Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
CINCINNATI, OH 45246

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 01/18/2026

Completed By: National TAB

PROJECT

Fieldstone @ Chester Springs ALF (Chester Springs, PA)

145 Byers Rd

Chester Springs, PA 19475

Client

D.J. Wagner Heating & Air Conditioning, Inc.

30 Cutler Avenue

Westville, NJ 08093

National TAB

Project: Fieldstone @ Chester Springs ALF (Chester Springs, PA)

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Issue List

- Basement exhaust fire damper
- Locker room exhaust E1-72
- Second floor Exhaust duct
- Unit configuration
- Unit Outside air controls
- Unit Tripping-High static

Fieldstone @ Chester Springs ALF (Chester Springs, PA)

Project Issue Information

Issue Name : Basement exhaust fire damper

Description : There is a drop off in flow from the first floor exhaust duct down to the basement, branch dampers on the first floor and basement confirmed full open. The fire damper was inspected and confirmed fully open, but there is audible turbulence and the damper is internal to the duct and looks to be taking up 35-40% of the duct flow area.

Created By : National TAB
Assigned To : National TAB - Tyler Youells
Status : Open
Priority : High
Asset Tag :
Originated Date : 01/28/2026 - Tyler Youells - National TAB

Project Issue File Details

01/28/2026

Project Issue Response Details

- **01/28/2026 National TAB - Tyler Youells**
  - Suspect the fire damper is the cause of low exhaust flow on the first floor and recommend upsizing damper size.

Fieldstone @ Chester Springs ALF (Chester Springs, PA)

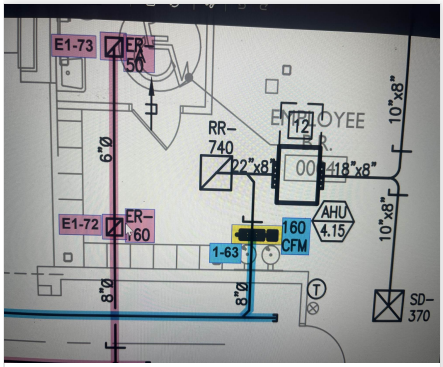
Project Issue Information

Issue Name : Locker room exhaust E1-72

Description : Exhaust register E 1-72 serving the locker room is installed as a 6" neck for 160CFM, Basement exhaust is already low but this exhaust register is at 22cfm. recommend upsizing the duct to 8" to allow for more flow.

Created By :	National TAB	**Assigned To :**	National TAB - Tyler Youells
Status :	Open		
Priority :	Medium	**Asset Tag :**	
Originated Date :	01/28/2026 - Tyler Youells - National TAB		

Project Issue File Details



01/28/2026

Fieldstone @ Chester Springs ALF (Chester Springs, PA)

Project Issue Information

Issue Name : Second floor Exhaust duct

Description : Towards the end of the exhaust run on the second floor, a 12x8 to 6x8 transitioned occurred too soon causing 2-3 additional hits off the 6x8 duct where it should have been 12x8. the additional cfm load through the 6x8" duct is causing diffusers to be low on flow (E1-16 through E1-20)

Created By : National TAB

Assigned To : National TAB - Tyler Youells

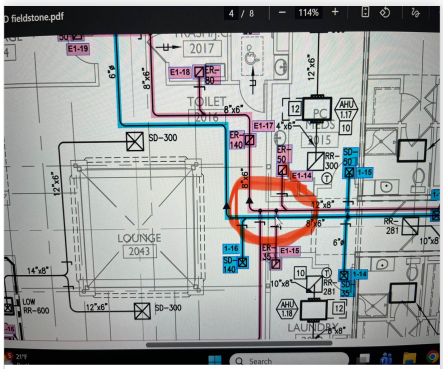
Status : Open

Priority : Medium

Asset Tag :

Originated Date : 01/28/2026 - Tyler Youells - National TAB

Project Issue File Details



01/28/2026

Fieldstone @ Chester Springs ALF (Chester Springs, PA)

Project Issue Information

Issue Name : Unit configuration

Description : Unit configuration is installed as a RTU with minimum outside air intake and powered exhaust with heat recovery wheel(Per unit submitalls recovery wheel is designed for 1500CFM OA/EX). The application is designed as a DOAS 100% supplied outside air and 100% exhaust with no mixing allowed.

Created By : National TAB

Assigned To : National TAB - Tyler Youells

Status : Open

Priority : InfoOnly

Asset Tag :

Originated Date : 01/28/2026 - Tyler Youells - National TAB

Project Issue Response Details

- **01/28/2026 National TAB - Tyler Youells**
  - Note: Engineers have provided revisions to terminal device CFMs to bring unit total flows down to 6210CFM-OA and 4800CFM Exhaust

Fieldstone @ Chester Springs ALF (Chester Springs, PA)

Project Issue Information

Issue Name : Unit Outside air controls

Description : Found OA flow station unhooked from controls and OA damper fully closed with the unit in auto operation mode. Per the no return air mixing requirement OA needs to be 100% open. NTi permanently affixed the OA damper to be 100% open since the unit runs occupied 24/7.

Created By :	National TAB	**Assigned To :**	National TAB - Tyler Youells
Status :	Open		
Priority :	InfoOnly	**Asset Tag :**	
Originated Date :	01/28/2026 - Tyler Youells - National TAB		

Project Issue File Details

01/28/2026

01/28/2026

Project Issue Response Details

- **01/28/2026 National TAB - Tyler Youells**
  - Sub-note: should the outside air damper close, both the supply and powered exhaust fans will pull from the same duct and cause negative building pressure and unit cabinet extreme negative pressure.

Fieldstone @ Chester Springs ALF (Chester Springs, PA)

Project Issue Information

Issue Name : Unit Tripping-High static

Description : On the last day of Tab, the unit had tripped on high static alarm 3-4 times,running fine the previous days. Found that water was dripping down the pressure sample tube outside of the unit from snow melt. Negative pressure tube was sucking water in and blocking the port causing the unit to think high pressure.Tested with a cup of water and confirmed

Created By : National TAB

Assigned To : National TAB - Tyler Youells

Status : Open

Priority : High

Asset Tag :

Originated Date : 01/28/2026 - Tyler Youells - National TAB

Project Issue File Details

01/28/2026

Project Issue Response Details

- **01/28/2026 National TAB - Tyler Youells**
  - Recommend installing proper pressure sampling device that will prevent water from getting sucked into the tube.

