGINEER shall be compensated in accordance with the terms of this AGREEMENT for all work accomplished prior to the receipt of notice of such termination. All completed or partially completed PROJECT DOCUMENTS prepared under this AGREEMENT shall then be delivered to the AUTHORITY, which it may use without restraint. All rights, duties, liabilities, and obligations accrued prior to such termination shall survive termination. ENGINEER shall be liable for any damages suffered by the AUTHORITY as a result of ENGINEER'S termination of this AGREEMENT.

ARTICLE XI

PROJECT DOCUMENTS

All PROJECT DOCUMENTS are and shall become the property of the AUTHORITY, which it may use without restraint. The ENGINEER is not responsible and is hereby released from responsibility for the AUTHORITY’S use of the documents for any purpose other than for this PROJECT. The ENGINEER may retain a set of reproducible record copies of drawings and other documents; however, ENGINEER shall not provide to, or use this work product on behalf of, any person or entity without the express written consent of the AUTHORITY.

ARTICLE XII

PRIVATE LAND ENTRY

ENGINEER shall not enter any property owned by others on the AUTHORITY’S behalf to survey, to perform soil tests, or for other reasons related to the performance of services under this AGREEMENT until the ENGINEER has secured the landowner's permission to so enter and perform such activities.
ARTICLE XIII

LAWS AND ORDINANCES

ENGINEER shall at all times observe and comply with all federal, state, and local laws, ordinances, rules, regulations, and orders of any public authority, which in any manner affect this AGREEMENT or the PROJECT. ENGINEER agrees, moreover, not to discriminate against any employee or applicant for employment because of race, religion, color, sex, age, disability, or national origin. ENGINEER agrees to comply with the Immigration Reform and Control Act of 1986 and the Americans with Disabilities Act of 1990. The ENGINEER agrees that the indemnification provisions of ARTICLE XIV INDEMNIFICATION below encompass any failure by the ENGINEER to comply with this ARTICLE.

ARTICLE XIV

INDEMNIFICATION

To the fullest extent permitted by law, ENGINEER DOES HEREBY COVENANT AND CONTRACT TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS THE AUTHORITY ALL OF ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, IN BOTH THEIR PUBLIC AND PRIVATE Capacities, from and against any and all liability, claims, suits, demands, causes of action, damages, expenses and costs, including all expenses of litigation, and/or settlement of any character, type or description (including expert/consultant fees and attorneys’ fees, and expenses of alternative dispute resolution) arising out of or in connection with and to the extent attributable to the intentional acts or omissions of ENGINEER or its agents, subcontractors, consultants or employees in the execution or performance of this AGREEMENT, provided that the claims, suits, losses, damages, causes of action, expenses, fees or liability of whatever nature arise in whole or in part from the negligence or other act or omission of ENGINEER or any of its officers, officials, agents, subcontractors, consultants, employees or invitees. ENGINEER contracts to indemnify and protect AUTHORITY from any liability, claims, suits, losses, damages, attorneys’ fees or causes of action due to ENGINEER’S negligence, joint or concurrent negligence, error or omission to the extent that said liability, claims, suits, losses, damages, attorneys’ fees or causes of action arise out of or in connection with the acts or omissions of ENGINEER or its agents, subcontractors, consultants, or employees. This obligation shall not be defeated by the contributory, joint or concurrent negligence or fault of the AUTHORITY, but shall be limited proportionately to the extent of that negligence or fault, as ultimately adjudged by the finder of fact.

ENGINEER agrees that the AUTHORITY has sole discretion and control over the selection and retention of any attorneys, experts or consultants, in fulfillment of ENGINEER’S defense and indemnification obligations hereunder.
ARTICLE XV
NOTICES

All notices and communications under this AGREEMENT to be delivered to the
AUTHORITY shall be sent to the address of the AUTHORITY as follows, unless and until the
ENGINEER is otherwise notified:

Trinity River Authority of Texas
P.O. Box 240
Arlington, Texas 76004-0240

Attention: Ms. Patricia M. Cleveland
Executive Manager, Northern Region

All notices and communications under this AGREEMENT to be delivered to the
ENGINEER shall be sent to the address of the ENGINEER as follows, unless and until the
AUTHORITY is otherwise notified:

Black & Veatch Corporation
1300 Summit Ave., Suite 400
Fort Worth, Texas 76102

Attention: Mr. Ignacio Cadena, P.E.
North Texas Client Services Manager

ARTICLE XVI
INDEPENDENT CONTRACTOR

The services performed hereunder by the ENGINEER shall be subject to AUTHORITY’S
inspection and approval, but the detailed manner and method of doing said services shall be
under the control of the ENGINEER. In the performance of services hereunder, ENGINEER
shall be deemed an independent contractor, and any of its employees performing services
required hereunder shall be deemed solely employees of ENGINEER or its subcontractor, and
not employees of the AUTHORITY.

ARTICLE XVII
SUBCONTRACTORS

In fulfilling its duties pursuant to this AGREEMENT, it is anticipated that the ENGINEER
may subcontract to individuals, corporations, organizations, governments or governmental
subdivisions or agencies, partnerships, associations, or other legal entities. Such subcontracts
may be entered into only with written approval from the AUTHORITY.

The AUTHORITY encourages ENGINEER to provide equal opportunity to historically
underutilized business enterprises, and ENGINEER agrees that qualified historically
underutilized business enterprises, including minority-owned and female-owned businesses, and labor-surplus firms located in the PROJECT area shall have the maximum practicable opportunity to participate in the performance of AUTHORITY contracts and subcontracts. ENGINEER agrees that it will attempt to achieve at least twenty-five percent participation by historically underutilized business enterprises in the performance of this PROJECT, and will routinely submit evidence to AUTHORITY on the degree to which this goal is met. ENGINEER shall include this ARTICLE in all its contracts and in all their subcontracts directly related to this PROJECT.

ARTICLE XVIII

PRIOR AGREEMENTS SUPERSEDED

This AGREEMENT constitutes the sole and only Agreement of the parties hereto and supersedes any prior understanding or oral or written Agreements between the parties regarding the subject matter of this AGREEMENT, and any and all changes, modifications or alterations of this AGREEMENT must be in writing and approved by both AUTHORITY and ENGINEER.

ENGINEER releases and waives any and all causes of action of whatever nature, or any other legal theory arising out of any prior understanding or oral or written Agreements between the parties, or any subsequent oral understanding or Agreements between the parties, regarding the subject matter of this AGREEMENT, from any and all liability damages of any kind known or unknown, whether in contract or tort.

ARTICLE XIX

LEGAL CONSTRUCTION

In case any one or more of the provisions contained in this AGREEMENT shall be for any reason held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and this AGREEMENT shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein. The validity of this AGREEMENT and of any of its terms or provisions, as well as the rights and duties hereunder, shall be governed by the laws of the State of Texas. All amounts due under this AGREEMENT, including damages for its breach, shall be paid in Tarrant County, Texas, said Tarrant County, Texas being the place of performance as agreed to by the parties to this AGREEMENT. In the event that any legal proceeding is brought to enforce this AGREEMENT or any provision hereof, the same shall be brought in Tarrant County, Texas.

Nothing in this AGREEMENT is intended to waive any governmental immunity available to AUTHORITY under Texas law or waive any defenses of ENGINEER or AUTHORITY under Texas law. This AGREEMENT shall not be construed for the benefit of any third party, nor does it create or grant any right or cause of action in favor of any third party against AUTHORITY or ENGINEER.
ARTICLE XX

REPRESENTATIONS

ENGINEER represents that no officer, employee, or agent of the AUTHORITY has sought or received compensation in any way with respect to the consideration or execution of this AGREEMENT, and in no event will ENGINEER pay a fee to, or in any other manner compensate AUTHORITY officers, employees, or agents in connection with the approval or performance of this AGREEMENT. ENGINEER expressly warrants and represents that no promise or agreement which is not herein expressed has been made to ENGINEER in executing this AGREEMENT and ENGINEER is not relying upon any such statement or representation of AUTHORITY, its officials, officers, agents or employees in entering into this AGREEMENT. ENGINEER is relying on its own judgment in entering into this AGREEMENT and has been represented by independent legal counsel in this matter.

A breach of any provision contained in this ARTICLE shall result in automatic termination of this AGREEMENT. Upon such termination, the AUTHORITY may use all PROJECT DOCUMENTS prepared under this AGREEMENT as provided in ARTICLE X, TERMINATION, and ENGINEER shall be liable for all damages to the AUTHORITY occasioned by a termination under this ARTICLE.

ARTICLE XXI

TERM OF AGREEMENT AND TIME OF PERFORMANCE

This AGREEMENT shall be effective the ________ day of ________________, 202_, and ENGINEER shall complete BASIC ENGINEERING SERVICES within Twenty-four months after receipt of first written authorization to proceed with Tasks in ARTICLE III. This AGREEMENT shall continue in full force and effect until July 1, 2022. AUTHORITY may, on its own determination, extend the term of this AGREEMENT by written agreement with ENGINEER. All payments and liabilities accrued prior to termination shall survive the termination.

IN WITNESS WHEREOF, the parties acting under authority of their respective governing bodies have caused this AGREEMENT to be executed in several counterparts, each of which is deemed to be an original, as of the day and date written above.

[SIGNATURES ON THE FOLLOWING PAGE]
PRODUCTION VERIFICATION

The solicitation and contractor selection process used in the procurement of this Agreement complies with Texas law and Authority policy.

HOWARD S. SLOBODIN
General Counsel

[VERIFICATION TO BE COMPLETED BY ENGINEER ON FOLLOWING PAGE]
VERIFICATION REQUIRED BY TEXAS GOVERNMENT CODE CHAPTER 2270

By signing below, the signatory hereby verifies that the firm it represents:

1. Does not boycott Israel; and,
2. Will not boycott Israel during the term of the contract.

SIGNED BY: ____________________________________________

Print Name & Title: ____________________________________________

Firm Name: ____________________________________________

Date Signed: ____________________________________________

NOTARIZATION

THE STATE OF _________ )
COUNTY OF _________ )

BEFORE ME, the undersigned notary public on this day personally appeared ________________________, on behalf of ________________________________ (Company), who, being duly sworn, stated under oath that he/she has read the foregoing verification required by Texas Government Code Section 2270.002 and said statements contained therein are true and correct.

SWORN TO AND SUBSCRIBED before me on the_______day of __________, 20__.

__________________________________
NOTARY PUBLIC IN AND FOR THE STATE OF _________________

The following definitions apply to Texas Government Code Section 2270.001:

   (1) "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and

   (2) "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

State law requires any firm entering into an agreement or contract with the Authority to complete the foregoing verification. TEX. GOV’T CODE § 2270.002.
**BLACK & VEATCH CORPORATION**

**HOURLY BILLING RATES**

**June 2020**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>BILLING RATE RANGES*</th>
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<tr>
<td>Clerical</td>
<td>$ 50.00 - $ 115.00</td>
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<tr>
<td>Engineering Technician</td>
<td>$ 50.00 - $135.00</td>
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<tr>
<td>Project Accountant</td>
<td>$ 65.00 - $145.00</td>
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<tr>
<td>Project Controls</td>
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<tr>
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<tr>
<td>Project Engineer/Process Engineer</td>
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<tr>
<td>Senior Engineering Technician</td>
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<tr>
<td>Engineering Manager/Lead Process Engineer</td>
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<tr>
<td>Project Manager/Technical Director</td>
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<td>Senior Technical Advisor</td>
<td>$150.00 - $250.00</td>
</tr>
<tr>
<td>Principal/Client Director</td>
<td>$150.00 - $250.00</td>
</tr>
</tbody>
</table>

*The above billing rates are based upon "Salary Cost" times a multiplier of 3.05. As used herein, the term "Salary Cost" shall be established at 3.05 times "Direct Salary."
DATE: June 2, 2020

FILE: 19,002

TO: UTILITY SERVICES COMMITTEE
VIA: (2) J. KEVIN WARD, General Manager
      (1) GLENN CLINGENPEEL, Executive Manager, Technical Services and Basin Planning

RE: Geographic Information System License and Maintenance Improvement
    GIS Maintenance and Enterprise License Agreement
    Environmental Systems Research Institute

BACKGROUND: In 2013, the Authority made the decision to centralize and expand in-house Geographic Information System (GIS) services. Key drivers in this decision were potential financial savings and strategic benefits associated with the implementation of a core enterprise GIS. At that time, Authority GIS efforts mainly focused on collection system sanitary sewer asset mapping. The program has since expanded to include geospatial-service delivery to every department across the Authority, including the Lake Livingston Project, Land Rights, Environmental Services, Finance, Planning Design and Construction Administration, as well as every Northern Region project. These services include geospatial data acquisition, processing, data and information storage, maintenance, analysis, mapping and reporting.

Since 2015, the Authority has invested over 1.5 million dollars on asset inventory and mapping projects for its Northern Region water and wastewater treatment plants alone. During that same time, the Authority has seen tremendous growth in the usage of GIS licenses and services, with the number of active users growing from thirty to one hundred and thirteen. The Authority currently purchases licenses and services from Environmental Systems Research Institute (Esri) a la carte, meaning we specify the number and type of licenses and services, paying incrementally for each. Growth in the number of GIS users is expected to continue, increasing to almost two hundred by the end of 2022. Moving to an enterprise licensing agreement (ELA) with Esri will restructure the way the Authority purchases licensing and maintenance, with licenses and services purchased in bulk. Management believes an ELA is the most efficient and cost-effective mechanism to implement the current and future needs of the Authority through GIS.

STAFF ANALYSIS: The proposed ELA will enable the Authority to establish a shared data foundation for collaboration across the organization, meet demand from increased usage, and significantly improve data analysis, mapping and reporting. The benefits of this can be summarized as follows:

- Additional cost avoidance and savings derived from in-house data creation and maintenance activities;
- Facilitating access and sharing of information, which can have far-reaching impacts, including helping to limit the loss of institutional knowledge through retirements;
Eliminating duplication of certain tasks, for instance, entering information directly into the enterprise system remotely versus writing it down in the field, bringing it back to the office, then entering it into the system;

Improving operational and planning efforts with faster and easier access to information, reducing time, improving decisions, and ultimately providing a better quality of service; and

Improving access and sharing of data through enterprise integration, where “location” serves as the common denominator for all related information, and in which the ArcGIS online platform provides the framework for integration.

