

Report By:

National TAB
105 Stone Village Drive
Fort Mill, SC 29708



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 08/11/2025
Completed By: National TAB

PROJECT
CW 3000 - 4th Floor Brinker (Dallas, TX)

3000 OLYMPUS BLVD

DALLAS, TX 75063

Client

Billingsley
ONE ART PLAZA
1722 ROUTH ST SUITE 1313
DALLAS, TX 75201

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Project: CW 3000 - 4th Floor Brinker (Dallas, TX)

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CERTIFICATION

PROJECT: CW 3000 - 4th Floor Brinker (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: 8/11/2025

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: 3755

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: 12/31/2025





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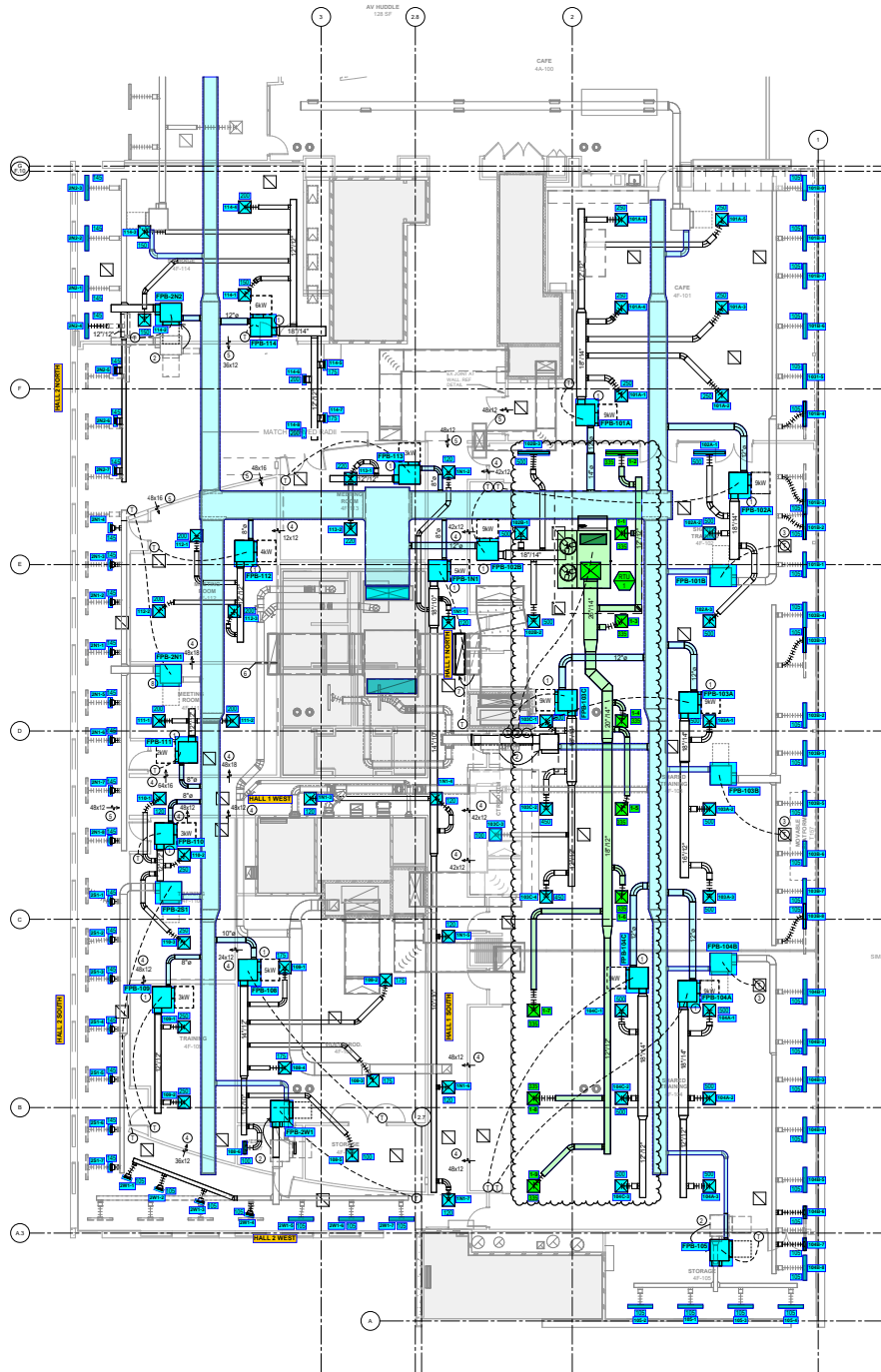
Testing, Adjusting, and Balancing Equipment



