PREFERRED TEST AND BALANCE, INC.

P.O. BOX 384
SNELLVILLE, GA 30078
phone: 404-626-5592
fax: 770-267-4367

SUBMITTAL PACKAGE

GENERAL INFORMATION:

FIRM QUALIFICATIONS

PREFERRED TEST AND BALANCE IS A NATIONAL BALANCING COUNCIL (NBC) CERTIFIED, ENVIRONMENTAL SYSTEMS TESTING AND BALANCING MEMBER FIRM. WE HAVE SERVED ENGINEERS, ARCHITECTS, CONTRACTORS, INDUSTRY AND BUSINESS THROUGHOUT THE U.S. FOR OVER 22 YEARS.

PREFERRED TEST AND BALANCE, INC. HAS BEEN RETAINED TO PERFORM TESTING, ADJUSTING AND BALANCING FOR OVER 5,000 PROJECTS TO DATE.

PLEASE ACCEPT THIS TEST AND BALANCE SUBMITTAL PACKAGE THAT INTRODUCES OUR STAFF, PROJECTS THAT WE HAVE COMPLETED, SERVICES OFFERED AND INFORMATION ABOUT OUR CERTIFICATION CREDENTIALS.

WE HAVE ALSO INCLUDED SAMPLE FORMS THAT OUTLINE OUR REPORT FORMAT AND GIVE INSIGHT AS TO HOW WE PRESENT OUR REPORTS AND ARRIVE AT SOLUTIONS.

YOU WILL FIND HVAC SYSTEM REPORTS FOR BOTH AIR AND HYDRONIC TESTING AND BALANCING IN ACCORDANCE WITH THE TESTING AND REPORTING PROCEDURES SPECIFIED BY THE NATIONAL BALANCING COUNCIL, OUR CERTIFYING AGENCY. IF THERE IS ANY DATA DESIRED OUR REQUIRED THAT IS PROJECT / DESIGN SPECIFIC, PLEASE MAKE THE REQUEST IN ADVANCE AND THAT DATA WILL BE ADDED TO OUR REPORT.

SERVICES OFFERED:

- NATIONAL BALANCING COUNCIL CERTIFIED AIR AND HYDRONIC SYSTEM BALANCING
- DUCT LEAKAGE TESTING
- BUILDING PRESSURE TESTING
- CONSULTING SERVICES
- AIR CHANGES PER HOUR AND PRESSURIZATION TESTING AND CERTIFICATION
- KITCHEN EXHAUST SYSTEM BALANCING
- INDOOR AIR QUALITY SOLUTIONS

PREFERRED TEST AND BALANCE, INC.

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January 19, 2015

Subject: National Balancing Council Certification and Standards

Thank you for the opportunity to tell you more about the National Balancing Council. Founded in 2006 as the commercial/industrial arm of National Comfort Institute, Inc., we at NBC are taking the field of testing, adjusting, and balancing to the next level, while exploring needs and demands that are currently not being met by other certifying organizations.

For the record, the qualifications and standards to become an NBC Certified Test and Balance Supervisor meet or exceed those of other certifying organizations. For example, NBC requires a verbal interview as part of the application process, which is unique to NBC. NBC also requires the demonstrated ability to use the TAB equipment and instruments, which is not required by at least one other certifying organization. Who NBC accepts into certification is also unique. NBC accepts professionals, regardless of union affiliation, other contracting licenses, and even facility engineers, provided they have the background and experience, are otherwise qualified. All applicants must also provide references, past TAB reports for evaluation, prove ownership of calibrated test instruments and pass rigorous written and practical exams after attending a five day seminar.

This has led to a unique relationship with the United States Military. As you, the construction professional may be aware, the US Army Corps of Engineers and Naval Facilities Command have some of the most stringent specifications in construction, particularly for Test and Balance. NAVFAC currently has three NBC certified supervisors on staff and plans on adding more in the future. It is also of note that NASA has an NBC Certified Supervisor under contract for critical construction at the Goddard Space Center. Beyond this, multiple firms Certified by NBC have performed work on dozens of military and federal facilities across the globe. A list of some of these projects can be provided upon request. NBC has also been accepted by dozens of well-known chains on a global basis. NBC is sometimes exclusive to some of these chains. A list of some of these can also be provided upon request.

Another aspect that sets the National Balancing Council apart is our emphasis on *Performance Balancing* as opposed to simply Production Balancing. Here at NBC, we place emphasis on analyzing actual *system* performance as opposed to design criteria. This provides the design team, buildings owners and facilities engineers with actionable data they may use to optimize system performance. This is accomplished by training in our CSER™ and HSER™ evaluations, as well as our trademarked ComfortMaxx™ Software. To this end, NBC has been working hand-in-hand with Southern California Edison, Austin Energy, as well as the States of California, Iowa, Nevada, Colorado and others in regard to developing and aiding energy efficiency programs and related training. NBC board members have served on ASHRAE, ACCA and numerous other professional committees, with the goal of making improvements across the industry.

