



May 10, 2023

Alton A. Alexander
Construction Project Specialist
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1200 Broadway Blvd.
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**Ref: Commissioning Services for High School HVAC Air Side Systems Replacements and Upgrades
Project #2022113**

Dear Mr. Alexander:

Thank you for inviting Bath Group, Inc. to submit a proposal for professional commissioning services for the HVAC Air Side Systems Replacements and Upgrades project at Gregory Portland Independent School District. We have reviewed the Issued for Construction Documents dated April 20, 2023, and we are pleased to offer this fee proposal to perform the commissioning of the specific systems outlined below. This letter is a brief written Scope of Work that is intended to be a description of the proposed work included on our Man-Hour Scope form B-101 attached to this letter. This fee proposal has estimated time for specific work required. The time allotments for each task may be adjusted during the execution of the work.

Scope of Work

Review of submittals. The specification reviews will be detailed for compliance with the specifications and for proper coordination of the MEP trades. The submittal reviews will include all systems that are to be commissioned and include HVAC equipment and HVAC Controls.

Develop a commissioning plan and forms for the documentation of all commissioning functions. All commissioning documentation will be controlled using an on-line database CxAlloy developed specifically for this project.

We will conduct meetings to kick-off the pre-functional checklists documentation and to kick-off functional testing with the contractors. It is expected that there will be multiple meetings for retraining and discussion of items required by the Contractor. There will be two meeting to introduce the parties and review the process with the participants and another meeting prior to beginning the functional performance tests. We will also attend the Contractor led commissioning meetings remotely (Teams or Zoom) when they are scheduled. However, the

Contractor will be required to head the meeting and produce agendas and minutes the Contractor's meeting.

The entire commissioning process will be tracked using Bath's CxAlloy database management system. This data collected will be able to be exported as an excel spreadsheet for use by the district's asset management or maintenance databases. The cost of the database is included in the fee proposal.

We will make at least 3 field observations prior to functional performance testing. These observations will include testing, the installation observations, controls installation, HVAC equipment, and startup of the major equipment (Air Handlers and Drives). An observation report will be formally submitted after each observation in a timely manner.

We will verify the Pre-Functional checklists are properly filled out. We will verify 10% of data input by the Contractor on the Pre-Functional checklists.

We will perform the functional performance testing of the HVAC systems as detailed in the attached Man-Hour estimate. This will be conducted remotely and on-site during building turnover. This proposal does not include change of season testing. We will need access to the building automation system during Functional Commissioning.

We will verify training has been conducted and coordinated properly; review O&M manuals of the equipment commissioned to verify completeness; create, maintain and update an issue log for all commissioned equipment, produce a final report with all commissioning forms including contractor supplied start-ups, functional performance test procedures, equipment identification, etc.; and produce a searchable PDF for the maintenance staff that includes links for easy access to the drawings, specifications, submittals, O&M manuals and all commissioning forms.

MEP Systems to be Commissioned

HVAC Systems:

HVAC systems to be commissioned:

-) Outdoor Air Handling Units
-) Energy Recovery Units
-) Outdoor Roof Mounted Air Handling Units
-) Electric Duct Heaters
-) Blower Coil Air Handling Units
-) Terminal Units (tested by trending)
-) Food Lab Hood and Fans
-) Small Exhaust Fans
-) Dehumidifier
-) Building Automation System

All functional tests are to be performed by the Commissioning Authority.

We offer to provide professional building commissioning services for an Hourly Based - Fee Not to Exceed amount of **\$49,392.50**. The hourly rate indicated on the attached Form B-101 will be used for all hours. Bath will not exceed the proposal amount without the written consent received from GPISD. This fee proposal is valid for 60 days from the date of this fee proposal letter.

Deliverables

- Meeting Minutes and Observation Reports
- Initial and Updated Issue Logs
- Pre-Functional Checklists for the Contractor
- Functional Performance Test procedures
- Equipment Identification and Pre-functional Checklist as required
- O&M Review Forms
- Final Commissioning Report
- Searchable System Manual

Timeline

We can begin work on this project immediately and have sufficient staff available to meet the project's expected delivery dates.

Consultant and HUB Plan

Bath Commissioning will be self-performing all work indicated in the scope of this project.

We look forward with great interest to working with you on this exciting project.

Sincerely yours,
Bath Group, Inc.



Brian Mende, P.E., CCP

Bath Group, Inc.

MAN-HOUR SCOPE form B-101

Project: **GP High School HVAC Airside Systems ReplacementS and Upgrades**
 Client: **Gregory Portland ISD**

Date: **5/9/2023**
 Bath Job No.

ESTIMATE SUMMARY					Principal	CxA or PE	Grad Eng or Tech	Trips	Total
Estimated Project Costs					\$0	\$34,865	\$11,528		46,392.50
Estimated Hours					0	183.5	79.5	12	
Estimated Cost per Man-hour					\$200.00	\$190.00	\$145.00		
Expenses					Expenses & CxAlloy				3,000.00
Total Estimate									49,392.50

Project Scope: Supply commissioning services for the equipment/systems indicated on the following pages.

