

Report By:

**National TAB
1329 E Kemper Rd, Ste 4210
Cincinnati, OH 45246**



**Report: Test and Balance
Date: 10/26/2020**

**PROJECT
CW - 3401 OPTYM (DALLAS, TX)**

3401 OLYMPUS BLVD. SUIT 510
DALLAS, TX 75019

Client

Billingsley
1722 Routh St.
Suite 770
Dallas, TX 75201

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Project: CW - 3401 OPTYM (DALLAS, TX)

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CERTIFICATION

PROJECT: CW - 3401 OPTYM (DALLAS, TX)

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB *Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems*. Any variances from design quantities, which exceed NEBB tolerances, are noted in the Test-Adjust-Balance Report Project Summary.

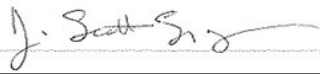
The air distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM: National TAB-Southeast
REGISTRATION NO: 3755
CERTIFIED BY: J. Scott Springer 23312
DATE: 10/26/2020

The hydronic distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM: National TAB-Southeast
REGISTRATION NO: 3086
CERTIFIED BY: J. Scott Springer 23312
DATE: _____

Submitted and Certified by:

NEBB TAB FIRM: National TAB-Southeast
TAB PROFESSIONAL: J. Scott Springer
SIGNATURE: 
REGISTRATION NO: 3755 (NTAB) / 23312
CERTIFICATION EXP: 3/31/2021