National Balancing Council
P.O. Box 147 Avon Lake, OH 44012
800-633-7058 FX 866-258-3919
www.nbctab.org

Many facilities managers, design engineers and building owners have taken notice of our standards and practices. Be assured that the National Balancing Council holds our members to the highest standards of integrity and accountability. NBC strives to see that the certification process is challenging and thorough, ensuring our standards are upheld and enforced through our re-certification process. NBC only accepts the most skilled and experienced professionals, but does not discriminate due to union affiliation or specific area of the industry as long as candidates are proven capable of performing test and balance to the highest standards. And although it is rare, the National Balancing Council has not, nor will not hesitate to de-certify any firm found not to be compliant with our Procedural Standards or Code of Ethics that they must sign and uphold.

NBC now has Certified Professionals in seven countries across the globe, and that number is growing every few months. Among our Certified Professionals are multiple Professional Engineers, and even professionals who were previously and/or currently certified by NEBB, TABB or AABC. Such professionals often seek NBC certification to provide them with additional practical skills and resources not offered by the other certifying organizations. Aside from NBC's emphasis on Performance Balancing and our work in energy efficiency, we are able to offer additional training in system performance, carbon monoxide and combustion safety, and multiple other areas through our sister organization, NCI. Furthermore, NBC offers 24 hour technical and administrative support to our Certified Professionals. No other certifying organization provides this. Aside from simply providing a unique service, the support network also serves to ensure the quality and proficiency of the TAB work being done under our certification. NBC also offers an on-line forum, exclusive to certified personnel, where he or she can discuss any TAB related subject and receive support and information from other NBC Certified Professionals across the globe.

The National Balancing Council prides itself by constantly growing and adapting with continuous input from our Certified Professionals. Just as ASHRAE does, we continually update and improve upon our Manual for TAB Professionals and our Procedural Standards, as well as strive to create unique and timely training to keep up with an ever changing industry.

The National Balancing Council is proud of what we and our Certified Professionals have accomplished, and we believe that we are uniquely positioned to lead the entire industry into a new era.

Feel free to contact me directly should you require any further information.

Respectfully,

Scott A. Fielder

Scott A. Fielder, Director,
National Balancing Council
P.O. Box 147
Avon Lake, OH 44012

TAB Certifying Organizations

Standards / Qualifications	NBC	TABB	AABC	NEBB
Is established and well respected nationwide	✓	✓	✓	✓
Is established and well respected globally	✓		✓	✓
Was started by a member of another certifying organization	✓	✓		✓
Requires rigorous written test covering all aspects of TAB	✓	✓	✓	✓
Requires practical/hands-on test for Certified Professionals	✓	✓		✓
Requires at least 5 years documented TAB experience	✓	✓	✓	✓
Requires that applicants submit letters of recommendation from contractors, engineers and owners	✓			✓
Requires annual verification of calibration for required TAB testing instrumentation and equipment	✓	✓	✓	✓
Requires applying firm has been in business for at least one year prior to certification	✓		✓	✓
Requires personal / verbal interview prior to acceptance into certification program	✓			
Requires applicant signs and complies with Code of Ethics	✓	✓	✓	✓
Requires applicant submit 3 TAB reports for review prior to certification	✓			✓
Requires Certified Professional physically attends CEU course for recertification	✓	✓		✓
Has specific procedural standards that all Certified Professionals must abide by	✓	✓	✓	✓
Allows Mechanical, Control contractors, energy auditors and facilities engineers to become TAB Certified Professionals, Provided they meet the standards	✓			
Has sister organization to address other training needs within the industry	✓	✓	✓	
Pioneered the field of "Performance Balancing"	✓			
Offers 24 hour technical support to it's Certified Professionals	✓			
Is recognized by multiple states and utility providers as sole certifying agency for specific energy programs	✓			
Only Certifies Union Companies		✓		
Has current Certified Professionals who work for NASA and the United States Naval Facilities Engineering Command	✓			
Offers Consistent, established on-line TAB courses	✓			
Constantly re-searches how to improve the strength of their organization	✓	✓	✓	✓
Pioneered and offers an on-line forum for their Certified Professionals to interact, ask questions, provide technical expertise, exchange ideas and promote joint ventures among the organization's Certified professionals	✓			
Offers Entry Level Training for TAB / Industry Professionals	✓			

All information in regard to other certifying organizations that is not common knowledge within the industry (IE: AABC is the first certifying organization, AABC will not certify mechanical contractors, AABC does not require a practical test with TAB equipment in order to earn certification, TABB will only certify Union Companies) was taken directly from the web sites of the certifying organizations. The links are provided below. Any potential omission or mistake is not intentional.

NBC *http://www.nbctab.org/index.cfm?pid=1064*

TABB *http://www.tabbcertified.org/site/public/content/index/home*

AABC *https://www.aabc.com/certifications/#testbalanceeng*

NEBB *http://www.nebb.org/certified/*

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STAFF:

PERSONAL QUALIFICATIONS

NAME: STEVE G. LUNDY
PRESIDENT / TECHNICIAN

EDUCATION: DEKALB COLLEGE
DEKALB TECHNICAL SCHOOL

EXPERIENCE: OWNER / LEAD TECHNICIAN OF PREFERRED TEST AND BALANCE INC.
SINCE JANUARY 1993.

