CONTRACT COMBINED CTE @ MIDLAND AVENUE TEST AND BALANCE SERVICES FCPS RFP# 72-22

THIS CONTRACT is entered into this 16th day of December, 2022 by and between the BOARD OF EDUCATION OF FAYETTE COUNTY, KENTUCKY, 450 Park Place, Lexington, Kentucky 40511, hereinafter referred to as the Board, and SYNERGY TEST AND BALANCE, 2611 Waterfront Parkway, Ste. 340, Indianapolis, Indiana 46214, hereinafter referred to as Second Party.

PARTIES:

The Board of Education of Fayette County, Kentucky, Division of Facility Design and Construction has established the need to hire the professional services of a test and balance firm to perform test and balance services for the construction of the New Combined CTE School at Midland Avenue.

Second Party provides test and balance services as described herein.

PURPOSE:

The purpose of this contract is to provide test and balance services for the construction of the New Combined CTE School at Midland Avenue.

NOW, THEREFORE, for and in consideration of the mutual promises set out herein, it is hereby agreed by and between the parties hereto as follows:

- 1. The Second Party shall provide the above described services to the Division of Facility Design and Construction, as an independent contractor, under the direction of Melinda Joseph-Dezarn, AIA, Director.
- 2. The services will be provided as set out in FCPS RFP #72-22 and the proposal from Synergy Test and Balance dated November 4, 2022, attached hereto and incorporated herein by reference.
- 3. The Board agrees to pay the Second Party for the services provided in this contract the amount of \$58,987.00. Additional expenses to be reimbursed are \$0, with a total amount of this contract not exceeding \$58,987.00.
- 4. The Second Party shall provide to the Fayette County Board of Education an invoice for services rendered under this contract and any agreed upon expense at regular intervals. Original receipts will be provided for all expenses to be reimbursed. Unless otherwise stated, travel and per diem shall be reimbursed based upon the district's current travel policies.
- 5. The Second Party is not debarred or suspended or otherwise excluded from or ineligible for participation in Federal assistance programs under Executive Order 12549, "Debarment and Suspension."

- 6. This contract may be re-negotiated based upon, but not limited to, increases in services to participants. Any modifications shall be agreed to in writing and signed by both parties.
- 7. The staff providing services to the Board herein are employees of the Second Party and shall not represent to anyone that they are employees or agents of the Board.
- 8. Either party shall have the right to terminate this agreement at any time upon a fourteen (14) day written notice, either personally delivered or served by some form of return receipt mail evidencing delivery, to the other party.
- 9. Each of the parties agrees to comply with all applicable law concerning the performance of the provisions of this contract.
- 10. The Second Party certifies that it shall not discriminate in any of the services performed in connection with this contract or in any program or activity it operates on the basis of race, color, national origin, religion, age, creed, political affiliation, marital status, sex, or disabling condition.
- 11. KRS 45A.455 PROHIBITS CONFLICTS OF INTEREST, GRATUITIES, AND KICKBACKS TO EMPLOYEES OF THE BOARD OF EDUCATION IN CONNECTION WITH CONTRACTS FOR SUPPLIES OR SERVICES WHETHER SUCH GRATUITIES OR KICKBACKS ARE DIRECT OR INDIRECT. KRS 45A.990 PROVIDES SEVERE PENALTIES FOR VIOLATIONS OF THE LAWS RELATING TO GRATUITIES OR KICKBACKS TO EMPLOYEES WHICH ARE DESIGNED TO SECURE A PUBLIC CONTRACT FOR SUPPLIES OR SERVICES.
- 12. Contractor understands that pursuant to KRS 160.380, any adult who is permitted access to school grounds on a regularly scheduled and continuing basis pursuant to a written agreement for the purpose of providing services directly related to a student or students as part of a school-sponsored program or activity must submit to a national and state criminal background check by the Department of Kentucky State Police and the Federal Bureau of Investigation and have a clear CA/N check.
- 13. If any section, paragraph, or clause of this contract shall be held invalid by any court of competent jurisdiction, the invalidity of said section, paragraph, or clause shall not affect any remaining provisions herein.
- 14. This contract is deemed to be made under and shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky.
- 15. Venue for any legal action filed concerning this contract shall be Fayette County, Kentucky.
- 16. This writing reflects the entire agreement between the parties. No change or modification of this Agreement shall be valid or binding upon the parties hereto, nor shall any waiver of any terms or conditions hereof be deemed a waiver of such terms or conditions in the future, unless such change, modification or waiver shall be in writing and signed by the parties hereto.

17. This agreement will be in effect from December 16, 2022, through June 30, 2025, unless terminated by either party as defined in Paragraph 8.

IN WITNESS WHEREOF, the parties have executed this contract the day, month, and year above written.

Director's Approval	BOARD OF EDUCATION OF FAYETTE (KENTUCKY	COUNTY
Melinda Joseph-Dezarn Da Director, Facility Design & Constructio	33 -, , -, ,,	Date
	SYNERGY TEST AND BALANCE	
	Cheryl L. Yates, President	Date