Esri is the world’s leader in GIS software, which includes the ArcGIS platform that the Authority has used as its standard for over a decade. Esri is the sole-source provider of software sales and maintenance for all of its products in the United States.

An ELA, Attachment A, has been negotiated with Esri in an amount not to exceed $315,000 over a three-year period. The proposed payment terms, developed to reflect the Authority’s specific deployment schedule, are as follows:

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>Total</th>
</tr>
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<tbody>
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<td>Annual ELA Fee</td>
<td>$100,000</td>
<td>105,000</td>
<td>110,000</td>
<td>$315,000</td>
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**RECOMMENDATION:** Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors authorize the General Manager to execute the Enterprise License Agreement, in substantially the form presented, between the Trinity River Authority of Texas and Environmental Systems Research Institute in the amount of $315,000.

Respectfully submitted,

BOB AYENSU, PMP, GISP
Manager, Geospatial Services
Technical Services and Basin Planning

JBA/crt

[Attachment A – Enterprise License Agreement](#)
Enterprise Agreement

Enterprise Agreement No. 00284090.0

This Enterprise Agreement, including the documents listed below ("EA"), is between Trinity River Authority ("TRA"), with its main offices located at 5300 South Collins, Arlington, Texas 76018-1710 and Environmental Systems Research Institute, Inc. ("Esri"), with an Effective Date of the date of the last party to sign below. This EA provides for the licensing and Deployment of certain EA Products, delivery of EA Maintenance, and provision of Esri User Conference registrations and any additional services as specified herein.

This EA is composed of the following documents, which are incorporated herein by reference:

1. Enterprise Agreement signature page(s)
2. Enterprise License Terms and Conditions, including
   - Appendix A—Products and Deployment Schedule
   - Appendix B—EA Fee Schedule
   - Appendix C—EA Points of Contact
3. Master Agreement

The parties acknowledge that they have read and understand this EA and agree to be bound by the terms and conditions contained herein.

This EA constitutes the sole and entire agreement of the parties as to the subject matter set forth herein and supersedes any previous agreements, proposals, presentations, understandings, and arrangements between the parties relating to such subject matter. Any modifications or amendments to this EA must be in writing and signed by an authorized representative of each party.

ACCEPTED AND AGREED:

TRINITY RIVER AUTHORITY
(TRA) By: ________________________________
Authorized Signature
Printed Name: ____________________________
Title: ________________________________
Date: ________________________________

ENVIRONMENTAL SYSTEMS
RESEARCH INSTITUTE, INC.
(Esri) By: ________________________________
Authorized Signature
Printed Name: ____________________________
Title: ________________________________
Date: ________________________________
ENTERPRISE AGREEMENT TERMS AND CONDITIONS

ARTICLE 1—DEFINITIONS

All definitions in other parts of the EA will have the same meaning in this Enterprise Agreement Terms and Conditions. In addition, the following definitions apply to the EA:

- "Case(s)" means a failure of Products to operate according to the Documentation where such failure substantially impacts operational or functional performance.
- "Customer(s)" means TRA. For avoidance of doubt, the definition of Customer will not include consultants or contractors. Customer(s) must not include persons or entities ineligible to receive or have access to Esri products or services by operation of law, including US export control laws, decrees, orders, rules, regulations, policies, riders, conditions, or provisos.
- "Deploy," "Deployment," or "Deployed" means to redistribute, or the redistribution of, the EA Products (and their related keycodes/registration files), or their having been redistributed, by TRA during the term of this EA for installation and use by Customer.
- "EA Fee" means the fee set forth in Appendix B—EA Fee Schedule.
- "EA Maintenance" means Tier 2 Support, updates, and patches provided by Esri for EA Products and Rolled-In Software.
- "EA Products" means the Products identified in Tables A-1 and A-2 of Appendix A—Products and Deployment Schedule. EA Products do not include Unit-Priced Item(s) or Esri technology that may be embedded in third-party products purchased by Customer.
- "Effective Date" means the date the EA commences and the start date for all licenses, regardless of when an Ordering Document is provided by Customer.
- "Master Agreement" means the applicable master agreement incorporated by this reference that is (i) found at https://www.esri.com/en-us/legal/terms/full-master-agreement and available in the installation process requiring acceptance by electronic acknowledgment, or (ii) a signed master agreement between Esri and Customer that supersedes such electronically acknowledged master agreement.
- "Rolled-In Software" means Products (excluding Term licenses or subscriptions) of the same type as EA Products that Customer acquired for use prior to the Effective Date, that are current on paid maintenance (as shown in Esri's customer service records), and that receive EA Maintenance during the term of the EA. If this EA is extended or renewed, Rolled-In Software shall include EA Products Deployed prior to the then-current renewal period.
- "Technical Support" means a process to attempt to resolve reported Case(s) through error correction, patches, hot fixes, and workarounds; replacement deliveries; or any other type of Product corrections or modifications specified in the most current applicable Esri Maintenance and Support Program.
- "Tier 1 Help Desk" means TRA's point of contact from which all Tier 1 Support will be given to Customer.
- "Tier 1 Support" means the Technical Support provided by the Tier 1 Help Desk as the primary contact to Customer in the attempted resolution of reported Case(s).
- "Tier 2 Support" means the Technical Support provided by Esri to the Tier 1 Help Desk when a Case cannot be resolved through Tier 1 Support.
- "Unit-Priced Item(s)" means separately orderable Products or maintenance that is available subject to a per-unit license fee, subscription fee, or maintenance fee.

ARTICLE 2—GRANT OF LICENSE

2.1 Grant of License. During the term of this EA, Customer's use of the EA Products is subject to the Master Agreement and any additional terms set forth in this EA. Unit-Priced Items, if acquired, and Rolled-In Software will be licensed in accordance with the Master Agreement.

2.2 Beta License. Beta licenses are not available under this EA as EA Products.
ARTICLE 3—SCOPE OF USE

3.1 Additional Permitted Uses. For the term of the EA, TRA may copy and Deploy the EA Products to Customers up to the quantities of licenses granted in Appendix A. No other Customer has a right to copy (except as permitted in the Master Agreement) or Deploy the EA Products. TRA may transfer, redistribute, or Deploy the EA Products within the continental United States; Hawaii; Alaska; and US territories, excluding Puerto Rico and the US Virgin Islands.

3.2 Uses Not Permitted
a. Customer shall not use the EA Products outside the United States or its territories or possessions without the prior written permission of Esri and agreement on additional fees, if any. Any such export will be subject to US Export Control Regulation requirements of the Master Agreement.
b. Customer shall not transfer, redistribute, or assign EA Products to any third party without the prior written permission of Esri.

3.3 Consultant Access. Customer's consultants or contractors may use EA Products in accordance with the Master Agreement. Customer may not permit its consultants or contractors to install EA Products on consultant, contractor, or third-party computers or remove EA Products from Customer locations except for the purposes of hosting the EA Products on contractor servers for the benefit of Customer.

ARTICLE 4—MAINTENANCE

4.1 EA Maintenance. EA Maintenance is included in the EA Fee. Rolled-In Software and EA Products will receive EA Maintenance, provided that standard maintenance is available for each item. EA Maintenance includes benefits specified in the most current applicable Esri Maintenance and Support Program document (found at https://www.esri.com/en-us/legal/terms/maintenance) as modified by this Section 4.1.

a. Tier 1 Support Provided by TRA
(1) The Tier 1 Help Desk will provide Tier 1 Support to all Customers.
(2) The Tier 1 Help Desk will use analysts fully trained in the Products they are supporting.
(3) At a minimum, Tier 1 Support will include those activities that assist the user in resolving how-to and operational questions as well as questions on installation and troubleshooting procedures.
(4) Tier 1 Support analysts shall obtain a full description of each reported Case and the system configuration from Customer. This may include obtaining any customizations, code samples, or data involved in the Case. The analyst may also use any other information and databases that may be developed to satisfactorily resolve Case(s).
(5) If the Tier 1 Help Desk cannot resolve a Case, an authorized Tier 1 Help Desk individual may contact Esri for Tier 2 Support. The Tier 1 Help Desk shall provide support in such a way as to minimize repeat calls and make solutions available to Customer.
(6) TRA may assign named Tier 1 Help Desk individuals up to the quantity listed in Appendix B. These individuals will be identified through the My Esri portal and will be the only individuals (callers) authorized to contact Esri directly for Tier 2 Support.

b. Tier 2 Support Provided by Esri
(1) Esri shall log the calls received from Tier 1 Help Desk individuals.
(2) Esri shall review all information collected by and received from Tier 1 Help Desk individuals including preliminary documented troubleshooting provided by the Tier 1 Help Desk when Tier 2 Support is required.
(3) Esri may request that Tier 1 Help Desk individuals provide verification of information, additional information, or answers to additional questions to supplement any preliminary information gathering or troubleshooting performed by Tier 1 Help Desk.
(4) Esri shall attempt to resolve Case(s) submitted by Tier 1 Help Desk by assisting the Tier 1 Help Desk individuals and not Customer.
(5) When a Case is resolved, Esri shall communicate the information to the Tier 1 Help Desk individuals, and the Tier 1 Help Desk shall disseminate the resolution to Customer.

(6) Esri may, at its sole discretion, make patches, hot fixes, or updates available for downloading from Esri's website or, if requested, deliver them on media.

4.2 Maintenance for Unit-Priced Items. Annual maintenance fees for Unit-Priced Items are not included in the EA Fee, and if ordered, additional fees will apply.

ARTICLE 5—ORDERING, ADMINISTRATIVE PROCEDURES, DELIVERY, AND DEPLOYMENT REPORT

5.1 Purchase Orders, Invoicing, Delivery, and Deployment

a. Esri does not require TRA to issue purchase orders and will invoice TRA for the initial payment upon the Effective Date of the EA. Subsequently, Esri may submit invoices up to thirty (30) days before (i) the payment date shown in Appendix B or, (ii) if no payment dates are shown, the anniversary dates of the EA. TRA may submit purchase orders in accordance with its own process requirements. If TRA issues purchase orders, then TRA will submit its initial purchase order upon execution of this EA and any subsequent purchase order at least thirty (30) days before the anniversary date. Invoices will be due and payable within thirty (30) days of invoice.

b. Any purchase orders that TRA issues will reference, incorporate, and be subject to the terms and conditions of this EA. Additional or conflicting terms in any purchase orders, invoices, or other documents exchanged during the ordering process, other than the terms of this EA, Product or Service descriptions, quantities, pricing, and delivery instructions, are void and of no effect. TRA will process all orders and deliveries pertaining to this EA through TRA's centralized point of contact.

c. TRA will include the following information in each purchase order:

(1) Esri customer number, the ship-to address, and bill-to address as identified in Appendix C.
(2) Purchase order number.
(3) Applicable annual payment due and name of Customer. For Unit-Priced Items, the name of the product and quantity.
(4) On the face of the purchase order, the following printed statement: "Governed by and subject to Enterprise Agreement No. 00284090.0."

d. Esri will provide Authorization Codes to activate the nondestructive copy protection program that enables TRA to download, operate, or allow access to the EA Products listed in Appendix A.

e. Delivery of updates/new versions of EA Products will be made in the same manner. If requested by TRA, Esri will deliver a limited number of sets of backup media as provided in Appendix B to the ship-to address identified in Appendix C—EA Points of Contact, FOB destination with shipping charges prepaid. TRA may purchase additional backup media sets at the prices in effect at the time of purchase. Delivery or receipt of tangible media could cause prior and future license fees to be subject to taxes. Esri may invoice for and TRA agrees to pay any such sales or use tax associated with receipt of tangible media.

f. TRA shall track the Deployment status of EA Products.

g. Esri reserves the right to suspend Customer's access to and use of EA Products if Customer fails to pay any undisputed amount owed on or before its due date. Esri may charge Customer interest at a monthly rate equal to the lesser of one percent (1.0%) per month or the maximum rate permitted by applicable law on any overdue fees plus all expenses of collection for any overdue balance that remains unpaid ten (10) days after Esri has notified Customer of the overdue balance.

5.2 Annual Report of Deployments. At each anniversary date and ninety (90) days prior to the expiration date of this EA, TRA shall provide Esri a written report, in the form provided by Esri, detailing all Deployments made, including preexisting and Rolled-In Software (each a "Deployment Report"). The report will be subject to audit by an authorized representative of Esri.

5.3 Esri User Conference Registration. Esri shall provide Esri User Conference registrations to TRA annually during the term of this EA in the quantities set forth in Appendix B. TRA is responsible for distributing the registrations to Customers. Third parties may not represent or attend on behalf of Customer at any Esri User Conference.
ARTICLE 6—POINTS OF CONTACT; NOTICES

6.1 Points of Contact. In Appendix C, each party shall identify points of contact for administrative and technical issues.

6.2 Legal Notices. Except as otherwise set forth in this EA, any notice, report, demand, or other communication will be made in writing in English; sent by courier, registered or certified airmail, or facsimile or other electronic transmission; and confirmed when sent by courier or by registered or certified airmail, properly addressed to the appropriate party at the address set forth below, until changed by notice in writing by either party hereto. If sent by courier or airmail, notice will be effective upon the earlier of confirmed receipt or seven (7) days from the date of deposit with the courier service or post office. If sent by electronic transmission, notice will be effective one (1) business day from the date of transmission, provided confirmation of receipt is made. Notices will be given at the following addresses:

To: Esri
380 New York Street
Redlands, CA 92373-8100
Attn.: Manager, Contracts and Legal
Fax: 909-307-3020
Email: legalnotices@esri.com

To: TRA
as listed in Appendix C

ARTICLE 7—TERM, TERMINATION, AND EXPIRATION

7.1 Term. The term of the EA will commence on the Effective Date and be for the period listed in Appendix B unless this EA is terminated earlier as provided herein.