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-880C S/N M05066	10/15/2024	10/15/2025
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Shortridge ADM-880C S/N M05066	10/15/2024	10/15/2025
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 3 % +/- 7 cfm	Shortridge Flow Hood	10/15/2024	10/15/2025
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 5028	10/15/2024	10/15/2025
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 1075	10/15/2024	10/15/2025
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 4011	10/15/2024	10/15/2025
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper ATKINS - SRH77A S/N 090315046	10/15/2024	10/15/2025
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/15/2024	10/15/2025
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/15/2024	10/15/2025
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Dwyer TAC-L - S/N S1100123	10/15/2024	10/15/2025
HYDRONIC	PRESSURE MEASUREMENT	-30 in Hg to 200 psi	±2% of reading +/- 1 psi	Shortridge HDM 250 - S/N W25059	6/18/2025	6/18/2026
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Shortridge HDM 250 - S/N W25059	6/18/2025	6/18/2026
DALT	DUCT LEAKAGE	-10" - +10" wc	±1% of reading +/- 0.004" wc	Kanomax DALT 6900 S/N: 080439	3/7/2025	3/7/2026

Abbreviation List

A = Area (ft ²)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A _k = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T _{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T _{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T _{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO ₂ = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C _v = Flow Constant	K _v = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T _{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
% _{ra} = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio





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Project: CW 3000 - 4th Floor Brinker (Dallas, TX)

VAV-Fan Powered Box

FPB/

Asset										
Asset Name	Service	Type	Inlet Size	Design Max Cool CFM	Max Cool CFM	Design Min Heat CFM	Min Heat CFM	Design Fan CFM (Heat)	Fan CFM (Heat)	Ak (max)
FPB-105	FPB-4B-7	REHEAT	8	420	442	105	108	294	316	0.98

Completed By: Bayley Morvant on 07/07/2025



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Project: CW 3000 - 4th Floor Brinker (Dallas, TX)

Diffuser Supply (GRD)

FPB-105/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-105	LD	12	105	71	106	101.0
SGRD2	4F-105	LD	12	105	64	113	107.6
SGRD3	4F-105	LD	12	105	81	113	107.6
SGRD4	4F-105	LD	12	105	67	110	104.8
Total				420	283	442	105.24%

FPB-108/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-108	CD	8	175	114	164	93.7
SGRD2	4F-108	CD	8	175	128	189	108.0
SGRD3	4F-108	CD	8	175	168	172	98.3
SGRD4	4F-108	CD	8	175	118	189	108.0
SGRD5	4F-106	NA	8	100	93	101	101.0
SGRD6	4F-107	LD	8	100	117	107	107.0
Total				900	738	922	102.44%

FPB-109/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-109	CD	10	250	220	266	106.4
SGRD2	4F-109	CD	10	250	189	250	100.0
Total				500	409	516	103.2%

FPB-110/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	HALL WEST	CD	8	120	118	118	98.3
SGRD2	4F-110	CD	10	250	211	244	97.6
SGRD3	4F-110	CD	10	250	96	240	96.0
Total				620	425	602	97.1%

FPB-111/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-111	CD	8	200	173	200	100.0
SGRD2	4F-111	CD	8	200	172	205	102.5
Total				400	345	405	101.25%

FPB-112/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-112	CD	8	200	51	206	103.0
SGRD2	4F-112	CD	8	200	308	214	107.0
SGRD3	4F-112	CD	8	200	246	193	96.5
Total				600	605	613	102.17%

FPB-113/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-113	CD	8	220	169	218	99.1
SGRD2	4F-113	CD	8	220	168	218	99.1
Total				440	337	436	99.09%

