



Construction Contract  
Initial Audit of  
Oso WRP Process Upgrades  
Project No. 20084A

for

City of Corpus Christi



FINAL REPORT: August 14, 2025

Table of Contents

EXECUTIVE SUMMARY ..... 3

PROJECT BACKGROUND ..... 4

AUDIT APPROACH..... 4

WORK PERFORMED ..... 5

SCHEDULE OF FINDINGS, OBSERVATIONS AND RECOMMENDATIONS ..... 6

APPENDIX A: DOCUMENTS REVIEWED & INTERVIEWS CONDUCTED..... 10

## EXECUTIVE SUMMARY

Talson Solutions, LLC (Talson), an independent construction auditing and advisory firm, conducted a Construction Contract Audit of the City of Corpus Christi's (the City) Oso Wastewater Reclamation Plant (WRP) Project No. 20084A (Project)<sup>1</sup>. CSA Construction, Inc. (CSA) is the general contractor under a Lump Sum Agreement (Contract) with an initial value of \$109.9 million. Engineering design services are being provided by Ardurra Group, Inc. (Ardurra).

Audit objectives were to assess CSA's compliance to contract obligations and deliverables and Ardurra and the City's compliance to construction and engineering management procedures. Audit scope included testing adherence to established processes and alignment to industry best practices for construction management program areas including cost and change order request (COR) management, progress and cost reporting, and overall project administration. The audit focused on the City, CSA, and Ardurra's activities from commencement through June 2025.

Talson found that CSA is generally compliant with the terms of the Contract. The City and Ardurra are sufficiently managing the Project. Communication of Project details and administration of financial controls between the City, CSA, and Ardurra was deemed mostly adequate and transparent. Based on the documentation sampled, there were no significant financial, schedule or contractual risks at the time of the audit nor was any reference to fraud, illegal acts or ethical violations noted.

The audit did result in two Findings and two Observations. Findings are considered areas of non-compliance to the Contract or established procedures. Observations are noted for areas of potential enhancement to controls or management actions. Although two of the audit results are similar to past audits for the City, enhancement to project controls was noted including project reporting and construction risk management.

### **Summary Audit Results:**

- Time impact analysis' as required by the Contract were not submitted and not a part of City approved CORs, which will extend completion by 98 days (***Finding No. 1***)
- Excessive overhead & profit mark-ups were noted in subcontractor CORs resulting in over charges to the City totaling \$9,623 (***Finding No. 2***)
- Pay Estimates included a "non-approved" Change Order (***Observation No. 1***)
- CSA is withholding retainage beyond the contractual and Texas Government Code limits for four of the six subcontractors totaling \$38,535 (***Observation No. 2***)

The audit included a detailed review of various Project documents and interviews with representatives of the City, CSA, and Ardurra. The City Auditor's Office, CSA, Ardurra, and Engineering Services were accessible and provided beneficial support to the audit. Details of the audit, including work performed and testing methodology, were presented and discussed with City Auditor's Office and Engineering Services.

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<sup>1</sup> On June 27, 2023, The City of Corpus Christi, through a board motion, approved execution of Amendment No. 1 to Talson's professional services agreement to conduct co-sourced construction audits. Talson's fee for performing this Construction Contract Closeout Audit is \$49,520.

## PROJECT BACKGROUND

The Project scope of work features construction of new headworks and lift station at Oso Water Reclamation Plant (WRP) which commenced operations in 2018. The current phase of work involves secondary treatment improvements and a process conversion to Biological Nutrient Removal (BNR). This will allow the City to decommission the breakpoint chlorination (BPC) system which is currently achieving ammonia removal by chemical addition and will allow the plant to maintain permit compliance by removing ammonia more efficiently and safely through biological processes. Scope of improvements include constructing a new 6 million gallons per day train, retrofitting existing aeration basins with fine bubble aeration equipment, construction of a new blower building, replacement or rehabilitation of existing scum and sludge removal components on secondary clarifiers, improvements to chlorine contact chambers to address short circuiting, demolition/ decommissioning of breakpoint chlorination system, upgrades in the existing belt press building, and other miscellaneous enhancements associated with administrative building, digesters and access roads.

Solicitation for bids by the City, inclusive of five addendums, was through a Design-Bid-Build project delivery method. At the time of bid openings, CSA was the only bid response received by the City for the Project. On March 19, 2024, the City of Corpus Christi entered into the Contract with CSA for construction services for a Lump Sum of \$109.9 million inclusive of \$18.7 million of allowances. Substantial completion is to occur within 1,465 calendar days from the Notice to Proceed date of June 11, 2024. The City has since approved 98 additional days to contract completion date through the approval of four time extension CORs.

As of Payment Estimate No. 8 for the period of April 1 to April 30, 2025, CSA has invoiced approximately thirteen-percent (13%) of the contract value and the City is withholding \$873,383 of retainage. There have been no change orders to the original contract value.