7.2 Termination for a Material Breach; Convenience. Esri may terminate this EA for a material breach by Customer. Customer will be given a period of thirty (30) days from date of written notice to cure any material breach. Upon termination of this EA by Esri for a material breach by Customer, all licenses Deployed will also terminate, and the full amount of unpaid EA Fees will be due and payable by TRA within thirty (30) days from the date of termination. Customers shall uninstall, remove, and destroy all EA Products; training materials; and any whole or partial copies, modifications, or merged portions in any form. TRA shall deliver evidence of such destruction to Esri (e.g., certification letter). Customer may continue to use Rolled-In Software, provided Customer complies with the terms and conditions of the Master Agreement. Further, Esri agrees that Customer is not required to pay a maintenance reinstatement fee for lapsed maintenance for Rolled-In Software if Customer orders maintenance at time of EA termination. Other items that may be included in this EA—such as EEAP, access codes, and Esri User Conference registrations—will also terminate if this EA is terminated. This EA may not be terminated for convenience.

7.3 License Term and Use upon Expiration of EA Term. Upon full payment of EA Fee and expiration of this EA, the Master Agreement will survive, and Customer may continue to use the Deployed EA Products included in the final Deployment Report and Rolled-In Software in accordance with the terms and conditions set forth in the Master Agreement. Customer shall notify Esri of the quantity and type of licenses for which Customer elects to purchase standard maintenance. If maintenance is not ordered for Rolled-In Software or EA Products upon expiration of the EA, it lapses. If, at a later date, Customer decides to reinstate maintenance, Customer must pay maintenance reinstatement fees from the date of EA expiration (i.e., back maintenance fees). Customer may only purchase standard maintenance or reinstate maintenance on licenses that were included in the final Deployment Report. TRA shall not Deploy additional copies of the EA Products beyond the quantities in use upon termination or as of the date of expiration.

ARTICLE 8—CONFIDENTIALITY

8.1 Esri Confidential Information. Certain terms and conditions of this EA are confidential and proprietary information of Esri. Except as provided herein or required by law, TRA shall not publish or disclose the EA (or contents) to any third party without Esri's prior written consent. Disclosure may be made only to those TRA employees, contractors, or consultants of Customer (e.g., outside counsel or accountants) who have a need to
know to perform their duties or work on behalf of Customer, and have an obligation of confidentiality. No other portions of the EA may be disclosed to a contractor or consultant. To the extent that any such disclosures may be required by law (such as an open/public records request), TRA shall inform Esri of the requested disclosure, with a reasonable description of the requested disclosure and identification of the requester, in sufficient time for Esri to assert any objection Esri may have to such disclosure with the appropriate administrative or judicial body.

8.2 Disclosure of Fees for Unit-Priced Item(s). If Unit-Priced Items are included in this EA, Esri gives permission to TRA to maintain Unit-Priced Item prices, fees, and discounts on TRA's intranet, subject to password protection accessible to Customer, to support potential procurements. TRA shall use no less than the same degree of care to protect this information as it uses to protect its own confidential information or third-party information of similar nature. TRA must include the following notice on information concerning this EA and its pricing posted on or accessible through TRA intranet that is accessible by Customer and its employees, or on any other web pages that make reference to this EA, including order forms:

PRICING INFORMATION, INCLUDING APPLICABLE DISCOUNT RATES, CONTAINED HEREIN IS CONSIDERED CONFIDENTIAL AND PROPRIETARY. EXCEPT TO SUPPORT AUTHORIZED LICENSE ACQUISITIONS, RECIPIENT WILL NOT COPY, DISCLOSE TO ANY THIRD PARTY, OR USE ANY PRICING INFORMATION FOR ANY OTHER PURPOSE OR PROGRAM.

ARTICLE 9—RELATIONSHIP OF THE PARTIES

The EA does not constitute a partnership, joint venture, or agency between Esri and TRA. Neither Esri nor TRA will hold itself out as such, nor shall Esri or TRA be bound or become liable because of any representation, action, or omission of the other.

ARTICLE 10—FORCE MAJEURE

If the performance of any obligation under this EA is prevented, restricted, or interfered with by reason of fire, flood, earthquake, explosion, or other casualty or accident; strikes or labor disputes; inability to procure or obtain delivery of parts, supplies, or power; war; threat of or actual terrorist act, cyber attack, or other violence; any law, order, proclamation, regulation, ordinance, demand, or requirement of any government agency; or any act or condition whatsoever beyond the reasonable control of the affected party, the party so affected, upon giving prompt notice to the other party, will be provided a temporary extension for a period of time as may be reasonably necessary to allow for such delay, prevention, interference, or restriction.

ARTICLE 11—NON-EXCLUSIVITY

This EA will not be construed or interpreted as an exclusive dealings agreement, and Customer reserves the right to purchase from third parties any of their requirements for GIS software or related services.

ARTICLE 12—ADMINISTRATIVE REQUIREMENTS

12.1 Esri Partner Original Equipment Manufacturer (OEM) Bundled or Embedded Items/Services. Certain Esri partners are authorized to either embed limited portions of Esri technology or bundle Esri products or services with the partner's application or service under Esri's OEM or Solution OEM programs. Partner pricing and product bundling is independent of this EA, and each partner markets under its own business model and pricing. Customer shall not be entitled to or seek any discount from the OEM partner or Esri, directly or indirectly, as a result of or based on the availability of such Products as EA Products under this EA. Customer shall not be entitled to or seek to decouple Esri's technology or products/services from the partner's bundle or solution. In addition, such Products or any component thereof included in the OEM software program or product, will be licensed through the Master Agreement provided by the OEM partner and not through this EA.

12.2 EA Products—Limited Quantity or Unit-Priced Items. Esri reserves the right to exclude new Products from uncapped Deployment. New Products may contain or be developed with (i) newly acquired technology obtained through a significant investment or (ii) third-party intellectual property that requires a unit-based royalty
fee or prohibits Deployment under a site or enterprise license. Such items can be made available to TRA on a limited-quantity basis or as unit-priced items.

12.3 Obsolescence. During the term of this EA, some of the items listed in Appendix A may become obsolete, will no longer be commercially offered, or may no longer be available for Deployment. Customer may continue to use EA Products that have been Deployed, but support and upgrades for older items may not be available. EA Maintenance and maintenance and availability of EA Products identified in Appendix A will be subject to each item's Product Life Cycle Support Status and Esri's Product Life Cycle Support Policy, which can be found at https://support.esri.com/en/other-resources/product-life-cycle by selecting the product type and clicking the Product Life Cycle link for specific product plans.

ARTICLE 13—GENERAL PROVISIONS

13.1 If there is a conflict among any of the terms and conditions in the various documents, the order of descending precedence will be as follows: (1) Signature Page, (2) Enterprise License Terms and Conditions, (3) Master Agreement. For the avoidance of doubt, Article 7—Term, Termination, and Expiration of this EA supersedes any termination language in the Master Agreement with respect to all Products and Services provided under this EA. If Customer subscribes to the Esri Enterprise Advantage Program (EEAP), the EEAP terms and conditions take precedence over the provisions of this EA with respect to products or services provided under EEAP. Except as otherwise expressly provided herein, any amendment or Addendum to this EA must be in writing and signed by an authorized representative of each party.

13.2 Survival of Certain EA Clauses. The provisions of Sections 2.3 and 7.4 and Article 8 of this Enterprise License Terms and Conditions document will survive the expiration or termination of this EA.
APPENDIX A
PRODUCTS AND DEPLOYMENT SCHEDULE

TRA may Deploy the EA Products up to the total quantity of licenses indicated below to Customer during the term of this EA.

Table A-1
EA Products—Uncapped Quantities

<table>
<thead>
<tr>
<th>Product</th>
<th>Total Qty. to Be Deployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArcGIS Desktop: ArcGIS Desktop Advanced, Standard, and Basic (Single &amp; Concurrent Use)</td>
<td>Uncapped</td>
</tr>
<tr>
<td>ArcGIS Enterprise: ArcGIS Enterprise and Workgroup (Advanced and Standard)</td>
<td>Uncapped</td>
</tr>
<tr>
<td>ArcGIS GIS Server; Advanced, Standard, Basic</td>
<td>Uncapped</td>
</tr>
<tr>
<td>ArcGIS Enterprise Additional Capability Servers: ArcGIS Image Server, ArcGIS GeoEvent Server</td>
<td>Uncapped</td>
</tr>
<tr>
<td>ArcGIS Monitor</td>
<td>Uncapped</td>
</tr>
<tr>
<td>Mapping and Charting Solutions: Esri Production Mapping for Desktop</td>
<td>Uncapped</td>
</tr>
</tbody>
</table>
Table A-2
EA Products—Capped Quantities

<table>
<thead>
<tr>
<th>Item</th>
<th>Rolled-In Qty. (if applicable)</th>
<th>Qty. to Be Deployed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Interoperability Desktop Extension Concurrent Use License</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Insights for ArcGIS Online Term License</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Navigator for ArcGIS Online Term License</td>
<td>-</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Drone2Map for ArcGIS Online Term License</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>ArcGIS Utility Network Management License</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>ArcGIS Utility Network Management Staging License</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product</th>
<th>Number of Subscriptions</th>
<th>User Types per Subscription</th>
<th>Annual Credits per Subscription</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArcGIS Online Subscription (Organizational)</td>
<td>1</td>
<td>100 – Viewer 100 – Creator</td>
<td>50,000</td>
</tr>
</tbody>
</table>
The EA Fee is $315,000. The EA Fee is in consideration of the EA Products, EA Maintenance, and Esri User Conference registrations.

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>EA Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payments</td>
<td>$100,000</td>
<td>$105,000</td>
<td>$110,000</td>
<td>$315,000</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Esri User Conference Registrations per Year</td>
<td>7</td>
</tr>
<tr>
<td>Number of Tier 1 Help Desk Callers That May Contact Esri for Tier 2 Support</td>
<td>5</td>
</tr>
<tr>
<td>Number of Sets of Backup Media, if Requested</td>
<td>1</td>
</tr>
<tr>
<td>Term of EA</td>
<td>Three (3) Years from Effective Date</td>
</tr>
</tbody>
</table>
APPENDIX C
EA POINTS OF CONTACT

Either party may change its point of contact by written notice to the other party.

1. Esri point of contact for order processing issues:

   Name: Customer Service
   Esri
   380 New York Street
   Redlands, CA 92373-8100
   Email: service@esri.com
   Phone: 888-377-4575
   Fax: 909-307-3083

2. Esri contact for Tier 2 Support issues:

   MyEsri: https://my.esri.com
   Phone: 909-793-3774 (within the United States only)
   Fax: 909-792-0960
   Web: https://support.esri.com

3. TRA centralized point of contact for order release and administrative issues:

   Name: ____________________________
   Email: ____________________________
   Phone: ____________________________
   Fax: ____________________________

4. All invoices to TRA will be mailed to the address listed below (unless otherwise stated on the purchase order):

   TRA Office: ____________________
   Name: __________________________
   Address: __________________________

5. All deliverables to TRA will be shipped to the address listed below:

   TRA Office: ____________________
   Name: __________________________
   Address: __________________________

6. All notices to TRA will be mailed to the address listed below:

   TRA Office: ____________________
   Name: __________________________
   Address: __________________________
BACKGROUND: In 2005, the Authority’s Construction Management Services (CMS) began electronically transmitting all submittals and correspondence on new projects using Projectmates, an on-line construction management software, created by Systemates, Inc. (Systemates). Using Projectmates, CMS (now Planning, Design and Construction Administration or “PDCA”) has been able to receive and track information more readily from contractors and the engineers, enabling viewing and storage of project documentation in an organized, easily-retrievable format. Using a web browser, the Authority, outside engineers and contractors can share construction schedules, drawings, specifications, shop drawing submittals, pay applications and many other project-related documents. The result is better communication and time savings for PDCA in performing construction contract administration and inspection of the Authority’s facilities. In August 2017, the Board approved extending the software license for an additional three years. Earlier this year, management of this procurement was delegated to the Chief Information Officer as a high-tech procurement of information technology services.

STAFF ANALYSIS: Systemates has submitted a quote that extends Projectmates services for three years; increases storage space to 1500 GB for the Authority’s increasing volume of projects; expands desk and mobile access for 500 users, and provides access to the capital planning module and requisite services to conduct initial setup for a proof of concept. Details of the proposal received from Systemates in the amount of $589,318 are shown in the attached Consulting Services Agreement (Exhibit A). The costs of Projectmates is provided by project-specific construction funds. Systemates is a Women-Owned Business Enterprise.
RECOMMENDATION: Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors authorize the General Manager to execute the Consulting Services Agreement between the Trinity River Authority of Texas and Systemates, Inc., in the amount of $589,318 for Projectmates Construction Management Software Services.

Respectfully submitted,

DOUGLAS L. SHORT
Chief Information Officer

DLS/trd

Exhibit A – Consulting Services Agreement
EXHIBIT A

CONSULTING SERVICES AGREEMENT
FOR THE TRINITY RIVER AUTHORITY OF TEXAS

STATE OF TEXAS §
COUNTY OF TARRANT §

This Agreement is made and entered into as of the 23rd day of August, 2020, by and between the TRINITY RIVER AUTHORITY OF TEXAS, with its principal office at 5300 South Collins Street, Arlington, Tarrant County, Texas 76018 (“Authority”) and the firm of SYSTEMATES, INC., with its principal office at 2435 North Central Expressway, Suite 640, Richardson, Dallas County, Texas 75080 (“Consultant”).