VICE-PRESIDENT OF TOTAL SYSTEMS BALANCING, INC.
JANUARY 1988 TO DECEMBER 1992.

RESPONSIBLE FOR SUPERVISION OF PROPER TESTING, ADJUSTING AND BALANCING OF ON-GOING PROJECTS. COORDINATE WITH THE CUSTOMER TO DETERMINE THEIR TEST AND BALANCE NEEDS, AND ENSURE THAT THOSE NEEDS ARE MET TO THE SATISFACTION OF THE CUSTOMER, OWNER OR OWNER'S REPRESENTATIVE AND THE ENGINEER OF RECORD. ENSURE THAT ALL REPORTS ARE VERIFIED AND REVIEWED AND THAT ALL SPECIFICATIONS HAVE BEEN MET.

TWO YEARS EXPERIENCE AS A SALES MANAGER WITH TAB SERVICES, INC.
RESPONSIBLE FOR MANAGEMENT OF SALES DEPERTMENT, COORDINATE PROJECTS WITH OTHER DEPARTMENTS TO ENSURE EFFICIENT FLOW OF DOCUMENTS AND REPORTING.

TWELVES YEARS AS A FIELD TECHNICIAN WITH TAB SERVICES, INC.
TESTING, ADJUSTING AND BALANCING OF ALL PHASES OF HEATING, VENTILATION AND AIR-CONDITIONING SYSTEMS FOR COMMERCIAL AND INDUSTRIAL PROJECTS.

FOUR YEARS AS A SHEET METAL WOKER WITH DIXON AIR CONTROL
INSTALLED DUCT SYSTEMS IN RESIDENTIAL AND COMMERCIAL PROJECTS WHICH INCLUDE NATURAL GAS AND REFRIGERANT LINES AND PERFORMED ALL OTHER TASKS ASSOCIATED WITH THE INSTALLATION OF THESE SYSTEMS.

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STAFF:

PERSONAL QUALIFICATIONS

NAME: GREGG FIELDER
CERTIFYING TECHNICIAN
NBC CERTIFIED SUPERVISOR
JUNE 21, 2013 : CERTIFICATION NO. 13-215-08

EDUCATION: PENN STATE UNIVERSITY

EXPERIENCE: CERTIFYING TECHNICIAN OF PREFERRED TEST AND BALANCE, INC.
OCTOBER 2013 TO PRESENT

RESPONSIBLE FOR THE PERFORMANCE OF PROPER TESTING, ADJUSTING AND BALANCING OF PROJECTS AND ENSURING THAT ALL TESTING IS IN ACCORDANCE WITH THE GOVERNING PROCEDURAL STANDARDS OF THE NATIONAL BALANCING COUNCIL.

OTHER RESPONSIBILITES INCLUDE THE REVIEW, CERTIFICATION AND PUBLICATION OF ALL CONSTRUCTION DOCUMENTS, FIELD REPORTS AND FINAL CERTIFIED TEST AND BALANCE REPORTS.

TEST AND BALANCE SUPERVISOR / PROJECT MANAGER FOR NEXREV INC.
JUNE 2006 TO SEPTEMBER 2013

MANAGE ALL TEST AND BALANCE WORK PERFORMED FOR NUMEROUS NATIONAL COMMERCIAL ACCOUNTS INCLUDING SCHEDULING OF WORK, DOCUMENT PREPARATION AND REVIEW, PERFORMING AND SUPERVISING FIELD WORK, TRAINING, AND CERTIFYING FINAL TEST AND BALANCE REPORTS.

TEST AND BALANCE TECHNICIAN FOR ADVANCE AIR SYSTEMS:
JANUARY 2005 TO MAY 2006

PERFORMED TEST AND BALANCE WORK ON COMMERCIAL AND INDUSTRIAL PROJECTS. GENERATED FIELD REPORTS AND FINAL TEST AND BALANCE REPORTS.

Certified Test & Balance Supervisor

designation awarded to:

GREGORY FIELDER

for successful completion of all required coursework and examinations
in the field of commercial HVAC air and hydronic testing and balancing, and project management

Certified Since

June 21, 2013

as administered and recognized by the

National Balancing Council

Expires: 6/21/2017

NBC Certification #13-215-08

NATIONAL BALANCING COUNCIL™

Rob Falke, President

PREFERRED TEST AND BALANCE, INC.

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PROJECTS COMPLETED:

COLLEGE / UNIVERSITY PROJECTS:

GEORGIA STATE BOOKSTORE
ATLANTA, GA

MILLER SCIENCE BUILDING
FORT CALLEY STATE COLLEGE
FORT VALLEY, GA

KENNESAW ADADEMIC BLDG.
KENNESAW COLLEGE
KENNESAW, GA

ADMINISTRATION BLDG.
FORT VALLEY STATE COLLEGE
FORT VALLEY , GA

EDUCATION FACILITY
GEORGIA SOUTH WEST COLLEGE
AMERICUS, GA

TABOR HALL
FORT VALLEY STATE COLLEGE
FORT VALLEY, GA

HOWARD BLDG.
COLUMBUS COLLEGE
COLUMBUS, GA

EDUCATIONAL CURRICULUM LAB
GEORGIA STATE UNIVERSITY
ATLANTA, GA

MANLEY CENTER
SPELLMAN COLLEGE
ATLANTA, GA

PUBLIC SCHOOL PROJECTS:

