

SUBMITTAL COVERSHEET **Nanuet UFSD –Phase 3 Projects**

Architect:
KSQ Architects
215 W 40th Street, 15th Floor
New York, NY 10018

Owner:
Nanuet Union Free School District
101 Church Street
Nanuet, NY 10954

Construction Manager:
Jacobs
One Penn Plaza, 54th floor
New York, NY 10019

Contractor: Joe Lombardo Plumbing & Heating of Rockland Inc

Contract: Ron Lombardo

Address: 321 Spook Rock Road Suite 109A

845-357-6537

Telephone:

Suffern, New York 10901

Fax: 845-357-8529

School Name: Nanuet Union Free School District Phase 3 Bond Projects @ Barr Middle School & Nanuet High School

Type of Submittal:

Re-submittal: ☐ No ☐ Yes

☐ Shop Drawings

☐ Product Data

☐ Schedule

☐ Sample

☐

☐ Test Report

☐ Certificate

☐ Color Sample

☐ Warranty

☐

Submittal Description:

testing and balancing

Product Name:

Manufacturer:

**Subcontractor/
Supplier:**

DL FLOWTECH

References:

Spec. Section No.: 230593

Drawing No(s):

Paragraph:

Rm. or Detail No(s):

Architect's/ Engineer's Review Stamp

Contractor Review Statement:

These documents have been checked for accuracy and coordinated with job conditions and Contract requirements by this office and have been found to comply with the provisions of the Contract Documents.

Ronald J. Lombardo

9/11/2024

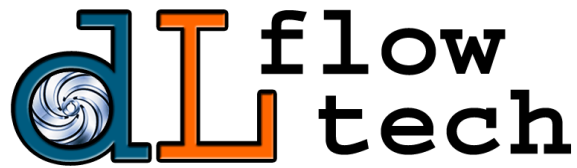
Name:

Date:

Company Name:

Joe Lombardo Plumbing & Heating of Rockland Inc.

Remarks:



Date: 9/11/2024

FT#: 23-299

Technician: MN

PROJECT:

Nanuet Union Free School District
Bond Projects Phase 3
Nanuet Senior High School
Barr Middle School

PREPARED FOR:

Joe Lombardo Plumbing & Heating
321 Spook Rock Rd.
Suffern NY 10901

ARCHITECT

KSQ Architects

ENGINEER:

Sage Engineering

PRELIMINARY



September 11, 2024

FT #: 23-299.HS

Project: Nanuet Union Free School District
Bond Projects Phase 3
Nanuet Senior High School
Preliminary Reports

Our professional services have been performed and our findings obtained in accordance with customary principles in the engineering field. It should be noted that evaluations are inherently limited in the sense that conclusions are drawn from information obtained during dL Flow Tech's visit to the site. Balancing and testing has been performed as per the Procedural Standards set forth by the National Environmental Balancing Bureau (NEBB) to within the physical limits of the system testing. In NEBB's definition of a TAB report they note it "does not guarantee that systems included are balanced to design flows." This is noted to highlight the fact as a TAB contractor we do not perform testing and balancing services and guarantee it will work as intended, as we did not design it or install it. The dL Flow Tech, Co highly recommends that any commendations or suggestions noted in this report should be reviewed with your design professional.

General Notes:

1. Where available pump or fan capacity is less than the total flow requirements or individual system parts, full flow in one part may be simulated by temporary restriction of flow to the other parts.
2. The number 1 seen in the AK column indicates a direct CFM reading.
3. Units with ECM motors are balanced proportionate with available airflow due to many manufacturers in their IOM requiring that no adjustments be made on the ECM setting.
4. Due to system effect, static pressure readings are for reference only, static pressure readings may conflict with manufacturers published data, due to field conditions.