WITNESSETH:

WHEREAS, the Authority uses Projectmates Construction Management Software to manage the flow of documents and to facilitate communications during construction projects, and to allow management to track construction progress; and

WHEREAS, the Authority requires technical support and hosting services to make full use of Projectmates Construction Management Software for projects serving the Central Regional Wastewater System, Tarrant County Water Supply Project, Ten Mile Creek Regional Wastewater System, Denton Creek Regional Wastewater System, Mountain Creek Regional Wastewater System, Red Oak Creek Regional Wastewater System, and other Authority facilities; and

WHEREAS, Consultant provides such technical support and hosting services to the Authority at this time, and has done so satisfactorily since 2005; and

WHEREAS, in response to the negotiations to purchase Projectmates Construction Management Software services, Consultant has submitted to Authority, a formal proposal to continue its services for three additional years; and

WHEREAS, the Authority has examined the proposal submitted by Consultant, and has determined the proposal to be in accordance with the needs of the Authority and to be an appropriate value for the delivery of such services; and

WHEREAS, the Consultant represents that it is qualified and capable of performing the consulting and other services proposed herein, is acceptable to the Authority, and is willing to enter into an Agreement with the Authority to perform such services.

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein, Authority and Consultant agree as follows:
ARTICLE I

RETAINER

The Authority agrees to retain the Consultant and the Consultant agrees to perform services as specified herein. The Authority agrees to pay and the Consultant agrees to accept fees as specified hereinafter as full and final compensation for the services authorized and accomplished.

It is understood and agreed that no services of any nature shall be undertaken under this Agreement by the Consultant until Consultant is instructed in writing by the Authority to commence with the work.

ARTICLE II

QUALITY

Consultant shall be responsible for the quality, technical accuracy, timely completion, and coordination of all services furnished by the Consultant under this Agreement. Approval by the Authority of Project Documents, services, and incidental consulting services shall not in any way relieve the Consultant of responsibility for the technical accuracy of the consulting services performed. The Authority’s review, approval or acceptance of, or payment for any of the services described herein shall not be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.

ARTICLE III

SERVICES TO BE PERFORMED HEREUNDER

Consultant agrees to perform the SERVICES detailed in this Agreement for the time periods stated herein. The Consultant shall perform services as follows:

1. Provide Projectmates services for a period of three years.

2. Provide the Authority increased storage space to 1500GB for the Authority’s increasing volume of projects and monthly archiving services.

3. Provide the Authority with desk and mobile access for 500 users.

4. Provide the Authority with one additional site administrator license.

5. Provide the Authority with access to the capital planning module and requisite services to conduct initial setup for a proof of concept.

6. Provide any other services otherwise excluded in this Agreement but customarily furnished in accordance with generally accepted consulting practices.
ARTICLE IV
SERVICES BY THE AUTHORITY

The Authority and its representatives will render services inclusive of the following:

(1) Provide available criteria and full information as to the Authority’s requirements for the project;

(2) Assist the Consultant by placing at his disposal all available written data pertinent to the project;

(3) Examine documents submitted by the Consultant and render a decision pertaining thereto promptly, to avoid unreasonable delay in the progress of the Consultant’s services;

(4) Furnish information required as expeditiously as possible for the orderly progress of the work;

(5) The General Manager of the Authority or his designated representative shall appoint, in writing, a representative that the Consultant shall be entitled to rely upon regarding decisions made by the Authority. All subsequent communication to the Authority shall be deemed made when conveyed in writing to the representative at the location specified in ARTICLE XIII, NOTICES; and

(6) The services, information, and reports required by this ARTICLE, inclusive, shall be furnished at the Authority’s expense, and the Authority will apprise the Consultant of any known inaccuracies or inconsistencies in the information provided.

ARTICLE V
COMPENSATION

A. CONSULTING SERVICES

For and in consideration of the services (ARTICLE III) to be rendered by the Consultant, the Authority shall pay, and the Consultant shall receive compensation not to exceed $589,318. All remittance by the Authority for such compensation shall either be mailed or delivered to the Consultant’s office as identified in ARTICLE XIII, NOTICES.

B. METHOD OF BILLING

For services performed by Consultant for Authority under the terms of this Agreement, Consultant shall submit statements monthly for the preceding months services, such statements reflecting 1/12 of the annual cost provided for herein.
C. TIME OF PAYMENT OF COMPENSATION

The Consultant shall submit a request for payments for services on a monthly basis, as evidenced by monthly statements submitted by the Consultant to the Authority. Payment for services shall be due upon receipt of each monthly statement by the Authority.

Should the Authority fail to make payment to the Consultant, the sum named in any partial or final statement, and when payment is past due for more than thirty days, then the Authority shall pay to the Consultant, in addition to the sum shown as due by such statement, interest thereon at the rate of five percent per annum from the date due, as provided herein until fully paid, which shall fully compensate Consultant for any injury arising from such delay in payment.

However, in the event that the sum shown as due to the Consultant by such statement shall be disputed, questioned, or objected to by the Authority, then said rate of five percent per annum from the date due shall only apply to that portion or amount of payment which is finally and mutually agreed upon by Authority and Consultant to be rightfully due and owing to the Consultant.

ARTICLE VI
AUDIT OF RECORDS

All records of the Consultant of a financial or timekeeping basis which have been used to determine the fees earned by the Consultant and billed to Authority shall be open to inspection and subject to audit and/or reproduction by Authority’s agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of cost of the services at the conclusion of the scope of all services to be performed under this Agreement. The Authority or its designee shall be afforded access to all of the Consultant’s records pursuant to the provisions of this ARTICLE at the conclusion of the term of the Agreement and for a period of three years after final payment.

ARTICLE VII
LIABILITY AND INSURANCE MATTERS

During the term of this Agreement, Consultant shall, to the fullest extent permitted by law, maintain, and shall require its subcontractors to maintain:

(1) Public liability, commercial general liability and umbrella policies (all including blanket contractual liability coverage for all liabilities assumed in this Agreement, including all indemnification obligations set forth in ARTICLE XII) and automobile insurance for bodily injury, and property damage, and workers' compensation coverage on all of Consultant’s or its subcontractors’ employees working on the project;

(2) All insurance policies referenced in paragraph (1) above, except workers’ compensation coverage, shall, to the fullest extent permitted by law, name and cover the Authority as an additional insured, by policy declaration, with coverage being primary, and all said insurance policies shall include a waiver of subrogation, and shall be in amounts and with carriers satisfactory to Authority;
(3) Consultant shall furnish to the Authority certificates (and upon request endorsements and policies) reflecting that the above-required insurance coverages are in full force and effect prior to Consultant’s execution of this Agreement and also thereafter within seven days of the Authority’s request. Policies shall not be subject to endorsements, exclusions, limitations, conditions or restrictions inconsistent with the insurance requirements to be fulfilled by the Consultant, and all policies shall be written through companies duly approved to transact that class of insurance in the State of Texas. The Authority prior to the effective date of this Agreement must approve all said insurance in writing. Said certificates of insurance shall be attached hereto as “Attachment A” and shall be incorporated herein for all purposes; and

(4) Approval, disapproval, or failure to act by Authority regarding any insurance required by this Agreement shall not relieve Consultant of full responsibility or liability, if any, for liabilities and damages as set forth in the Agreement. Neither shall the insolvency or denial of liability by any insurance company relieve the Consultant of liability.

ARTICLE VIII

ASSIGNMENT

Neither this Agreement, nor any right privilege or cause of action arising hereunder may be assigned by Consultant, or any of Consultant’s subcontractors, in whole or in part for any purpose and whether in settlement of litigation or not, and any purported assignment shall be void and unenforceable without the written consent of the Authority. The Authority and the Consultant each binds itself and its successors and assigns to the other party with respect to all covenants of this Agreement.

ARTICLE IX

TERMINATION

In connection with all the SERVICES outlined or contemplated above, it is agreed that the Authority or the Consultant may cancel or terminate this Agreement upon thirty days written notice to the other, with the provision and understanding that immediately upon receipt of notice of such cancellation from either party to the other, all work and labor being performed under this Agreement shall immediately cease, pending final cancellation at the end of such thirty day period, and further provided that the Consultant shall be compensated in accordance with the terms of this Agreement for all work accomplished prior to the receipt of notice of such termination. All rights, duties, liabilities, and obligations accrued prior to such termination shall survive termination. Consultant shall be liable for any damages suffered by the Authority as a result of Consultant’s termination of this Agreement.

ARTICLE X

PROJECT DOCUMENTS

All project documents are and shall become the property of the Authority, which it may use without restraint. The Consultant is not responsible and is hereby released from
responsibility for the Authority’s use of the documents for any purpose other than for this project. The Consultant may retain a set of reproducible record copies of drawings and other documents; however, Consultant shall not provide to, or use this work product on behalf of, any person or entity without the express written consent of the Authority.

ARTICLE XI

LAWS AND ORDINANCES

Consultant shall at all times observe and comply with all federal, state, and local laws, ordinances, rules, regulations, and orders of any public authority, which in any manner affect this Agreement or the services. Consultant agrees, moreover, not to discriminate against any employee or applicant for employment because of race, religion, color, sex, age, disability, or national origin. Consultant agrees to comply with the Immigration Reform and Control Act of 1986 and the Americans with Disabilities Act of 1990. The Consultant agrees that the indemnification provisions of ARTICLE XII INDEMNIFICATION below encompass any failure by the Consultant to comply with this ARTICLE.

ARTICLE XII

INDEMNIFICATION

To the fullest extent permitted by law, CONSULTANT DOES HEREBY COVENANT AND CONTRACT TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS THE AUTHORITY ALL OF ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, from and against any and all liability, claims, suits, demands, causes of action, damages, expenses and costs, including all expenses of litigation, and/or settlement of any character, type or description (including expert/consultant fees and attorneys’ fees, and expenses of alternative dispute resolution) arising out of or in connection with and to the extent attributable to the intentional acts or omissions of Consultant or its agents, subcontractors, consultants or employees in the execution or performance of this Agreement, provided that the claims, suits, losses, damages, causes of action, expenses, fees or liability of whatever nature arise in whole or in part from the negligence or other act or omission of Consultant or any of its officers, officials, agents, subcontractors, consultants, employees or invitees. Consultant contracts to indemnify and protect Authority from any liability, claims, suits, losses, damages, attorneys’ fees or causes of action due to Consultant’s negligence, joint or concurrent negligence, error or omission to the extent that said liability, claims, suits, losses, damages, attorneys’ fees or causes of action arise out of or in connection with the acts or omissions of Consultant or its agents, subcontractors, consultants, or employees. This obligation shall not be defeated by the contributory, joint or concurrent negligence or fault of the Authority, but shall be limited proportionately to the extent of that negligence or fault, as ultimately adjudged by the finder of fact.

Consultant agrees that the Authority has sole discretion and control over the selection and retention of any attorneys, experts or consultants, in fulfillment of Consultant’s defense and indemnification obligations hereunder.
ARTICLE XIII

NOTICES

All notices and communications under this Agreement to be delivered to the Authority shall be sent to the address of the Authority as follows, unless and until the Consultant is otherwise notified:

Trinity River Authority of Texas  
P.O. Box 60  
Arlington, Texas 76004-0060

Attention: Douglas L. Short  
Chief Information Officer

All notices and communications under this Agreement to be delivered to the Consultant shall be sent to the address of the Consultant as follows, unless and until the Authority is otherwise notified:

Systemates, Inc.  
2435 North Central Expressway, Suite 640  
Richardson, Texas 75080

Attention: Hemant Bhave, AIA  
Vice President

ARTICLE XIV

INDEPENDENT CONSULTANT

The SERVICES performed hereunder by the Consultant shall be subject to Authority’s inspection and approval, but the detailed manner and method of doing said SERVICES shall be under the control of the Consultant. In the performance of services hereunder, Consultant shall be deemed an independent contractor, and any of its employees performing services required hereunder shall be deemed solely employees of Consultant or its subcontractor, and not employees of the Authority.

ARTICLE XV

SUBCONSULTANTS

In fulfilling its duties pursuant to this Agreement, it is anticipated that the Consultant may subcontract to individuals, corporations, organizations, governments or governmental subdivisions or agencies, partnerships, associations, or other legal entities.

The Authority encourages Consultant to provide equal opportunity to historically underutilized business enterprises, and Consultant agrees that qualified historically underutilized business enterprises, including minority-owned and female-owned businesses, and labor-surplus firms located in the project area shall have the maximum practicable opportunity to participate in the performance of Authority contracts and subcontracts.
ARTICLE XVI

PRIOR AGREEMENTS SUPERSEDED

This Agreement constitutes the sole and only Agreement of the parties hereto for the time periods stated in this Agreement and supersedes any prior understanding or oral or written Agreements between the parties regarding the subject matter of this Agreement, and any and all changes, modifications or alterations of this Agreement must be in writing and approved by both Authority and Consultant.

Consultant releases and waives any and all causes of action of whatever nature, or any other legal theory arising out of any prior understanding or oral or written Agreements between the parties, or any subsequent oral understanding or Agreements between the parties, regarding the subject matter of this Agreement, from any and all liability damages of any kind known or unknown, whether in contract or tort.

ARTICLE XVII

LEGAL CONSTRUCTION

In case any one or more of the provisions contained in this Agreement shall be for any reason held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein. The validity of this Agreement and of any of its terms or provisions, as well as the rights and duties hereunder, shall be governed by the laws of the State of Texas. All amounts due under this Agreement, including damages for its breach, shall be paid in Tarrant County, Texas, said Tarrant County, Texas being the place of performance as agreed to by the parties to this Agreement. In the event that any legal proceeding is brought to enforce this Agreement or any provision hereof, the same shall be brought in Tarrant County, Texas.

Nothing in this Agreement is intended to waive any governmental immunity available to Authority under Texas law or waive any defenses of Consultant or Authority under Texas law. This Agreement shall not be construed for the benefit of any third party, nor does it create or grant any right or cause of action in favor of any third party against Authority or Consultant.

ARTICLE XVIII

REPRESENTATIONS

Consultant represents that no officer, employee, or agent of the Authority has sought or received compensation in any way with respect to the consideration or execution of this Agreement, and in no event will Consultant pay a fee to, or in any other manner compensate Authority officers, employees, or agents in connection with the approval or performance of this Agreement. Consultant expressly warrants and represents that no promise or agreement which is not herein expressed has been made to Consultant in executing this Agreement and Consultant is not relying upon any such statement or representation of Authority, its officials, officers, agents or employees in entering into this Agreement. Consultant is relying on its own judgment in entering into this Agreement and has been represented by independent legal counsel in this matter.
A breach of any provision contained in this ARTICLE shall result in automatic termination of this Agreement. Upon such termination, the Authority may use all project documents prepared under this Agreement as provided in ARTICLE IX, TERMINATION, and Consultant shall be liable for all damages to the Authority occasioned by a termination under this ARTICLE.