FAYETTE COUNTY PUBLIC SCHOOLS

REQUEST FOR PROPOSAL

TESTING, ADJUSTING, AND BALANCING SERVICES FOR

NEW COMBINED CTE SCHOOL

PROJECT ARCHITECT



PART 1 BIDDING INFORMATION

1.1 SOLICITATION OF PROPOSAL

- A. On behalf of the Fayette County Public Schools (FCPS) hereinafter referred to as the "Owner", EOP Architects is soliciting proposals from qualified, independent Testing and Balancing contractors (TAB) for New Combined CTE School, located at 100 Midland Avenue, Lexington, Kentucky, in accordance with the requirements and instructions set forth in this Request for Proposal and Testing and Balancing specifications of the contract documents. Refer to the contract document specifications section 23 05 93 TESTING, ADJUSTING AND BALANCING FOR HVAC.
- B. The project will consist of full renovation of the existing Lexington Herald Leader Building. The existing facility is approximately 174,000 square foot. The project will consist of four (4) levels. The project will consist of multiple Career and Technical programs ranging from Welding, Automotive, Carpentry, Culinary, Electrical, Nursing, Law Enforcement, and more. The HVAC system shall be geothermal water-source heat pump with full dedicated energy recovery. There will be an alternate bid for Boiler / Tower system. There will be various vehicle exhaust and dust collection system. There will be dedicated make-up and exhaust for Culinary Labs. The Architect for this project is Ross Tarrant Architects (RTA) and the Mechanical and Electrical Engineers are Shrout Tate Wilson (STW).
- C. The successful TAB contractor will have a contract directly with the Owner and will provide services as required by specifications.
- D. A digital set of contract documents (plans and specifications) may be downloaded from Lynn Imaging website.
 - 1. Contractors submitting proposals are responsible to ensure that all addenda are reviewed and priced accordingly.
- E. All questions regarding TAB Scope, specifications, etc. shall be addressed in writing to Joshua Cairell, Shrout Tate Wilson, and transmitted via email to josh.cairell@stweng.com All questions must be submitted no later than Noon, Wednesday, October 26, 2022.

1.2 SUBMITTAL OF PROPOSAL

- A. All proposals shall be addressed to Fayette County Public Schools, 450 Park Place, Lexington, Kentucky 40511 and shall be delivered in a sealed envelope to Fayette County Public Schools Office of Facility Design, located at 128 Walton Avenue, Lexington, KY 40505 by 12:00 PM on November 4, 2022
 - 1. Construction Bid Openings will occur at 1:30pm. TAB proposals will be opened and reviewed following Construction Bid Opening.
- B. Any contractor submitting a proposal must honor their pricing for a minimum of 60 days. This will provide the owner time to process contracts.

1.3 TAXES

A. All taxes, fees, permits, etc. are to be included in the proposal.

1.4 INVOICES AND PAYMENT

- A. Invoices shall be addressed to Fayette County Public Schools and will be submitted on a monthly basis to Fayette County Public Schools. A copy of the invoice should be submitted with the monthly pay application for comment and review by the engineer. Upon review, the engineer will make recommendation of payment and invoice can be sent to FCPS for processing. Invoices should not be sent to FCPS without review by engineer.
- B. Invoices will be reviewed monthly at the regular progress meeting. Invoices submitted after the regular progress meeting will not be reviewed or processed until the next regular progress meeting.
- C. Upon review and approval by STW and the Owner, payments will be mailed directly to the TAB Contractor from FCPS within 30 days of the invoice date.

1.5 COMPLIANCE WITH LAWS

- A. The successful commissioning agency may be subject to background checks, and the successful commissioning agency shall provide background checks as requested by the Owner at any time. Per the intent of KRS 160.380(4), employment of workers convicted of sex crimes is prohibited on this project. Any monetary damages or costs incurred due to the Agency's violation of this provision shall be at the sole expense of the Agency.
- B. All items and services furnished under this contract shall comply with all Federal, State, and local laws and regulations; and shall have all proper labeling where applicable.
- C. The Owner reserves the right to reject any item, piece of equipment, or service in the event of a violation of the requirements of this RFP or the commissioning specifications.

1.6 COMPLIANCE WITH RFP REQUIREMENTS

A. It is the responsibility of all TAB contractors providing a proposal for this work to be in full compliance with this RFP document and specifications.

<u>Exclusions to items specifically required by contract documents and this RFP are not permitted.</u>

1.7 PROPOSAL EVALUATION AND AWARD

A. The owner and STW will review all proposals thoroughly to ensure compliance with the requirements herein. The owner will decide and issue a notice to proceed to the successful TAB Contractor. This Notice to Proceed may be issued at any time by the Owner and is not subject to any requirements for an interview or negotiation with TAB Contractor submitting a proposal.

- B. The Owner reserves the right to negotiate, accept, and reject any or all proposals, as well as evaluate all proponents based on criteria including but not limited to the following:
 - 1. Experience and Qualifications
 - 2. Proposal Quality
 - References
 - 4. Fees
 - Interviews
 - 6. Architect/Engineers Recommendations
- C. All TAB contractors shall be willing and prepared to attend an interview if so chosen by the Owner. TAB contractors submitting a proposal for this job may be required to provide a presentation, sample documents, qualifications, key staff, relevant experience, etc. during said interview.

1.8 OWNERS REPRESENTATION

A. Shrout Tate Wilson shall act as the owner's representation regarding any items that may require addressing throughout Testing and Balancing procedures and covered under this RFP and associated specifications of the contract documents.

1.9 QUALIFICATIONS AND EXPERIENCE

- A. The TAB agency shall have the minimum qualifications:
 - 1. At least ten (10) years of experience in the testing and balancing field, and with the types of controls, HVAC systems, and buildings included in this project.
 - NEBB and/or AABC Certifications
 - 3. Knowledge of operation and maintenance requirements.
 - 4. A thorough understanding of Testing and Balancing procedures.
 - 5. Knowledge and experience with all applicable building codes.
- B. The TAB Contractor shall submit the following with their proposal:
 - 1. Certificate of Insurance for the following:
 - a. Professional Liability
 - b. General Liability
 - 2. Non-collusion affidavit

1.10 SUBMITTAL REQUIREMENTS

- A. The proposal shall include the following:
 - 1. A statement of qualifications.
 - 2. A list and resume of all persons who will be working on the project.
 - 3. An outline of the services to be rendered and the procedures to implement.

- 4. Lump sum price for scope covered in specifications section 23 05 93.
- 5. References for projects that are similar in scope including the name, client, client contact information, building type, building location, and a general description of the scope of work.
- 6. A sheet of hourly rates in the event that the Owner elects at any time during the project to request additional services not included in the scope of this proposal.
- 7. A list of reports that will be made available to the Owner to demonstrate compliance of the construction, acceptance, and post acceptance phases with the design requirements.