National TAB

Project: Fieldstone @ Chester Springs ALF (Chester Springs, PA)

System/Unit: Energy Recovery Unit

Asset: ERU-1 AREA:COMMON AREAS

Unit Data	
	Actual
MFG	DAIKIN
Model Num	DPS020AHMG4DW-4
Serial Num	FBOU230501800
Num Exh-Filters 1	2
Exh-Filter Size 1	18X24X2
Num OA-Filters 1	11
OA-Supply Size 1	18X24X2
Num OA-Filters 2	9
OA-Filter Size 2	18X24X4

Exhaust Fan Motor Data		
	Design	**Actual**
Motor MFG	-	2X DAIKIN
Frame	-	NL
Horsepower	5.0	3300W
Motor Rpm	-	3300
Phase	3	3
Voltage (rated)	480	480
Amperage (rated)	-	5.4
Service Factor	-	NL

OA Fan Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR RELIANCE
Frame	-	215T
Horsepower	7.5	10
Motor Rpm	-	1770
Phase	3	3
Voltage (rated)	480	460
Amperage (rated)	-	12.5
Service Factor	-	1.15

Exhaust Fan Test Data		
	Design	**Actual**
Exh-ERU CFM	4800	4418
Exh-ERU RPM	1603	2277
Exh-ERU System SetPt	-	69%
RL Voltage	480	495.1/494.2/497.8
RL Amperage	-	1.9/1.9/1.9/2.1/2./2.1
Brake Horse Power	-	3.19

Exhaust Fan Performance Data		
	Design	**Actual**
Exh-ERU Filter Delta SP	-	*COMBINED
Exh-ERU Wheel Delta SP	-	*1.76"
Exh-ERU Inlet T (db/wb)	-	72.0/52.4
Exh-ERU Discharge T (db/wb)	-	52.6/41.2
Exh-ERU Delta T	-	19.4/11.2

OA Fan Test Data		
	Design	**Actual**
OA-ERU CFM	6210	5971
OA-ERU RPM	2083	2330
Motor Frequency	-	79.0 HZ
RL Voltage	480	495.1/494.2/497.8
RL Amperage	-	10.4 VFD

OA Fan Performance Data		
	Design	**Actual**
OA-ERU Filter Delta SP	-	*COMBINED
OA-ERU Wheel Delta SP	-	*2.87"
OA-ERU Inlet T (db/wb)	-	45.6/36.8
OA-ERU Discharge T (db/wb)	-	56.1/43.1
OA-ERU Delta T	-	10.5/6.3

Completed By: Tyler Youells on 01/27/2026

Unit Data - PHOTO LOG

01/22/2026

01/22/2026

01/22/2026

National TAB

Project:Fieldstone @ Chester Springs ALF (Chester Springs, PA)

Energy Recovery Unit

Diffuser Supply (GRD)

ERU-1/COMMON AREAS

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
1-1	3058 HALLWAY	SD	4	25	31	25	100.0
1-2	3056 PC OFFICE	SD	4	10	23	11	110.0
1-3	3057 HALLWAY	SD	4	40	47	44	110.0
1-4	3051 LAUNDRY	SD	4	35	29	33	94.3
1-5	3034 PC MEDS	SD	4	30	31	31	103.3
1-6	3059 HALLWAY	SD	8	120	41	109	90.8
1-7	3060 HALLWAY	SD	4	20	26	22	110.0
1-8	3057 HALLWAY	SD	8	110	77	103	93.6
1-9	3001A READING LOUNGE	SD	8	110	92	107	97.3
1-10	3001A READING LOUNGE	SD	8	160	111	156	97.5
1-11	2037 PC OFFICE	SD	4	15	48	16	106.7
1-12	2001 MULTI PURPOSE	SD	10	210	250	213	101.4
1-13	2039 HALLWAY	SD	4	30	48	27	90.0
1-14	2032 LAUNDRY	SD	4	35	45	37	105.7
1-15	2015 PC MEDS	SD	4	50	53	47	94.0
1-16	2043 LOUNGE	SD	8	140	112	130	92.9
1-17	2040 HALLWAY	SD	4	20	77	18	90.0
1-18	2038 HALLWAY	SD	4	25	33	27	108.0
1-19	227 LAUNDRY	SD	4	25	102	24	96.0
1-20	2005 PANTRY	SD	4	40	49	37	92.5
1-21	226 MC DINING	SD	6	520	522	483	92.9
1-22	200 HALLWAY	SD	4	30	25	27	90.0
1-23	204 STORAGE	AHU-2.13 DAMPER		30	65	32	106.7
1-24	203 OFFICE	AHU-2.14 DAMPER		30	73	28	93.3
1-25	1051 HALLWAY	SD	8	120	140	120	100.0
1-26	1045 DISCOVERY	AHU-1.12 DAMPER		85	96	80	94.1
1-27	MULTI PURPOSE	SR	14X6	55	93	53	96.4
1-28	1044 MARKETING	SD	4	15	62	17	113.3
1-29	1050A HALLWAY	SD	4	60	79	64	106.7
1-30	1042 ADMIN	SD	4	15	54	16	106.7
1-31	1041 CONFERENCE	SD	6	60	66	65	108.3
1-32	1052 HALLWAY	SD	4	30	10	28	93.3
1-33	1015 REHAB	SD	8	100	102	98	98.0
1-34	1047 OFFICE	AHU-1.08 DAMPER		45	20	42	93.3
1-35	1038 EXEC DIRECTOR	SD	6	20	34	22	110.0
1-36	1017 PC MEDS	SD	6	30	45	33	110.0
1-37	1016 BEAUTY/BARBER	AHU-1.06 DAMPER		100	128	98	98.0
1-38	1035 LAUNDRY	SD	4	35	55	33	94.3
1-39	1025 LOUNGE	SD	8	160	183	153	95.6
1-40	1053 HALLWAY	SD	4	20	28	22	110.0
1-41	1014 PUB	SD	14	570	546	517	90.7
1-42	1051 HALLWAY	SD	10	370	426	355	95.9
1-43	1011 PRIVATE DINING	AHU-3.03 DAMPER		150	163	146	97.3
1-44	1010 PC DINING	SD	10	370	263	351	94.9
1-45	1006 OFFICE	SD	4	15	62	16	106.7
1-46	128 MC DINING	SD	10	300	225	305	101.7
1-47	129 STORAGE CL	AHU-3.08 DAMPER		160	0	161	100.6