ARTICLE XIX

TERM OF AGREEMENT AND TIME OF PERFORMANCE

This Agreement shall be effective the 23rd day of August, 2020, and Consultant shall perform all services after receipt of written authorization to proceed as set forth in this Agreement. This Agreement shall continue in full force and effect for three years from date Consultant receives its authorization to proceed. All payments and liabilities accrued prior to termination shall survive the termination.

IN WITNESS WHEREOF, the parties acting under authority of their respective governing bodies have caused this Agreement to be executed in several counterparts, each of which is deemed to be an original, as of the day and date written above.

SYSTEMATES, INC. TRINITY RIVER AUTHORITY OF TEXAS

____________________________  ______________________________
HEMANT BHAVE, AIA           J. KEVIN WARD, General Manager

ATTEST:

____________________________
HOWARD S. SLOBODIN, Secretary
Board of Directors

(SEAL)
PROCUREMENT VERIFICATION

The solicitation and contractor selection process used in the procurement of this Agreement complies with Texas law and Authority policy.

HOWARD S. SLOBODIN
General Counsel

[VERIFICATION TO BE COMPLETED BY ENGINEER ON FOLLOWING PAGE]
VERIFICATION REQUIRED BY TEXAS GOVERNMENT CODE CHAPTER 2270

By signing below, the signatory hereby verifies that the firm it represents:

1. Does not boycott Israel; and,
2. Will not boycott Israel during the term of the contract.

SIGNED BY: 

Print Name & Title: 

Firm Name: 

Date Signed: 

NOTARIZATION

THE STATE OF _________  )
 )
COUNTY OF _________  )

BEFORE ME, the undersigned notary public on this day personally appeared __________________________, on behalf of ________________________________ (Company), who, being duly sworn, stated under oath that he/she has read the foregoing verification required by Texas Government Code Section 2270.002 and said statements contained therein are true and correct.

SWORN TO AND SUBSCRIBED before me on the_______day of _________, 202__.

______________________________
FOR THE STATE OF _____________

The following definitions apply to Texas Government Code Section 2270.001:

(1) "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and

(2) "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

State law requires any firm entering into an agreement or contract with the Authority to complete the foregoing verification. TEX. GOV’T CODE § 2270.002
### Projectmates Project Management System

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<tr>
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<th>2020-21</th>
<th>2021-22</th>
<th>2022-23</th>
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<td>$ 12,130</td>
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<td>- Monthly fee for 500 users, 1500 GB storage</td>
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<tr>
<td>- Current storage upgraded from 1000 GB to 1500 GB</td>
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<tr>
<td>- Includes mobile licenses for all users</td>
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<tr>
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<td>Capital Planning module (for Proof of concept)</td>
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<tr>
<td>Consultation/Programming</td>
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<tr>
<td>60 hrs for Capital Planning/cost tracking configuration</td>
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<td>$ 2,850</td>
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<td>Allowance for Consulting/Customization</td>
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<td>Monthly Archiving Service</td>
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<td>Monthly archives of all projects</td>
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<td>Contract Total</td>
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DATE:      June 1, 2020

FILE:     0806.004

TO:       BOARD OF DIRECTORS
VIA:      (2) J. KEVIN WARD, General Manager
          (1) ALISON A. MACKEY, CPA, Chief Financial Officer

RE:       Summary Report of Trinity River Authority Debt
          Summary Report of June 2020 Capital Contracts

BACKGROUND: For the reference of the Board of Directors, a Summary Report of the
Authority’s Debt as of June 1, 2020 and a Summary Report of June 2020 Capital Contracts
included within the current agenda is attached as Exhibit A and Exhibit B.

RECOMMENDATION: This item is presented as a status report only; no action is necessary.

Respectfully submitted,

CHRISTINE J. EPPS, CPA
Controller

CJE/dlg

Exhibit A - Summary Report of Trinity River Authority Debt
Exhibit B - Summary Report of June 2020 Capital Contracts
# EXHIBIT A

## SUMMARY REPORT OF TRINITY RIVER AUTHORITY DEBT

**COMBINED DEBT**

**AS OF JUNE 1, 2020**

### GOVERNMENTAL DEBT

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Principal</th>
<th>Interest</th>
<th>Total</th>
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</thead>
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<td>2022</td>
<td>$205,000</td>
<td>$76,493</td>
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<tr>
<td>2023</td>
<td>$215,000</td>
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<td>2024</td>
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<td>2025</td>
<td>$235,000</td>
<td>$46,500</td>
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<td>2026</td>
<td>$245,000</td>
<td>$35,573</td>
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<td>2028</td>
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<td>2051-2053</td>
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**TOTAL**

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<th>Interest</th>
<th>Total</th>
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**2020 - Payoff percentage**

| Payoff Percentage | 24.43% | 6.89% | 3.06% | 6.89% |

**CRWS Extendable Commercial Paper Bond Program:** $0 issued during fiscal year 2020. Currently, $0 outstanding out of $350,000,000 authorized amount.

*Amount does not include the liability of $73,018,516 due to the City of Houston for TRA’s cost share of the facility at Livingston-Wallisville.*
### GOVERNMENTAL DEBT
#### AS OF JUNE 1, 2020

<table>
<thead>
<tr>
<th>FISCAL YEAR</th>
<th>GENERAL IMPROVEMENT REVENUE BONDS</th>
<th>NOTES PAYABLE</th>
<th>TOTAL GOVERNMENTAL DEBT</th>
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<tr>
<td></td>
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<td>Interest</td>
<td>TOTAL</td>
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<tr>
<td>2022</td>
<td>$205,000</td>
<td>$76,493</td>
<td>$281,493</td>
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<tr>
<td>2023</td>
<td>$215,000</td>
<td>$66,960</td>
<td>$281,960</td>
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<tr>
<td>2024</td>
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<td>$235,000</td>
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<td>$245,000</td>
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<td>$255,000</td>
<td>$24,180</td>
<td>$279,180</td>
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2020 - Payoff percentage

11.06% 100.00% 24.43%

(continued - 2)
## REVENUE BONDS

**AS OF JUNE 1, 2020**

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<thead>
<tr>
<th>FISCAL YEAR</th>
<th>CENTRAL REGIONAL WASTEWATER SYSTEM</th>
<th>TARRANT COUNTY WATER SUPPLY PROJECT</th>
<th>TEN MILE CREEK REGIONAL WASTEWATER SYSTEM</th>
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2020 - Payoff percentage

6.54%  8.70%  7.32%

(continued - 3)
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<th>Fiscal Year</th>
<th>Denton Creek Regional Wastewater System</th>
<th>Red Oak Creek Regional Wastewater System</th>
<th>Mountain Creek Regional Wastewater System</th>
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<td>$73,950,013</td>
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2020 - Payoff percentage: 6.26%  

TOTAL: $134,930,000  
$43,371,893  
$178,301,893

* $1,123,891 net reduction in debt due to issuance of S2020 Refunding Bonds.

* $95,653 net reduction in debt due to issuance of S2020 Refunding Bonds and $48,639,310 increase in debt due to issuance of S2020 Revenue Bonds.

(continued - 4)
### REVENUE BONDS
### AS OF JUNE 1, 2020

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<tr>
<th>FISCAL YEAR</th>
<th>HUNTSVILLE REGIONAL WATER SUPPLY SYSTEM</th>
<th>LIVINGSTON REGIONAL WATER SUPPLY SYSTEM</th>
<th>TRINITY COUNTY REGIONAL WATER SUPPLY SYSTEM</th>
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<tbody>
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2020 - Payoff percentage

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(continued - 5)
## REVENUE BONDS
### AS OF JUNE 1, 2020

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<th>FISCAL YEAR</th>
<th>WALKER-CALLOWAY BRANCHES</th>
<th>NORTHEAST LAKEVIEW WASTEWATER</th>
<th>DENTON CREEK WASTEWATER INTERCEPTOR SYSTEM - GRAHAM BRANCH</th>
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<tr>
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<td>TOTAL</td>
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2020 - Payoff percentage

5.27% 12.30% 8.88%

(continued - 6)
### REVENUE BONDS
#### AS OF JUNE 1, 2020

<table>
<thead>
<tr>
<th>FISCAL YEAR</th>
<th>Principal</th>
<th>Interest</th>
<th>TOTAL</th>
<th>Principal</th>
<th>Interest</th>
<th>TOTAL</th>
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<td>$ 22,800</td>
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2020 - Payoff percentage 33.09% 6.89%

(continued - 7)
**CONTRACTS PAYABLE**  
**AS OF JUNE 1, 2020**

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<th>YEAR</th>
<th>BARDWELL</th>
<th>LIVINGSTON-WALLISVILLE</th>
<th>JOE POOL LAKE</th>
<th>TOTAL CONTRACTS PAYABLE</th>
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**TOTAL** $555,662 $192,316 $747,978  
$8,363,974 $5,342,321 $13,706,295  
$129,263 $81,697 $210,960  
$9,048,899 $5,616,334 $14,665,233

2020 - Payoff percentage 4.55% 2.94% 5.88% 3.06%

* Amount does not include the liability of $73,018,516 due to the City of Houston for TRA's cost share of the facility at Livingston-Wallisville.
<table>
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<th>PROJECT NAME</th>
<th>PROJECT TYPE</th>
<th>LOCATION</th>
<th>BOND SERIES</th>
<th>TYPE</th>
<th>AMOUNT</th>
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<tr>
<td>Bear Creek Interceptor Relief, Phase 1</td>
<td>Final Design</td>
<td>CRWS</td>
<td>Extendable Commercial Paper/2018/2019 Bond Fund</td>
<td>Basic</td>
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<td>First Amendment</td>
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<tr>
<td>Feed 2 Interceptor</td>
<td>Final Design</td>
<td>CRWS</td>
<td>Extendable Commercial Paper/2018/2019 Bond Fund</td>
<td>Basic</td>
<td>$ 1,234,187</td>
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<tr>
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<td></td>
<td>Special</td>
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<td></td>
<td>Special</td>
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<td>Interlocal Agreement</td>
<td>CRWS</td>
<td>DCURD Funded</td>
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<td>Preliminary Design</td>
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<td>Special</td>
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<tr>
<td>Peak Flow Storage and Berm Improvements</td>
<td>Final Design</td>
<td>ROCRWS</td>
<td>2018/2019 Bond Series</td>
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<td>$ 200,000</td>
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<td>TCWSP</td>
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<td>&amp; Final Design</td>
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<td>NR</td>
<td>CRWS, DCRWS, MCRWS, ROCRWS, TMCRWS Projects</td>
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<td>FY20, 21 and 22 Operations and Maintenance Budgets</td>
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<td>$ 6,721,994</td>
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Trinity River Authority of Texas

General Office

DATE:     June 12, 2020

FILE:     0106

TO:       BOARD OF DIRECTORS

RE:       Summary Report of General Manager-Approved Agreements

BACKGROUND: The Board-approved “Purchasing and Procurement Policy” empowers the General Manager to execute contracts that require compensation of $75,000 or less without further approval of the Authority’s Board of Directors. Since the last Board meeting, I have executed the contracts shown as Exhibit A pursuant to that delegated authority.

RECOMMENDATION: This item is presented as a status report only; no action is necessary.

Respectfully submitted,

J. KEVIN WARD
General Manager

JKW/Iic

Exhibit A - Summary Report
## EXHIBIT A
### SUMMARY REPORT OF GENERAL MANAGER-APPROVED AGREEMENTS

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>DESCRIPTION</th>
<th>CONTRACT DATE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between TRA and FlightSafety Textron Aviation Training, LLC</td>
<td>Contract for KA300/350 Initial and Recurrent Training for Trinity River Authority for FY 2020</td>
<td>May 1, 2020</td>
<td>$31,600</td>
</tr>
<tr>
<td>Between TRA and Freese and Nichols Lake Livingston, Polk County</td>
<td>Scope and fee estimate to prepare and submit a US Army Corps of Engineers permit application for a proposed bank stabilization project at Lake Livingston, Polk County</td>
<td>May 8, 2020</td>
<td>$35,565</td>
</tr>
</tbody>
</table>
DATE: June 1, 2020

FILE: 0200

TO: BOARD OF DIRECTORS

VIA: (2) J. KEVIN WARD, General Manager
     (1) GARY N. ORADAT, P.E., Executive Manager, Planning, Design and Construction Administration

RE: Summary Report of Change Orders

BACKGROUND: The Authority’s Board-approved Purchasing and Procurement Policy requires that a report of all Change Orders executed by the General Manager within his delegated power shall be made at the next meeting of the Board.

Since the last Board meeting, the Change Orders shown as Exhibit A have been approved and executed.

RECOMMENDATION: This item is presented as a status report only; no action is necessary.