Project Notes:

- RTU-HS-4&5: Controls were incomplete while on site for balancing 9/5/24. Final unit profiles will be completed when controls are 100% operational.
- F-HS-2: Found existing backdraft damper at louver on outside wall to be inoperable. DLF manually opened the damper for balancing purposes.
- F-HS-2: There were many issues with the existing registers noted in the report.
- BC-HS-1: As per the control contractor the outside air is not ready to be set at this time. Final unit data and outside air will be set once controls are 100% complete 9/5/24.

dL flow tech

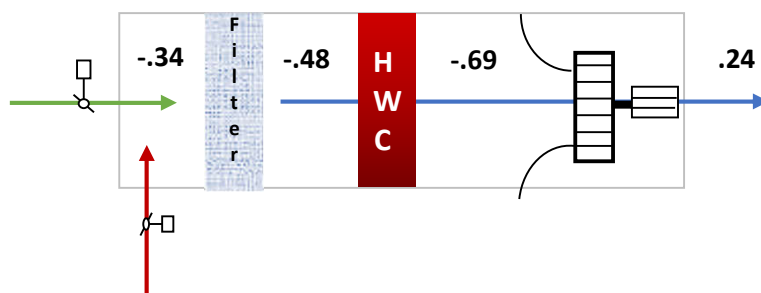
Equipment Summary

[illegible]

Fan Performance

New	Supply Fan	Return /EF		
System	BC-HS-2			
Service	Computer Room			
Location	Ceiling			
Manufacturer	DAIKIN			
Model	BC.H.E.030.1.D.R.W.Y.			
Sheave Position	Direct Drive			
Speed Control	73%			
System SP Set Point	N/A			
	RATED	OPERATING	RATED	OPERATING
Connected Load /Diversity	2645	2662		
Fan CFM	2620			
Return CFM	1705	1771		
Outside Air CFM	915	891		
Exhaust Air CFM				
Total Static	1.84	0.93		
External Static Pressure	1.00	0.58		
Fan RPM	2289	2463		
Motor Manuf. / HP	DELTA	4 3/7		
RPM	3300	2463		
Line Voltage	208	208		
Amperage	10.03	3.8		
Phase	3	3		
Brake HP	1.14	1.67		
Power Factor	Not Specified			
Motor Efficiency	Not Specified			
Service Factor	Thermal			
Frame	Self Supporting			

Remarks:

[illegible]

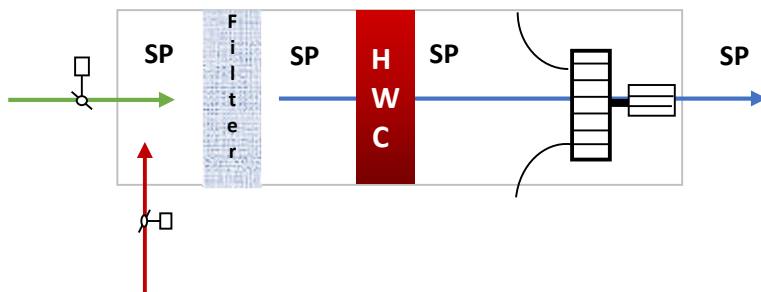
Actual OSA % of SA 33%

Actual OSA Damper Pos. 40%

Fan Performance

New	Supply Fan	Return /EF		
System	BC-HS-1			
Service	Art Room 45			
Location	Ceiling			
Manufacturer	Dakin			
Model	BC.H.E.030.1.D.L			
Sheave Position	Direct Drive			
Speed Control	75%			
System SP Set Point	N/A			
	RATED	OPERATING	RATED	OPERATING
Connected Load /Diversity	2645	2731		
Fan CFM	2500			
Return CFM	1690	2731		
Outside Air CFM	810	0		
Exhaust Air CFM				
Total Static	1.82			
External Static Pressure	1.00			
Fan RPM	2228			
Motor Manuf. / HP	Delta	4 1/5		
RPM	3300			
Line Voltage	230			
Amperage	10.3			
Phase	3	3		
Brake HP	1.07	0		
Power Factor	Not Specified			
Motor Efficiency	Not Specified			
Service Factor	Thermal			
Frame	Self Supporting			

Remarks:

[illegible]