## AUDIT APPROACH

Talson conducted the audit in alignment with Generally Accepted Government Auditing Standards (GAGAS) and in accordance with Yellow Book guidance. Those standards and guidance require planning and performing the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings, observations, and conclusions within a detailed audit plan based on the audit objectives. Talson believes that the evidence obtained provides a reasonable basis for our conclusions based on the audit objectives.

Talson utilized a comprehensive risk-based approach to assess compliance with Contract provisions and identify any risks to successful Project completion, specifically schedule and budget. Talson assessed Project management (e.g., City, CSA, Ardurra, and subcontractors) alignment with industry best practices throughout the engagement and collaborated with the Project teams to ensure transparency of the audit work but also maintained independence.

Talson's independence declares that an internal auditor, following the standards, is free from any conflicts of interest or influences that could impair our objectivity and ability to perform audit duties in an unbiased manner, ensuring the integrity of the audit process; and stating we are independent and can conduct the audit without bias.

## WORK PERFORMED

Talson reviewed Project documents followed by fieldwork in the City's offices from July 25 to 27, 2025. Fieldwork consisted of a site visit, a review of documents, and Project team interviews. Specific audit activities included reviewing the following:

1. Contract between the City and CSA inclusive of terms and deliverables.
2. Contract-allowed costs (including allowances) and associated mark-ups.
3. CSA's Payment Estimate Nos. 1 and 8, inclusive of supporting documentation, schedule of value charges and material on hand.
4. Unanticipated Work Allowance<sup>2</sup> COR Nos. 7, 10 and 15 totaling \$208,025.
5. Project documentation: RFIs, submittals, meeting minutes, and a monthly schedule update to determine any potential risks.
6. Certified payroll, specifically testing compliance to prevailing wage rate requirements for heavy construction and building construction for Nueces and San Patricio County.
7. Professional Services Agreement between the City and Ardurra, including terms, conditions, Scope of Services, and task list with a billing breakdown by phase.
8. Project administration by the City, CSA and Ardurra.

Talson's audit procedures included assessing compliance to Contract obligations and alignment with established policies and procedures. Talson testing included areas of prior audit results, including findings, observations and/or recommendations for process enhancements.

### Notable examples of areas sampled include:

- Acceptable preparation and format of Project meeting minutes distributed by Ardurra are consistent with industry norms. The meeting minutes are compliant with General Conditions 20.04.B.2 Agenda Items for OAC meetings.
- Contractual allowance items were being adequately managed and approved in accordance with City procedures, with minor exception to adherence to allowable overhead and profit mark-up percentages.
- Bid form schedule of values aligned with pay estimates prepared by Engineering Services.
- Independent cost verifications were performed by Ardurra to support approved CORs and determine that material and labor costs were fair and reasonable.
- Improved adherence to the City's Risk Management Procedure QA2 was noted, including the completion of a Risk Register and regular discussions occurring regarding identifying and mitigating risk to the Project.
- Although only one responsive bid was provided for construction management services, the City provided adequate support and details of the solicitation and RFP responses included references to advertisements, pre-bid conferences and the volume of plan holders registered.

A complete list of documents reviewed and interviews conducted is listed in *Appendix A*.

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<sup>2</sup> CSA's Contracted Unanticipated Work Allowance totals \$1 million.

## SCHEDULE OF FINDINGS, OBSERVATIONS AND RECOMMENDATIONS

The audit yielded two Findings and two Observations. For reference, the following classifications are provided to ensure alignment within our approach and methodology. For this audit, the definition of a ***Finding*** and an ***Observation*** are as follows:

- ***Finding*** is an issue where a party (the City or other) is non-compliant with a contractual provision, a stated policy, or procedure. A finding may also be identified in situations of impact to the schedule or budget, or an immediate control risk has been identified. Corrective action must be taken, and a management response provided.
- ***Observation*** does not mean there is an issue of non-compliance; however, the auditor has determined that the issue poses a potential risk of becoming a finding in the future and ***may*** require a management response. An observation might also be a process enhancement that can be incorporated in a project going forward or on future capital projects.

The following **Findings** have been discussed with the City:

### **Finding No. 1 – Time Extension Request**

CSA is non-compliant with the requirements for requesting a time extension to the Contract duration. COR Nos. 7R1, 8R1, 9 & 10 did not include a time impact analysis as required by Article 13.02.F.2. Additionally, although Engineering Services has approved time extension requests in COR Nos. 7R1, 8R1, 9 & 10 adding 98 days to the Project, at the time of the onsite fieldwork and interviews, a formal change order to modify the contractual substantial completion date of June 15, 2028 had not been issued amending substantial completion to August 2028.