Respectfully submitted,

STEVEN E. METZLER, PE, PMP, CCM
Manager, Construction Services
Planning, Design and Construction Administration

SEM/anf

Exhibit A - Summary Report of Change Orders
## EXHIBIT A
SUMMARY REPORT OF CHANGE ORDERS
(APPROVED BY GENERAL MANAGER)

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>DESCRIPTION</th>
<th>CHANGE ORDER DATE</th>
<th>CHANGE ORDER TOTALS</th>
<th>PERCENT OF ORIGINAL CONTRACT</th>
<th>CONTRACT AMOUNTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>CURRENT ALL CHANGES</td>
<td>CURRENT ALL CHANGES</td>
<td>CURRENT ORIGINAL AMOUNT</td>
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<tr>
<td>Central Regional Wastewater System</td>
<td>CO - 002 - Substation CC and DD Pad and Transformer Modifications</td>
<td>4/20/2020</td>
<td>$28,431</td>
<td>0.20%</td>
<td>$14,213,541</td>
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<td>$78,341</td>
<td>0.55%</td>
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<tr>
<td>Central Regional Wastewater System</td>
<td>CO - 002 - Plate Removal, Add'l Coarse Screen, Parkson Screen Condition</td>
<td>4/2/2020</td>
<td>$28,628</td>
<td>2.37%</td>
<td>$1,238,952</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>$30,952</td>
<td>2.56%</td>
<td>$1,208,000</td>
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<tr>
<td>Central Regional Wastewater System</td>
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<td>2.56%</td>
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<tr>
<td>Central Regional Wastewater System</td>
<td>CO - 108 - Buried Fittings and Concrete Encasement</td>
<td>3/17/2020</td>
<td>$34,972</td>
<td>0.02%</td>
<td>$201,286,724</td>
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<td>$5,736,624</td>
<td>2.93%</td>
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<td>Central Regional Wastewater System</td>
<td>CO - 110 - Hydrolyzed Sludge Line Size Changes</td>
<td>3/17/2020</td>
<td>$17,500</td>
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<td>$5,844,632</td>
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<td>Central Regional Wastewater System</td>
<td>CO - 112 - Redesign of Digester Building Monorail System</td>
<td>4/20/2020</td>
<td>$7,054</td>
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<td>$5,915,686</td>
<td>3.03%</td>
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<td>Central Regional Wastewater System</td>
<td>CO - 113 - CRWS C Utility Routing Modifications</td>
<td>4/20/2020</td>
<td>$9,851</td>
<td>0.01%</td>
<td>$201,475,637</td>
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<td>$5,925,537</td>
<td>3.03%</td>
<td>$195,550,100</td>
</tr>
</tbody>
</table>

* - defined items (see last page)

**PROJECT CHANGE ORDER DATE**

**DESCRIPTION**

1. **CO - 002 - Substation CC and DD Pad and Transformer Modifications**
   - **(PCM-02)** Modifications required to accommodate the larger than anticipated substations, which would not fit on the proposed pad and allow for maintenance access, due to not having detailed dimensions from the manufacturer during design.

2. **CO - 002 - Plate Removal, Add'l Coarse Screen, Parkson Screen Condition**
   - **(CMR-01)** Removal and reinstallation of a platform, not previously identified in project reviews, was covering the 20” and 24” drain lines to the PS-6* wet wells which needed to be plugged during the installation of the fine screen ($1,479);
   - **(CMR-02)** Additional costs incurred for the removal of a secondary coarse screen that was discovered after dewatering the wet well and is required to remove, rehabilitate, and reinstall the fine screen ($1,245); and
   - **(CMR-03)** Extensive corrosion to the structural welds of the screen 10' below the surface was discovered and requires rewelding. The screen frame was also bent on one side and requires straightening, and one of the take up screws was found seized and needed to be replaced and reinstalled ($25,904).

3. **CO - 108 - Buried Fittings and Concrete Encasement**
   - **(PCO-133)** Modifications to the tapped flanges for the 2" PVC lines servicing the yard hydrants could potentially break due to subsurface movement and were replaced with mechanical joint reducers, which are expected to be more robust. Concrete encasement was also added at each buried gate valve to protect the piping from over-torque to eliminate any connection damage.

4. **CO - 110 - Hydrolyzed Sludge Line Size Changes**
   - **(PCO-160)** Revision to CAMBI design recommends a 4" stainless steel line be installed in place of the originally bid 2" line. The 4" line is anticipated to be less susceptible to clogging with the nominal 16% solids process flow.

5. **CO - 112 - Redesign of Digester Building Monorail System**
   - **(PCO-120)** Field modifications to the monorail alignment required due to larger than anticipated trolley which would ultimately conflict with existing piping in two areas in the Digester Building. The new alignment eliminated a u-turn and added a two-way switch.

6. **CO - 113 - CRWS C Utility Routing Modifications**
   - **(PCO-163)** New utility alignment in conflict with an existing electrical MH* requires re-routing. Engineer offered an alternative alignment of the potable water line to offset the additional effort to re-route the other utilities around the electrical MH.
**PROJECT** | **DESCRIPTION** | **CHANGE ORDER DATE** | **CHANGE ORDER TOTALS** | **PERCENT OF ORIGINAL CONTRACT** | **CONTRACT AMOUNTS**
--- | --- | --- | --- | --- | ---
Central Regional Wastewater System | **CO - 114 - Rework 8" WAS* Valves in Area 10**<br>• *(PCO-177)* Installation of two new 8" WAS lines/valves have been installed and tied into existing WAS lines, whose exact location was unknown during design. A new 36" drain line is pending installation in the same area and was discovered to be in conflict with the risers for the 8" line. Contractor was directed to remove/reinstall sections of the conflicting 8" line. Due to congestion in the area where this will take place, a considerable amount of hand digging and pipe placement is required. | 5/19/2020 | $48,647 | 0.02% | 201,524,284
|  |  |  |  |  |  
|  | **CO - 115 - Tank Area Instrument Detail Change**<br>• *(PCO-175)* Re-direction to the correct standard details after discovery that the incorrect instrumentation details were referenced in the Contract Documents. Engineer provided the correct references, which require more fittings and ancillary components than the originally referenced details. | 5/19/2020 | $10,153 | 0.01% | 201,534,437
| Denton Creek Regional Wastewater System | **CO - 004 - 72" FRP* 1-Miter Elbow and Lowering of FRP MH-12***<br>• *(PCM-06)* Installation of two 72" 1-Miter bends was required to make the pipe connections at JB-1* and the Plant Lift Station Structure, which was at a slight angle ($35,680); and<br>• *(CMR-08)* Modifications for the installation of MH-12 were required due to the elevation difference and close proximity to MH-13 ($7,113). | 5/22/2020 | $42,793 | 0.26% | 17,693,296
| Henrietta Creek Relief Interceptor, HC-1 |  |  |  |  |  
|  | **CO - 002 - Concrete Demo and Add'l VFD**<br>• *(CMR-05)* Demolition and removal of a concrete cradle, not shown in the record drawings, around a 36" RCP* which was required to allow the installation of the new JB* near LS-1* ($15,492); and<br>• *(CMR-06)* Installation of a second VFD is needed to support the new RAS* pumps. The additional motor amperage requires a 20 hp VFD to be used for the 15hp motors ($30,320). | 5/22/2020 | $45,812 | 0.61% | 7,632,171
| Denton Creek Regional Wastewater System |  |  |  |  |  
| Plant Rehabilitation Phase 1 |  |  |  |  |  
|  | **CO - 002 - Concrete Demo and Add'l VFD**<br>• *(CMR-05)* Demolition and removal of a concrete cradle, not shown in the record drawings, around a 36" RCP* which was required to allow the installation of the new JB* near LS-1* ($15,492); and<br>• *(CMR-06)* Installation of a second VFD is needed to support the new RAS* pumps. The additional motor amperage requires a 20 hp VFD to be used for the 15hp motors ($30,320). | 5/22/2020 | $78,343 | 1.04% | 7,553,828
| Red Oak Creek Regional Wastewater System | **CO - 002 - Entrance Rd Grading, Delete Drainage Culverts & Headwalls**<br>• *(CMR-11)* Additional costs incurred to grade the west side of the access road to intercept local drainage, which was not included in the bidding process due to being designed afterwards ($34,341); and<br>• *(CMR-12)* Credit issued due to the design change of the access road, which determined that a ditch required less maintenance and would serve the Authority better, as opposed to the original headwalls and culverts (-$11,688). | 3/20/2020 | $22,652 | 0.20% | 11,356,926
| Bear Creek Lift Station, Force Main |  |  |  |  |  
|  | **CO - 001 - Noise Reduction Proposal**<br>• *(PCM-01)* Relocation of air compressor away from the fence to a more suitable location and installation of a sound attenuation system with surrounding portable panels to mitigate the noise. | 5/22/2020 | $12,497 | 0.72% | 1,758,772
| Tarrant County Water Supply Project |  |  |  |  |  
| Murphy Dr Pump Station Storage Tank 1 Rehab |  |  |  |  |  

* - defined items (see last page)
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</thead>
<tbody>
<tr>
<td>Tarrant County Water Supply Project</td>
<td>CO ‐ 014 ‐ CW* Repairs, Pipe/Overflow Credit</td>
<td>5/22/2020</td>
<td>$5,258</td>
<td>0.03%</td>
<td>$18,435,411</td>
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<tr>
<td>Treatment Plant Improvements</td>
<td>* [PCM‐21] Additional costs incurred to repair and resurface several interior surfaces at CW‐2 where rebar is visible in several locations ($17,361); * [PCM‐22] Credit for unused materials and excavation from different configuration in the existing underground piping at the Raw Water Ozone Building ‐ North Room (‐$9,001); * [CMR‐58] Credit for eliminating the 18” overflow pipe replacement at CW‐2 that was uncovered to inspect and determine if replacement was necessary (‐$5,000); and * [CMR‐61] Temporary relocation of existing wires and fiber optic cables in conflict with the Raw Water Ozone Building foundation excavation (‐$1,898).</td>
<td></td>
<td></td>
<td>$362,378</td>
<td>2.01%</td>
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<tr>
<td>Ten Mile Creek Regional Wastewater System</td>
<td>CO ‐ 012 ‐ PC‐1* Valve</td>
<td>4/20/2020</td>
<td>$47,201</td>
<td>0.42%</td>
<td>$11,941,041</td>
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<tr>
<td></td>
<td>* [CMR‐49] Modifications required to accommodate the installation of new direct bury plug valve between the existing drain MH* and the wall for PC-1. Due to lack of space between the wall and PC-1, as well as existing RAS* and primary sludge lines, a fiberglass MH and knife gate valve within the new MH will be installed, in lieu of the direct buried plug valve.</td>
<td></td>
<td></td>
<td>$595,041</td>
<td>5.24%</td>
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<td></td>
<td>CO ‐ 013 ‐ FC‐1* Tunnel</td>
<td>4/20/2020</td>
<td>$49,860</td>
<td>0.44%</td>
<td>$11,990,901</td>
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<tr>
<td></td>
<td>* [CMR‐52] Installation of a tunnel between drain MHs* at FC-1 was needed to allow the installation of new drain piping. The existing drain piping was partially filled with concrete and an open cut method of installation was not possible due to an existing duct bank.</td>
<td></td>
<td></td>
<td>$644,901</td>
<td>5.68%</td>
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<td></td>
<td>CO ‐ 014 ‐ PC‐5* Drain Valve, Switchgear Grading Plan, RASPS‐3* Access</td>
<td>5/1/2020</td>
<td>$41,908</td>
<td>0.37%</td>
<td>$12,032,810</td>
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<td></td>
<td>* [CMR‐48] Removal of concrete encasement around ductile iron pipe inside the drain MH* for PC-5 to allow for installation of a new 14” drain valve on the line ($11,776); * [CMR‐15] Grading improvements needed at the switchgear area adjacent to the plant main entrance and existing switchgear building. In addition to grading modifications, a new curb and gutter was constructed to help convey stormwater flow away from the switchgear area, and also included the relocation of an existing light pole ($10,998); and * [CMR‐22] Provisions added to allow installation of a ladder between 430‐Pump‐2 and 430‐Pump‐3 in RASPS‐3. A ladder and walkway grating were also added to provide access between 430‐Pump‐3 and 430‐Pump‐4 ($19,135).</td>
<td></td>
<td></td>
<td>$686,810</td>
<td>6.05%</td>
</tr>
<tr>
<td>Ten Mile Creek Regional Wastewater System Plant Rehabilitation Improvements</td>
<td>CO ‐ 015 ‐ Modification of Fiberglass MH*, Re‐Route of 6&quot; Sludge Line</td>
<td>5/1/2020</td>
<td>$45,176</td>
<td>0.40%</td>
<td>$12,077,986</td>
</tr>
<tr>
<td></td>
<td>* [CMR‐53] Modifications required to accommodate the replacement of an existing concrete MH with a new fiberglass MH by installing an eccentric top section to avoid conflict with an existing ductbank that was in a different location that shown in the record drawings ($29,039); and * [CMR‐54] Re-routed a 6” sludge line that was discovered and in conflict of the new fiberglass MH replacement, which is larger in diameter than the original deteriorated concrete MH ($16,137).</td>
<td></td>
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<td>$731,986</td>
<td>6.45%</td>
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<tr>
<td>PROJECT</td>
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<td>TOTAL CHANGES</td>
<td>ORIGINAL CONTRACT AMOUNT</td>
<td>CONTRACT AMOUNT</td>
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</tr>
<tr>
<td>Ten Mile Creek Regional Wastewater System</td>
<td><strong>CO - 002 - Demo and Removal of Flowable Fill</strong> (CMR-11) Discovery of a flowable fill cap installed over the existing piping scheduled to be removed and replaced was not previously known, and was not reflected in the record drawings. Demolition and removal of flowable fill needed to replace the pipe and make the connection.</td>
<td>5/20/2020</td>
<td>$4,554</td>
<td>0.12%</td>
<td>$3,709,054</td>
</tr>
<tr>
<td>Walker-Calloway Branch Outfall Trunk Sewer System</td>
<td><strong>CO - 009 - Additional Decommissioning Grout</strong> (CMR-17) Additional costs associated with additional decommissioning grout needed to complete the grout fill abandonment of the corroded, unlined reinforced concrete pipe.</td>
<td>5/20/2020</td>
<td>$42,000</td>
<td>1.24%</td>
<td>$3,800,619</td>
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</tbody>
</table>

**Glossary**

- CW (CW-#) Clearwell (No. X)
- FC (FC-#) Final Clarifier (No. X)
- FRP Fiberglass Reinforced Pipe
- JB (JB-#) Junction Box (No. X)
- LS (LS-#) Lift Station (No. X)
- MH (MH-#) Manhole (No. X)
- PC (PC-#) Primary Clarifier (No. X)
- PS (PS-#) Pump Station (No. X)
- RAS Return Activated Sludge
- RASPS (RASPS-#) Return Activated Sludge Pump Station (No. X)
- RCP Reinforced Concrete Pipe
- VFD Variable Frequency Drive
- WAS Waste Activated Sludge
DATE:  June 1, 2020

FILE:  0200

TO:  BOARD OF DIRECTORS

VIA:  (2) J. KEVIN WARD, General Manager
      (1) GARY N. ORADAT, P.E., Executive Manager, Planning, Design and Construction Administration

RE:  Summary Report of Quantity Overruns

BACKGROUND: The Board-approved Purchasing and Procurement Policy authorizes quantity overruns of construction contract line items that are bid at a unit cost. This authorization is necessary and appropriate because many estimated quantities may vary during the course of actual construction. For instance the actual quantity of concrete required to construct a project may be more than was estimated during design.