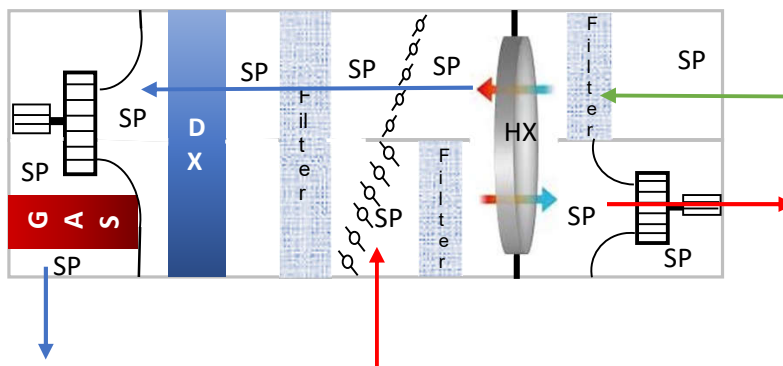
Actual OSA % of SA 0%

Fan Performance

New	Supply		Exhaust	
System	RTU-HS-4			
Service	Cafeteria			
Location	Roof			
Manufacturer	Daikin			
Model	DPS016AHMG2DW-4			
Sheave Position	Direct Drive			
Speed Control	VFD @ 60Hz			
System SP Set Point	N/A			
	RATED	OPERATING	RATED	OPERATING
Connected Load /Diversity	5648	5398	5000	7905
Fan CFM	5000		5000	
Return CFM	2500			
Outside Air CFM	2500			
Exhaust Air CFM			2500	
Total Static	3.89		0.70	
External Static Pressure	1.20			
Fan RPM	2008		Not Specified	Direct Drive
Motor Manuf. / HP	Baldor	7 1/2	No Access	8
RPM	1770		Not Specified	No Access
Line Voltage	200		200	
Amperage	23.3		99.5	
Phase	3	3	3	3
Brake HP	6.67	0	1.79	0
Power Factor	77		No Access	
Motor Efficiency	91.0%		No Access	
Service Factor	1.15		Thermal	
Frame	213T		Self Supporting	

Remarks: Incomplete Controls 9/4/24.

Zone	Internal Duct Size	Eff Area	Design FPM	Actual FPM	Design CFM	Actual CFM	SP	Remarks
Supply	34 x 20	4.7	1059	1143	5000	5398	0.4	
Return								
OSA								
Exhaust / Return	36 x 20	5.0	1000	1581	5000	7905	-0.69	
Spill								



PRELIMINARY

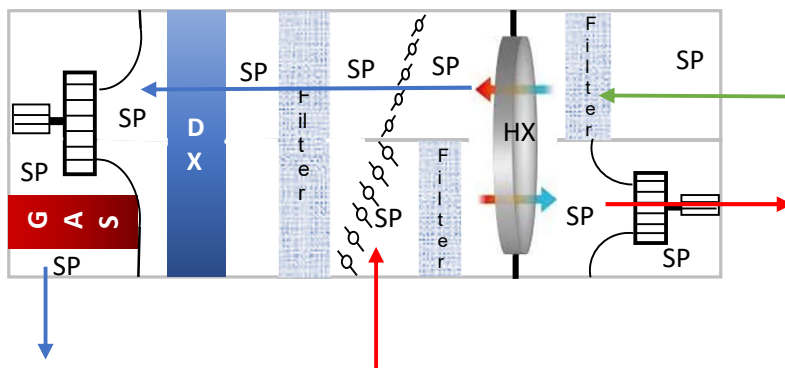
Fan Performance

New	Supply	Exhaust		
	RTU-HS-5			
	Cafeteria			
	Roof			
	Daikin			
	DPS016AHMG2DW-4			
	Direct Drive			
	VFD @ 60Hz			
	N/A			
	RATED	OPERATING	RATED	OPERATING
Diversity	6300	6046	5000	7685
	6300		5000	
	2775			
	3525			
			2225	
	5.13		0.70	
Pressure	1.65			
	2394		Not Specified	Direct Drive
Motor / HP	Baldor	10	No Access	8
RPM	1770		Not Specified	No Access
Voltage	200		200	
Amperage	29.5		99.5	
Phase	3	3	3	3
Brake HP	9.34	0	1.96	0
Power Factor	80		No Access	
Motor Efficiency	91.7%		No Access	
Service Factor	1.15		Thermal	
Frame	215T		Self Supporting	

Remarks: Incomplete Controls 9/5/24.

