



**EXHIBIT “A-1”
CITY OF CORPUS CHRISTI, TEXAS**

**WILLIAMS LIFT STATION FORCE MAIN (LINE A)
PROJECT NO. 18085A**

I. Project Description

The City owns and operates the Williams Forcemain, which connects the Williams Lift Station to the Oso Water Reclamation Plant (WRP) – a distance of approximately 8,400 linear feet. The Williams Forcemain carries an average daily flow of 10 MGD to the Oso WRP with a maximum design Peak Flow of 39 MGD. The Williams Forcemain was installed in 1978 and has been repaired multiple times over the years due to ruptures, typically at the location of air release valves. In 2003, a 700’ segment of 36” PVC pipe was installed on the north side of S.P.I.D. prior to construction of the Auto Nation Ford dealership. This pipe was capped in place to replace 700’ of the existing ductile iron Williams Forcemain in the future. Most recently on January 8, 2021, the forcemain ruptured again on the north side of S.P.I.D., causing damage to the parking lot of the auto dealership. The current 21-22 FY CIP shows a remaining design budget of \$750,000 for the Williams Lift Station Force Main (Line A) project.

On October 21, 2020, the City of Corpus Christi City Council executed a Large AE Contract with LNV, LLC (“LNV”) for PRELIMINARY PHASE services on the WILLIAMS LIFT STATION FORCE MAIN (LINE A) Project - City Project No. 18085A – the “Project”. The Project Scope of Work included the preparation of an Engineering Letter Report (ELR) that detailed three (3) options and associated costs for either rehabilitating or replacing the existing 36” ductile iron, Williams Forcemain. LNV completed and submitted the Final ELR to the City on March 26, 2021. Upon review, the City decided to move forward with Option 2 outlined in the ELR. This option proposes the installation of approximately 7,250 linear feet of 36” PVC forcemain adjacent to the existing forcemain. Attachment 1 shows the schematic route and proposed modifications detailed in Option 2. The City has also requested the addition of a CMU wall along the perimeter of the lift station property with an automatic access gate compatible with the City’s security ID cards. New concrete pavement will be placed to cover the entire area within the CMU perimeter wall. Existing pavement will be removed and replaced with concrete to provide a uniform and aesthetic parking area around the Lift Station.

The City is currently in the final stages of design for rehabilitating the Williams Lift Station under a separate contract. Additional coordination will be required to avoid conflicting schedules between the Lift Station and Forcemain projects.

The Scope of Services included in this Contract include Design, Bid and Construction Phase Services plus listed Additional Services, as authorized for the Option 2 improvements.

II. SCOPE OF SERVICES

A. BASIC SERVICES

For the purpose of this Contract, Design Phase services may include Design Development as applicable to Architectural/Engineering services.

1.0 Preliminary Phase (Complete).

In August 2020, the City of Corpus Christi provided notice to proceed on the preliminary design phase of the Williams Lift Station Force Main (Line A) project. This preliminary phase included researching three (3) options for rehabilitating or replacing the Williams Force Main, provide preliminary costs for each option, and determination of right-of-way and easement acquisition requirements. These findings were provided to the City in an ELR in March 2021. Option 2 contained in the ELR consists of installing a new 36” PVC force main to replace the existing 36” ductile iron force main, which will be abandoned in place.

For the purposes of this contract, the preliminary phase is considered to be complete. However, there are several standard preliminary phase tasks that were not included in the scope of work for the previously completed preliminary phase, including:

- a. 30% design drawings
- b. Geotechnical and SUE coordination
- c. Kick off meeting attendance
- d. Traffic Control Plan (TCP) performance criteria
- e. Detailed project schedule development
- f. Drawing and specification index

These tasks have been included into the scope of design phase under this amendment.

2.0 Design Phase.

Upon approval of the design phase, designated by receiving authorization to proceed from the City Project Manager, the A/E will:

- 2.01 Attend Project Kick-off Meeting and distribute meeting minutes to attendees within five working days of the meeting.
- 2.02 Provide recommended geotechnical investigations scope and coordination efforts with City’s geotechnical Consultant.
 - a. Provide recommended SUE locations to City Staff for coordination with City’s SUE Consultant. Identify the approximate locations and areas of existing utilities and pipelines that may have a significant potential impact on the proposed features or utilities and for which the existing location(s) cannot be adequately determined by the SUE investigation up to and including Level B, and which require a Level A exploratory excavation during the design phase. These critical locations and their basis of potential impact are to be clearly provided on a layout for the City PM.