Quantity overruns exceeding either 50 percent of the estimated bid line item quantity, or $25,000 of the bid line item cost, are reported to the General Manager.

Since the last Board meeting, the quantity overruns shown as Exhibit A have been reported to the General Manager.

RECOMMENDATION: This item is presented as a status report only; no action is necessary.

Respectfully submitted,

STEVEN E. METZLER, P.E., PMP, CCM
Manager, Construction Services
Planning, Design and Construction Administration

SM/pk

Exhibit A - Summary Report of Quantity Overruns
## Exhibit A
### Summary Report of Quantity Overruns

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>DESCRIPTION</th>
<th>PRICE PER UNIT OF MEASURE</th>
<th>ESTIMATED QUANTITY</th>
<th>CONTRACT AMOUNT</th>
<th>AMOUNT OF OVERRUN</th>
</tr>
</thead>
</table>
| TEN MILE CREEK REGIONAL WASTEWATER SYSTEM | **Bid Item Overrun – No. 38** Additional asphalt pavement quantities  
- This item increased by 6,820.20 SF to account for additional asphalt pavement quantities. A bid item for asphalt pavement was included in the Bid Proposal but quantities exceeded the bid amount with effort on the force main, valve and vault, and moving of piers. | $5 | 1,531 | $7,655 | $34,101 |
| | | Square Feet (SF) | 8,351 | $41,755 | 445.460% |
| RED OAK CREEK REGIONAL WASTEWATER SYSTEM | **Bid Item Overrun – No. 23** Additional 54-inch casing (steel or liner plate) by other than open cut quantity  
- This item increased by 35 LF to account for field adjustment needed to avoid power pole utility conflict. A bid item for casing was included in the Bid Proposal but quantities exceeded the bid amount. | $1200 | 507 | $608,400 | $42,000 |
| | | Linear Feet (LF) | 542 | $650,400 | 6.9% |
BACKGROUND: In June 2019, the Authority’s Board of Directors approved an on-call emergency repair contract with Flow-Line Construction, Inc. (Flow-Line). That contract provides the Authority the standby capability to call upon Flow-Line to perform emergency pipeline repairs should they prove needed during that contract’s term. The Emergency Repair Biennial Contract authorizes the General Manager to engage Flow-Line for a total amount not exceeding $2,920,500, and that contract expires on July 25, 2021. $1,529,253.06 of that contract has been authorized for payment to date, which represents 31.1% of the total compensation authorized.

Since the last Board meeting, we have authorized the emergency pipeline repairs shown on Exhibit A pursuant to that delegated authority.

RECOMMENDATION: This item is presented as a status report only; no action is necessary.

Respectfully submitted,

J. KEVIN WARD
General Manager

JKW/ebl/anf

Exhibit A - Summary Report of Emergency Repairs
## EXHIBIT A
### SUMMARY REPORT OF EMERGENCY REPAIRS

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>DESCRIPTION</th>
<th>DATE OF DISCOVERY</th>
<th>ESTIMATED COST TO COMPLETE</th>
<th>CURRENT COST</th>
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<tbody>
<tr>
<td>Central Regional Wastewater System (CRWS)</td>
<td>On Monday, April 13, 2020, Construction Services personnel, in coordination with CRWS Operation staff, discovered the failure of the electrical feeder to the warehouse that feeds the west side of the CRWS treatment plant. After discussion, Facility Solutions Group, Inc (FSG), was contacted to diagnose and make the repair. A letter contract with FSG was drafted, and payment was based on time and materials utilized. The actual cause of the failure of the electrical feed is unknown. FSG was able to complete the repair the same week, replacing the wire, breaker and plug for a final cost of $22,970.39.</td>
<td>04/13/2020</td>
<td>$28,000</td>
<td>FINAL $22,970.39</td>
</tr>
<tr>
<td>Central Regional Wastewater System (CRWS)</td>
<td>On Thursday evening, April 23, 2020, Mike Querry, Construction Inspector Supervisor with Construction Services, was contacted by the CRWS plant management for assistance in working with the emergency repair contractor, Flow-Line Construction, LLC (Flow-Line), to make an expedient but temporary repair to the blower piping at Blower Building No. 3. Temporary repair measures to get Blower Building No. 3 back online included re-aligning the blower pipes, welding supports to each damaged expansion coupling, and relocating pipe flanges. The cause of failure was determined to be the result of flooding from a leak in the chilled water piping leading to separation in the couplings from buoyancy as a result of flooded blower piping. An engineered analysis is being performed for recommendation on a permanent repair.</td>
<td>04/23/2020</td>
<td>$105,000</td>
<td>$38,699.61</td>
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<tr>
<td>Ten Mile Central Regional Wastewater System (TMCRWS)</td>
<td>On Wednesday morning, April 15, 2020, Matthew Jalbert, Manager of Engineering Services, and John Durbin of the Collection System Group (CSG), were notified by Freese and Nichols, Inc., of a sinkhole and apparent pipe collapse on an existing 66-inch diameter reinforced concrete pipe (RCP) within the TMCRWS system. The repair location is in Lancaster, Texas, on the TM-7 Segment 2 system approximately 50-feet downstream of meter station MSLAN. Flow-Line was contacted to investigate and perform the repair. Flow-Line mobilized equipment and began repair on the morning of Thursday, April 16, 2020. The repair plan consists of excavation and installation of up to 80 linear feet of available 72-inch RCP with concrete encasement. The repair was completed April 20th. The final cost of the repair is $67,481.11.</td>
<td>04/23/2020</td>
<td>$82,000</td>
<td>FINAL $67,481.11</td>
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<tr>
<td>PROJECT</td>
<td>DESCRIPTION</td>
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<td>ESTIMATED COST TO COMPLETE</td>
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</table>
| Central Regional Wastewater System (CRWS) | **STAND-ALONE EMERGENCY REPAIR – NOT BILLING AGAINST CURRENT CONTRACT**  
On Thursday afternoon, March 26, 2020, John Durbin of CSG contacted PDCA regarding pipe line collapse adjacent to the Trinity River. A section of 102-inch diameter fiberglass reinforced pipe (FRP) within the West Fork Interceptor section WF-G collapsed causing the outflow. The pipe failure is located at the toe of the slope approximately 450 feet east of Bear Creek Relief Interceptor Siphon Box (5B) and accessible from the eastbound I-30 frontage road west of the McArthur Blvd. in Grand Prairie, Texas. The pipeline has been repaired and placed back in service. The slope has been restored, including seeding and placement of rip rap. LAN to design the relocation of 5,000 linear feet under the First Amendment to the Engineering Services Agreement for the Bear Creek Interceptor Relief, Phase 1 project to be presented at the June Board Meeting. | 03/26/2020 | $2,148,566  
Rev. 1 $2,606,316 | TBD |
BACKGROUND: Cantey Hanger, LLP, submits to the General Manager a status report every other month on condemnation matters that are handled by its office. Attached as Exhibit A is Cantey Hanger’s condemnation status report for the period through April 6, 2020.

RECOMMENDATION: This item is presented as a status report only; no action is necessary.

Respectfully submitted,

HOWARD S. SLOBODIN
General Counsel

Exhibit A - Condemnation Status Report
April 6, 2020

Dear Kevin and Howard,

Please allow the following to serve as a summary of the status of:

**DALLAS COUNTY WILDLIFE PARKWAY**

1. **Cause No. CC-18-04748-B; Dallas County v. MB Capital Investors, Inc., et al; In the County Court at Law No. 2, Dallas County, Texas.**

   a. **Nature of Suit:** Dallas County brought this suit against MB Capital Investors, TRA, and others, to acquire land rights for the Wildlife Parkway Project. Dallas County seeks to acquire a permanent easement, drainage easement, slope easement, utility easement and temporary construction easement. A portion of the take, including the permanent easement and drainage easement, crosses over and upon TRA easements and sanitary sewer pipelines.

   b. **Attorneys:** Sherri Turner, Assistant District Attorney (Dallas County),
      Mary Colchin Johndroe, Cantey Hanger LLP, Fort Worth (TRA).

   c. **Status:** A Commissioners hearing was conducted with a Commissioners’ Award filed on April 4, 2019 in the amount of $112,472. TRA filed Objections to the Award on April 25, 2019, which were timely served, converting this proceeding to litigation (trial de novo). Dallas County has obtained a permit from TRA for any necessary rights. TRA and Dallas County agreed
to an Order dismissing TRA from this suit with prejudice. We received a conformed copy of the Order from the Court.

d. Liability: None.

Please let me know if you would like any additional information. Thank you for allowing us to represent TRA.

With kindest regards,

/s/ Mary Colchin Johnrode

Mary Colchin Johnrode

MCJ/et

cc: Mrs. Laura Caughey
     Executive Assistant, Legal Department
     Trinity River Authority of Texas
     P. O. Box 60
     Arlington, TX  76004-0060

VIA EMAIL: caugheyl@trinityra.org
DATE:       May 25, 2020

FILE:       TRA CONFIDENTIAL

TO:         BOARD OF DIRECTORS

VIA:        J. KEVIN WARD, General Manager

RE:         Selected Matters Pending Before the Texas Commission on Environmental Quality Status Report

BACKGROUND: Attached as Exhibit A is Authority Counsel's status report on selected matters pending before the Texas Commission on Environmental Quality submitted to the General Manager. This status report is updated on a regular basis.

RECOMMENDATION: This item is presented as a status report only; no action is necessary.

Respectfully submitted,

HOWARD S. SLOBODIN
General Counsel

/llc

Exhibit A - Status Report on Matters Pending
May 25, 2020

J. Kevin Ward
General Manager
Trinity River Authority of Texas
P.O. Box 60
Arlington, TX 76010

Via Email Transmission
wardk@trinityra.org

RE: Report on Selected Matters Pending Before the Texas Commission on Environmental Quality (TCEQ) and the Public Utility Commission of Texas (PUC)

Dear Kevin:

We continue to work with the Authority’s General Counsel and staff on the purchase of water rights by the Authority and on additional applications and potential water rights protests to be filed at the Texas Commission on Environmental Quality (“TCEQ”). No such matters are yet pending at that agency. We also continue to review proposed legislation and rulemaking notices to make sure that the Authority is aware of matters that may impact Authority operations or assets.

Previous reports shared information regarding a wholesale water rate contest filed against North Texas Municipal Water District (“NTMWD”), at the Public Utility Commission of Texas (“PUC”), by the district’s member cities. Those reports highlighted the political controversy surrounding the case, including the positions taken publicly by key legislators, including Chairmen Lyle Larson (House Natural Resources) and Charles Perry (Senate Committee on Water and Rural Affairs. Perhaps most pointedly in March, Chairman Perry addressed correspondence to the PUC Commissioners that alluded to the PUC overreaching and eroding the public trust that benefits water supply in Texas.

By mid-April, the PUC Commissioners changed course, putting the case on hold and ordering the parties to private mediation. The NTMWD member cities then skirted the issue of agency-ordered mediation by asking the agency for more time to negotiate amongst themselves and on their own. Their request, granted in mid-May, reported that the NTMWD customers saw “light at the end of the tunnel.”
Whether or not the NTMWD matter settles this year, the legislative train for addressing wholesale rate oversight in Texas has gathered its steam. Supporting the Commissioner’s change of course in additional correspondence to the agency, Chairman Larson projected that the Legislature would conduct a “holistic assessment of the policy issues this case has brought forward” and provide “any necessary clarification” during the next Session. We continue to stand ready to support the General Counsel on these issues as they progress and are expected to impact all wholesale service providers in the state.

If you have any questions, or would like more information at this time, please let me know.

Very truly yours,

Michael J. Booth,
Authority Counsel

cc: Howard S. Slobodin
Laura Caughey
GENERAL OFFICE

DATE: May 25, 2020

FILE: 0202.800.100

TO: BOARD OF DIRECTORS
VIA: (3) UTILITY SERVICES COMMITTEE
      (2) J. KEVIN WARD, General Manager
      (1) TAYLOR L. HUYNH, Executive Manager, Administrative Services

RE: Authority Projects
    Bids for Equipment, Supplies, Spare Parts and Services

BACKGROUND: Authority project personnel utilize equipment, supplies, spare parts and services to operate and maintain their facilities. The anticipated costs of these items are included in the FY 2020 Operation and Maintenance Budgets. They are grouped by categories where expenditures are projected to reach or exceed $75,000 annually, the statutory threshold for expenditure approval by the Board of Directors. The predicted quantity of each line item bid is based on historical and projected usage for the bid term. Purchases during the bid term are made on an as-needed basis to maintain operations. Consequently, actual expenditures may vary from the total proposed amount.

EVENTS TO DATE: Advertisements were placed in two local papers for two consecutive weeks. Vendors received electronic notification of potential bidding opportunities by means of an electronic vendor list. Additionally, vendors were sought out through the assistance of the Texas state comptroller’s website, cooperative purchasing contracts and internet searches. Bids were opened at the Central Regional Wastewater System (CRWS) Administration Building on April 29, 2020.

Filter Press Cloths - Filter Press cloths are utilized by the CRWS Solids Division for the Zimpro Passavant recessed plate and frame presses. The filter presses are used to dewater solids during the treatment process.

