

Beth Israel Deaconess Medical Center

Certified Test, Adjust and Balance Report Guidelines

This Certified Test, Adjust, and Balance Report is required as part of HVAC Reporting and Closeout Documentation for Beth Israel Deaconess Medical Center. Any deviation from this requirement shall be brought to the attention of the BIDMC Facilities Engineering Department during review.

Released by:

Beth Israel Deaconess Medical Center
Facilities Planning, Design & Construction
333 Brookline Avenue, OV-400B
Boston, MA

Certified Test, Adjust and Balance Report Guidelines

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A. Narrative

All testing and balancing reports shall be formatted to follow the outline below.

1. The **COVER PAGE** shall clearly define the following as applicable:
 - a. Contractor
 - b. Engineer
 - c. Architect
 - d. Project Description
 - e. Project Address
 - f. Report Revision No.
 - g. Date
 - h. Technician
 - i. Name & address of Balancing Firm
 - j. Balancer's Certification
 - k. Firm Certification No.
 - l. Certification Expiration Date
2. **TABLE OF CONTENTS**
3. **DEFINITION OF TERMS**
 - a. Use this section to define relevant terms and abbreviations used throughout the report.
4. Proof of **FIRM CERTIFICATIONS**
 - a. Use this section to demonstrate all relevant certifications.
5. **REPORT COMMENTS**
 - a. Use this section to make any general report comments, notes, or assumptions as applicable.
6. **METER CERTIFICATES**
 - a. Use this section to document instrument calibration certificates. This section shall list the instrument used, the application, dates of use and calibration due date.
7. **BALANCING REPORT ROOM PROFILE SUMMARY**
 - i. See Template for table requirements.
 - b. **ROOM SKETCH**
 - i. For each room or suite of rooms balanced, the balancer shall provide a room sketch. The room sketch shall indicate the room number, the layout of the room, all doorways, and all air outlets. The layout does not need to be to scale,

but shall include all relevant information. All air outlets shall be labeled with their size and numbered.

c. AIR OUTLET TEST REPORT

- i. For each room or suite of rooms balanced, the balancer shall provide an air outlet test report. The air outlet test report data should be keyed to the room sketch by way of the air outlet numbers. See Template for requirements.

B. Example

Certified Test, Adjust and Balance Report Template

Contractor:	BIDMC – Owner
Engineer:	The Engineer
Architect:	The Architect
Project:	OR-10
Project Address:	330 Brookline Ave., Boston, MA
Report Revision No.:	Rev. No. 1
Report Date:	6/10/11
Technician:	ER

Balancing Firm Name:	The Balancer
Firm Address:	1 Balance Way, Boston, MA
Firm Phone No.:	617 555 5555

Certification:	National Environmental Balancing Bureau
Firm Certification No.:	1234
Certification Expiration Date:	7/1/13

Project:	OR-10	
Address:	330 Brookline Ave., Boston, MA	Page: 1
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5. Balancing Report Room Profile Summary
6. Room No. GZ-001 Room Sketch & Individual Airflows
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Test Date:	7/1/13	Readings By:	ER
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Project:	OR-10	
Address:	330 Brookline Ave., Boston, MA	Page: 2
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Definition of Terms

Definition of Terms					
ACPH	Air Changes per Hour	FH	Fume Hood	NC	Not Complete
AHU	Air Handlin Unit	FPM	Fee Per Minute	NIC	Not in Contract
AK	Free Area	FPT	Fan Powered Terminal	NL	Not Listed
ACB	Active Cooling Beam	FT	Feet of Water	NR	Not Recorded
BV	Balancing Valve	HF	HEPA Filter Terminal	NS	Not Shown
BS	Bird Screen	HP	Heat Pump	RR	Return Register
CD	Ceiling Diffuser	KF	VAV/CV CFM at 1.00" of VP	SG	Supply Grill
CFM	Cubic Feet Per Minute	KV	Correction Multiplier	SR	Supply Register
CE	Ceiling Exhaust	LAT	Leaving Air Temperature	SP	Static Pressure
CR	Ceiling Register	LD	Lineal Diffuser	TBD	To be Determined
DNL	Data Not Listed	LR	Lineal Return	VP	Velocity Pressure
DP	Differential Pressure	PERF	Perforated Face	VAV	Variable Air Volume
EG	Exhaust Grill	MAX	Max Air Flow Setting	VEL	Velocity
EAT	Entering Air Temperature	MIN	Min Air Flow Setting	WMS	Wire Mesh Screen
ER	Exhaust Register	NA	Not Applicable	WPD	Water Pressure Drop

Test Date:	7/1/13	Readings By:	ER
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Project:	OR-10	
Address:	330 Brookline Ave., Boston, MA	Page: 3
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Firm Certifications

Test Date:	7/1/13	Readings By:	ER
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Project:	OR-10	
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Meter Certifications

Firm: TheBalancer

Project: OR-10

Project Address: 330 Brookline Ave, Boston, MA

Instrument Used/Serial No.	Application	Dates of Use	Calibration Due Date
Shortridge / M08344	Air Velocity	5/27/13	10/2013
Shortridge / M08344	Static & Differential Pressure	5/27/13	10/2013
Shortridge /M08344	Air Volume in CFM	5/27/13	10/2013
Shortridge / W03049	Hydronics	5/27/13	10/2013