MCEACHERN HIGH SCHOOL
MARIETTA, GA

FRANKLIN COUNTY HIGH SCHOOL
FRANKLIN COUNTY, GA

SIMMS CAREER ACADEMY
BARROW COUNTY, GA

CREEKSIDE HIGH SCHOOL
RENOVATION
FAIRBURN, GA

MAYNARD JACKSON HIGH SCHOOL
ATLANTA, GA

LILBURN ELEMENTARY SCHOOL
LILBURN, GA

CHAPEL HILL ELEMENTARY
DEKALB COUNTY, GA

SKYHAVEN ELEMENTARY
ATLANTA, GA

WASHINGTON HIGH SCHOOL
ATLANTA, GA

MCDONOUGH ROAD HIGH SCHOOL
MCDONOUGH, GA

MURPHY MIDDLE SCHOOL
AUGUSTA, GA

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PROJECTS COMPLETED:

PUBLIC SCHOOL PROJECTS:

RALPH D. HEAD ELEMENTARY
SNELLVILLE, GA

MANNING ROAD ELEMENTARY
MARIETTA, GA

EBENEZER ROAD ELEMENTARY
MARIETTA, GA

TRICKUM ROAD ELEMENTARY
MARIETTA, GA

EAST AUGUSTA MIDDLE SCHOOL
AUGUSTA, GA

NEW MIDDLE SCHOOL
JASPER, GA

MURPHY HIGH SCHOOL
ATLANTA, GA

JORDAN HIGH SCHOOL
COLUMBUS, GA

EDDY JR HIGH SCHOOL
COLUMBUS, GA

WEST FULTON MIDDLE SCHOOL
ATLANTA, GA

TOLBERT ELEMENTARY
CALHOUN, GA

COWETA ELEMENTARY
NEWNAN, GA

PUBLIC SCHOOL PROJECTS:

FINDLEY ROAD ELEMENTARY
ATLANTA, GA

GEORGIA 400 ELEMENTARY
ATLANTA, GA

NEW ELEMENTARY #3
NEWNAN, GA

JOHNSON HIGH SCHOOL
GAINESVILLE, GA

CASS MIDDLE SCHOOL
CARTERVILLE, GA

NEW MIDDLE SCHOOL
NEWNAN, GA

NORTH SPRING HIGH SCHOOL
ROSWELL, GA

CHATTAHOCHEE HIGH SCHOOL
ATLANTA, GA

NORTH CLAYTON HIGH SCHOOL
CLAYTON COUNTY, GA

TYRONE ELEMENTARY
FAYETTE COUNTY, GA

CARTERSVILLE ELEMENTARY
CARTERSVILLE, GA

MT. BETHEL ELEMENTARY
COBB COUNTY, GA

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PROJECTS COMPLETED:

PUBLIC SCHOOL PROJECTS:

SADAKIA PARK ELEMENTARY
COBB COUNTY, GA

FLOYD MIDDLE SCHOOL
ROME, GA

PLEASANT GROVE ELEMENTARY
HENRY COUNTY, GA

HICKORY FLAT ELEMENTARY
HENRY COUNTY, GA

STATE BRIDGE ELEMENTARY
FULTON COUNTY, GA

EVES ROAD ELEMENTARY
FULTON COUNTY, GA

WOOTEN ROAD ELEMENTARY
FULTON COUNTY, GA

WHITE COUNTY HIGH SCHOOL
CLEVELAND, GA

SOPE CREEK ELEMENTARY
COBB COUNTY, GA

RANDOLPH COUNTY HIGH SCHOOL
WEDOWEE, ALABAMA

DALLAS ELEMENTARY
DALLAS, GA

AUSTIN ROAD ELEMENTARY
DALLAS, GA

PUBLIC SCHOOL PROJECTS:

JONESBORO ROAD ELEMENTARY
JONESBORO, GA

EAST PAULDING MIDDLE SCHOOL
DALLAS, GA

SIMPSON ELEMENTARY
CARROLLTON, GA

NEW DALLAS ELEMENTARY
DALLAS, GA

FRANKLIN COUNTY MIDDLE SCHOOL
FRANKLIN COUNTY, GA

CARTERSVILLE HIGH SCHOOL
CARTERSVILLE, GA

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PROJECTS COMPLETED:

COMMERCIAL PROJECTS:

HAMMOND NORTH
ROSWELL, GA

AMWILER II OFFICE BLDG.
NORCROSS, GA

DIGITAL COMMUNICATIONS ASSOC.
ALPHARETTA, GA

CNN WORLD TRAVEL
ATLANTA, GA

EMBASSY SUITES HOTEL
ATLANTA, GA

LADE LANIER ISLANDS ADMIN.
BUFORD, GA

ALSTON BIRD COMPANY
MARIETTA, GA

PARAGON GROUP
ATLANTA, GA

REED DRUGS
PHOENIX CITY, ALABAMA

PIGGLY WIGGLY
PHOENIX CITY, ALABAMA

WINN-DIXIE
NORCROSS, GA

FIRST ATLANTA TRAINING CENTER
ATLANTA, GA

COMMERCIAL PROJECTS:

GENERAL ELECTRIC
DULUTH, GA

JARVIS B. WEBB CO.
MARIETTA, GA

MOSLEY SECURITY CORP.
MARIETTA, GA

P.B.I. BROKERAGE
MARIETTA, GA

ST. PAUL UNITED METHODIST
ATLANTA, GA

HOLIDAY RACQUET CLUB
ATLANTA, GA

COBB AQUATIC CENTER
COBB COUNTY, GA

KROGER STORES
SOUTHEAST DISTRICT

FOOD LION STORES
SOUTHEAST REGION

AMC THEATRES
ROSWELL, GA

AMC THEATRES
ALPHARETTA, GA

STORAY THEATERS
SNELLVILLE, GA

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PROJECTS COMPLETED:

FEDERAL GOVERNMENT PROJECTS:

INTERNATIONAL FIRST CLASS LOUNGE
HARTSFIELD JACKSON INTL.

MARINE CORPS LOGISTICS BASE
ALBANY, GA

LOCKHEED B1 BLDG.
MARIETTA, GA

DELTA OPERATIONS
HARTSFIELD JACKSON INTL.

ENGINE BLADE RE-WORK FACILITY
CAMP LEJEUNE, NC

VISTOL AIRCRAFT RE-WORK FACILITY
CHERRY POINT, NC

FORT GORDON MSE FACILITY
AUGUSTA, GA

ENLISTED CLUB
CAMP JOHNSON, NC

FEDERAL CORRECTION INST.
JESUP, GA

BATCHELORS ENLISTED QUARTERS
CHARLESTON, SC

SSI OFFICE BLDG.
NORCROSS, GA

US POST OFFICE
SOUTH DEKALB MALL

FEDERAL GOVERNMENT PROJECTS:

US POST OFFICE
RIVERDALE, GA

US POST OFFICE
DUNWOODY, GA

US POST OFFICE
STONE MOUNTAIN, GA

US POST OFFICE
SANDY SPRINGS, GA

US POST OFFICE
NORTH LAKE MALL

US POST OFFICE
PERIMETER MALL

US POST OFFICE
MEMORIAL DRIVE STONE MOUNTAIN, GA

US POST OFFICE
LITTLE FIVE POINTS

US POST OFFICE
THE CNN CENTER ATLANTA, GA

US POST OFFICE
BUCKHEAD STATION

US POST OFFICE
COLLEGE PARK, GA

PREFERRED TEST AND BALANCE, INC.

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PROJECTS COMPLETED:

HOSPITAL PROJECTS:

GEORGIA BAPTIST HOSPITAL
ATLANTA, GA

DEKALB GENERAL HOSPITAL
ATLANTA, GA

VA MEDICAL CENTER
DUBLIN, GA

GA BAPTIST CARDIAC LABORATORY
ATLANTA, GA

HIGGINS GENERAL HOSPITAL
BREMEN, GA

PATTERSON HOSPITAL
CUTHBERT, GA

CHARTER BROOK HOSPITAL
DORAVILLE, GA

WEST CENTRAL GA HOSPITAL
COLUMBUS, GA

GRACEWOOD HOSPITAL
AUGUSTA, GA

INDUSTRIAL PROJECTS:

ATT BUILDING
NORCROSS, GA

BEECHEM LABORATORIES
DULUTH, GA

GEORGIA POWER FACILITIES
ATLANTA, GA

AMBIOPHARM
NORTH AUGUSTA, SC

USDA LABORATORY
ALBANY, GA

SYNSTRAND, INC.
CHARLESTON, SC

HUGHS GEORGIA
LAGRANGE, GA

SOIL TESTING LABORATORY
ATHENS, GA

PRINTPAC, INC.
VILLA RICA, GA

GOERGIA POWER
TUCKER, GA

ROBERT BOSCH CO.
CHARLESTON, SC

GENERAL MOTORS
DORAVILLE, GA

PREFERRED TEST AND BALANCE, INC.

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CERTIFIED TEST AND BALANCE REPORT FOR:

PROJECT NAME

PROJECT NAME
ADDRESS
DDRESS

DATE: D TE

SAMPLE

JOB NUMBER:

ARCHITECT:

ENGINEER:

CONTRACTOR:

This certifies that Preferred Test and Balance Inc. has tested and balanced the systems included in this report to the specifications listed in the construction documents. The testing, adjusting and balancing has been performed in accordance with the standard requirements and procedures of the National Balancing Council. Test results are certified on the date the final specific tests were conducted. Subsequent changes made to conditions or adjustments may not be included.