ERU-1/COMMON AREAS

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
1-48	129 STORAGE CL	SD	10	160	360	163	101.9
1-49	100 HALLWAY	SD	8	75	83	80	106.7
1-50	101 MC DISCOVERY	SD	6	50	51	45	90.0
1-51	100 HALLWAY	AHU-2.03 DAMPER		35	5	37	105.7
1-52	100 HALLWAY	AHU-2.04 DAMPER		30	53	28	93.3
1-53	HALLWAY	SD	4	25	66	27	108.0
1-54	0009 FACILITIES	SD	6	50	70	48	96.0
1-55	0005 BUILDING STORAGE	SD	8	120	125	113	94.2
1-56	0008 MAINTENANCE	SD	6	50	25	51	102.0
1-57	0010 HOUSE KEEPING	SD	6	50	25	49	98.0
1-58	0017 LAUNDRY WASHERS	SD	6	50	34	46	92.0
1-59	0021 LAUNDRY DRYERS (HALL)	SD	6	50	55	48	96.0
1-60	0013 FIRE PUMP	SD	6	50	55	45	90.0
1-61	0012 MECH & PLUMBING	SD	6	30	36	27	90.0
1-62	0027 HALLWAY	SD	8	100	102	91	91.0
1-63	0002 EMPLOYEE LOUNGE	AHU-4.15 DAMPER		160	134	149	93.1
1-64	0007 RESIDENT STORAGE	SD	8	170	145	156	91.8
1-65	0001 TRAINING	SD	8	120	114	108	90.0
1-66	0016 KITCHEN STORAGE	SD	6	80	76	78	97.5
Total				6200	6504	5971	96.31%

Diffuser Ret/Exh (GRD)

ERU-1/COMMON AREAS

Asset								
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**FINAL CFM**	**% to design**
E1-1	3029 TOILET	ER	6	50	1.1	44	51	102.0
E1-2	3059 HALLWAY	ER	12X12	40	1.1	50	41	102.5
E1-3	3034 PC MEDS	ER	12X12	30	1.1	39	29	96.7
E1-4	3051 LAUNDRY	ER	12X12	35	1.1	31	36	102.9
E1-5	3046 M/E	ER	6	50	1.1	70	52	104.0
E1-6	LOUNGE	ER	12X12	120	1.1	102	111	92.5
E1-7	3036 TRASH/JAN	ER	12X12	50	1.1	52	45	90.0
E1-8	3043 STORAGE	ER	6	50	1.1	52	46	92.0
E1-9	3035 TOILER	ER	6	50	1.1	49	45	90.0
E1-10	3060 HALLWAY	ER	6	20	1.1	36	21	105.0
E1-11	3001A READING LOUNGE	ER	12X12	235	1.1	197	242	103.0
E1-12	3001A READING LOUNGE	ER	12X12	160	1.1	120	145	90.6
E1-13	2010 TOILET	ER	6	50	1.1	46	46	92.0
E1-14	2015 PC MEDS	ER	12X12	50	1.1	42	50	100.0
E1-15	2032 LAUNDRY	ER	12X12	35	1.1	20	38	108.6
E1-16	2027 M/E	ER	6	50	1.1	31	47	94.0
E1-17	2043 LOUNGE	ER	8X6	140	1.1	139	177	126.4
E1-18	2017 TRSH/JAN	ER	8X6	80	1.1	25	27	33.8
E1-19	2024 STORAGE	ER	6	50	1.1	25	24	48.0
E1-20	2016 TOILET	ER	6	50	1.1	0	27	54.0
E1-21	2040 HALLWAY	ER	6	20	1.1	22	20	100.0
E1-22	2001 MULTI PURPOSE	ER	12X18	0	1.1	0	0	-
E1-23	2005 PANTRY	ER	12X12	40	1.1	30	42	105.0
E1-24	226 MC DINING	ER	18X18	325	1.1	330	326	100.3
E1-25	226A TOILET	ER	6	50	1.1	60	50	100.0
E1-26	226 MC DINING	ER	14X8	450	1.1	495	451	100.2
E1-27	1014 PUB	ER	12X10	0	1.1	0	0	-