Remarks:

Test Date:	7/1/13	Readings By:	ER
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Project:	OR-10	Test Apparatus	Shortridge ADM 870
Address:	330 Brookline Ave, Boston, MA	Page: 5	
Revision:	No. 1		

Balancing Report Room Profile Summary

Area Served	Room Use	Pass/ Fail	Room Air Treatment	Humidity Control	Room Designs		Room Actuals				AHU/ System	Room Pressure
					ACPH	Press.	ACPH	Press.	CFM	Cubic Ft		
GZ-001	Procedure Room	Pass	Hepa Filter	Yes	15	Positive	19	Positive	636	2059	S1G & S3G	+0.013"
GZ-002	Scope Clean Room	Pass	HEPA Filter	Yes	10	Negative	37	Negative	1276	2046	S1G & S3G	-0.042"

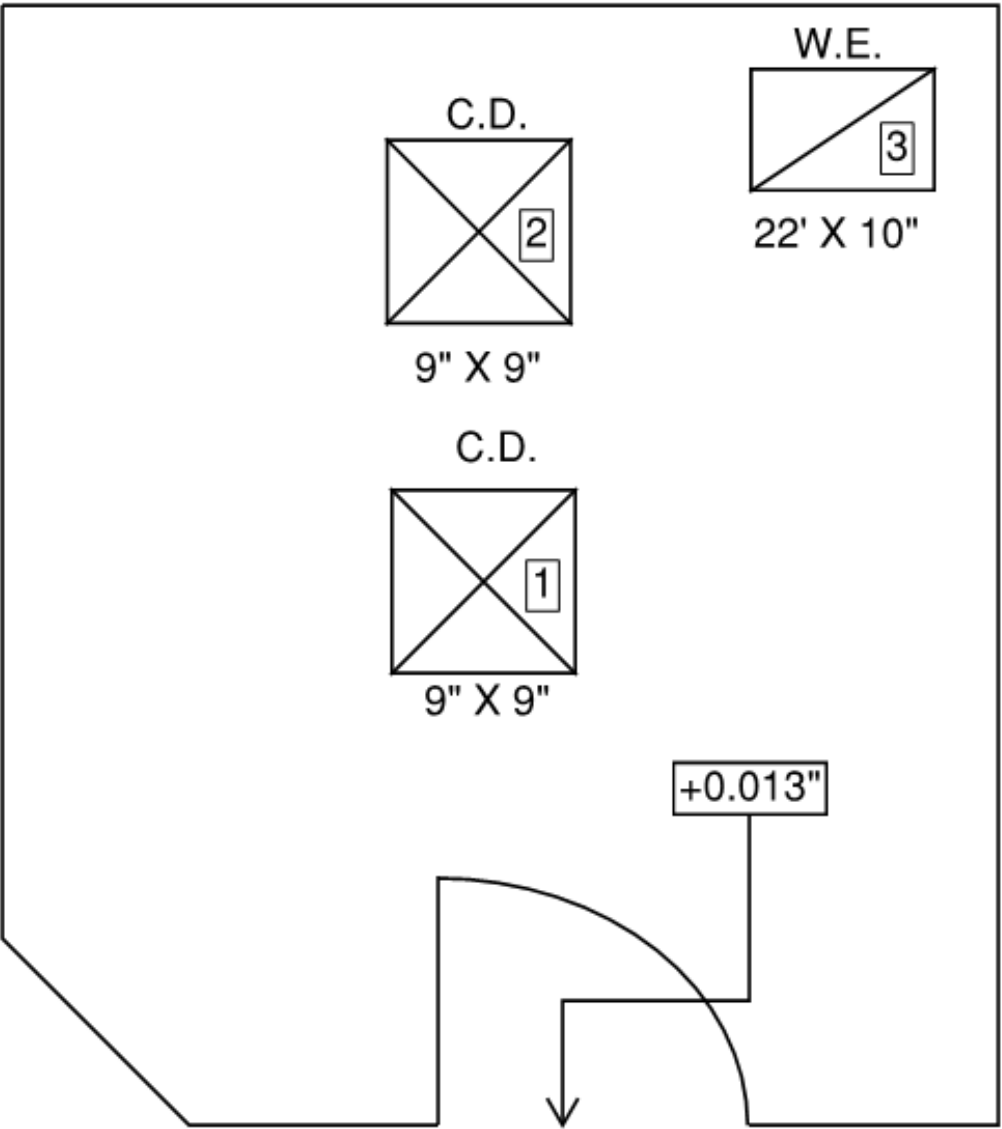
Remarks:

Test Date:	7/1/13	Readings By:	ER
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Project:	OR-10	System	S1G & S3G
Address:	330 Brookline Ave, Boston, MA	Page: 6	
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System Sketch

Room No. GZ-001



Drawing Not To Scale

Test Date:	7/1/13	Readings By:	ER
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Project:	OR-10	System	S1G & S3G
Address:	330 Brookline Ave, Boston, MA	Page: 7	
Outlet Manufacturer:			