- 2.03 The system curve may change as a result of increased pipe length and potential conflicts associated with the new forcemain route. The A/E will perform hydraulic calculations to develop an updated system curve that will be used to evaluate the system. This will require coordination with the City and the engineering firm tasked with designing the Williams Lift Station repairs and upgrades under City Project 19029 – Citywide Lift Station Repair.
- 2.04 Determine potential utility conflicts (City and Third-Party Utilities). Design to avoid conflicts, if possible. Submit a list of identified companies to the City. Coordinate with the City’s Project Manager and Operating Departments. Assist City Project Manager in resolving unavoidable utility conflicts with other City utilities and with Third-Party utilities.
- 2.05 Provide temporary Traffic Control parameters, sequencing and performance requirements for the Contractors to develop the construction TCP.
- 2.06 Develop a detailed project schedule and provide the city with schedule updates as the project progresses.
- 2.07 Create a Drawing and Specification Index to be included in the 30% Design Submittal for the City’s review and approval.
- 2.08 Further develop assumptions made in the approved ELR to provide a 30% Design submittal for the City’s review and approval prior to developing detailed design plans and specifications.
- 2.09 Participate in Project 30% review meeting. Prepare and distribute meeting minutes to attendees within five working days of the meeting. Assimilate all review comments, as appropriate, and proceed to the 60% submittal.
- 2.10 Attend two (2) site visits to gather additional information, identify potential conflicts, verify locations, and photograph existing conditions. Coordinate findings with the City and resolve conflicts identified in the site visits.
- 2.11 Prepare Construction Documents in City standard format for the work identified in Option 2 of the approved ELR. Construction plans to include improvements or modifications to street, storm water, water, wastewater, gas and IT infrastructure within the Project limits, per the Project scope. Include standard City of Corpus Christi detail sheets and specifications as applicable to the Project.
 1. Prepare construction plans in compliance with CPPS using English units on 11” x 17”.
 2. Provide temporary Traffic Control parameters, sequencing and performance requirements for the Contractors to develop the construction TCP.
 3. Provide pollution control measures and BMP layout for the Contractor’s Storm Water Pollution Prevention Plan, using the City Standard Notes and BMP Detail Sheets as applicable.
- 2.12 Submit two (2) sets of the **interim plans** (60% submittal) in half-size (11” x 17”) hard copies and electronic format using City Standards as applicable to City staff for review and approval purposes with 60% estimates of probable construction costs. Identify distribution list for plans and bid documents to all affected franchise utilities and stakeholders.

1. **Required** with the interim plans is:
 - a. Design Submittal Packet Checklist
 - b. Executive Summary of the 60% submittal.” which will identify and briefly summarize the Project by distinguishing key elements of the Project, decisions made, outstanding issues, items TBD, Opinion of Probable Construction Costs (OPCC) compared to construction budget and the schedule with changes identified.
 - c. Project Submittal Checklist
 - d. Drawing Review Checklist
 - e. OPCC
 - f. Drawings
 - g. Draft Table of Contents with specification list
- 2.13 Participate in Project 60% review meeting. Prepare and distribute meeting meetings to attendees within five working days of the meeting. Assimilate all review comments, as appropriate, and upon confirmation from the City PM proceed to the 90% design.
- 2.14 Submit two (2) sets of the **pre-final plans and bid documents** (90% submittal) in electronic and half-size hard copies using City Standards as applicable to City staff for review and approval purposes. Include the 90% estimate of probable construction costs, 90% submittal Executive Summary, Submittal Packet, Project, and Drawing Checklists, responses to previous review comments and the Contract Document Book with in-line Track Changes in red to identify all proposed edits to the City Construction Contracts.
- 2.15 Participate in Project 90% review meeting. Prepare and distribute meeting minutes to attendees within five working days of the meeting. Assimilate all review comments, as appropriate, and proceed to the pre-ATA submittal.
- 2.16 Assimilate all pre-ATA comments, as appropriate, and provide one (1) set of the **final plans and contract documents** (signed and sealed, electronic and half-size hard copy using City Standards as applicable) suitable for reproduction. Said bid documents henceforth become the shared intellectual property of the City of Corpus Christi and the Consultant. The City agrees that any modifications of the submitted final plans (for other uses by the City) will be evidenced on the plans and be signed and sealed by a professional engineer prior to re-use of modified plans.
- 2.17 Provide Quality Assurance/Quality Control (QA/QC) measures to ensure that all submittals accurately reflect the percent completion designated and do not necessitate an excessive amount of revision and correction by City. Additional revisions or design submittals are required (and within the scope of Consultant’s duties under this Contract) if, in the opinion of the City Engineer or designee, Consultant has not adequately addressed City-provided review comments or provided submittals in accordance with City standards.
- 2.18 Prepare and submit Monthly Status Reports to the Project Manager no later than the last Wednesday of each month with action items developed from monthly progress and review meetings.