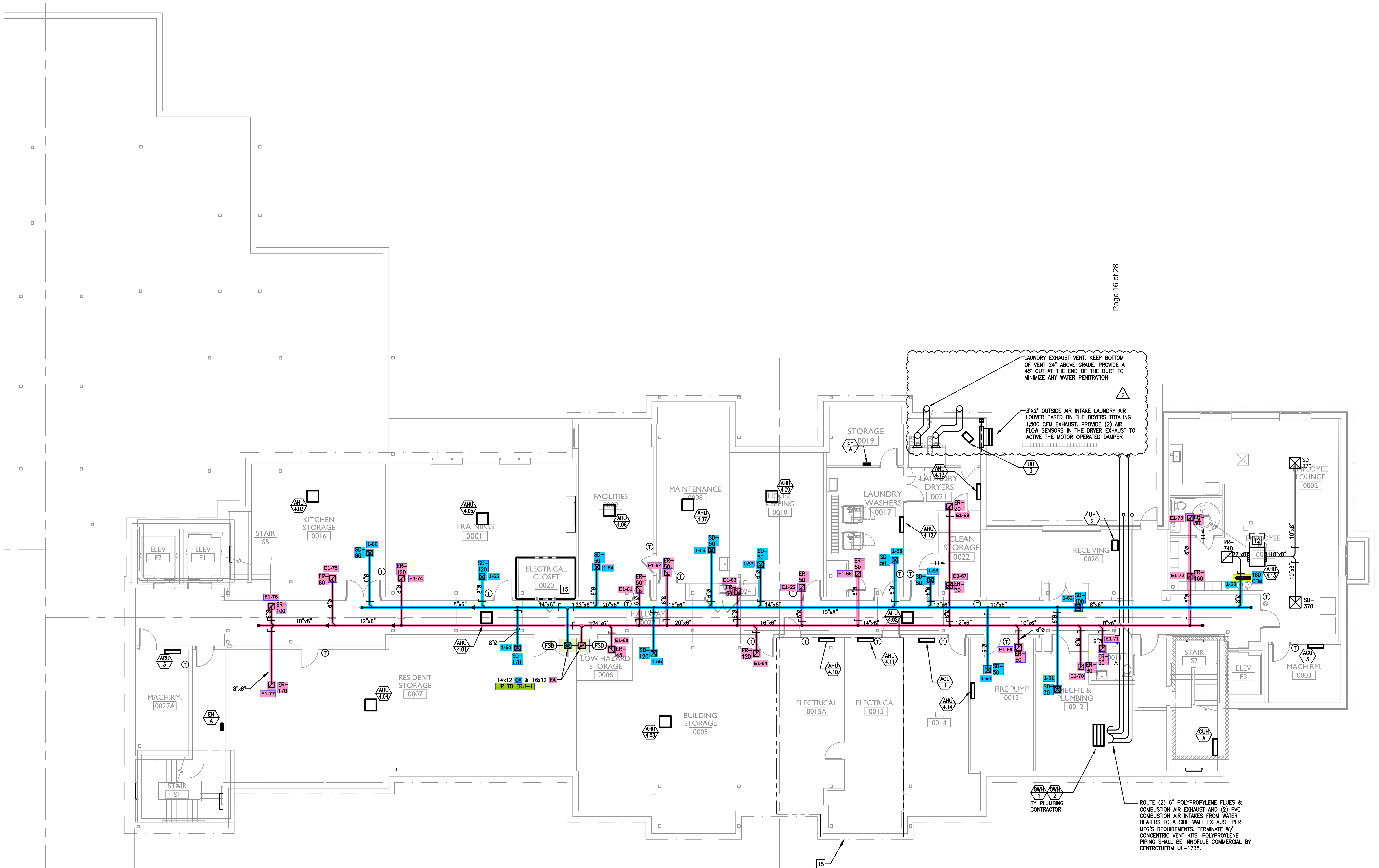
ERU-1/COMMON AREAS

Asset								
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	FINAL CFM	% to design
E1-28	1045 DISCOVERY	ER	6	50	1.1	56	45	90.0
E1-29	100 HALLWAY	ER	10	0	1.1	0	0	-
E1-30	1044 MARKETING	ER	6	15	1.1	30	16	106.7
E1-31	1046 MARKETING	ER	6	20	1.1	29	22	110.0
E1-32	1047 OFFICE	ER	6	15	1.1	28	16	106.7
E1-33	1041 CONFERENCE	ER	6	65	1.1	103	66	101.5
E1-34	1048 HUMAN RESOURCES	ER	6	15	1.1	24	14	93.3
E1-35	1049 BUSINESS	ER	6	10	1.1	26	11	110.0
E1-36	1015 REHAB	ER	12X12	80	1.1	58	74	92.5
E1-37	1015B OFFICE	ER	1X12	20	1.1	20	18	90.0
E1-38	1015A TOILET	ER	12X12	50	1.1	68	48	96.0
E1-39	1016 BEAUTY/BARBER	ER	6	100	1.1	92	100	100.0
E1-40	1050 HALLWAY	ER	12X12	60	1.1	73	63	105.0
E1-41	1036	ER	6	15	1.1	15	16	106.7
E1-42	1037 TOILET	ER	6	50	1.1	54	52	104.0
E1-43	1038 EXECUTIVE DIRECTOR	ER	12X12	20	1.1	25	22	110.0
E1-44	1035 LAUNDRY	ER	12X12	35	1.1	48	33	94.3
E1-45	1017 PC MEDS	ER	12X12	30	1.1	60	28	93.3
E1-46	1025 LOUNGE	ER	8	60	1.1	92	54	90.0
E1-47	1018 TOILET	ER	12X12	50	1.1	43	48	96.0
E1-48	1019 TRASH/JAN	ER	8X6	50	1.1	47	51	102.0
E1-49	1013 TOILET	ER	12X12	50	1.1	42	51	102.0
E1-50	1012 TOILET	ER	12X12	50	1.1	39	46	92.0
E1-51	1011 PC PRIVATE DINING	ER	8	150	1.1	66	154	102.7
E1-52	1010 PC DINING	ER		0	1.1	0	0	-
E1-53	1006 OFFICE	ER	12X12	15	1.1	27	15	100.0
E1-54	128 MC DINING	ER	12X10	0	1.1	0	0	-
E1-55	130 TOILET	ER	6	50	1.1	55	50	100.0
E1-56	100 HALLWAY	ER	12X12	75	1.1	85	82	109.3
E1-57	1004 TOILET	ER	6	50	1.1	55	51	102.0
E1-58	100 HALLWAY	ER	8X6	65	1.1	74	68	104.6
E1-59	101 DISCOVERY	ER	6	50	1.1	113	50	100.0
E1-60	0006 LOW HAZARD STORAGE	ER	12X12	45	1.1	33	33	73.3
E1-61	0009 FACILITIES	ER	6	50	1.1	41	41	82.0
E1-62	0008 MAINTENANCE	ER	6	50	1.1	48	48	96.0
E1-63	0024 J.C.	ER	6	50	1.1	47	47	94.0
E1-64	0005 BUILDING STORAGE	ER	12X12	120	1.1	113	113	94.2
E1-65	0010 HOUSEKEEPING	ER	6	50	1.1	40	40	80.0
E1-66	0017 LAUNDRY WASHERS	ER	6	50	1.1	68	68	136.0
E1-67	0022 CLEAN STORAGE	ER	6	30	1.1	41	41	136.7
E1-68	0021 LAUNDRY DRYERS	ER	6	20	1.1	47	47	235.0
E1-69	0013 FIRE PUMP	ER	6	50	1.1	34	34	68.0
E1-70	0012 MECH & PLUMBING	ER	6	30	1.1	35	35	116.7
E1-71	0011 TOILET	ER	6	50	1.1	27	27	54.0
E1-72	0002 EMPLOYEE LOUNGE	ER	8	160	1.1	22	22	13.8
E1-73	0004 EMPLOYEE BATHROOM	ER	6	50	1.1	22	22	44.0