PART 2 - SCOPE OF TESTING AND BALANCING

2.1 SYSTEMS TO BE TESTED & BALANCED

- A. The TAB contractor shall provide all labor and materials as required during construction to provide Testing and Balancing for all systems as specified in 23 05 93.
- B. The TAB contractor is to include verification of the HVAC system testing and balancing including the Air and Hydronic systems. TAB Contractors providing a proposal for this work shall become thoroughly familiar with the Test and Balance specifications prior to submitting pricing.
- C. The TAB contractor shall be required to coordinate and plan with mechanical contractor to perform / witness duct pressure testing. Refer to specifications. The successful TAB contractor shall provide a written plan for duct pressure testing for review by the engineer.
- D. There will be a meeting held with mechanical contractor, engineer, commissioning agent and TAB contractor prior to any work being performed for testing and balancing.
- E. The scope of work shall include but is not limited to the following:
 - 1. ALL Supply, Return, and Exhaust Air Systems
 - 2. Air Terminal Devices
 - a. GRDs
 - b. VAV Boxes
 - 3. Exhaust Fans
 - 4. Culinary Program Hoods & Make-up Air
 - 5. Dust Collection Systems
 - 6. Vehicle Exhaust Systems (Automotive & Diesel Engine)
 - 7. Water Source Heat Pumps
 - a. Geothermal Field (BASE BID)
 - b. Boiler / Tower System (BID ALTERANTE)
 - 8. Dampers (Motorized and Manual)

- 9. Hydronic System (Pumps, VFDs, etc.)
- 10. Hydronic Circuit Setters & Balance Valves
- 11. Energy Recovery Units (ERUs)
 - a. Demand Control Ventilation System
 - b. Pressure Testing of ERU Supply Air Mains
- 12. HVAC Control System
- 13. Domestic Hot Water System

2.2 CONSTRUCTION PHASE

- A. TAB Contractor shall perform and document all TAB activities per the NEBB or AABC guidelines.
- B. During the construction phase, the TAB Contractor shall carry out the following services:
 - 1. Coordinate with Mechanical Contractor to ensure that services are provided in a timely manner.
 - 2. Perform required pressure testing of mains during construction before any duct insulation is installed.
 - 3. Provide written reports on TAB procedures performed during construction.
 - 4. Provide pencil copy of TAB as work is performed.
 - Provide final written TAB report at substantial completion date. (Substantial Completion Dates can be found in specifications of contract documents. If project is phased, TAB reports may be required for each phase of the project.)
 - 6. Review the design drawings and specifications.
 - 7. Review shop drawings and equipment submittals for information affecting the TAB process.

END OF SECTION



2611 Waterfront Parkway, Ste. 340 | Indianapolis, IN 46214 | Tel. (317) 222-1828

REQUEST FOR PROPOSAL RESPONSE FOR TEST AND BALANCE SERVICES

Fayette County Public Schools New FCPS Combined CTE School Lexington, KY

Attention: Fayette County Public Schools

November 4, 2022



2611 Waterfront Parkway, Ste. 340 Indianapolis, IN 46214 Tel. (317) 222-1828

Request for Proposal For Test and Balance Services Fayette County Public Schools New FCPS Combined CTE School Lexington, KY

November 4, 2022

TABLE OF CONTENTS

- 1. STATEMENT OF QUALIFICATIONS AND EXPERIENCE
- 2. INSURANCE CERTIFICATE EXAMPLES
- 3. NON-COLLUSION AFFIDAVIT
- 4. PROVIDER GROUP AND RESUMES
- 5. OUTLINE OF SERVICES/PROCEDURES
- 6. LUMP SUM FEE PROPOSAL
- 7. REFERENCES/REPRESENTATIVE PROJECTS
- 8. SHEET OF HOURLY RATES
- 9. LIST OF REPORTS



2611 Waterfront Parkway, Ste. 340 | Indianapolis, IN 46214 | Tel. (317) 222-1828

STATEMENT OF QUALIFICATIONS AND EXPERIENCE

Synergy Test and Balance was formed in 2011 to provide independent, third party Test and Balance services. From then until 2012 we balanced 14 projects and established a portfolio of work allowing us to apply for certification through the Associated Air Balance Council (AABC), which we successfully completed in 2013. To date we have balanced over 500 projects.

The TAB experience of our personnel goes much deeper than Synergy's corporate history. Cheryl Yates' association with the Test and Balance field goes back many years. More recently she has focused on finance and business development, and has now combined that experience with her engineering background to become president of Synergy Test and Balance. As can be seen in our staff resumes, Todd Yates, and Glenn Miller Jr. have combined TAB experience of nearly 50 years prior to the founding of Synergy Test and Balance. Glenn Miller, TBE and Todd Yates, P.E., TBE currently hold AABC Test and Balance Engineer (TBE) certification. HVAC and HVAC controls represent the core knowledge of the Synergy managing officers. They have balanced some of the most complex facilities in the region, as well as many smaller projects. With this background we can provide a full range of Test and Balance services including:

Test and Balance for Air systems
Test and Balance for Hydronic systems
Duct leakage testing
Sound testing
Vibration testing

Synergy is based in Indianapolis, Indiana at 2611 Waterfront Parkway, Suite 340. Synergy has performed successful TAB services for more than 500 projects, including similar scope and building types as requested for these Elementary School projects. We provide TAB services in Indiana, Kentucky, Tennessee, West Virginia, and the surrounding areas.

Client#: 47695

ACORD...