The City staff will:

- a) Designate an individual to have responsibility, authority, and control for coordinating activities for the Project.



- b) Provide the budget for the Project specifying the funds available for the construction contract.
- c) Provide electronic copy the City's Standard Specifications, Standard Detail sheets, Front End Contract Documents, and forms for required bid documents.

The records provided for A/E's use under this Contract are proprietary, copyrighted, and authorized for use only by A/E, and only for the intended purpose of this project. Any unauthorized use or distribution of the records provided under this Contract is strictly prohibited.

3.0 Bid Phase (T&M).

Upon receipt of authorization from the City Project Manager, the A/E will:

- 3.01 Participate in the pre-bid conference to discuss scope of work and to answer scope questions.
- 3.02 Provide clarifications to contractor questions on the CivCast platform.
- 3.03 Assist the City with the preparation of addenda if contractor questions require modification to the Contract Documents.
- 3.04 Attend bid opening.
- 3.05 Assemble all addenda and incorporate clarifications and modifications into conformed drawings and specifications. Mark contract docs as "Conformed". Reissue and deliver two (2) hard copy sets and one (1) electronic set of **conformed drawings and conformed Contract Documents** (PDF and original [CAD/Word/etc.]) to the City.
- 3.06 Review the final bid tabulation and bidder reference material and provide the City with a recommendation of award based on the bidder qualification criteria outlined in the contract documents.

The City staff will:

- a) Advertise the Project for bidding, maintain the list of prospective bidders, issue any addenda, prepare bid tabulation and conduct the bid opening.
- b) Review all received bids.
- c) Prepare agenda materials for the City Council concerning bid awards.
- d) Prepare, review, and provide copies of the Contract for execution between the City and the Contractor.

4.0 Construction Administration Phase (T&M).

Upon receipt of authorization from the City Project Manager, the A/E will:

- 4.01 Participate in pre-construction meeting conference and provide a recommended agenda for critical construction activities and elements impacting the project. This task includes time for coordination prior to and following the pre-construction meeting.
- 4.02 Review Contractor submittals and operating and maintenance manuals for conformance to Contract Documents.



- 4.03 If requested by the City, review and interpret field and laboratory tests.
- 4.04 Provide interpretations and clarifications of the Contract Documents for the Contractor and authorize required changes, which do not affect the Contractor's price and are not contrary to the general interest of the City under the Contract as requested by the Owner's Authorized Representative (OAR).
- 4.05 Bi-weekly site visits for the 12-month construction duration has been removed from scope at the request of the City. Ardurra will make up to four (4) periodic visits to the site of the Project upon request from the City. The purpose of these visits will be to confer with the City Project Inspector and Contractor to observe the general progress and quality of work, and to determine, in general, if the work is being done in accordance with the Contract Documents. This will not be confused with the project representative observation or continuous monitoring of the progress of construction. If more than four (4) visits are requested, Ardurra will request additional funds from the City's Project Manager.
- ~~4.06 Attend monthly construction progress meetings.~~
- 4.06 Provide interpretations and clarifications of the plans and specifications for the Contractor and recommendations to the City for minor changes which do not affect the Contractor's price and are not contrary to the general interest of the City under the Contract as requested by the OAR.
- 4.07 Attend final inspection with City staff, provide punch list items to the City's Construction Engineers for Contractor completion, and provide the City with a Certificate of Completion for the Project upon successful completion of the Project.
- 4.08 Review Contractor-provided construction "red-line" drawings. Prepare Project Record Drawings and provide a reproducible set and electronic file (both PDF and AutoCAD r.14 or later) within one (1) month of receiving the Contractor's red-line drawings. All drawings shall be CADD drawn using dwg format in AutoCAD, and graphics data will be in .dxf format with each layer being provided in a separate file. Attribute data will be provided in ASCII format in tabular form. All electronic data will be compatible with the City GIS system. The Record Drawings should incorporate the Contractor's red-lines and identify all changes made during construction. The Drawing Cover and each sheet should be clearly identified as the Record Drawing and should indicate the basis and date.
- 4.09 Prepare Record drawings based on redlines from the Contractor. A reproducible set and electronic copy in PDF and AUTOCAD formats will be provided.