National TAB

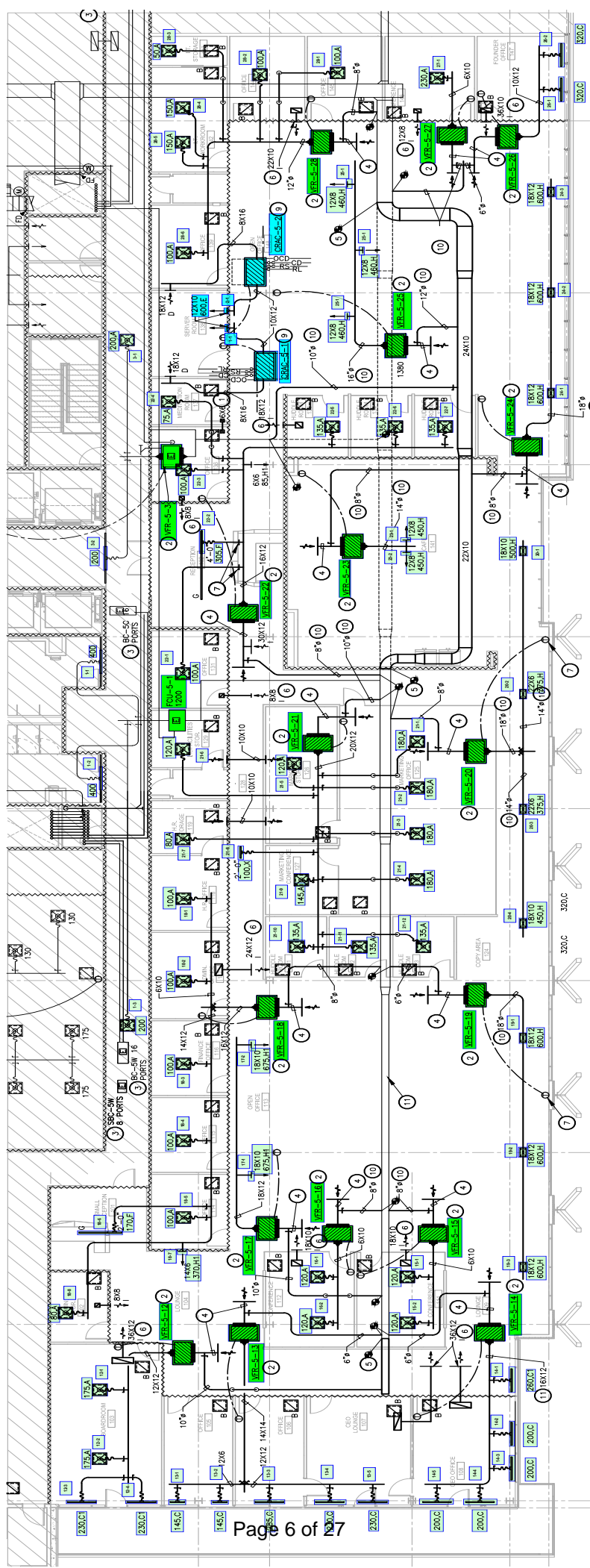


Testing, Adjusting, and Balancing Equipment

Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	Shortridge ADM-860C - S/N MO5066	11/22/2019	11/22/2020
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Shortridge ADM-860C - S/N MO5066	11/22/2019	11/22/2020
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 5 % +/- 7 cfm	DWYER SAH- S/N 01KB6V	3/30/2020	3/30/2021
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 090315046	6/4/2020	6/4/2021
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 5028	6/4/2020	6/4/2021
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 090315046	6/4/2020	6/4/2021
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 1075	6/4/2020	6/4/2021
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 090315046	6/4/2020	6/4/2021
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 4011	6/4/2020	6/4/2021
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper ATKINS - SRH77A S/N 090315046	6/4/2020	6/4/2021
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Fluke 334 , S/N: 87004594	6/5/2020	6/6/2021
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Fluke 334 , S/N: 87004594	6/5/2020	6/6/2021
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	SHIMPO DT-207LR S/N: C4AB0029	6/6/2020	6/7/2021
HYDRONIC	PRESSURE MEASUREMENT	-30 in Hg to 200 psi	±2% of reading +/- 1 psi	Alnor HM680 S/N: 70807241	1/5/2020	1/5/2021
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Alnor HM680 S/N: 70807241	1/5/2020	1/5/2021

ABBREVIATIONS

AK	Area Factor	NL	Not Listed
B.H.P.	Brake Horse Power	NO.	Number
CFM	Cubic Feet Per Minute	NPSH	Net Positive Suction Head
CO ₂	Carbon Dioxide	NOX	Mono – Nitrogen Oxides
CO	Carbon Monoxide	NS	Not Specified
CH ₂ O	Formaldehyde	OA	Outside Air
CD	Ceiling Diffuser	OAT	Outdoor Air Temperature
CLG	Cooling	P.F.	Power Factor
CF	Correction Factor	P.D.	Pressure Drop
DB	Dry Bulb	PPM	Parts Per Million
Dir	Direction	PSI	Pounds Per Square Inch
EA	Exhaust Air	PSID	PSI Differential
Eff.	Efficiency	RA	Return Air
EF	Exhaust Fan	RH	Relative Humidity
EAT	Entering Air Temperature	RF	Return Fan
EG	Exhaust Grille	RPM	Rotations Per Minute
E.S.P.	External Static Pressure	RAT	Return Air Temperature
EWT	Entering Water Temperature	RG	Return Grille
FPM	Feet Per Minute	SA	Supply Air
F.L.	Full Load	S.F.	Service Factor
FPVAV	Fan Powered Variable Air Volume	SF	Supply Fan
FT	Feet	S.P.	Static Pressure
F	Fahrenheit	SR	Supply Register
GPM	Gallons Per Minute	SQ.	Square
H.P.	Horse Power	TEMP	Temperature
HTG	Heating	T.S.P.	Total Static Pressure
IN	Inches	VEL	Velocity
LAT	Leaving Air Temperature	VFD	Variable Frequency Drive
LWT	Leaving Water Temperature	VAV	Variable Air Volume
MIN	Minimum	VVR	Variable Volume Reheat
MAX	Maximum	WB	Wet Bulb
NEBB	National Environmental Balancing Bureau	WC	Water Column
N/A	Not Applicable	%	Percentage
NA	No Access	#	Number



System/Unit: Fan Coil



Asset: FCU-5-1

AREA: CORRIDOR

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP024
Serial Num	-	97R04708
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	1.30

Test Data		
	Design	Actual
SFAN CFM	1000	955
Motor Speed SetPt	-	HIGH
RL Voltage	-	212
RL Amperage	-	0.91
RA CFM	0	0
OA CFM	955	955

Performance Data		
	Design	Actual
Suction ESP	-	0.15
Discharge ESP	-	0.46
Total ESP	-	0.61

Completed By: Brian Irvin on 09/27/2020

Notes:

Diffuser Supply (GRD)

FCU-5-1 / CORRIDOR

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	RESTROOM	C	8	400		366		382	95.5
SGRD2	RESTROOM	C	8	400		354		386	96.5
SGRD3	500B	A	8	200		123		194	97.0

Completed By: Brian Irvin on 09/27/2020

Asset	Area Served	Notes



Asset: FCU-5-12

AREA: OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP024
Serial Num	-	06R0196130P80 H
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	2.73