CERTIFICATE OF LIABILITY INSURANCE

DATE (MW/DD/YYYY)

2/15/2022 THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER. IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(les) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s). CONTACT Krishna Patel **EPIC Insurance Midwest** PHONE (A/C, No, Ext): 317.706.9537 FAX (A/C, No): P.O. Box 80159 E-MAIL ADDRESS: krishna.patel@epicbrokers.com Indianapolis, IN 46280 INSURER(S) AFFORDING COVERAGE NAIC # INSURER A: Ohlo Security Insurance Company 24082 INSURED 24074 INSURER B: The Ohio Casualty Insurance Company Synergy Test & Balance Inc. INSURER C: 2611 Waterfront Pkwv. **INSURER D:** Suite 340 INSURER E : Indianapolis, IN 46214 INSURER F : COVERAGES **CERTIFICATE NUMBER: REVISION NUMBER:** THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. ADDL SUBR POLICY EFF POLICY EXP TYPE OF INSURANCE LIMITS **POLICY NUMBER** X COMMERCIAL GENERAL LIABILITY 02/15/2022 02/15/2023 s1.000.000 A BKS55044952 EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) CLAIMS-MADE | X OCCUR s300.000 s15,000 MED EXP (Any one person) PERSONAL & ADV INJURY s1,000,000 GEN'L AGGREGATE LIMIT APPLIES PER: s2,000,000 **GENERAL AGGREGATE** PRO-JECT s2,000,000 PRODUCTS - COMP/OP AGG POLICY OTHER COMBINED SINGLE LIMIT (Ea accident) s1,000,000 **AUTOMOBILE LIABILITY** BAS55044952 02/15/2022 02/15/2023 A BODILY INJURY (Per person) S ANY AUTO SCHEDULED OWNED AUTOS ONLY **BODILY INJURY (Per accident)** AUTOS NON-OWNED AUTOS ONLY PROPERTY DAMAGE (Per accident) HIRED AUTOS ONLY s X 02/15/2022 02/15/2023 EACH OCCURRENCE В **UMBRELLA LIAB** USO55044952 \$1,000,000 OCCUR EXCESS LIAB s1.000.000 CLAIMS-MADE AGGREGATE DED | X RETENTION SO WORKERS COMPENSATION 02/15/2022 02/15/2023 X | STATUTE XW055044952 AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/E E.L. EACH ACCIDENT \$500,000 N N/A E.L. DISEASE - EA EMPLOYEE s500.000 (Mandatory in NH) If yes, describe under DESCRIPTION OF CPERATIONS below E.L. DISEASE - POLICY LIMIT | \$500,000 DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) **CERTIFICATE HOLDER** SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE

	ersigned agent, being duly sworn, states that neither I or through kinship) to:	he/she nor his/her firm has any relationship			
	Any school board member or the superintendent;				
0	Any or all prime contractors or material suppliers when using the construction managemen method of construction.				
	ersigned further states that he/she has not entered elative to the price bid by anyone nor has he/she				
Explain b this proje N/A	pelow any kinship or financial relationship you may lect.	have to any parties as mentioned above or			
kickbacks					
Todd Ya	ates	President			
Name		Title			
Facility	Commissioning Group, Inc.				
Name of	Company				
Subscribe	ed and Sworn to Me this				
03	day ofNovember				
2022	<u>!</u>				
Notary Si		BRANDON CHRISTOPHER MOORE NOTARY PUBLIC STATE AT LARGE KENTUCKY COMMISSION # KYNP57710 MY COMMISSION EXPIRES SEPTEMBER 24, 2026			
151	nission expires:				
Sep	otember 24, 2026	Notary Seal			



2611 Waterfront Parkway, Ste. 340 Indianapolis, IN 46214 | Tel. (317) 222-1828

TEST AND BALANCE PROVIDER GROUP

The TAB professionals provider team members noted below have experience in the systems and building type of this project, and all names listed below are experienced TAB professionals.

PROJECT MANAGER

Glenn Miller Jr., CxA, TBE, Vice President; Associate degree in Applied Science at Paducah Community College, Business Management/Drafting & Design Studies at Murray State University; ACG Certified Commissioning Authority (CxA) #1214-1254. Glenn has industry experience since 1991. He possesses certification as a Test and Balance Engineer (TBE) from the AABC #13-04-38, has completed OSHA 10-Hour and 30-Hour Construction Safety and Health Courses, has USEC/HAZMAT training (24 hours) and NES/Operator Training for using Scissor and Boom Lifts.

PROFESSIONAL AND TECHNICAL STAFF

Todd Yates, PE, TBE, CxA, LEED AP; Bachelor of Science degree from the University of Kentucky in Mechanical Engineering; licensed Professional Engineer in the Commonwealth of Kentucky (#20447), Indiana (#PE10001131), Tennessee (#001906392) and Alabama (#27716E); certified Test and Balance Engineer (TBE #97-06-34) with the Associated Air Balance Council (AABC) from 1991-2009, charter Certified Commissioning Authority (#1004-042). Todd is a member of ASHRAE. Todd possesses extensive HVAC experience with schools, HVAC controls, and specializes in laboratory fume hood systems.

Todd Miller, TBT; Associate in Arts at West Kentucky Community & Technical College and graduate of University Technical Institute; Test and Balance Technician (TBT) from the AABC #05-02-19. Completed OSHA 10-Hour Construction Safety and Health Courses. Todd has industry experience since 2016 and serves as a Test and Balance (TAB) technician.

Shane Catron; Bachelors Degree of Telecommunications at University of Kentucky and Associate in Arts at Bluegrass Community & Technical College; Kentucky Electrical License #EE64580 and has completed OSHA 10-Hour Construction Safety and Health Courses. Shane has industry experience since 2011 and serves as a Test and Balance (TAB) technician.

Corey Thomasson; Corey has industry experience since 2016 and serves as a Test and Balance (TAB) technician.

Eric Jespersen; Eric has industry experience since 2021 and serves as a Test and Balance (TAB) technician.