The City staff will:

- a) Prepare applications/estimates for payments to Contractor.
- b) Conduct the final inspection with the Engineer.

B. ADDITIONAL SERVICES

This section defines the scope of additional services that may only be included as part of this contract if authorized by the Project Manager. A/E may not begin work on any services under this section without specific written authorization by the Project Manager. Fees for Additional Services are an allowance for

potential services to be provided and will be **negotiated** by the Project Manager as required. The A/E shall, with written authorization by the Project Manager, perform the following:

5.0 **Permit Preparation.**

Assist City Staff with the TxDOT Utility Installation Request (UIR) online submittal. The A/E will provide supplemental engineering data and documentation necessary for the required TxDOT permits.

The City staff will:

5.01 Prepare and submit the UIR through TxDOT's online system.

6.0 **Topographic and Right-of-Way (ROW) Surveys.**

All work must comply with Category 1-A, Condition I specifications of the *Texas Society of Professional Surveyors' Manual of Practice for Land Surveying in the State of Texas*, latest edition. All work must be tied to and in conformance with the City's Global Positioning System (GPS) control network. All work must comply with all TxDOT requirements as applicable. Include references tying Control Points to a minimum of two (2) registered NGS Benchmark Monuments in the vicinity of the Project that will not be disturbed by construction. Survey sheets shall be sealed, provided to the City and included in the bid document plan set.

6.01 Establish Horizontal and Vertical Control.

6.02 Establish both primary and secondary horizontal/vertical control.

6.03 Set project control points for Horizontal and Vertical Control outside the limits of area that will be disturbed by construction.

6.04 Horizontal control will be based on NAD 83 State plane coordinates (South Zone), and the data will have no adjustment factor applied – i.e. – the coordinate data will remain in grid.

6.05 Vertical control will be based on NAVD 88.

6.06 All control work will be established using conventional (non-GPS) methods. Perform topographic surveys to gather existing condition information.

6.07 Locate proposed soil/pavement core holes as drilled by the City's Geotechnical Engineering Consultant.

6.08 Obtain x, y, and z coordinates of all accessible existing wastewater, storm water, water, IT and gas lines as well as any other lines owned by third-parties and locate all visible utilities, wells and signs within the apparent ROW width along project limits. Survey shall include utility marking from the Texas 811 request.

6.09 Open accessible manholes and inlets to obtain information on structure invert, type, and size; and all related pipe size, type, invert, orientation, and flow direction.

6.10 Everything up to and including Level B subsurface engineering (SUE) is to be included in Topographic Survey. Surveying services related to Level A SUE are not included in

Topographic and ROW Survey services, but shall be provided as part of the scope of work for SUE below, if needed.

- 6.11 Locate existing features within the apparent ROW.
- 6.12 Locate and identify trees, at least five inches in diameter, and areas of significant landscape or shrubs within the apparent ROW.
- 6.13 Generate electronic planimetric base map for use in project design.
- 6.14 Research plats, ROW maps, deed, easements, and survey for fence corners, monuments, and iron pins within the existing ROW and analyze to establish existing apparent ROW.
- 6.15 Provide a preliminary base map containing apparent ROW, which will be used by the A/E to develop the proposed alignment and its position relative to the existing and proposed ROW. This preliminary base map must show lot or property lines, addresses, and significant business/facility names.

7.0 **Easement Acquisition Survey and Parcel Descriptions.**

All work must be tied to and conform with the City's Global Positioning System (GPS) control network and comply with Category 6, Condition I specifications of the *Texas Society of Professional Surveyors' Manual of Practice for Land Surveying in the State of Texas*, latest edition.

- 7.01 Set property corners and prepare right of way/easement strip parcel map depicting all parcels proposed for acquisition. Metes and bounds descriptions must indicate parent tract areas based on the most accurate information available. Strip map will show entire parent tracts at a representative scale and for information only. All existing easements within the parcels to be acquired and those within adjacent parcels must be shown.
- 7.02 Prepare Metes and Bound Instrument with supporting exhibits as required and agreed upon, subsequent to ELR acceptance for ROW parcels, utility easements and temporary construction easements.
- 7.03 Prepare individual signed and sealed parcel maps and legal descriptions for the required right of way acquisition for parcels and easements. A strip map showing all parcels required will be submitted along with parcel descriptions. If boundary conflicts between Owners are identified, additional fees may be authorized if needed. A/E shall submit parcel maps and legal descriptions prior to the 60% submittal.
- 7.04 A/E must obtain Preliminary Title Reports from a local title company and provide copies of the title reports to the City. Preliminary Title Report shall identify title ownership and any title encumbrances to all right-of-way to be acquired.