PRELIMINARY

Zone	Internal Duct Size	Eff Area	Design FPM	Actual FPM	Design CFM	Actual CFM	SP	Remarks
Supply					6300	6046		
DT-1	34 x 20	4.7	0	944		4458	0.22	
DT-2	20 x 8	1.1	0	1429		1588	0.19	
Exhaust / Return	36 x 20	5.0	1000	1537	5000	7685	-0.65	
Spill								



	New	New		
Fan Number	F-HS-2	F-HS-3		
Location	Ceiling	MER		
Service	Computer/Art/Lockers	Gym		
Manufacturer	Acme	Penn Barry		
Model/Size	XD161	VCR-SWSI-AF 330		
Fan Type	Inline			
Speed Control	VFD @ 45Hz			
Horsepower	2	7.5		
Safety Factor	1.15			
Volts/Phase	230/3	208/3		
Rated Amperage	5.6			
Actual Amperage	3.6			
Sheave Position	Direct Drive			
Design Fan RPM	1616	937		
Actual Fan RPM	1212			
Design Static Pressure	1.25	2.1		
Actual Static Pressure	-.26 / .02			
Required CFM	3000	1400		
Actual CFM	3126			
Remarks:				

[illegible]

[illegible]

[illegible]

[illegible]



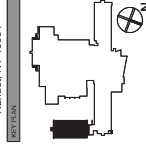
Code	Remarks
AS Req't'd	Final airflow has been adjusted to suit requests of occupants
ABV CLG	Register (ETC) is located above ceiling line
BKN DPR	Volume Damper (VD), Face Damper (OPD), Splitter Damper (SD) is broken/stuck
CC	Ceiling conflict; kinked flex duct causing low flow
CS	Circuit Setter
DD	Unit is direct drive; no adjustment can be made without a speed controller.
DD on HI	Direct drive fan set to High, medium (MED) or low (LO)
DT	Duct Traverse
DLF	DL Flow Tech Inc.
FACE	Velocity taken at the balance point
HDW MSG	Volume or splitter damper hardware is missing
Inline	Fan is an inline fan; Actual RPM can not be obtained
Long Flex	Flexible duct configuration and length is probable cause for low flow
Locked	No key available at time of balance
Max Flow	Maximum flow achievable
MAN OPN'D	Temporarily opened manually to set
New outlet	Outlet not shown on contract drawing; no CFM given; CFM assigned by DLF
Noisey	Register (ETC) has been set low to reduce objectionable air noise.
NPA	No provision to adjust; requires installation of volume damper / face damper
NI	Outlet not installed
NW	Device not working
TP	Test point location for duct traverse and/or static pressure
PT	Poor take -off / inlet flex to VAV box causing turbulence / probable cause for low flow
RAW	Raw opening -- Ductwork and collar is installed; register (etc.) is missing; tap is balanced high to compensate.
Set High	Set high due to missing register and/or to maintain total room flow (etc).
T'stat REV	The t'stat is reverse or opposite of design
T'stat LOC	T'stat not in area served
VD FO	Volume Dampers are in their maximum open position
VD FC	Volume Dampers are in their full closed position
VAV	Variable air volume box
CAV	Constant Volume Box
FPVAV	Fan powered variable air volume box
Register Types	
CD	Ceiling Diffuser
CR	Ceiling Register
EC	Egg Crate Type register
ER	Exhaust Register
FH	Fume Hood
LD	Linear Diffuser
LT	Light Troffer
WMS	Wire Mesh Screen
TR	Top Register
BR	Bottom Register
RAW	Raw opening
No CC	Flow metering device not installed, temp/pressure differential across elements used to determine flow.
Simulated flow	Where available pump or fan capacity is less than the total flow requirements, flow temporarily restricted to other parts.

PRELIMINARY



NUFSD
BOND
PROJECTS
PH3

☒ STD 652-6146-0434-040-035 (HHS SCHOOL)
☐ STD 652-6146-0434-040-032 (JHS MIDDLE SCHOOL)

[illegible]

ISSUED: BID SET ISSUANCE
DATE: 06/06/2023
SCALE: 1/8" = 1'-0"
SHEET NAME: 2004 ADDITION HVAC REMOVAL AND INSTALL PLANS
SHEET NUMBER:

HS-M106

KEYED NOTES

- [illegible]



A12 FIRST FLOOR REMOVALS - 2004 ADDITION

FIRST FLOOR PLAN - 2004 ADDITION