NATIONAL BALANCING COUNCIL™

Gregory Fielder

Gregory Fielder
NBC Test and Balance Supervisor
Certification # 13-215-08
Expiration: 6/21/2017

Steve Lundy

Steve Lundy
Owner and President
Preferred Test and Balance, Inc.
Est. 1993

ABBREVIATIONS

ACU	AIR CONDITIONING UNIT
AHU	AIR HANDLING UNIT
BS	BIRD SCREEN
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
CCW	COUNTER CLOCKWISE
CEG	CEILING EXHAUST GRILLE
CFLA	CORRECTED FULL LOAD AMPS
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CRG	CEILING RETURN GRILLE
CU	CONDENSOR UNIT
CW	CLOCKWISE
CWR	CONDENSOR WATER RETURN
CWS	CONDENSOR WATER SUPPLY
DD	DIRECT DRIVE
DMPR	DAMPER
DNA	DATA NOT AVAILABLE
DNG	DATA NOT GIVEN
DNL	DATA NOT LISTED
DNT	DATA NOT TESTED
DP	DIFFERENTIAL PRESSURE
DT	DIFFERNTIAL TEMPERATURE
DWDI	DUAL WIDTH DOUBLE INTAKE
EAT	ENTERING AIR TEMPERATURE
ECR	EGG CRATE RETURN
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
ER	EXHAUST REGISTER
EWT	ENTERING WATER TEMPERATURE
FSD	FIRE / SMOKE DAMPER
FCU	FAN COIL UNIT
FH	FUME HOOD
FLA	FULL LOAD AMPS
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HPACU	HEAT PUMP AIR CONDITIONING UNIT
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
ID	INSIDE DIAMETER
INAC	INACCESSIBLE
LAT	LEAVING AIR TEMPERATURE
LD	LINEAR DIFFUSER
LWT	LEAVING WATER TEMPERATURE
MAT	MIXED AIR TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MIN	MINIMUM
NA	NOT APPLICABLE
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER
OA	OUTSIDE AIR
RAR	RETURN AIR REGISTER
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SD	SLOT DIFFUSER
SF	SERVICE FACTOR
SP	STATIC PRESSURE
SWDI	SINGLE WIDTH DUAL INTAKE
SWRG	SIDEWALL RETURN GRILLE
SWSG	SIDEWALL SUPPLY GRILLE
SWSI	SINGLE WIDTH SINGLE INTAKE
SWSR	SIDEWALL SUPPLY REGISTER
T.P.	TERMALLY PROTECTED
TSP	TOTAL STATIC PRESSURE
T-STAT	THERMOSTAT or SPACE SENSOR
TYP	TYPICAL
VD	VOLUME DAMPER
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
WSHP	WATER SOURSE HEAT PUMP

PREFERRED TEST AND BALANCE, INC.

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NATIONAL BALANCING COUNCIL™

PROJECT SUMMARY

SAMPLE

PREFERRED TEST AND BALANCE, INC.

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PREFERRED TEST AND BALANCE, INC.

SECTION A

AIR APPARATUS UNITS

RTU TEST REPORT

DATE

PROJECT

READINGS BY:

UNIT DATA

UNIT NO.				
AREA SERVED				
MANUFACTURER				
MODEL NO.				
SERIAL NO.				
DESIGN CFM				
ACTUAL CFM				
RETURN AIR CFM				
DESIGN OA CFM				
ACTUAL OA CFM				
DESIGN ESP				
ACTUAL ESP				
RETURN AIR SP				
BEFORE FILTER SP				
AFTER FILTER SP				
FAN SUCTION SP				
DISCHARGE SP				
DESIGN FAN RPM				
ACTUAL FAN RPM				
ARRANGEMENT				
TYPE / SIZE				
FILTER SIZE				

SAMPLE

MOTOR DATA

MANUFACTURER				
MOTOR HP				
FRAME				
VOLTAGE				
PHASE				
RATED AMPS				
ACTUAL AMPS				
SERVICE FACTOR				
RATED RPM				
ACTUAL RPM				
MOTOR SHEAVE				
FAN SHEAVE				
BELTS				
CENTERLINE "				

TEMPERATURE TEST DATA

AMBIENT TEMP.				
EAT DB				
LAT DB				
EAT WB				
LAT WB				

REMARKS:

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AIR OUTLET TEST REPORT

ROOM / AREA SERVED	OUTLETS			DESIGN	PRELIMINARY		FINAL			
	#	TYPE	SIZE INCHES	CFM	TEST 1	TEST 2	CFM	Ak Fact.	FPM	% OF DESIGN
	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
	10									
	11									
	12									
	13									
	14									
	15									
	16									
	17									
	18									
	19									
	20									
	21									
	22									
	23									
	24									
	25									
	26									
	27									
	28									
	29									
	30									
	31									
	32									
	33									
	34									
	35									
	36									
	TOTALS									

SAMPLE

REMARKS

DATE

PROJECT

SYSTEM

READINGS BY:

G. FIELDER

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NATIONAL BALANCING COUNCIL™

TERMINAL UNIT TEST REPORT

DATE

PROJECT

READINGS BY:

DESIGN DATA

TERMINAL UNIT #				
TERMINAL TYPE				
INLET SIZE				
CONTROL TYPE				
CONTROL ADDRESS				
PRIMARY MAX AIRFLOW				
PRIMARY MIN AIRFLOW				
FAN AIRFLOW				