TASK DESCRIPTION	Principal	CxA	rad Eng or Tec	Trips	Item Total
Cx Services					
Review and Update Owner's Project Requirements (OPR)					0
Review and Updated Basis of Design (BOD)					0
Develop Cx Plan for Design Phase					0
Participate in Design Review Meetings					0
Develop Cx Specifications					0
Develop Cx Plan		4			4
Develop Pre-Functional Checklist		14	14	2	27
Develop Functional Testing					0
Verify Fully Developed Sequence of Operation		4			4
Develop Integrated System Test					0
Provide Design Document Reviews					0
Prepare Issues & Benefits Log					0
Attend and participate in Kickoff -Commissioning Meeting		12		3	12
Conduct Site Visits & Observations		16		3	16
Develop/Refine Pre-Functional Checklist					0
Develop Equipment Startup Checklists					0
Attend Contractor Cx Team Meetings (remotely)					0
Review Technical Submittals		12			12
Perform 10% sampling of PFC's		8			8
Oversight/Observation of Equipment Startups (duct tests)					0
Develop/Finalize Functional Test		12			12
Witness Functional Test		66	66	4	132
Develop/Refine Integrated System Testing					0
Document/Witness Integrated System Testing					0
Maintain Master Issues Log		4			4
Maintain Testing Record & Progress Report		4			4
Review O&M Manuals		4			4
Develop a Facility Operational Manual		12			12
Develop a Summary Commissioning Report					0
Verify Deferred & Seasonal Testing					0
Issue Final Commissioning Report		12			12
Post Occupancy review 10 months after Substantial Completion					0
		Total umber of Trips			12
		Total for Commissioning Process			263

- Notes**
- 1 Specialize testing equipment such as load banks if required will be additional cost without markup.
 - 2 Factory witness testing of major equipment will be on a cost basis.

MAN-HOUR SCOPE form B-101

Project: **GP High School HVAC Airside Systems ReplacementS and Upgrades**
 Client: **Gregory Portland ISD**

Date: 5/9/2023
 Bath Job No.

Mechanical

Total Hours for Mechanical: 147.0

Prefunctional Checkout and Start-Up Checklists

	# of Lists	Man Hours	Functional Tested	Total
Outdoor Air Handling Units	1.0	3.0	yes	3.0
Energy Recovery Units	1.0	3.0	yes	3.0
Outdoor Roof Mounted Air Handling Units	1.0	4.0	yes	4.0
Electric Duct Heaters	1.0	3.0	yes	3.0
Blower Coil Air Handling Units	1.0	3.0	yes	3.0
Terminal Units	1.0	3.0	yes	3.0
Food Lab Hood and Fans	1.0	3.0	yes	3.0
Small Exahust Fans	1.0	2.0	yes	2.0
Dehumidifier	1.0	3.0	yes	3.0
Total				27.0

Functional Testing

Outdoor Air Handling Units

Functional Test	# of Units	Time	Retest	Total
Outdoor Air Handling Units	2.0	4.0	1.0	10.0

Energy Recovery Units

Functional Test	# of Units	Time	Retest	Total
Energy Recovery Units	6.0	4.0	1.0	30.0

Outdoor Roof Mounted Air Handling Units

Functional Test	# of Units	Time	Retest	Total
Outdoor Roof Mounted Air Handling Units	1.0	4.0	1.0	5.0

Electric Duct Heaters

Functional Test	# of Units	Time	Retest	Total
Electric Duct Heaters	8.0	2.0		16.0

Blower Coil Air Handling Units

MAN-HOUR SCOPE form B-101

Project: **GP High School HVAC Airside Systems RepalcementS and Upgrades**
 Client: **Gregory Portland ISD**

Date: 5/9/2023
 Bath Job No.

Mechanical

	# of Units	Time	Retest	Total
Functional Test Blower Coil Air Handling Units	1.0	4.0		4.0

Terminal Units

	# of Units	Time	Retest	Total
Functional Test Terminal Units	9.0	2.0		18.0

Food Lab Hood and Fans

	# of Units	Time	Retest	Total
Functional Test Food Lab Hood and Fans	7.0	2.0		14.0

Small Exahust Fans

	# of Units	Time	Retest	Total
Functional Test Small Exahust Fans	42.0	0.5		21.0

Dehumidifier

	# of Units	Time	Retest	Total
Functional Test Dehumidifier	1.0	2.0		2.0

Total Functional Test

120.0

MAN-HOUR SCOPE form B-101

Project: **GP High School HVAC Airside Systems ReplacementS and Upgrades** Date: 5/9/23
 Client: **Gregory Portland ISD** Bath Job No.

Building Automation System **Total Hours for BAS: 12**

Prefunctional Checklist and Start-Up Checklists

	# of Lists	Man Hours	Functional Tested	Total
Control Documentation, Review, and Monitor	1	8	no	8
Point to Point Verification			By T&B	
Verify Contractor Calibration			By T&B	
Graphic Testing		4	Yes	4
Verify all Control Sequences by BAS			Included	
				<u>12</u>