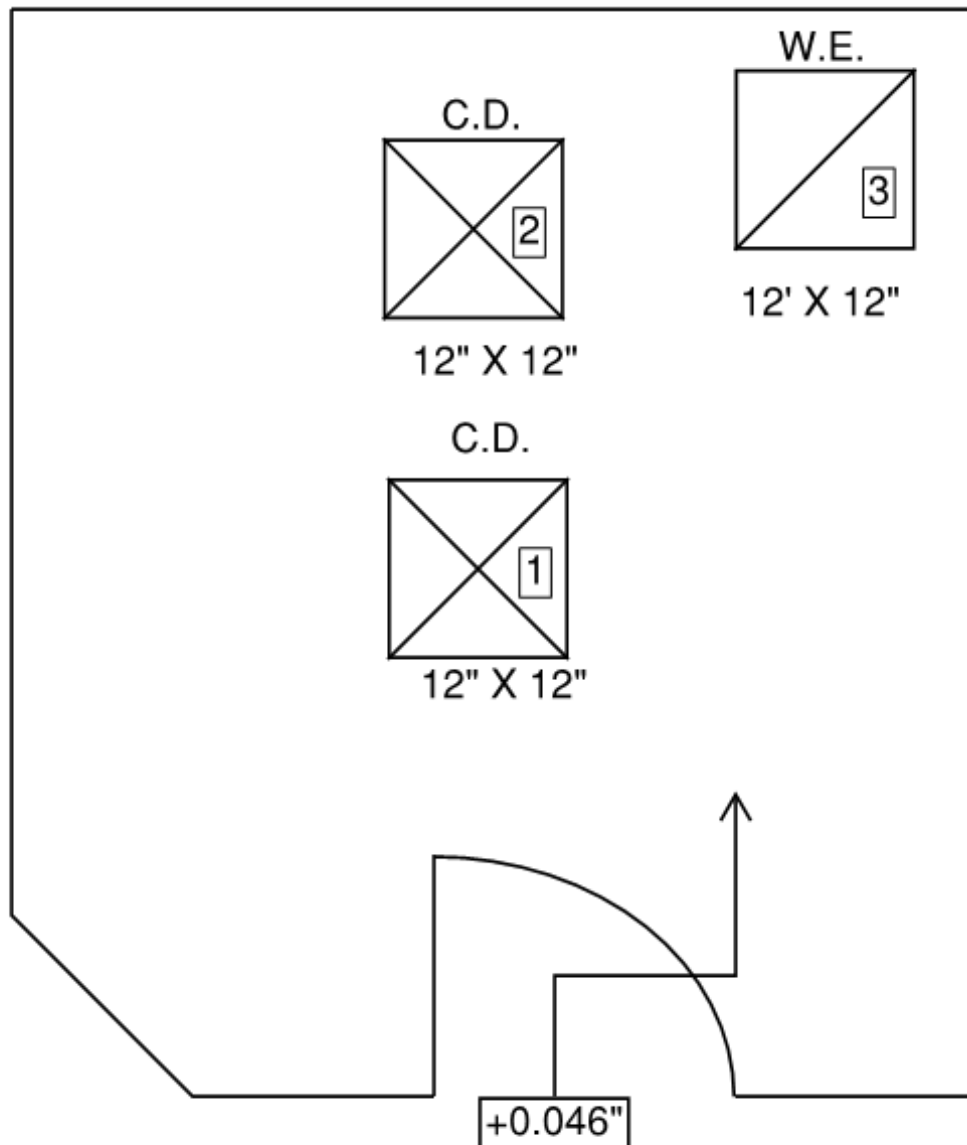
Area Served	Outlet				Design CFM				Final CFM		CFM%	Terminal Data
	No.	Type	Size	AK	CFM	VEL			VEL	CFM		
GZ-0001	1	CD	9" x 9"	-	NA	-			-	316		S1G-S3G
	2	CD	9"x9"	-	NA	-			-	320		
					NA	-			-	636		
	3	WE	22"x10"	-	NA	-			-	305		
					NA	-			-	305		

Test Date:	7/1/13	Readings By:	ER
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Project:	OR-10	System	S1G & S3G
Address:	330 Brookline Ave, Boston, MA	Page: 8	
Outlet Manufacturer:			

System Sketch

Room No. GZ-002



Drawing Not To Scale

Test Date:	7/1/13	Readings By:	ER
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Project:	OR-10	System	S1G & S3G
Address:	330 Brookline Ave, Boston, MA	Page: 9	
Outlet Manufacturer:			

Area Served	Outlet				Design CFM				Final CFM			Terminal Data
	No.	Type	Size	AK	CFM	VEL			VEL	CFM	CFM%	
GZ-0002	1	CD	12" x 12"	-	NA	-			-	194		EF-7
	2	CD	12"x 12"	-	NA	-			-	265		
					NA	-			-	459		
	3	WE	12"x 12"	-	NA	-			-	1276		
					NA	-			-	1276		

Test Date:	7/1/13	Readings By:	ER
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C. Template