ERU-1/COMMON AREAS

Asset								
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**FINAL CFM**	**% to design**
E1-74	0001 TRAINING	ER	8	120	1.1	86	86	71.7
E1-75	0016 KITCHEN STORAGE	ER	6	80	1.1	42	42	52.5
E1-76	0027 HALLWAY	ER	6	100	1.1	56	56	56.0
E1-77	0007 RESIDENT STORAGE	ER	8X6	50	1.1	63	63	126.0
Total				4800		4519	4418	92.04%

Completed By: Tyler Youells on 01/27/2026



BASEMENT FLOOR PLAN

SCALE: 1/8"=1'-0"

MECHANICAL GENERAL NOTES:

1. ALL DUCTWORK SIZES INDICATED ARE INSIDE DIMENSIONS UNLESS OTHERWISE NOTED.
2. DUCT SIZES INDICATED ON DRAWING ARE BASED AFTER THE LAST DIFFUSER AND/OR BRANCH TAKE-OFF.
3. CONTRACTOR TO PROVIDE A CLEAN OUT AT EVERY CHANGE IN DIRECTION OF A CONDENSATE LINE AND AT 50 FT. CENTERS.
4. RUN ALL CONDENSATE PIPING TO POINT OF DISCHARGE, PROVIDE REQUIRED AIR GAP AT DISCHARGE POINT, REFER TO PLANS & SPECIFICATIONS FOR SIZES AND REQUIREMENTS.
5. ALL DUCTWORK SERVING THE ENERGY RECOVERY UNIT SHALL BE MINIMAL 26 GAUGE SHEET METAL FROM THE ERU TO THE AIR DEVICE. NO FLEXIBLE DUCTWORK IS ALLOWED. THIS SHALL COMPLY WITH THE IBC 2015 717.5.4 FIRE PARTITIONS EXCEPTION #4.
6. COORDINATE FINAL THERMOSTAT LOCATIONS WITH ARCHITECT AND OWNER.
7. RECTANGULAR WEB OPENINGS SHALL BE PROVIDED IN THE LIGHT-GUAGE METAL TRUSS SYSTEM AS REQUIRED FOR MECHANICAL DUCTWORK RUNS. WEB OPENINGS IN ADJACENT TRUSSES SHALL BE ALIGNED IN ORDER TO PASS THROUGH THE TRUSSES IN A STRAIGHT LINE. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED DUCTWORK RUN PENETRATIONS WITH THE LIGHT-GUAGE METAL TRUSS MANUFACTURER, MECHANICAL ENGINEER, AND GENERAL CONTRACTOR.
8. EVERY DIFFUSER BRANCH DUCT SHALL HAVE A VOLUME DAMPER. ALL ENERGY RECOVERY DUCTWORK SHALL USE A CONSTANT AIR REGULATOR.
9. ALL FAN COILS SHALL HAVE FLEXIBLE CONNECTIONS ON SUPPLY AND RETURN. ALL DUCTWORK CONNECTIONS SHALL HAVE A SMOOTH TAPER DUCT CONNECTOR.
10. ALL EXHAUSTS AND VENT TERMINALS FROM NON-RESIDENTIAL SOURCES MUST BE LOCATED AT LEAST 10'-0" FROM FRESH AIR INTAKE TERMINALS AND OPERABLE PORTIONS OF ANY WINDOW.
11. ALL EXHAUSTS AND VENT TERMINALS FROM APARTMENTS MUST BE LOCATED AT LEAST 10'-0" FROM FRESH AIR INTAKE TERMINALS AND AT LEAST 3'-0" FROM ANY OPERABLE PORTION OF A WINDOW.
12. ANY DUCTWORK THAT RUNS OUTSIDE OF THE BUILDING ENVELOPE SHALL HAVE ADDITIONAL INSULATION, REFER TO THE INSULATION SPECIFICATION FOR FURTHER DETAIL.

CONSTRUCTION NOTES: (NOT ALL NOTES USED, REFER TO PLANS)