Sludge Removal and Disposal (HRWSS) - The Huntsville Regional Water Supply System (HRWSS) treatment plant discharges sludge generated from the alum clarification process into three sludge retention ponds. The sludge is a silt-type material that is transported to a nearby land application site in Walker County. Each pond is cleaned as it approaches capacity. The removal and disposal process is bid as a turnkey project where the contractor is required to furnish the permitted site for land disposal.

Aqua-Aerobics Filter Parts - Northern Region Projects (NRP) use Aqua Aerobic filter parts in the wastewater treatment process. Parts are needed to maintain and keep the diamond filters in working order.
Internal Pipeline Cleaning and CCTV Inspection - NRP utilize outside vendor services throughout the year to conduct pipeline inspection, multi-sensor pipeline inspection, cleaning of pipelines, cleaning of wet wells and process units located at treatment plants or small to medium pipes located within the collection systems in Dallas, Denton, Ellis, and Tarrant Counties as part of an ongoing maintenance program.

Rock, Gravel, Flex Base and Sand - NRP utilize gravel, crushed rock, and a road flex base as part of a maintenance program throughout the year by each facility and the collection system group. Gravel back-fills exposed pipe caused by erosion, construction or repairs. Large rock protects pipes, vulnerable to erosion by water flow from creeks, rivers, and storm drains, preventing wash out. Road flex base is sued to construct and repair access to remotely-located lift or metering stations.

STAFF ANALYSIS: Bids were solicited for the foregoing categories of equipment, supplies, spare parts and services with the intent of obtaining bids at the most competitive prices. Comparable products were not found through the State of Texas Cooperative Program, Houston Galveston Area Cooperative, or BuyBoard.

Bid Data sheets are presented as Exhibit A, Exhibit B, Exhibit C, Exhibit D, and Exhibit E. The recommended bids have been checked for conformance to specifications and are in order. However, items identified below required additional analysis, as follows:

Sludge Removal and Disposal (HRWSS) had one bidder. Other bidders stated they were either unable to attend the pre-bid meeting scheduled or did not have access to an authorized disposal site. The increase in the proposed price is due to historical volumes removed in relation to the specified turnkey scope.

Only one bid for Aqua-Aerobics Filter Parts was received, which was from the original manufacturer/supplier for the items bid. The total pricing increased due to an increase in the number of units anticipated to be purchased.

Internal Pipeline Cleaning and CCTV Inspection had two bidders each that were able to meet the equipment requirements of the bid specifications.

<table>
<thead>
<tr>
<th>BID ITEM</th>
<th>PROPOSED PRICE</th>
<th>PRESENT PRICE</th>
<th>TOTAL PRICE VARIANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Press Cloths</td>
<td>$98,048.00</td>
<td>$95,180.00</td>
<td>3.013% Increase</td>
</tr>
<tr>
<td>Sludge Removal and Disposal (HRWSS)</td>
<td>$218,000.00</td>
<td>$129,417.00</td>
<td>68.447% Increase</td>
</tr>
<tr>
<td>Aqua Aerobics Filter Parts</td>
<td>$345,093.78</td>
<td>$258,212.88</td>
<td>33.647% Increase</td>
</tr>
</tbody>
</table>
RECOMMENDATION: Management recommends that the Utility Services Committee approve the following motion for submittal to the Board of Directors:

Motion that the Board of Directors accept the following vendors for Equipment, Supplies, Spare Parts and Services for Authority Projects:

<table>
<thead>
<tr>
<th>BID ITEM</th>
<th>VENDOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Regional Wastewater System Filter Press Cloths</td>
<td>Clear Edge Filtration</td>
</tr>
<tr>
<td>Huntsville Regional Water Supply System Sludge Removal and Disposal (HRWSS)</td>
<td>Denali Water Solution, LLC</td>
</tr>
<tr>
<td>Northern Region Projects Aqua-Aerobics Filter Parts</td>
<td>Aqua-Aerobic Systems, Inc.</td>
</tr>
<tr>
<td>Internal Pipeline Cleaning and CCTV Inspection Rock, Gravel, Flex Base, and Sand</td>
<td>CJA Enterprises LLP</td>
</tr>
</tbody>
</table>

Respectfully submitted,

JOHN S. OWENS
Purchasing Manager,
Administrative Services

JSO/mds/yr

Exhibit A - (Filter Press Cloths)
Exhibit B - (Sludge Removal and Disposal (HRWSS))
Exhibit C - (Aqua-Aerobics Filter Parts)
Exhibit D - (Internal Pipeline Cleaning and CCTV Inspection)
Exhibit E - (Rock, Gravel, Flex Base and Sand)
EXHIBIT A

BID DATA SHEET

I. GENERAL

Project: Central Regional Wastewater System (CRWS)

Bid Nomenclature: Filter Press Cloths (4450-032-G-20)

Bid is for: X Annual Supply: 3 lines

___ Single Purchase:

___ Other (Specify):

II. HISTORICAL COMPARISON

X A Comparable Bid is on File

Date: April 24, 2019 Quantity Bid: 3 lines

Unit Price: extension: $95,180.00

Term Date: 07/01/19 – 06/30/20 Current Vendor: Clear Edge Filtration

The specification requirements on the item(s) bid are unique to this bid, invalidating any direct comparison with previous bids.

III. REQUEST FOR BIDS/BID RESPONSE

Number of Bid Packages Furnished: 12 Number of Bid Proposals Received: 3

IV. BID EVALUATION

___ Line Item Unit Price X Total of All Quantity

___ Line Item Quantity Price Extension ___ Total of All Unit Prices

___ Other

The lowest and best bidder, as determined by evaluation of bids by Regional management, is:

Name: Clear Edge Filtration

Address: 11607 E. 43rd St. N
Tulsa, OK 74116

Bid Price: $98,048.00 Unit Price: 

Reviewed By: Bill Tatum, Manager, Central Regional Wastewater System

Recommended By: John S. Owens, Purchasing Manager, Administrative Services

Attachment
# RESPONSIVE BIDDERS

## Filter Press Cloths

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Edge Filtration</td>
<td>$98,048.00</td>
</tr>
<tr>
<td>(Tulsa, OK)</td>
<td></td>
</tr>
<tr>
<td>Micronics, Inc.</td>
<td>$104,696.08</td>
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<tr>
<td>(Portsmouth, NH)</td>
<td></td>
</tr>
<tr>
<td>Cross Filtration</td>
<td>$138,220.00</td>
</tr>
<tr>
<td>(Moravia, NY)</td>
<td></td>
</tr>
</tbody>
</table>
EXHIBIT B

B I D D A T A S H E E T

I. GENERAL

Project: Huntsville Regional Water Supply System

Bid Nomenclature: Sludge Removal and Disposal (HRWSS) (4490-011-G-20)

Bid is for: X Annual Supply: Removal and disposal of sludge from two retention ponds estimated at 16,800 cubic yards

___ Single Purchase:
___ Other (Specify):

II. HISTORICAL COMPARISON

X A Comparable Bid is on File

Date: April 24, 2019

Unit Price: 

Term Date: 7/1/18-6/30/19

Current Vendor: Denali Water Solutions, LLC

___ The specification requirements on the item(s) bid are unique to this bid, invalidating any direct comparison with previous bids.

III. REQUEST FOR BIDS/BID RESPONSE

Number of Bid Packages Furnished: 11

Number of Bid Proposals Received: 1

IV. BID EVALUATION

___ Line Item Unit Price ___ Total of All Quantity Price Extensions

___ Line Item Quantity Price Extension ___ Total of All Unit Prices X Other (Lump Sum)

The lowest and best bidder, as determined by evaluation of bids by Regional management, is:

Name: Denali Water Solutions, LLC
Address: 3308 Bernice Avenue
          Russellville, AR 72802

Bid Price: $218,000.00 Unit Price:

Reviewed By: Bill Holder, Assistant Regional Manager, Southern Region

Recommended By: John S. Owens, Purchasing Manager, Administrative Services

Attachment
## RESPONSIVE BIDDERS

**Sludge Removal and Disposal (HRWSS)**

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Total Amount</th>
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</thead>
<tbody>
<tr>
<td>Denali Water Solutions, LLC</td>
<td>$218,000.00</td>
</tr>
<tr>
<td>(Russellville, AR)</td>
<td></td>
</tr>
</tbody>
</table>
EXHIBIT C

BID DATA SHEET

I. GENERAL

Project: Northern Region Projects

Bid Nomenclature: Aqua-Aerobic Filter Parts (4450-229-G-20)

Bid is for: X Annual Supply: 30 Line Items

___ Single Purchase:

___ Other (Specify):

II. HISTORICAL COMPARISON

X A Comparable Bid is on File

Date: April 24, 2019 Quantity Bid: 30 Line Items

Unit Price: Extension: $258,212.88

Term Date: 07/01/19 – 06/30/20 Current Vendor: Aqua-Aerobic Systems, Inc.

___ The specification requirements on the item(s) bid are unique to this bid, invalidating any
direct comparison with previous bids.

III. REQUEST FOR BIDS/BID RESPONSE

Number of Bid Packages Furnished: 2 Number of Bid Proposals Received: 1

IV. BID EVALUATION

___ Line Item Unit Price ___ Total of All Quantity

___ Line Item Quantity Price Extension ___ Price Extensions

___ Total of All Unit Prices ___ Other

The lowest and best bidder, as determined by evaluation of bids by Regional management, is:

Name: Aqua-Aerobic Systems, Inc.
Address 6306 N. Alpine Rd.
         Loves Park, IL 61111

Bid Price: $345,093.78 Unit Price: ________________

Reviewed By: Bill Tatum, Manager, Central Regional Wastewater System
Andrew Moore, Manager, Denton Creek Regional Wastewater System

Recommended By: John S. Owens, Purchasing Manager, Administrative Services

Attachment
## RESPONSIVE BIDDERS

Aqua-Aerobics Filter Parts

<table>
<thead>
<tr>
<th>Vendor</th>
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<tbody>
<tr>
<td>Aqua-Aerobic Systems, Inc.</td>
<td>$345,093.78</td>
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<tr>
<td>(Loves Park, IL)</td>
<td></td>
</tr>
</tbody>
</table>
EXHIBIT D

B I D  D A T A  S H E E T

I. GENERAL

Project: Northern Region Projects

Bid Nomenclature: Internal Pipeline Cleaning and CCTV Inspection (4430-044-G-20)

Bid is for: X Annual Supply: 10 Line Items

II. HISTORICAL COMPARISON

X A Comparable Bid is on File

Date: April 24, 2019
Quantity Bid: 10 Line Items
Unit Price: 
Extension: $227,060.00
Term Date: 07/01/19 – 06/30/20
Current Vendor: Aims Companies

The specification requirements on the item(s) bid are unique to this bid, invalidating any direct comparison with previous bids.

III. REQUEST FOR BIDS/BID RESPONSE

Number of Bid Packages Furnished: 12
Number of Bid Proposals Received: 2

IV. BID EVALUATION

X Total of All Quantity

The lowest and best bidder, as determined by evaluation of bids by Regional management, is:

Name: Aims Companies
Address: 3808 Knapp Rd.
         Pearland, TX 77581

Bid Price: $233,060.00

Reviewed By: Bill Tatum, Manager, Central Regional Wastewater System
Andrew Moore, Manager, Denton Creek Regional Wastewater System
Quintin Winters, Manager, Mountain Creek Regional Wastewater System
Tim Morgan, Manager, Red Oak Creek Regional Wastewater System
Ed Mach, Manager, Ten Mile Creek Regional Wastewater System
Sid McCain, Manager, Tarrant County Water Supply Project
John Durbin, Manager, Collection Systems Group

Recommended By: John S. Owens, Purchasing Manager, Administrative Services

Attachment
# RESPONSIVE BIDDERS

**Internal Pipeline Cleaning and CCTV Inspection**

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aims Companies (Pearland, TX)</td>
<td>$233,060.00</td>
</tr>
<tr>
<td>Ace Pipe Cleaning, Inc. (Kansas City, MO)</td>
<td>$269,470.00</td>
</tr>
</tbody>
</table>
EXHIBIT E

BID DATA SHEET

I. GENERAL

Project: Northern Region Projects

Bid Nomenclature: Rock, Gravel, Flex Base and Sand (4430-012-G-20)

Bid is for: X Annual Supply: 7 Line Items

II. HISTORICAL COMPARISON

X A Comparable Bid is on File

Date: April 24, 2019
Quantity Bid: 7 Line Items
Unit Price: $575,968.00
Extension: 
Term Date: 07/01/19 – 06/30/20
Current Vendor: Q.Roberts Trucking

The specification requirements on the item(s) bid are unique to this bid, invalidating any direct comparison with previous bids.

III. REQUEST FOR BIDS/BID RESPONSE

Number of Bid Packages Furnished: 13
Number of Bid Proposals Received: 3

IV. BID EVALUATION

X Total of All Quantity Price Extensions

The lowest and best bidder, as determined by evaluation of bids by Regional management, is:

Name: CJA Enterprises LLP
Address: 362 Crossroads Rd.
Collinsville, TX 76233

Bid Price: $558,752.60 Unit Price: 

Reviewed By: Bill Tatum, Manager, Central Regional Wastewater System
Andrew Moore, Manager, Denton Creek Regional Wastewater System
Quintin Winters, Manager, Mountain Creek Regional Wastewater System
Tim Morgan, Manager, Red Oak Creek Regional Wastewater System
Ed Mach, Manager, Ten Mile Creek Regional Wastewater System
Sid McCain, Manager, Tarrant County Water Supply Project
John Durbin, Manager, Collection Systems Group

Recommended By: John S. Owens, Purchasing Manager, Administrative Services

Attachment
# Responsive Bidders

**Rock, Gravel, Flex Base and Sand**

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJA Enterprises LLP</td>
<td>$558,752.60</td>
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<tr>
<td>(Collinsville, TX)</td>
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<tr>
<td>Q. Roberts Trucking, Inc.</td>
<td>$575,968.00</td>
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<tr>
<td>(Dallas, TX)</td>
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<tr>
<td>DFW Materials</td>
<td>$678,149.92</td>
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<tr>
<td>(Saginaw, TX)</td>
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