This a low risk to the City, but it is a best practice to issue change orders that modify the original agreement in a timely manner. Issuance of approved changes to contractual completion dates also mitigates the risk of disagreements over approved changes in the event of any potential future delay claims and staffing changes.

This finding is consistent with previous audits conducted in FY 2024. Engineering Services previously indicated in the management response to this finding that although revised schedules are not submitted with time extension requests, they are included in the final approved time extension, and additional training would be provided to staff as a corrective action.

### **Recommendation**

It is recommended that the City issue a change order amending the contract duration at it is earliest opportunity.

### **Finding No. 1 Management Response:**

Management Agrees: Management is currently working with the contractor to incorporate all proposed changes into Change Order No. 1 and amend the contract duration.

**Finding No. 2 - Excessive Mark-ups for Subcontractor Work**

CSA's subcontractor, Big State Electric, is calculating overhead and profit markups for a combined total of 20%, which is 5% greater than the contractually allowed 15% markup on changes for self-performed work per Article 15.01.E.3.c.1. For COR Nos. 7, 10, and 15, which totaled \$208,025<sup>3</sup>, the overcharges totaled \$9,623. The CORs were funded through CSA's contractual allowance for Unanticipated Work and allowed for an incorrect basis of negotiation with the City through the use of excessive mark-ups for the proposed cost of work.

COR No.	Date	Subcontractor	Overhead & Profit (20%)	Allowed Overhead & Profit (15%)	Overcharge
7	01/16/2025	Big State Electric	\$19,163	\$13,488	\$5,575
10	01/16/2025	Big State Electric	\$5,735	\$4,096	\$1,639
15	05/29/2025	Big State Electric	\$8,430	\$6,021	\$2,409
TOTALS			\$33,328	\$23,705	\$9,623

Furthermore, the 2% bond costs included in Big State Electric's pricing for COR Nos. 7, 10 and 15 is greater than the 1.18% bond cost stated in Big State Electric's subcontract agreement.

There is a moderate risk to the City if change order pricing is not thoroughly vetted by Engineering Services and Ardurra resulting in potential overpayment to the contractors / subcontractors.

**Recommendation**

Engineering Services should consider developing a COR review checklist to be completed and signed off by the City's Project Manager indicating that the pricing has been reviewed, is fair and reasonable and all the contract allowed mark-ups have been applied correctly.

**Finding No. 2 Management Response:**

Management Disagrees: The change orders noted were negotiated as lump sum. Article 15 does not apply to lump sum change orders. The loading is part of the discussion and negotiation of change orders. Article 15 is utilized when the City is unable to reach agreement on a lump sum change order. In that case, the City is assuming more of the cost risk. That would justify a lower loading rate for the contractor.

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<sup>3</sup> Although submitted with labor and material prices and OH/P mark-ups that exceeded contractual limits, the City approved the CORs as lump sum and not as a time & material change and transferred risk of any supplemental cost over runs to CSA.



The following **Observations** have been discussed with the City:

**Observation No. 1 – Inaccurate Change Order references in Pay Estimate Nos. 1 through 8**  
Pay Estimate Nos. 1 through 8 included a reference to approved Change Order No. 1 as a “no cost change”, however Change Order No. 1 has not been approved and/or issued for signature.

**Recommendation**

The City (and/or CSA) should remove any unapproved change orders from future Pay Estimates.

**Observation No. 2 – CSA is holding 10% Retainage on Subcontractors**

CSA is withholding 10% retainage from all subcontractor billings, except for Big State Electric and Dana Industrial Group. This percentage is greater than the 5% the City is withholding from the CSA’s billing and the withholding of 10% retainage from subcontractor payments conflicts with the flow-down provisions of the City’s contract with CSA into the subcontracts and with the Texas Government Code 2252.032 Retainage.

- a) In accordance with State of Texas law governing public works contracts, a Prime Contractor may not withhold from a subcontractor a greater percentage of retainage than the percentage that may be withheld from the Prime Contractor by the governmental entity under the contract. *In the Agreement, Article 5.02 Progress Payments Retainage* states the standard retainage is 5%.
- b) CSA’s detailed Subcontractor Status Report, dated May 29, 2025, details payments made to subcontractors and retainage withheld at 10%. See the table below.

Subcontractor	To-date Invoiced Amount	CSA 10% Retainage Withheld	City -5% Allowable Retainage
Integrated Demolition & Remediation	\$267,908	\$26,790	\$13,395
JB Steel	\$260,826	\$26,082	\$13,041
Matthew’s CCAC	\$163,633	\$16,363	\$8,182
Precision Masonry Co.	\$78,328	\$7,832	\$3,916
<b>TOTAL</b>	<b>\$770,695</b>	<b>\$77,069</b>	<b>\$38,534</b>

This observation was previously included as part of Williams Lift Station Audit (January 2024), being constructed by Associated Construction Partners, Ltd. The City indicated that a provision would be incorporated to the City’s contracts specifically referencing *Texas Government Code 2252.032 Retainage*. The contract provision referencing *Texas Government Code 2252.032* was not included within the March 2024 CSA Contract for this Project.