Test Data		
	Design	Actual
SFAN CFM	810	824
Motor Speed SetPt	-	HIGH
RL Voltage	-	208
RL Amperage	-	0.47
RA CFM	530	558
OA CFM	280	266

Performance Data		
	Design	Actual
Suction ESP	-	0.06
Discharge ESP	-	0.13
Total ESP	-	0.19

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-12 / OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	103	A		175	8	166		177	101.1
SGRD2	103	A		175	8	187		178	101.7
SGRD3	103	C1		230	8	251		233	101.3
SGRD4	103	C1		230	8	166		236	102.6

Completed By: Brian Irvin on 10/01/2020

Asset	Area Served	Notes

System/Unit: Fan Coil



Asset: FCU-5-13

AREA: OFFICES

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP030
Serial Num	-	07R0104130P80 K
Configuration	HORIZONTAL	HORIZONTAL

Test Data		
	Design	Actual
SFAN CFM	1035	925
Motor Speed SetPt	-	HIGH
RL Voltage	-	208
RL Amperage	-	.76
RA CFM	955	844
OA CFM	80	81

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	2.73

Performance Data		
	Design	Actual
Suction ESP	-	0.11
Discharge ESP	-	0.16
Total ESP	-	0.27

Completed By: Brian Irvin on 10/06/2020

Notes: FAN IS IN HIGHEST SPEED AND CFM IS LOW. DUCTWORK IS TOO CLOSE TO DIFFUSER CAUSING SHARP RADIUS TURNS IN FLEX DUCT IN SHAPE OF AN S.

Diffuser Supply (GRD)

FCU-5-13 / OFFICES

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	105	C	8	145		166		135	93.1
SGRD2	105	C	8	145		174		133	91.7
SGRD3	106	C	10	285		231		251	88.1
SGRD4	107	C	8	230		194		201	87.4
SGRD5	107	C	8	230		172		205	89.1

Completed By: Brian Irvin on 10/01/2020

Asset	Area Served	Notes



Asset: FCU-5-14

AREA: OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP024
Serial Num	-	06R0196830P80 H
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	2.73

Test Data		
	Design	Actual
SFAN CFM	800	840
Motor Speed SetPt	-	HIGH
RL Voltage	-	208
RL Amperage	-	.89
RA CFM	980	762
OA CFM	80	78

Performance Data		
	Design	Actual
Suction ESP	-	0.08
Discharge ESP	-	0.11
Total ESP	-	0.19

Completed By: Brian Irvin on 10/06/2020

Notes: DIFFUSER 14-1 IS NOT INSTALLED
BALANCED TO NEW DIFFUSER TOTAL.

Diffuser Supply (GRD)

FCU-5-14 / OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	108	C1	8	260		0		0	0.0
SGRD2	108	C	8	200		200		200	100.0
SGRD3	108	C	8	200		209		209	104.5
SGRD4	108	C	8	200		217		217	108.5
SGRD5	108	C	8	200		214		214	107.0

Completed By: Brian Irvin on 10/01/2020

Asset	Area Served	Notes
SGRD1	108	NOT INSTALLED

System/Unit: Fan Coil



Asset: FCU-5-15

AREA: OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP008
Serial Num	-	06R014343CP80 D
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	1.05

Test Data		
	Design	Actual
SFAN CFM	240	240
Motor Speed SetPt	-	LOW
RL Voltage	-	209
RL Amperage	-	.15
RA CFM	80	85
OA CFM	160	155

Performance Data		
	Design	Actual
Suction ESP	-	0.03
Discharge ESP	-	0.09
Total ESP	-	0.12

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-15 / OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	111	A	8	120		150		120	100.0
SGRD2	111	A	8	120		150		120	100.0

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes



Asset: FCU-5-16

AREA: OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP008
Serial Num	-	06R0146630P80 D
Configuration	HORIZONTAL	HORIZONTAL

Test Data		
	Design	Actual
SFAN CFM	240	241
Motor Speed SetPt	-	LOW
RL Voltage	-	208
RL Amperage	-	0.13
RA CFM	80	79
OA CFM	160	162

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	1.05

Performance Data		
	Design	Actual
Suction ESP	-	0.05
Discharge ESP	-	0.08
Total ESP	-	0.13

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-16 / OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	112	A	8	120		129		115	95.8
SGRD2	112	A	8	120		139		126	105.0

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes



Asset: FCU-5-17

AREA: OPEN OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP036
Serial Num	-	06R0141430P80 L
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.50