Glenn Miller, Jr., Vice President

EDUCATION AAS, Paducah Community College, Studies at MSU

INDUSTRY EXPERIENCE BEGINNING 1991

CERTIFICATIONS/TRAINING

AABC Test and Balance Technician (TBT) #12-06-03 (2003-2011)
AABC Test and Balance Engineer (TBE) #13-04-38
ACG Commissioning Authority (CxA) #1214-1254
OSHA 10 Hour and 30 Hour Occupational Safety and Health
USEC/HAZMAT Training (24 Hours)
NES/Operator Training (Scissor Lift and Boom Lift)

AFFILIATIONS

Associated Air Balance Council (AABC)
AABC Commissioning Group (ACG)
United States Green Building Council (USGBC)

EXPERIENCE

Thermal Balance, Inc. Lexington, KY (1991-2011)
Facility Commissioning Group, Inc. Lexington, KY (2011-Present)
Synergy Test and Balance, Inc. Indianapolis, IN (2011-Present)

Hardin County School District – North Middle School
Defense Supply Center Columbus – Building #20
Floro Torrence Elementary School #83
Kentucky Community and Technical College System
Franklin County Public School – Franklin County Alternative School
VAMC Louisville Robley Rex – Construct Chilled Water Distribution
Thomas A. Edison Key Learning Community School #47
Charles Warren Fairbanks Elementary School #105
Arlington Woods Elementary School #99
Ralph Waldo Emerson Elementary School #58
Ernie Pyle Elementary School #90
Margaret McFarland Middle School #112
Ameresco – Kentucky Horse Park Visitor Center & Museum Assessments



V. Todd Yates

EDUCATION BSME, University of Kentucky

INDUSTRY EXPERIENCE BEGINNING 1991

CERTIFICATIONS

PE in the Commonwealth of Kentucky #20447
PE in the State of Tennessee #001906392
PE in the State of Indiana #PE10001131
PE in the State of Alabama #27716-E
AABC Test and Balance Engineer (TBE) #97-06-34
ACG Commissioning Authority (CxA) #1004-042
USGBC LEED Accredited Professional, LEED AP BD+C

AFFILIATIONS

Associated Air Balance Council (AABC)

AABC Commissioning Group (ACG)

American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)

United States Green Building Council (USGBC)

EXPERIENCE

Thermal Balance, Inc. Lexington, KY (1992-2008)
Facility Commissioning Group, Inc. Lexington, KY (1999-Present)
Synergy Test and Balance, Inc. Indianapolis, IN (2011-Present)

Floro Torrence Elementary School #83 Thomas A. Edison Key Learning Community School #47 Arlington Woods Elementary School #99 Ralph Waldo Emerson Elementary School #58 Ernie Pyle Elementary School #90 Margaret McFarland Middle School #112 Bartholomew Consolidated School Corporation - Columbus East and North High Schools Purdue University - Lilly Hall Phases V, VI and VII Purdue University - Marriott Hall Purdue University - Roger B. Gatewood Mechanical Engineering Building Jonathan Jennings Elementary School #109 Lexmark Buildings 32 and 35 TAB **UK Anderson Tower Lab** IUPUI - Neuroscience Research Building IU Health - Neuroscience Center of Excellence IUB - Jacobs School of Music East Studio Building



Shane Catron

EDUCATION

BS Telecommunications, University of Kentucky AA, Bluegrass Community & Technical College

INDUSTRY EXPERIENCE BEGINNING 2011

CERTIFICATIONS/TRAINING

Kentucky Electrical License #EE64580 OSHA 10 Hour Occupational Safety and Health

EXPERIENCE

Facility Commissioning Group, Inc. Lexington, KY (2016-Present) Synergy Test and Balance, Inc. Indianapolis, IN (2016-Present)

Brownsburg High School - Renovation and Addition, Brownsburg, IN

Bullitt County Public Schools - Maryville Elementary School, Shepherdsville, KY

Bullitt County Public Schools - Mt. Washington Elementary School, Shepherdsville, KY

Clark County Public Schools - Gym and Athletic Complex, Winchester, KY

Greenwood Community School Corporation - Greenwood Middle School, Greenwood, IN

Jefferson County Public Schools - YPAS HVAC Renovation & Elevator Addition , Lousiville, KY

KCTCS – Southeast Kentucky Career & Technical Center – New Education Alliance Center Laurel County Correctional Center, London, KY

MSD Lawrence Township – Harrison Hill Elementary School, Indianapolis, IN

Oldham County Detention Center, LaGrange, KY

Owen County Lower Elementary School, Owentown, KY

Powell County Detention Center, Stanton, KY

Scott County Schools - Great Crossing High School, Winchester, KY

University of Kentucky - Cancer Services Improve Clinical/Ambulatory Services, Lexington, KY

University of Kentucky - College of Medicine Library Renovation, Lexington, KY

University of Kentucky - Improve Clinical/Ambulatory Services Brachytherapy, Lexington, KY

University of Kentucky - Neonatal Intensive Care Unit - PEDS ENDO/PICU, Lexington, KY

University of Kentucky - Pavilion A 11th Floor, Lexington, KY

University of Louisville - Physicians Pediatric Ambulatory Care Center, Lexington, KY

VAMC Lexington - 5th Floor Main Addition, Lexington, KY

VAMC James H. Quillen - Building 8 Renovation, Johnson City, TN

Washington County Courts - Additions and Renovations, Salem, IN

West Lafayette Community School Corporation - New Elementary School, West Lafayette, IN



Todd Miller

<u>EDUCATION</u> Associate Degree in Arts, West Kentucky Community & Technical College Graduate, Universal Technical Institute

INDUSTRY EXPERIENCE BEGINNING 2016

CERTIFICATIONS/TRAINING

AABC Test and Balance Technician (TBT) #05-02-19 OSHA 10 Hour Occupational Safety and Health

EXPERIENCE

Facility Commissioning Group, Inc. Lexington, KY (2016-Present) Synergy Test and Balance, Inc. Indianapolis, IN (2016-Present)