**Recommendation**

Contractor should review all subcontracts and adjust the percentage of retainage being withheld and pay the subcontractors for any amount withheld above the contractually allowed 5%.



**Management Observation Nos. 1 & 2 Responses:**

**Observation No. 1**

Management Agrees: All Change Order Requests will be turned into Change Orders and included in the pay estimates.

**Observation No. 2**

Management Disagrees: Contractors should consult with their own attorneys about following State Law.

~ End of Audit Report ~

**Initial Audit of Oso WRP Process Upgrades**

**Appendix A: Documents Reviewed & Interviews Conducted**

**From City of Corpus Christi:**

- 1) City of Corpus Christi Request for Bid
- 2) Request for Bid Addendums 1, 2, 3, 4, 5
- 3) OSO WRP Final Agenda Memorandum with Tabulation of Bids
- 4) Ardurra Construction Contract Award Recommendation
- 5) Conformed Contact Documents – OSO WRP
- 6) Daily Activity Report from 01/14/2025, 04/14/2025, 08/14/24,10/14/24
- 7) Monthly Construction Meeting Minutes from 5/13/2025
- 8) CSA Payment and Performance Bonds
- 9) Payment Estimates 1 and 8
- 10) OSO WRP Project Risk Assessment

**From CSA Construction, Inc.:**

- 1) Change Order & Allowance Log from 6/2/2025
- 2) Job Cost Analysis from 4/30/2025
- 3) CSA Construction Labor Burden Detail
- 4) List of Subcontractors and Suppliers
- 5) RFI Log from 6/2/2025
- 6) May 2025 Updated Construction Schedule
- 7) May 2025 Subcontractor Status Report
- 8) CSA Construction Submittal Log from 6/2/2025
- 9) Change Order Request Nos. 1, 7, 10, and 15
- 10) Grace Water Services, LLC. Fully Executed Subcontractor Agreement
- 11) Lone Star Blower Quote – Scope (Both Contract and Procurement)
- 12) Ovivo USA, LLC. Clarifiers PO – Fully Executed
- 13) Process Wastewater Technologies, LLC PO – Fully Executed
- 14) CSA construction Certified Payroll from 4/12/2025, 05/10/2025, 06/14/2025
- 15) Big State Electric – Ltd. Certified Payroll Register for 2/15/2025, 3/15/2025, 04/12/2025
- 16) DANA Industrial Group Certified Payroll Register from 1/14/2025, 2/25/2025
- 17) JB Steel Certified Payroll Register from 2/16/2025
- 18) Mathews CCAC Certified Payroll Register from 3/16/2025
- 19) Precision Masonry Company Inc. Certified Payroll Register from 3/16/2025
- 20) Atlas Universal Fully Executed Subcontractor Agreement
- 21) Big State Electric Fully Executed Subcontractor Agreement
- 22) Integrated Demolition and Remediation Fully Executed Subcontractor Agreement
- 23) Mathews CCAC Fully Executed Subcontractor Agreement

**Project Management Team Interviews:**

City of Corpus Christi

- Daniel Deng – Assistant Director of Treatment Construction
- Claudia Pena-Fernandez – Assistant Director, Support Services
- Jeff Edmonds, PE – Director of Engineering

City of Corpus Christi Plant Operators

- Earl Richardson – Supervisor
- Freddie DeLeon – Supervisor

Ardurra

- Logan Burton, PE – Water Practice Director
- Kate Narley-Quaye, PE – Project Manager

CSA Construction

- Rick Mayfield – President

August 14, 2025

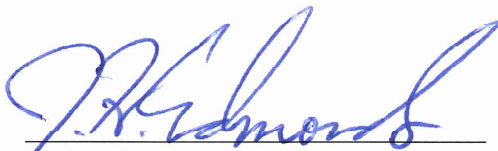
George H. Holland  
City Auditor  
Corpus Christi, Texas

Re: Construction Contract Audit Report  
Oso WRP Process Upgrades Project No. 20084A

We have carefully reviewed the issues presented in the audit report referenced above, and our plans to correct the issues are described here within.

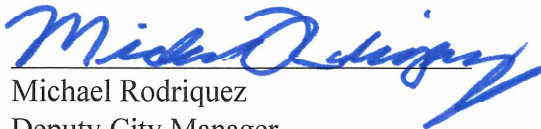
We are committed to correcting the issues in the audit report by implementing the action plans in a timely fashion.

Sincerely,



Jeffrey H. Edmonds  
Director of Engineering Services

8/15/25  
Date



Michael Rodriguez  
Deputy City Manager

8.19.25  
Date



Peter Zanon  
City Manager

8.29.25  
Date