FPB-114/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-114	CD	8	150	136	172	114.7
SGRD2	4F-114	CD	8	150	111	158	105.3
SGRD3	4F-114	CD	8	150	110	153	102.0
SGRD4	4F-114	CD	8	200	144	185	92.5
SGRD5	HALL 1 NORTH	SD	8	175	153	179	102.3
SGRD6	HALL 1 NORTH	SD	8	200	173	202	101.0
SGRD7	HALL 1 NORTH	SD	8	175	161	188	107.4
SGRD8	HALL 1 NORTH	SD	8	200	171	199	99.5
Total				1400	1159	1436	102.57%

FPB-101A 1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-101	CD	10	250	119	234	93.6
SGRD2	4F-101	CD	10	250	149	256	102.4
SGRD3	4F-101	CD	10	250	228	262	104.8
SGRD4	4F-101	CD	10	250	221	226	90.4
SGRD5	4F-101	CD	10	250	386	231	92.4
SGRD6	4F-101	CD	10	250	264	269	107.6
Total				1500	1367	1478	98.53%

FPB-101B 1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	NA	NA	NA	0	0	0	-
SGRD2	4F-102	LD	12	157	133	153	97.5
SGRD3	4F-102	LD	12	158	119	143	90.5
SGRD4	4F-101	LD	12	105	129	101	96.2
SGRD5	4F-101	LD	12	105	98	116	110.5
SGRD6	4F-101	LD	12	105	129	112	106.7
SGRD7	4F-101	LD	12	105	108	112	106.7
SGRD8	4F-101	LD	12	105	118	115	109.5
SGRD9	4F-101	LD	12	105	136	102	97.1
Total				945	970	954	100.95%

FPB-102A 1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-102	LD	12	500	269	450	90.0
SGRD2	4F-102	CD	12	500	434	459	91.8
SGRD3	4F-102	CD	12	500	360	455	91.0
Total				1500	1063	1364	90.93%

FPB-102B 1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-102	CD	12	500	426	456	91.2
SGRD2	4F-102	CD	12	500	561	481	96.2
SGRD3	4F-102	LD	12	500	271	454	90.8
Total				1500	1258	1391	92.73%

FPB-103A 1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-103	CD	12	500	421	491	98.2
SGRD2	4F-103	CD	12	500	405	471	94.2
SGRD3	4F-103	CD	12	500	511	501	100.2
Total				1500	1337	1463	97.53%

FPB-103B 1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-103	LD	12	105	80	108	102.9
SGRD2	4F-103	LD	12	105	81	109	103.8
SGRD3	4F-103	LD	12	105	51	97	92.4
SGRD4	4F-103	LD	12	105	79	116	110.5
SGRD5	4F-103	LD	12	105	66	105	100.0
SGRD6	4F-103	LD	12	105	64	96	91.4
SGRD7	4F-103	LD	12	105	69	110	104.8
SGRD8	4F-103	LD	12	105	66	108	102.9
Total				840	556	849	101.07%

FPB-103C 1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-103	CD	12	500	419	472	94.4
SGRD2	4F-103	CD	12	450	390	426	94.7
SGRD3	CTR BOOTH	CD	8	100	150	102	102.0
SGRD4	4F-103	CD	12	450	418	486	108.0
Total				1500	1377	1486	99.07%

FPB-104A 1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-104	CD	12	500	589	515	103.0
SGRD2	4F-104	CD	12	500	505	505	101.0
SGRD3	4F-104	CD	12	500	288	470	94.0
Total				1500	1382	1490	99.33%

FPB-104B 1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-104	LD	12	105	72	98	93.3
SGRD2	4F-104	LD	12	105	90	96	91.4
SGRD3	4F-104	LD	12	105	102	96	91.4
SGRD4	4F-104	LD	12	105	76	97	92.4
SGRD5	4F-104	LD	12	105	107	108	102.9
SGRD6	4F-104	LD	12	105	88	112	106.7
SGRD7	4F-104	LD	12	105	44	104	99.0
SGRD8	4F-104	LD	12	105	67	109	103.8
Total				840	646	820	97.62%