Bullitt County Public Schools - Maryville Elementary School, Shepherdsville, KY Bullitt County Public Schools - Mt. Washington Elementary School, Shepherdsville, KY Danville Public Library - Additions and Renovations, Danville, IN Fort Campbell - Blanchfield Army Community Hospital Repair/Renwal OR/SPD/SDS, Fort Campbell, KY Fort Knox - Buildings 1474, 1475, 2373 and 2374, Fort Knox, KY Hancock County Schools - Hancock County High School, Hancock, IN Hyatt Place - Bowling Green, Bowling Green, KY Indiana University Bloomington - Assembly Hall Mark Cuban Center, Bloomington, IN Indiana University Bloomington - Swain East/West Renovation BP#2, Bloomington, IN Jefferson County Public Schools - Waggener High School Renovation Phase 1, Louisville, KY Jefferson County Public Schools - YPAS HVAC Renovation & Elevator Addition, Louisville, KY Madison County Public Library - Richmond Branch Addition and Renovation, Richmond, KY Oldham County Schools - Camden Station Elementary School, Crestwood, KY Scott County Schools - Great Crossing High School, Georgetown, KY Scott County Schools - Creekside Elementary School, Georgetown, KY Toyota of Bowling Green, Bowling Green, KY Tru by Hilton Hotel – Brooks, KY United Healthcare - Tenant Improvements, Indianapolis, IN University of Louisville - Physicians Pediatric Ambulatory Care Center, Lexington, KY VAMC Lexington - 5th Floor Main Addition, Lexington, KY Vincennes Community Schools - Vigo Elementary School Renovation, Vincennes, IN Warrick County School Corporation - Tecumseh Middle and High School, Warrick, IN Western Kentucky University - Hilltopper Hall, Bowling Green, KY



Corey Thomasson

EDUCATION

Redland High School, Paducah, KY

INDUSTRY EXPERIENCE BEGINNING 2017

EXPERIENCE

Facility Commissioning Group, Inc. Lexington, KY (2017-Present) Synergy Test and Balance, Inc. Indianapolis, IN (2017-Present)

CFSB - Southside Banking Center, Paducah, KY

Crane Builing 2540 Renovation, Crane, IN

Crane Building 41, Crane, IN

Fort Campbell - Blanchfield Army Community Hospital Repair/Renwal OR/SPD/SDS, Fort Campbell, KY

Humana Conference Center - Second Floor Renovation, Louisville, KY

Greenwood Community School Corporation - Greenwood Middle School, Greenwood, IN

Jefferson County Public Schools - Medora Elementary School HVAC Renovations, Louisville, KY

Jefferson County Public Schools - Waggener High School Renovation Phase 1, Louisville, KY

Laurel County Correctional Center, London, KY

Madison County Public Library - Richmond Branch Addition and Renovation, Richmond, KY

Oldham County Schools - Camden Station Elementary School, Crestwood, KY

Powell County Detention Center, Stanton, KY

Rockcastle High School - HVAC/Roof Replacement, Mt. Vernon, KY

Scott County Schools - Great Crossing High School, Georgetown, KY

Scott County Schools - Performance Contract - Eastern Elementary and High School, Georgetown, KY

Western Kentucky University - Hilltopper Hall, Bowling Green, KY

West Lafayette Community School Corporation - New Elementary School, West Lafayette, IN

United Healthcare - Tenant Improvements, Indianapolis, IN

University of Louisville - Physicians Pediatric Ambulatory Care Center, Lexington, KY

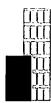
Vincennes Community Schools - Vigo Elementary School Renovation, Vincennes, IN



2611 Waterfront Parkway, Ste. 340 | Indianapolis, IN 46214 | Tel. (317) 222-1828

Test and Balance Procedures for Air Systems

- 1. Obtain up-to-date specifications, drawings, and equipment submittals of the complete mechanical systems to be balanced. Compare installed equipment to design and check for completeness of installation.
- 2. Equipment Checks:
 - A. Check fan housings, coils, louvers and filters to ensure they are clean and free of foreign material.
 - B. Examine drives for proper belt tension and alignment.
 - C. Check fan for proper rotation.
 - D. Check automatic dampers for proper operation and position.
 - E. Check that manual dampers are in the open and locked position.
 - F. This agency will not continue the test and balance if conditions are observed that are hazardous to the air system. Such conditions will be reported before proceeding further.
- 3. Determine total airflow:
 - A. Airflow quantity of the fan will be determined by Pitot-tube traverse, unless impractical to do so. When the quantity cannot be obtained by Pitot-tube traverse, the sum of the outlet quantities will be used as the total CFM of the fan.
- 4. Adjust Outlets:
 - A. Test and adjust diffusers, registers, and grilles to distribution pattern and design requirements. Special attention will be given to avoiding drafts and noise where possible when adjustments are made.
- Variable air volume (VAV) system:
 - A. Adjust and calibrate the VAV flow rate controllers to the required minimum and maximum CFM.
 - B. Record correction factors or flow coefficients.
- 6. Air Handler Unit data tested and recorded:
 - A. Manufacturer
 - B. Model Number
 - C. Serial Number
 - D. Size or Type
 - E. Fan CFM
 - F. Outlet CFM
 - G. Return CFM
 - H. Outside Air CFM
 - I. Fan RPM
 - J. Static Pressure Profile
 - K. Motor Manufacturer



2611 Waterfront Parkway, Ste. 340 | Indianapolis, IN 46214 | Tel. (317) 222-1828

- L. Motor Horsepower
- M. Motor RPM
- N. Motor Volts and Phase
- O. Motor Service Factor
- P. Overloads
- Q. Motor Sheave
- R. Fan Sheave
- S. Belts
- 7. Air balance procedures will be in accordance with AABC Standards.