Test Data		
	Design	Actual
SFAN CFM	1350	1417
Motor Speed SetPt	-	MED HIGH
RL Voltage	-	208
RL Amperage	-	1.3
RA CFM	950	1030
OA CFM	400	387

Performance Data		
	Design	Actual
Suction ESP	-	0.09
Discharge ESP	-	0.17
Total ESP	-	0.26

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-17 / OPEN OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	113	H1	18X10	675		863		707	104.7
SGRD2	113	H1	18X10	675		645		710	105.2

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes



Asset: FCU-5-18

AREA: OFFICES

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP036
Serial Num	-	06R013823GP80 D
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.50

Test Data		
	Design	Actual
SFAN CFM	1120	1137
Motor Speed SetPt	-	MEDIUM
RL Voltage	-	210
RL Amperage	-	.86
RA CFM	880	888
OA CFM	240	249

Performance Data		
	Design	Actual
Suction ESP	-	0.11
Discharge ESP	-	0.14
Total ESP	-	0.25

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-18 / OFFICES

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	118	A	8	100		191		108	108.0
SGRD2	117	A	8	100		204		107	107.0
SGRD3	116	A	8	100		158		105	105.0
SGRD4	115	A	8	100		175		108	108.0
SGRD5	114	A	8	100		189		104	104.0
SGRD6	101	F	8	170		46		166	97.6
SGRD7	104	H1	14X6	370		479		356	96.2
SGRD8	102	A	8	80		187		83	103.8

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes



Asset: FCU-5-19

AREA: OPEN OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP054
Serial Num	-	07R0043930P80 N
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.51

Test Data		
	Design	Actual
SFAN CFM	1800	1767
Motor Speed SetPt	-	MED HIGH
RL Voltage	-	208
RL Amperage	-	1.76
RA CFM	1700	1664
OA CFM	100	103

Performance Data		
	Design	Actual
Suction ESP	-	0.16
Discharge ESP	-	0.24
Total ESP	-	0.40

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-19 / OPEN OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	113	H	18X12	600		427		565	94.2
SGRD2	113	H	18X12	600		489		638	106.3
SGRD3	LOUNGE	H	18X12	600		523		564	94.0

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes

System/Unit: Fan Coil



Asset: FCU-5-20

AREA: COPY / CAFE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP072
Serial Num	-	9YW003497GEH B4
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.51

Test Data		
	Design	Actual
SFAN CFM	1700	2103
Motor Speed SetPt	-	LOW
RL Voltage	-	206
RL Amperage	-	1.4
RA CFM	1520	1929
OA CFM	180	174

Performance Data		
	Design	Actual
Suction ESP	-	0.15
Discharge ESP	-	0.28
Total ESP	-	0.43

Completed By: Brian Irvin on 10/06/2020

Notes: FAN AT LOWEST SPEED

Diffuser Supply (GRD)

FCU-5-20 / COPY / CAFE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	141	H	18X10	500		645	586	586	117.2
SGRD2	141	H	22X6	375		629	444	444	118.4
SGRD3	124	H	22X6	375		669	520	520	138.7
SGRD4	124	H	18X10	450		785	553	553	122.9

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes

System/Unit: Fan Coil



Asset: FCU-5-21

AREA: OFFICES

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP054
Serial Num	-	07R0044030P80 N
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.51

Test Data		
	Design	Actual
SFAN CFM	1690	1638
Motor Speed SetPt	-	HIGH
RL Voltage	-	208
RL Amperage	-	1.9
RA CFM	1025	1227
OA CFM	400	411

Performance Data		
	Design	Actual
Suction ESP	-	0.12
Discharge ESP	-	0.29
Total ESP	-	0.41

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-21 / OFFICES

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	125	A	8	180		102		162	90.0
SGRD2	125	A	8	180		188		180	100.0
SGRD3	125	A	8	180		164		164	91.1
SGRD4	125	A	8	180		61		166	92.2
SGRD5	126	A	8	120		143		119	99.2
SGRD6	129	A	8	120		56		127	105.8
SGRD7	119	A	8	80		178		85	106.3
SGRD8	128	X	8	100		46		90	90.0
SGRD9	127	A	8	145		211		144	99.3
SGRD10	121	A	8	135		198		136	100.7
SGRD11	122	A	8	135		230		126	93.3
SGRD12	123	A	8	135		135		139	103.0

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes

System/Unit: Fan Coil



Asset: FCU-5-22

AREA: OFFICES

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP036
Serial Num	-	05R120630P80 M
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.50