ACTUAL TEST DATA

FINAL MAX AIRFLOW				
FINAL MIN AIRFLOW				
FINAL HEAT AIRFLOW				
FAN AIRFLOW				
FLOW COEFF. / GAIN				

SAMPLE

DESIGN DATA

TERMINAL UNIT #				
TERMINAL TYPE				
INLET SIZE				
CONTROL TYPE				
CONTROL ADDRESS				
PRIMARY MAX AIRFLOW				
PRIMARY MIN AIRFLOW				
FAN AIRFLOW				
ACTUAL RPM				

ACTUAL TEST DATA

FINAL MAX AIRFLOW				
FINAL MIN AIRFLOW				
FINAL HEAT AIRFLOW				
FAN AIRFLOW				
FLOW COEFF. / GAIN				

REMARKS

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SECTION B

EXHAUST SYSTEMS

EXHAUST FAN TEST REPORT

DATE

PROJECT

READINGS BY:

FAN DATA

FAN NO.							
LOCATION							
MANUFACTURER							
AREA SERVED							
MODEL NO.							
SERIAL NO.							
FAN TYPE							

TEST DATA

DESIGN CFM							
ACTUAL CFM							
DESIGN SP							
ACTUAL SP							
DESIGN RPM							
ACTUAL RPM							

SAMPLE

MOTOR DATA

MOTOR MANUFACT.							
MOTOR HP							
VOLTAGE							
PHASE							
FRAME							
RATED AMPS							
ACTUAL AMPS							
SERVICE FACTOR							
MOTOR SHEAVE							
FAN SHEAVE							
BELTS							
CENTER DISTANCE							
RATED RPM							
ACTUAL RPM							

REMARKS

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AIR INLET TEST REPORT

ROOM / AREA SERVED	INLETS			DESIGN	PRELIMINARY		FINAL			
	#	TYPE	SIZE INCHES	CFM	TEST 1	TEST 2	CFM	Ak Fact.	FPM	% OF DESIGN
	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
	10									
	11									
	12									
	13									
	14									
	15									
	16									
	17									
	18									
	19									
	20									
	21									
	22									
	23									
	24									
	25									
	26									
	27									
	28									
	29									
	30									
	31									
	32									
	33									
	34									
	35									
	36									
	TOTALS									

SAMPLE

REMARKS

DATE

PROJECT

SYSTEM

READINGS BY:

G. FIELDER

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EXHAUST HOOD TRAVERSE REPORT

Area Served _____ Hood Location: _____

TOTAL FREE AREA	DESIGN		ACTUAL	
	FPM:	CFM:	FPM:	CFM:
SQ. FT.			PERCENT OF DESIGN	

POSITION											
NUMBER	POINT	VEL	VEL	VEL	VEL	VEL	VEL	VEL	VEL	VEL	VEL
1	PLATE 1										
2	PLATE 2										
3	PLATE 3										
4											
5											
6											
7											
8											
9											
10											
SUB-TOTAL		0	0	0	0	0	0	0	0	0	0

SAMPLE

TEST LOCATIONS

1	2	3	4	5
1	1	1	1	1

TOTAL READINGS =	
NUMBER READINGS =	
AVERAGE VELOCITY =	FPM
AREA =	SQ.FT.
TOTAL AIR FLOW =	CFM

REMARKS:

S.P. _____ INSTRUMENT: SHORTRIDGE ADM 860-C WITH VELOCITY GRID

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READINGS BY	SYSTEM	PROJECT	DATE

RECTANGULAR DUCT TRAVERSE REPORT

Area Served _____ Test Location: _____

RECTANGULAR DUCT		DESIGN		ACTUAL	
WIDTH:	HEIGHT:	FPM:	CFM:	FPM:	CFM:
	SQ. FT.			PERCENT OF DESIGN	

POSITION											
NUMBER	POINT	VEL	VEL	VEL	VEL	VEL	VEL	VEL	VEL	VEL	VEL
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
SUB-TOTAL		0	0	0	0	0	0	0	0	0	0

SAMPLE

HOLE LOCATIONS

TEST READINGS

1	2	3	4	5
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5

TOTAL READINGS =	
NUMBER READINGS =	
AVERAGE VELOCITY =	FPM
AREA =	SQ.FT.
TOTAL AIR FLOW =	CFM

REMARKS:

S.P. _____ INSTRUMENT: SHORTRIDGE ADM 860-C WITH PITOT TUBE

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READINGS BY	SYSTEM	PROJECT	DATE

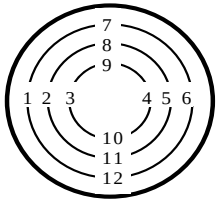
Round Duct Traverse Report

Area Served: _____ Test Location: _____

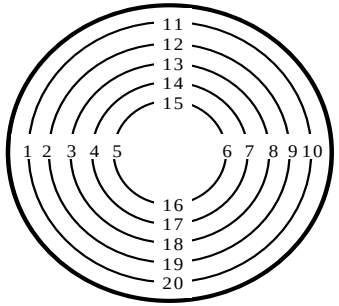
ROUND DUCT		DESIGN		ACTUAL	
SIZE:	(INCHES IN DIAMETER)	FPM:	CFM:	FPM:	CFM:
	SQ. FT.:			PERCENT OF DESIGN	

POSITION		1	2								
NUMBER	POINT	VEL	VEL								
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
SUB-TOTAL		0	0	0	0	0		0	0	0	0