1. ROUTE LAUNDRY EXHAUST FROM DRYER OUTLET TO SIDEWALL VENT. PROVIDE ANODIZED DRYER VENT W/ BACKDRAFT DAMPER. SIDEWALL TERMINATION KIT TO EQUAL X-VENT. COORDINATE FINISHES WITH ARCHITECT.
2. ROUTE EXHAUST FROM FAN OUTLET TO EXTERIOR WALL. PROVIDE ANODIZED WALL CAP WITH BIRDSCREEN. COLOR SELECTED BY ARCHITECT.
3. ROUTE EXHAUST FROM FAN OUTLET TO EXTERIOR WALL. PROVIDE ANODIZED WALL CAP WITH BIRDSCREEN. COLOR SELECTED BY ARCHITECT.
4. ROUTE REFRIGERANT PIPING FROM FREEZER/ REFRIGERATOR UP TO CONDENSER(S) ON ROOF PER MANUFACTURER'S REQUIREMENTS. CONDENSERS SHALL BE OUTDOOR, REMOTE MOUNTED, AND SHALL NOT REJECT HEAT TO THE SPACE.
5. REFER TO TYPICAL UNIT PLAN DRAWINGS ON SHEETS M2.1, M2.2, M2.3, AND M2.4, FOR EQUIPMENT LOCATIONS AND ASSOCIATED WORK IN THE RESIDENT UNITS.
6. COMBINATION FIRE AND SMOKE DAMPER. COORDINATE W/ EC AND FA CONTRACTORS IN ORDER TO INTEGRATE INTO SMOKE DETECTOR(S) AND FACP. CONTRACTOR SHALL INSTALL DAMPER WITH PROPER CLEARANCES AND ACCESS FOR MAINTENANCE. PROVIDE ACCESS PANELS (RATED) WHERE REQUIRED.
7. TYPE 1 COMMERCIAL KITCHEN HOOD GREASE DUCT WELDED STEEL W/ ZERO CLEARANCE WRAP FROM HOOD TO FAN INLET.
8. TYPE 2 DISHWASHER EXHAUST HOOD DUCT ALUMINUM FROM HOOD TO FAN INLET.
9. PROVIDE 18"x18" RECESSED FIRE RATED ACCESS PANEL W/ PERFORATED MUDRING FRAME. EQUAL TO ACUDOR FWC-5015 IN DRYWALL CEILINGS, AND FB-5060-TD IN WOOD CEILINGS. FINAL LOCATION SELECTED BY ARCHITECT AND OWNER DURING SHOP DRAWING PHASE OF PROJECT.
10. PROVIDE FILTERED RETURN GRILLE. NO FILTERED REQUIRED AT FAN COIL. REFER TO DIFFUSER SCHEDULE FOR SIZING.
11. PROVIDE 78"x64" O.A LOUVER 23,000 CFM, .1" @ 1000 FPM. BASED ON GREENHECK "ESU-153" LOUVER PAINT IN COLOR SELECTED BY ARCHITECT.
12. PROVIDE 30" CLEARANCE ON CONDUIT SIDE OF UNIT
13. PROVIDE 6"ø VENT FROM FIRE PLACE TO ROOF. SIZING TO BE CONFIRMED BY THE MANUFACTURER PRIOR TO ROUGH IN.
14. EXTEND DUCTWORK TO ROOF. REFER TO ROOF PLAN FOR CONTINUATION.
15. NO DUCTWORK IS ALLOWED TO RUN ABOVE ELECTRICAL PANELS.
16. SIDEWALL TERMINATION KIT TO EQUAL X-VENT. COORDINATE FINISHES WITH ARCHITECT.
17. 4"ø DRYER EXHAUST DUCTS SHALL HAVE A SMOOTH INTERIOR FINISH AND SHALL BE CONSTRUCTED OF 26 GAUGE SHEET METAL. NO SCREWS ARE ALLOWED TO PROTRUDE THROUGH THE DUCT. VENT DRYER EXHAUST THROUGH SIDEWALL FOR FIRST AND SECOND FLOOR LOCATIONS, THRU ROOF FOR THIRD FLOOR LOCATIONS. SIDEWALL TERMINATION KIT TO EQUAL X-VENT (SINGLE/COMBINATION). PER DETAIL, PROVIDE DRYER WALL BOX, CLEAN OUT, & BOOSTER FAN *WHERE REQUIRED) IN LAUNDRY ROOM.

NOTICE

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Date: 1/28/2026

Sheet Name: BASEMENT FLOOR PLAN

Progress Prints:	Revisions:
05.06.2022 PERMIT/BID SET	△
△ ADD.1 CONSTRUCTION SET-07.1.22	△
△ VE ISSUE-10.5.22	△

Construction Issue Date:

Drawn By: ST/KG/KG

Checked By: MW

Scale: AS NOTED

FIELD STONE @ CHESTER SPRINGS
ASSISTED LIVING FACILITY
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CHESTER SPRINGS, PA 19475

McHUGH ENGINEERING ASSOCIATES INC.

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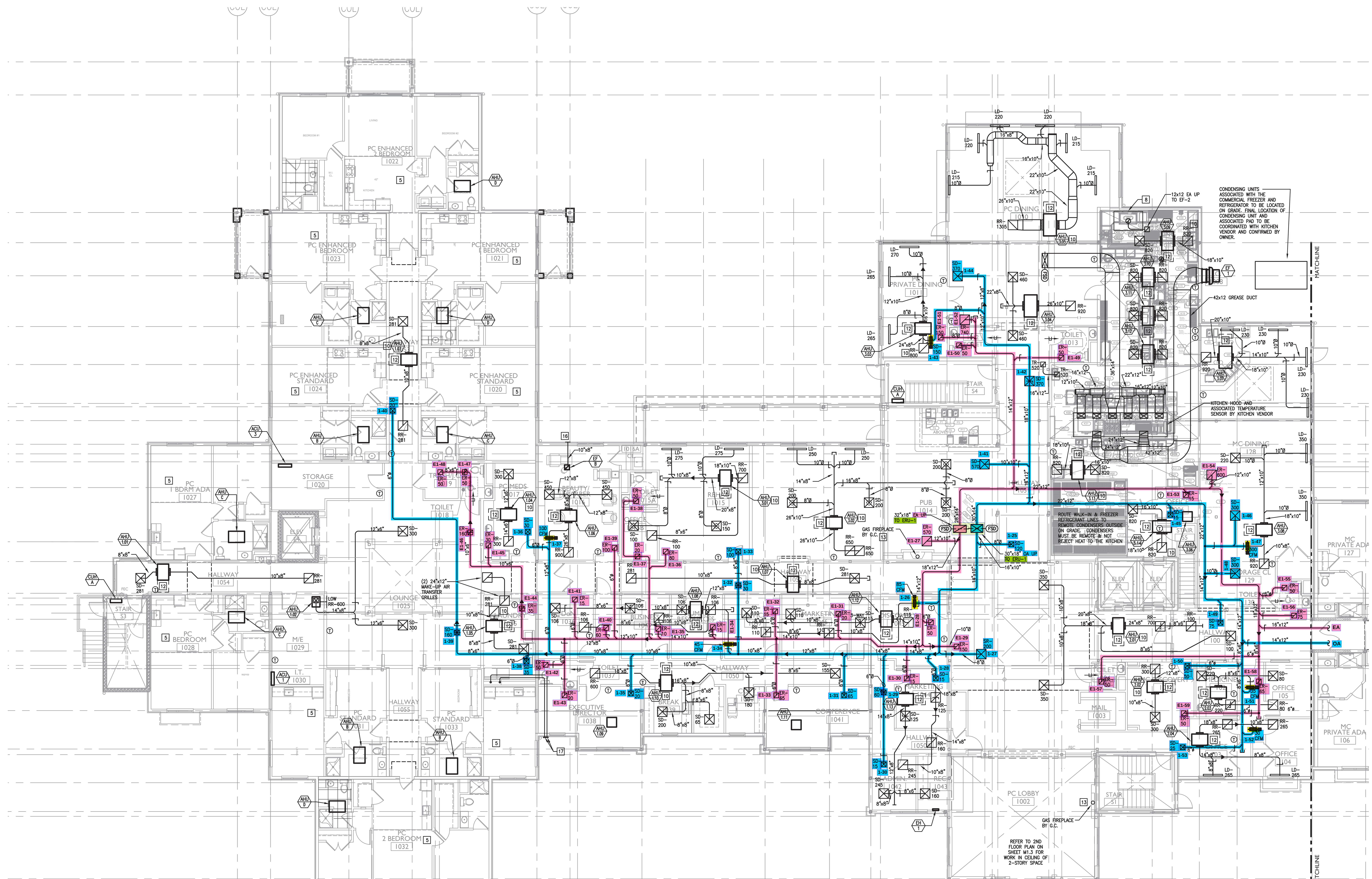
M1.0