FPB-104C 1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-104	CD	12	500	405	451	90.2
SGRD2	4F-104	CD	12	500	451	529	105.8
SGRD3	4F-104	CD	12	500	516	486	97.2
Total				1500	1372	1466	97.73%

FPB-1N1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	HALL 1 NORTH	CD	8	120	88	109	90.8
SGRD2	HALL 1 NORTH	CD	8	120	92	110	91.7
SGRD3	HALL 1 WEST	CD	8	120	87	108	90.0
SGRD4	HALL 1 WEST	CD	8	120	92	109	90.8
SGRD5	HALL 1 SOUTH	CD	8	120	77	108	90.0
SGRD6	HALL 1 SOUTH	CD	8	120	92	109	90.8
SGRD7	HALL 1 SOUTH	CD	8	120	81	110	91.7
Total				840	609	763	90.83%

FPB-2N1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	HALL 2 NORTH	SD	14X10	145	191	159	109.7
SGRD2	HALL 2 NORTH	SD	14X10	145	182	152	104.8
SGRD3	HALL 2 NORTH	SD	14X10	145	170	142	97.9
SGRD4	HALL 2 NORTH	SD	14X10	145	171	143	98.6
SGRD5	HALL 2 NORTH	SD	14X10	145	171	143	98.6
SGRD6	HALL 2 NORTH	SD	14X10	145	164	137	94.5
SGRD7	HALL 2 NORTH	SD	14X10	145	191	159	109.7
SGRD8	HALL 2 NORTH	SD	14X10	145	174	145	100.0
Total				1160	1414	1180	101.72%

FPB-2N2/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	HALL 2 NORTH	LD	8	145	112	133	91.7
SGRD2	HALL 2 NORTH	LD	8	145	75	130	89.7
SGRD3	HALL 2 NORTH	LD	8	145	71	134	92.4
SGRD4	HALL 2 NORTH	LD	8	145	82	133	91.7
SGRD5	HALL 2 NORTH	SD	14X10	145	221	141	97.2
SGRD6	HALL 2 NORTH	SD	14X10	145	337	141	97.2
SGRD7	HALL 2 NORTH	SD	14X10	145	341	159	109.7
Total				1015	1239	971	95.67%

FPB-2S1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	HALL 2 SOUTH	SD	14X10	145	129	158	109.0
SGRD2	HALL 2 SOUTH	SD	14X10	145	157	153	105.5
SGRD3	HALL 2 SOUTH	SD	14X10	145	138	159	109.7
SGRD4	HALL 2 SOUTH	SD	14X10	145	150	148	102.1
SGRD5	HALL 2 SOUTH	SD	14X10	145	80	131	90.3
SGRD6	HALL 2 SOUTH	SD	14X10	145	102	141	97.2
SGRD7	HALL 2 SOUTH	SD	14X10	145	101	135	93.1
Total				1015	857	1025	100.99%

FPB-2W1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	HALL 2 WEST	SD	14X10	105	76	99	94.3
SGRD2	HALL 2 WEST	SD	14X10	105	79	103	98.1
SGRD3	HALL 2 WEST	SD	14X10	105	71	103	98.1
SGRD4	HALL 2 WEST	SD	14X10	105	54	96	91.4
SGRD5	HALL 2 WEST	SD	12	105	79	108	102.9
SGRD6	HALL 2 WEST	SD	12	105	83	112	106.7
SGRD7	HALL 2 WEST	SD	12	105	87	102	97.1
Total				735	529	723	98.37%

RTU-1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	4F-102	CD	10	335	429	366	109.3
SGRD2	4F-102	LD	10	335	303	359	107.2
SGRD3	4F-103	CD	10	335	58	351	104.8
SGRD4	4F-103	CD	10	335	406	361	107.8
SGRD5	4F-103	CD	10	335	416	354	105.7
SGRD6	4F-103	CD	10	335	350	338	100.9
SGRD7	4F-104	CD	10	335	371	344	102.7
SGRD8	4F-104	CD	10	335	441	361	107.8
SGRD9	4F-104	CD	10	335	400	349	104.2
Total				3015	3174	3183	105.57%