SAMPLE



LESS THAN 10" TEST LOCATIONS



GREATER THAN 10" TEST LOCATIONS

TOTAL READINGS =	
NUMBER READINGS =	
AVERAGE VELOCITY =	FPM
AREA =	SQ.FT.
TOTAL AIR FLOW =	CFM

REMARKS:

S.P. _____ INSTRUMENT: SHORTRIDGE ADM 860C WITH PITOT TUBE

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READINGS BY	SYSTEM	PROJECT	DATE

DUCT TRAVERSE ZONE TOTALS

TEST SYSTEM / LOCATION	SIZE INCHES	EFFECTIVE AREA	REQUIRED VELOCITY	ACTUAL TEST	DESIGN CFM	ACTUAL TEST CFM	% OF DESIGN

ELECTRIC COIL / DUCT HEATER REPORT

UNIT NUMBER	DESIGN CONDITIONS					MEASURED CONDITIONS				
	CFM	VOLTS / PHASE	AMPERAGE	KW	DELTA T	CFM	VOLTS	AMPERAGE	EAT	DAT

SAMPLE

REMARKS:

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READINGS BY

PROJECT

DATE

ROOM AIR CHANGES / PRESSURE CONDITIONS

ROOM NUMBER	USE	RM SIZE (CU. FT.)	MINIMUM AIR CHANGES	ACTUAL AIR CHANGES	SA CFM	NEG CFM	PRESSURE		
							Min.	Actual	Adjacent Space

SAMPLE

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READINGS BY

PROJECT

DATE

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SECTION C

HYDRONIC TEST REPORTS

HYDRONIC PUMP TEST REPORT

PUMP DATA						
PUMP NO.						
SERVICE						
MANUFACTURER						
MODEL NO.						
SERIAL NO.						
DESIGN GPM						
DESIGN HEAD						
DESIGN IMPELLER						
MOTOR DATA						
MOTOR MANUFACTURER						
MOTOR HP						
VOLTAGE						
PHASE						
RATED AMPS						
SERVICE FACTOR						
DESIGN RPM						
MEASURED DATA						
NO FLOW DIFF.						
NO FLOW HEAD						
WIDE OPEN DIFF.						
WIDE OPEN HEAD						
WIDE OPEN GPM						
FINAL SUCTION						
FINAL DISCHARGE						
DIFFERENTIAL						
FINAL HEAD						
FINAL GPM						
PUMP OFF PRESSURE						
VOLTAGE (AVG)						
AMPS (AVG)						

SAMPLE

REMARKS

DATE

PROJECT

READINGS BY:

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COIL TEST REPORT

AHU UNIT	DESIGN CONDITIONS						MEASURED CONDITIONS					
	GPM	Ent Air DB	Discharge Air DB	Entering water	Leaving water	Δ P	Δ P	GPM	Ent Air DB	Discharge Air DB	Entering water	Leaving water
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												

SAMPLE

REMARKS:

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READINGS BY

PROJECT

DATE

FLOW STATION SCHEDULE

LOCATION - AHU	DESIGN GPM	SIZE	DEGREE SETTING	READING FT. WATER	ACTUAL GPM	MANFACT.	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							

SAMPLE

REMARKS

DATE

PROJECT

READINGS BY:

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BOILER DATA

UNIT DESIGNATION: B-1

BOILER DATA	
MANUFACTURER	
MODEL NUMBER	
SERIAL NUMBER	
FUEL INPUT	

ACTUAL TEST DATA	
FUEL FLOW RATE	
STACK TEMP.	
FUEL GAS ANALYSIS	
ENT. WATER TEMP	
LEAVING WTR TEMP	
BOILER PRESSURE	

SAMPLE

REMARKS

DATE

PROJECT

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SECTION D

CALIBRATION REPORT

PREFERRED TEST AND BALANCE, INC.

INSTRUMENT CALIBRATION REPORT

INSTRUMENT	MODEL	SERIAL NO.	CALIBRATION DATE
Shortridge Digital Manometer	860-C	M13579	1/12/2016
Shortridge Air Capture Hood	NA	NA	NA
Cooper Atkins Thermo-Hygrometer	SRH77A-E	17030	9/3/2015
Monarch Digital Tachometer	PT200	1850280	10/17/2015
Fluke Volt / Amp meter	FLUKE 324	11137529	9/6/2015
Extech Rotating Vane Anemometer	AN31	Z321771	9/15/2015
Alnor Digital Water Meter	[illegible]	71331123	8/20/2015
Extech Hotwire Thermoanenometer	14KC2[illegible]	407123	9/14/2015
United McGill Calibrated Orifice Tube	1954-L	[illegible]	NA
Shortridge 18" Airfoil Probe	NA	NA	NA
Dwyer 12" Pitot Tube	NA	NA	NA
Dwyer 18" Pitot Tube	NA	NA	NA
Dwyer 24" Pitot Tube	NA	NA	NA
Dwyer 36" Pitot Tube	NA	NA	NA
Dwyer 48" Pitot Tube	NA	NA	NA
Dwyer 60" Pitot Tube	NA	NA	NA

SAMPLE