2611 Waterfront Parkway, Ste. 340 | Indianapolis, IN 46214 | Tel. (317) 222-1828

Test and Balance Procedures for Hydronic Systems

- 1. Obtain up-to-date specifications, drawings, and equipment submittals of the complete mechanical systems to be balanced. Compare installed equipment to design and check for completeness of installation.
- 1. Equipment Checks:
 - A. Strainers and piping are free from debris, cleaned and flushed.
 - B. Balancing devices are set to the full open position.
 - C. Construction strainer baskets replaced with permanent baskets.
 - D. System filled to the proper level and the pressure reducing valve set.
 - E. Automatic and manual air vents installed and air is purged from the system.
 - F. Water expansion tanks are at the proper level.
 - G. Valves, flow meters and temperature/pressure taps installed correctly, accessible and functional.
 - H. Terminal coils installed, piped correctly, and accessible.
 - I. Pumps properly aligned, grouted and anchored.
 - J. Verify correct pump rotation.
 - K. This agency will not continue the test and balance if conditions are observed that are hazardous to the water system. Such condition shall be reported before proceeding further.
- 2. Determine total water flow:
 - A. Using "pump shutoff head" and its operating curve verify pump impeller size where practical.
 - B. Adjust pump to design flow and record data.
- 3. Adjust flow measuring devices:
 - A. If flow measuring devices are used, test and set design water flow to boilers, chillers and cooling towers.
 - B. Measure and adjust main and branch flow measuring devices to the required flow.
 - C. Measure and adjust connected terminal units to design flow.
 - D. Record data from flow measuring devices.
- Pump data tested and recorded:
 - A. Manufacturer
 - B. Model
 - C. Serial number
 - D. Impeller size
 - E. TDH (FT. HD.)
 - F. GPM
 - G. Discharge and Suction Pressures at full flow
 - H. Discharge and Suction Pressures at block off (where possible)



2611 Waterfront Parkway, Ste. 340 | Indianapolis, IN 46214 | Tel. (317) 222-1828

- I. Motor Manufacturer
- J. Motor Horsepower
- K. Motor RPM
- L. Motor Volts and Phase
- M. Overloads
- 5. Hydronic balance procedures will be in accordance with AABC Standards.



2611 Waterfront Parkway, Ste. 340 | Indianapolis, IN 46214 | Tel. (317) 222-1828

Duct Leakage Test Procedures

- 1. Obtain up-to-date specifications, drawings, and equipment submittals of the complete duct systems to be tested. Compare installed duct to design and check for completeness of installation. Confirm duct test requirements from project specifications.
- 2. Determine Maximum Allowable Leakage:
 - A. Calculations are done for either of two typical specifications: percentage of system flow, or leakage class.
 - B. Calculate total duct system surface area if leakage class is used.
- Determine Which Orifice Plate to Use:
 - A. The proper plate is the one where the maximum allowable leakage falls between the minimum and maximum leakage at the system static pressure (refer to manufacturer orifice plate chart).
 - B. Install orifice plate (refer to operating instructions).
- 4. Connect Flexible Duct:
 - A. Connect flexible duct to orifice tube and confirm a sealed tight connection.
 - B. Connect flexible duct to duct system and confirm a sealed tight connection.
- 5. System Test Pressure Connection:
 - A. Drill a hole at least 3 feet away from the flex duct connection of the duct system.
 - B. Insert the pressure tubing from the "DUCT SYSTEM" gage so that 6 to 12 inches of tubing is inside the duct system.
- 6. Obtaining System Test Pressure:
 - A. Prior to starting the blower shut the inlet slide gate.
 - B. Turn the blower on and slowly open the inlet slide gate to obtain the system test pressure. Take care to avoid over-pressurization.
 - C. When system static pressure has been reached tighten the set-screw on the inlet slide gate.
- Determining the Leakage Rate:
 - A. While system test pressure is being maintained note the pressure reading of the "ORIFICE TUBE" gage.
 - B. Refer to the calibration certificate to determine the leakage rate that corresponds to the gage reading.
 - C. Report test data on Duct Leakage report form.



2611 Waterfront Parkway, Ste. 340 Indianapolis, IN 46214 Tel. (317) 222-1828

PROJECT:	Fayette County Public Schools	DATE:	11/04/2022
	New FCPS Combined CTF School		

Lexington, KY

Addendums: TAB RFP Addendum 1

Drawings: 09/28/2022

Specification: 230593

The amount referenced below reflects our cost to perform Test and Balance (TAB) Services for equipment listed below.

 TAB Base Bid:
 \$51,787.00

 Duct Leakage Test Per 80 Hours:
 \$7,200.00

 BASE BID TOTAL:
 \$58,987.00

 Boiler/Tower System Alternate #1:
 \$1,650.00

.

Duct Leakage Test Hourly Rate: \$90.00

Please be advised of the following:

- Synergy Test and Balance performs work as an independent, third party owner advocate in accordance with AABC National Standards to accomplish the established scope of work.
- Each contractor must include time in their proposal to perform stipulated tests. The costs associated with other contractors' work are not included in the Synergy Test and Balance fee amount.
- Contractors not adhering to the TAB schedule will assume responsibility for lost time of other participating contractors, consultants, and owner's personnel.
- 4) Retests required due to concealed conditions, design, or installation issues are not included in our base scope of work.
- 5) Lost time or issues related to the requirements noted above will be reported to the project manager in a timely manner following the occurrence.

SYNERGY TEST AND BALANCE, INC.

Cheryl L. Yates, President Cheryl@SynergyTAB.com

Luy Yates



2611 Waterfront Parkway, Ste. 340 Indianapolis, IN 46214 | Tel. (317) 222-1828

REPRESENTATIVE PROJECTS

1. Clark County Public Schools - George Rogers Clark High School - Gym and Athletic Complex

Location:

2745 Boonesboro Road

Winchester, KY 40391

Type:

K-12 High School

Client:

Jo Beth French, Project Manager

Green Mechanical Construction, Inc.

2277 Danforth Drive Lexington, KY 40511 (859) 230-8248 ifrench@gmci.com

Description:

New construction of a \$21 million Gym and Grandstand Buildings for these schools. A 60,000-square-foot facility to house a gymnasium that seats about 4,300 people. The competition gym at the high school — which has an auxiliary gymnasium for practices —also has weight rooms and meeting rooms, as well as a trophy showcase and a lobby. There are locker rooms, office and storage space and concession areas beneath the home

grandstand.