8.0 **Environmental Issues.**

- 8.01 Identify and develop a scope of work for any testing, handling, and disposal of hazardous materials and/or contaminated soils that may be discovered during construction.



9.0 **Warranty Phase.**

9.01 Provide a maintenance guaranty inspection toward the end of the one-year period after acceptance of the Project. Note defects requiring contractor action to maintain, repair, fix, restore, patch, or replace improvement under the maintenance guaranty terms of the contract. Document the condition and prepare a report for the City staff of the locations and conditions requiring action, with its recommendation for the method or action to best correct defective conditions and submit to City Staff. Complete the inspection and prepare the report no later than sixty (60) days prior to the end of the maintenance guaranty period.

III. **SCHEDULE**

Date	Activity
Upon Receipt of Signed Contract and NTP	Commence work on Project
4 Months after Receipt of Design NTP	60% Design Submittal
4.5 Months after Receipt of Design NTP	City Review
6.5 Months after Receipt of Design NTP	90% Design Submittal
7 Months after Receipt of Design NTP	City Review
8 Months after Receipt of Design NTP	Final Sealed Bid Package
8.5 Months after Receipt of Design NTP	Advertise for Bids
9 Months after Receipt of Design NTP	Pre-Bid Conference
10 Months after Receipt of Design NTP	Receive Bids
11 Months after Receipt of Design NTP	Begin Construction
23 Months after Receipt of Design NTP	Complete Construction

FEES

A. **Fee for Basic Services.**

The City will pay the A/E a fixed fee for providing all “Basic Services” authorized under Amendment No. 1 as per the table below except for the Bid Phase and Construction Administration Phase. The fees for Basic Services will not exceed those identified and will be full and total compensation for all services outlined in Section II.A.1-3 above, and for all expenses incurred in performing these services. The Bid Phase and Construction Administration Phase services as outlined in Section II.A.3 and Section II.A.4 respectively will be provided on a Time and Material (T&M) basis in accordance with the Engineer’s standard hourly rates for a maximum not to exceed amount per the table below. **The fee for this project is subject to the availability of funds. The Engineer may be directed to suspend work pending receipt and appropriation of funds.** For services provided, A/E will submit monthly statements for services rendered. The statement will be based upon A/E’s estimate (and with City’s concurrence) of the proportion of the total services actually completed at the time of billing. City will make prompt monthly payments in response to A/E’s monthly statements.

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B. Fee for Additional Services.

For services authorized by the Project Manager under Section II.B. “Additional Services”, the City will pay the A/E a not-to-exceed fee as per the table below:

Summary of Fees

Basic Services Fees	Original Contract	Amendment No. 1	Total Contract
1. Preliminary Design Phase	\$ 183,290.00	\$ -	\$ 183,290.00
2. Design Phase	\$ -	\$ 379,545.00 \$ 338,995.00	\$ 379,545.00 \$ 338,995.00
3. Bid Phase (T&M)*	\$ -	\$ 14,180.00 \$ 11,390.00	\$ 14,180.00 \$ 11,390.00
4. Construction Administration Phase (T&M)*	\$ -	\$ 110,485.00 \$ 70,795.00	\$ 110,485.00 \$ 70,795.00
Subtotal Basic Services Fees	\$ 183,290.00 \$ 183,290.00	\$ 504,210.00 \$ 421,180.00	\$ 687,500.00 \$ 604,470.00
Additional Services Fees	Original Contract	Amendment No. 1	Total Contract
1. Permit: TxDOT Permitting *	\$ -	\$ 5,750.00	\$ 5,750.00
2. Topographic & ROW Surveys *	\$ -	\$ 40,800.00 \$ 39,600.00	\$ 40,800.00 \$ 39,600.00
3. Easement Acquisition Survey and Parcel Descriptions *	\$ -	\$ 29,720.00 \$ 29,520.00	\$ 29,720.00 \$ 29,520.00
4. Environmental Issues *	\$ -	\$ 4,900.00	\$ 4,900.00
5. Warranty Phase *	\$ -	\$ 10,880.00	\$ 10,880.00
Subtotal Additional Services Fees		\$ 92,050.00 \$ 90,650.00	\$ 92,050.00 \$ 90,650.00
Total Fee		\$ 596,260.00 \$ 511,830.00	\$ 779,550.00 \$ 695,120.00

* T&M and Additional Services to be authorized by the City’s project manager.