PARTIAL FIRST FLOOR PLAN – MECHANICAL

SCALE: 1/8"=1'-0"

CONSTRUCTION NOTES: (NOT ALL NOTES USED, REFER TO PLANS)

1. ROUTE LAUNDRY EXHAUST FROM DRYER OUTLET TO SIDEWALL VENT. PROVIDE ANODIZED DRYER VENT W/ BACKDRAFT DAMPER. SIDEWALL TERMINATION KIT TO EQUAL X-VENT. COORDINATE FINISHES WITH ARCHITECT.
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4. ROUTE REFRIGERANT PIPING FROM FREEZER/ REFRIGERATOR UP TO CONDENSER(S) ON ROOF PER MANUFACTURER'S REQUIREMENTS. CONDENSERS SHALL BE OUTDOOR, REMOTE MOUNTED, AND SHALL NOT REJECT HEAT TO THE SPACE.
5. REFER TO TYPICAL UNIT PLAN DRAWINGS ON SHEETS M2.1, M2.2, M2.3, AND M2.4, FOR EQUIPMENT LOCATIONS AND ASSOCIATED WORK IN THE RESIDENT UNITS.
6. COMBINATION FIRE AND SMOKE DAMPER. COORDINATE W/ EC AND FA CONTRACTORS IN ORDER TO INTEGRATE INTO SMOKE DETECTOR(S) AND FACP. CONTRACTOR SHALL INSTALL DAMPER WITH PROPER CLEARANCES AND ACCESS FOR MAINTENANCE. PROVIDE ACCESS PANELS (RATED) WHERE REQUIRED.
7. TYPE 1 COMMERCIAL KITCHEN HOOD GREASE DUCT WELDED STEEL W/ ZERO CLEARANCE WRAP FROM HOOD TO FAN INLET.
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10. PROVIDE FILTERED RETURN GRILLE. NO FILTERED REQUIRED AT FAN COIL. REFER TO DIFFUSER SCHEDULE FOR SIZING.
11. PROVIDE 78"x64" O.A LOUVER 23,000 CFM, .1" @ 1000 FPM. BASED ON GREENHECK "ESU-153" LOUVER PAINT IN COLOR SELECTED BY ARCHITECT.
12. PROVIDE 30" CLEARANCE ON CONDUIT SIDE OF UNIT
13. PROVIDE 6"ø VENT FROM FIRE PLACE TO ROOF. SIZING TO BE CONFIRMED BY THE MANUFACTURER PRIOR TO ROUGH IN.
14. EXTEND DUCTWORK TO ROOF. REFER TO ROOF PLAN FOR CONTINUATION.
15. NO DUCTWORK IS ALLOWED TO RUN ABOVE ELECTRICAL PANELS.
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17. 4"ø DRYER EXHAUST DUCTS SHALL HAVE A SMOOTH INTERIOR FINISH AND SHALL BE CONSTRUCTED OF 26 GAUGE SHEET METAL. NO SCREWS ARE ALLOWED TO PROTRUDE THROUGH THE DUCT. VENT DRYER EXHAUST THROUGH SIDEWALL FOR FIRST AND SECOND FLOOR LOCATIONS, THRU ROOF FOR THIRD FLOOR LOCATIONS. SIDEWALL TERMINATION KIT TO EQUAL X-VENT (SINGLE/COMBINATION). PER DETAIL, PROVIDE DRYER WALL BOX, CLEAN OUT, & BOOSTER FAN *WHERE REQUIRED) IN LAUNDRY ROOM.

MECHANICAL GENERAL NOTES:

1. ALL DUCTWORK SIZES INDICATED ARE INSIDE DIMENSIONS UNLESS OTHERWISE NOTED.
2. DUCT SIZES INDICATED ON DRAWING ARE BASED AFTER THE LAST DIFFUSER AND/OR BRANCH TAKE-OFF.
3. CONTRACTOR TO PROVIDE A CLEAN OUT AT EVERY CHANGE IN DIRECTION OF A CONDENSATE LINE AND AT 50 FT. CENTERS.
4. RUN ALL CONDENSATE PIPING TO POINT OF DISCHARGE, PROVIDE REQUIRED AIR GAP AT DISCHARGE POINT, REFER TO PLANS & SPECIFICATIONS FOR SIZES AND REQUIREMENTS.
5. ALL DUCTWORK SERVING THE ENERGY RECOVERY UNIT SHALL BE MINIMAL 26 GAUGE SHEET METAL FROM THE ERU TO THE AIR DEVICE. NO FLEXIBLE DUCTWORK IS ALLOWED. THIS SHALL COMPLY WITH THE IBC 2015 717.5.4 FIRE PARTITIONS EXCEPTION #4.
6. COORDINATE FINAL THERMOSTAT LOCATIONS WITH ARCHITECT AND OWNER.
7. RECTANGULAR WEB OPENINGS SHALL BE PROVIDED IN THE LIGHT-GUAGE METAL TRUSS SYSTEM AS REQUIRED FOR MECHANICAL DUCTWORK RUNS. WEB OPENINGS IN ADJACENT TRUSSES SHALL BE ALIGNED IN ORDER TO PASS THROUGH THE TRUSSES IN A STRAIGHT LINE. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED DUCTWORK RUN PENETRATIONS WITH THE LIGHT-GUAGE METAL TRUSS MANUFACTURER, MECHANICAL ENGINEER, AND GENERAL CONTRACTOR.
8. EVERY DIFFUSER BRANCH DUCT SHALL HAVE A VOLUME DAMPER. ALL ENERGY RECOVERY DUCTWORK SHALL USE A CONSTANT AIR REGULATOR.
9. ALL FAN COILS SHALL HAVE FLEXIBLE CONNECTIONS ON SUPPLY AND RETURN. ALL DUCTWORK CONNECTIONS SHALL HAVE A SMOOTH TAPER DUCT CONNECTOR.
10. ALL EXHAUSTS AND VENT TERMINALS FROM NON-RESIDENTIAL SOURCES MUST BE LOCATED AT LEAST 10'-0" FROM FRESH AIR INTAKE TERMINALS AND OPERABLE PORTIONS OF ANY WINDOW.
11. ALL EXHAUSTS AND VENT TERMINALS FROM APARTMENTS MUST BE LOCATED AT LEAST 10'-0" FROM FRESH AIR INTAKE TERMINALS AND AT LEAST 3'-0" FROM ANY OPERABLE PORTION OF A WINDOW.
12. ANY DUCTWORK THAT RUNS OUTSIDE OF THE BUILDING ENVELOPE SHALL HAVE ADDITIONAL INSULATION, REFER TO THE INSULATION SPECIFICATION FOR FURTHER DETAIL.