Test Data		
	Design	Actual
SFAN CFM	1070	979
Motor Speed SetPt	-	MED LOW
RL Voltage	-	207
RL Amperage	-	.52
RA CFM	830	746
OA CFM	240	233

Performance Data		
	Design	Actual
Suction ESP	-	0.05
Discharge ESP	-	0.16
Total ESP	-	0.21

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-22 / OFFICES

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	131	A	8	100		163		104	104.0
SGRD2	132	F	10	305		40		283	92.8
SGRD3	136	A	8	100		179		104	104.0
SGRD4	137	A	8	75		166		79	105.3
SGRD5	135	A	8	135		145		138	102.2
SGRD6	134	A	8	135		169		133	98.5
SGRD7	133	A	8	135		173		138	102.2

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes



Asset: FCU-5-23

AREA: OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP030
Serial Num	-	07R0101930P80 K
Configuration	HORIZONTAL	HORIZONTAL

Test Data		
	Design	Actual
SFAN CFM	900	874
Motor Speed SetPt	-	MED LOW
RL Voltage	-	208
RL Amperage	-	.53
RA CFM	660	636
OA CFM	240	238

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	2.73

Performance Data		
	Design	Actual
Suction ESP	-	0.09
Discharge ESP	-	0.17
Total ESP	-	0.26

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-23 / OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	141	H	12X8	450		388		440	97.8
SGRD2	141	H	12X8	450		486		444	98.7

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes



Asset: FCU-5-24

AREA: OPEN OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP048
Serial Num	-	05R0120530P80 M
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.51

Test Data		
	Design	Actual
SFAN CFM	1800	1744
Motor Speed SetPt	-	HIGH
RL Voltage	-	210
RL Amperage	-	1.7
RA CFM	1600	1543
OA CFM	200	201

Performance Data		
	Design	Actual
Suction ESP	-	0.10
Discharge ESP	-	0.26
Total ESP	-	0.36

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-24 / OPEN OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	148	H	18X12	600		283		609	101.5
SGRD2	148	H	18X12	600		411		568	94.7
SGRD3	148	H	18X12	600		546		567	94.5

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes



Asset: FCU-5-25

AREA: OPEN OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP048
Serial Num	-	05R0120430P80 M
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.51

Test Data		
	Design	Actual
SFAN CFM	1380	1817
Motor Speed SetPt	-	LOW
RL Voltage	-	208
RL Amperage	-	.63
RA CFM	900	1353
OA CFM	480	464

Performance Data		
	Design	Actual
Suction ESP	-	0.09
Discharge ESP	-	0.22
Total ESP	-	0.29

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-25 / OPEN OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	148	H	12X8	460		611		604	131.3
SGRD2	148	H	12X8	460		691		623	135.4
SGRD3	148	H	12X8	460		661		590	128.3

Completed By: Brian Irvin on 09/30/2020

Asset	Area Served	Notes



Asset: FCU-5-26

AREA: OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP015
Serial Num	-	06R0090530P80 F
Configuration	HORIZONTAL	HORIZONTAL

Test Data		
	Design	Actual
SFAN CFM	640	624
Motor Speed SetPt	-	HIGH
RL Voltage	-	209
RL Amperage	-	.70
RA CFM	620	603
OA CFM	20	21

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	1.45

Performance Data		
	Design	Actual
Suction ESP	-	0.04
Discharge ESP	-	0.08
Total ESP	-	0.12

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-26 / OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	147	C	10	320		75		303	94.7
SGRD2	147	C	10	320		91		321	100.3

Completed By: Brian Irvin on 10/01/2020

Asset	Area Served	Notes



Asset: FCU-5-27

AREA: OFFICE

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP008
Serial Num	-	06R0146730P80 D
Configuration	HORIZONTAL	HORIZONTAL

Test Data		
	Design	Actual
SFAN CFM	230	220
Motor Speed SetPt	-	MED LOW
RL Voltage	-	209
RL Amperage	-	1.6
RA CFM	70	60
OA CFM	160	167

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	1.05

Performance Data		
	Design	Actual
Suction ESP	-	0.02
Discharge ESP	-	0.19
Total ESP	-	0.21

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-27 / OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	146	A	8	230		220		220	95.7

Completed By: Brian Irvin on 09/29/2020

Asset	Area Served	Notes

System/Unit: Fan Coil



Asset: FCU-5-28

AREA: OFFICES

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP018
Serial Num	-	06R0160930P80 G
Configuration	HORIZONTAL	HORIZONTAL