Scope:

The Gym systems Air Balanced consisted of (5) Rooftop Units, (1) Energy Recovery Units, (7) Water Source Heat Pumps, and (5) Exhaust Fans). The Stadium Grandstand systems Air Balanced consisted of (2) Rooftop Units).

2. Scott County Schools - Great Crossing High School

Location: Type:

Georgetown, KY K-12 High School Doug Rookard

Client:

Frei Mechanical, Inc.

239 South Richardson Drive Somerset, KY 42501

606 676-0549

david@freimechanical.com

Description:

This new 230,000 SF high school that is a multi-story facility with both steel frame and load bearing masonry. Exterior walls are primarily concrete masonry with brick and stone veneers. Roofing is modified bitumen. Interior walls are primarily concrete masonry with limited areas of light gauge steel framing. Floor finishes include resilient, terrazzo, wood gymnasium flooring, ceramic tile and carpet. School has fully furnished auditorium and gymnasium in addition to typical classrooms, laboratories, offices and support spaces. HVAC system is geothermal with individual heat pumps.



2611 Waterfront Parkway, Ste. 340 Indianapolis, IN 46214 | Tel. (317) 222-1828

Scope:

The systems Air Balanced consisted of (12) Energy Recovery Units, (89) Outside Air VAV's, (30) Cassette VRV's - OA Traverse, (122) Heat Pumps, (26) Exhaus Fans, Kitchen Exhaust, (1) Dust Collector, (8) Science Lab/Welding Hoods and (11) Hydronic Pumps.

3. Lew Wallace Elementary School No. 107

Location:

Indianapolis, Indiana K-12 Elementary School

Type:

Client:

Michael East

R.E. Dimond and Associates, Inc.

732 North Capital Avenue Indianapolis, IN 46204

(317) 634-4672

Mike.east@redimond.com

Description:

Renovation of this building consisted of new Fully air conditioning the school and a new heating system. The project began in summer 2012 under the IPS Capital Improvements program Phase III to bring the building up to

modern education standards.

Scope:

The systems Air Balanced consisted of (2) Air Handling Units, (34) Unit Ventilators, (16) Fan Coil Units and (12) Exhaust Fans. The Air Handling Units (AH-1&2) were balanced to design via Duct Traverse, using their respective Variable Frequency Drive (VFD) to adjust the speed to design CFM. The Unit Ventilators (VUV) were Balanced under three different conditions. The Electronically Commutated Motor (ECM) was set to CFM at 100% of design, 70% of design and 50% of design. The Outside Air Damper was adjusted at each speed to maintain a constant minimum Outside Air CFM. The Exhaust Fans and Fan Coil Units were balanced using a Flow Hood or Duct Traverse.

The Dual Temperature Water Systems balanced consisted of (2) Building Loop Water Pumps, (2) Chiller Loop Water Pumps, (2) Air Cooled Chillers, (3) Condensing Boilers and (78) connected coils. The Dual Temperature Water System was balanced by driving all the Hot Water Valves open to the coil. Each Hot Water Coil was tested with the GPM and pressure drop recorded.

4. Livingston County Middle School - Misc. Repairs/Replacements/Improvements & Renovations

Location:

Burna, Kentucky K-12 Middle School

Type: Client:

Bryan Atkins

Marcum Engineering

270 444-9274

batkins@marcumengineering.net



2611 Waterfront Parkway, Ste. 340 | Indianapolis, IN 46214 | Tel. (317) 222-1828

Description: The renovation consisted of work primarily associated with the middle school

facility located at 1370 US Highway 68E, and the general scope of work was HVAC improvements for dedicated outdoor air system and replacement of

existing exhaust system.

Scope: Synergy Test and Balance provided TAB services on 4 outside air units and

13 exhaust fans that were installed for this project. The variable speed controller was not installed on the exhaust fans per the contract documents but was later installed. The fans that were found out of tolerance were

rebalanced using the variable speed controllers.

5. Theodore Potter Elementary School No. 74

Location: Indianapolis, Indiana **Type:** K-12 Elementary School

Client: Michael East

R.E. Dimond and Associates, Inc.

732 North Capital Avenue Indianapolis, IN 46204

(317) 634-4672

Mike.east@redimond.com

Description: Renovation of this building consisted of fully air conditioning the building and

a new heating system. The project began in summer 2012 under the IPS Capital Improvements program Phase III to bring the building up to modern

education standards.

Scope: The systems Air Balanced consisted of (2) Air Handling Units, (13) Variable

Air Volume Boxes, (27) Unit Ventilators, (5) Fan Coil Units and (11) Exhaust Fans. The Air Handling Units (AH-1&2) were balanced to design via Duct Traverse or sum of their outlets. Using their respective Variable Frequency Drive (VFD) to adjust the speed to design CFM. The Unit Ventilators (VUV) were Balanced under three different conditions. The Electronically Commutated Motor (ECM) was set to CFM at 100% of design, 70% of design and 50% of design. The Outside Air Damper was adjusted at each speed to maintain a constant minimum Outside Air CFM. The Exhaust Fans and Fan Coil Units were balanced using a Flow Hood or Duct Traverse.

The Hot and Chilled Water Systems balanced consisted of (2) Chilled Water Pumps, (2) Hot Water Pumps, (2) Air Cooled Chillers, (3) Condensing Boilers, (3) Boiler Loop Pumps and (123) connected Hot and Chilled Water coils. The Hot/Chilled Water System was balanced by driving all the Hot/Chilled Water Valves open to the coil. Each Hot/Chilled Water Coil was

tested with the GPM and pressure drop recorded.



2611 Waterfront Parkway, Ste. 340 | Indianapolis, IN 46214 | Tel. (317) 222-1828

HOURLY RATES

Please note our standard hourly rates for services that extend beyond the scope of this proposal if the Owner elects to request additional services:

Principal/Professional Engineer	\$125.00
TAB Engineer	\$90.00
TAB Technician	\$75.00
Administrative Associate	\$50.00