Test Data		
	Design	Actual
SFAN CFM	650	674
Motor Speed SetPt	-	HIGH
RL Voltage	-	208
RL Amperage	-	7.4
RA CFM	510	534
OA CFM	140	142

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	1.45

Performance Data		
	Design	Actual
Suction ESP	-	0.03
Discharge ESP	-	0.13
Total ESP	-	0.16

Completed By: Brian Irvin on 10/06/2020

Notes:

Diffuser Supply (GRD)

FCU-5-28 / OFFICES

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	145	A	8	100		93	104	103	103.0
SGRD2	144	A	8	100		115	107	106	106.0
SGRD3	143	A	8	50		101	69	54	108.0
SGRD4	142	A	8	150		138	136	158	105.3
SGRD5	142	A	8	150		175	95	143	95.3
SGRD6	139	A	8	100		187	105	110	110.0

Completed By: Brian Irvin on 10/17/2020

Asset	Area Served	Notes

System/Unit: Fan Coil



Asset: VRF-5-3

AREA: CORRIDOR

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP012
Serial Num	-	06R0255430P8
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	NL
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	1.30

Test Data		
	Design	Actual
SFAN CFM	400	384
Motor Speed SetPt	-	MEDIUM HIGH
RL Voltage	-	208
RL Amperage	-	0.61
RA CFM	0	0
OA CFM	384	384

Performance Data		
	Design	Actual
Suction ESP	-	0.05
Discharge ESP	-	0.31
Total ESP	-	0.36

Completed By: Brian Irvin on 09/27/2020

Notes:

Diffuser Supply (GRD)

VRF-5-3 / CORRIDOR

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	500C	A	8	200		322		195	97.5
SGRD2	200C	LD	8	200		138		189	94.5

Completed By: Brian Irvin on 09/27/2020

Asset	Area Served	Notes

System/Unit: Computer Room Air Conditioner



Asset: CRAC-5-1

AREA: SERVER

Unit Data		
	Design	Actual
MFG	VERTIV	VERTIV
Model Num	MT036HE1A0D606	MT036HE1A0D606
Serial Num	-	Y20GG1A105
Num Filters Size 1	-	1
Filter Size 1	-	20X20X2

Test Data		
	Design	Actual
SFAN CFM	600	605
SFAN RPM	-	DIRECT DRIVE
RL Voltage	-	484
RL Amperage	-	1.3
RA CFM	-	0
OA CFM	-	605

Motor Data		
	Design	Actual
Motor MFG	-	GENTEQ
Frame	-	NL
Horsepower	-	.75
Motor Rpm	-	550-1500
Phase	-	1
Voltage (rated)	-	460
Amperage (rated)	-	3.1

Performance Data		
	Design	Actual
Total SP	-	0.63"
Fan Discharge SP	-	0.22"
Fan Inlet SP	-	-0.41"

Completed By: Brian Irvin on 10/17/2020

Notes:

Diffuser Supply (GRD)

CRAC-5-1 / SERVER

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	138	E	12X10	600		605		605	100.8

Completed By: Stephan Gabbert on

Asset	Area Served	Notes

System/Unit: Computer Room Air Conditioner



Asset: CRAC-5-2

AREA: SERVER

Unit Data		
	Design	Actual
MFG	VERTIV	VERTIV
Model Num	MT036HE1A0D606	MT036HE1A0D606
Serial Num	-	Y20GG1A106
Num Filters Size 1	-	1
Filter Size 1	-	20X20X2

Test Data		
	Design	Actual
SFAN CFM	600	616
SFAN RPM	-	DIRECT DRIVE
RL Voltage	-	484
RL Amperage	-	1.2
RA CFM	-	0
OA CFM	-	616

Motor Data		
	Design	Actual
Motor MFG	-	GENTEQ
Frame	-	NL
Horsepower	-	.75
Motor Rpm	-	550-1500
Phase	-	1
Voltage (rated)	-	460
Amperage (rated)	-	3.1

Performance Data		
	Design	Actual
Total SP	-	0.61"
Fan Discharge SP	-	0.22"
Fan Inlet SP	-	-0.39"

Completed By: Brian Irvin on 10/17/2020

Notes:

Diffuser Supply (GRD)

CRAC-5-2 / SERVER

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	138	E	12X10	600		616		616	102.7

Completed By: Brian Irvin on 10/17/2020

Asset	Area Served	Notes