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COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MICHAEL WITKOWSKI ENGINEER

05/06/22

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145 BYERS RD
CHESTER SPRINGS, PA 19475

Construction Issue Date:	
Drawn By: ST/KG/KG	
Checked By: MW	
Scale: AS NOTED	

Sheet Name: FIRST FLOOR PLAN

Progress Prints:	Revisions:
05.06.2022 PERMIT/BID SET	△
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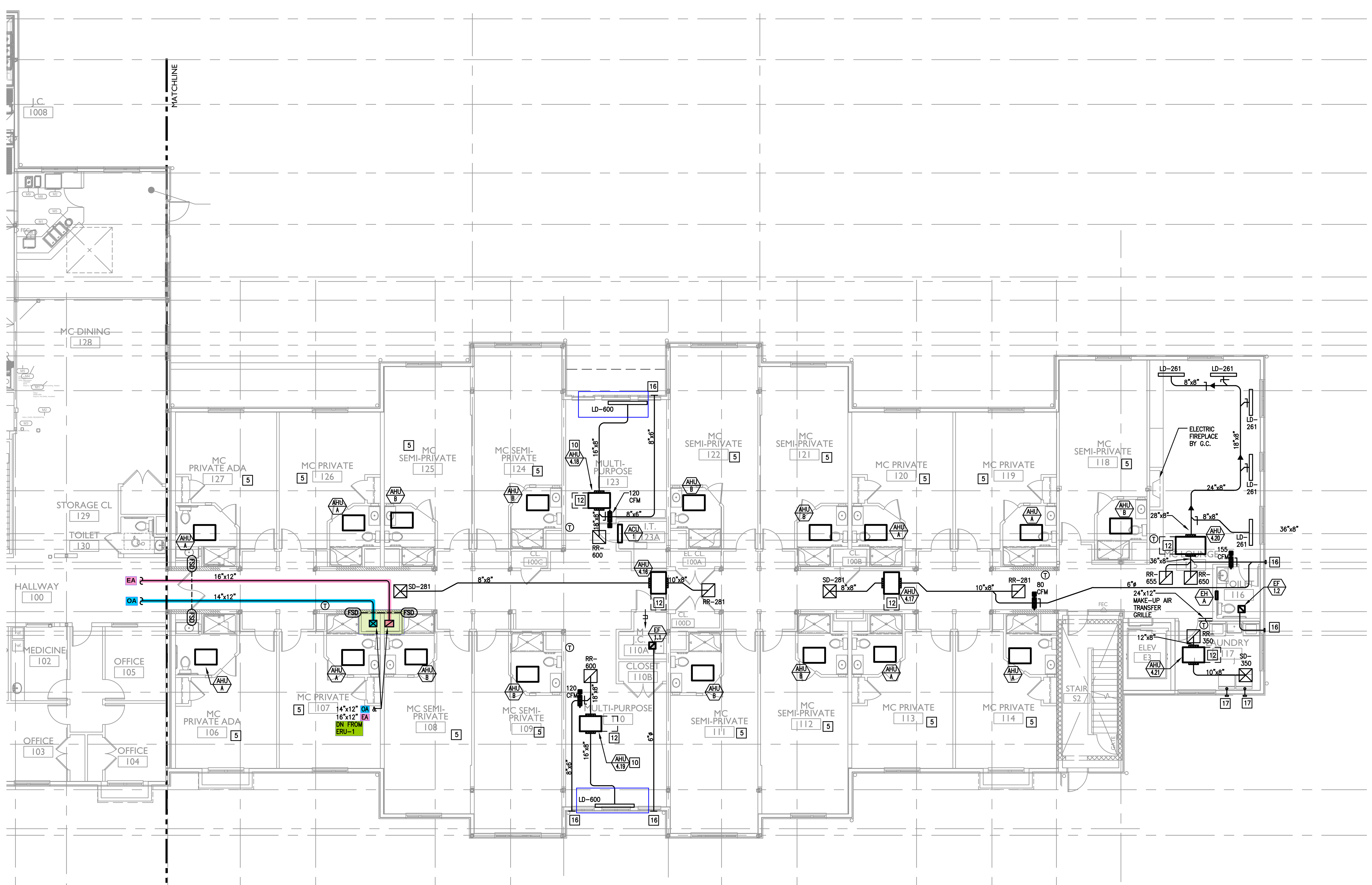

PARTIAL FIRST FLOOR PLAN – MECHANICAL

NORTH

SCALE: 1/8"=1'-0"

MATCHLINE

MECHANICAL GENERAL NOTES:

1. ALL DUCTWORK SIZES INDICATED ARE INSIDE DIMENSIONS UNLESS OTHERWISE NOTED.
2. DUCT SIZES INDICATED ON DRAWING ARE BASED AFTER THE LAST DIFFUSER AND/OR BRANCH TAKE-OFF.
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COMMONWEALTH OF PENNSYLVANIA – REGISTERED PROFESSIONAL ENGINEER – MICHAEL WITKOWSKI
05/06/22

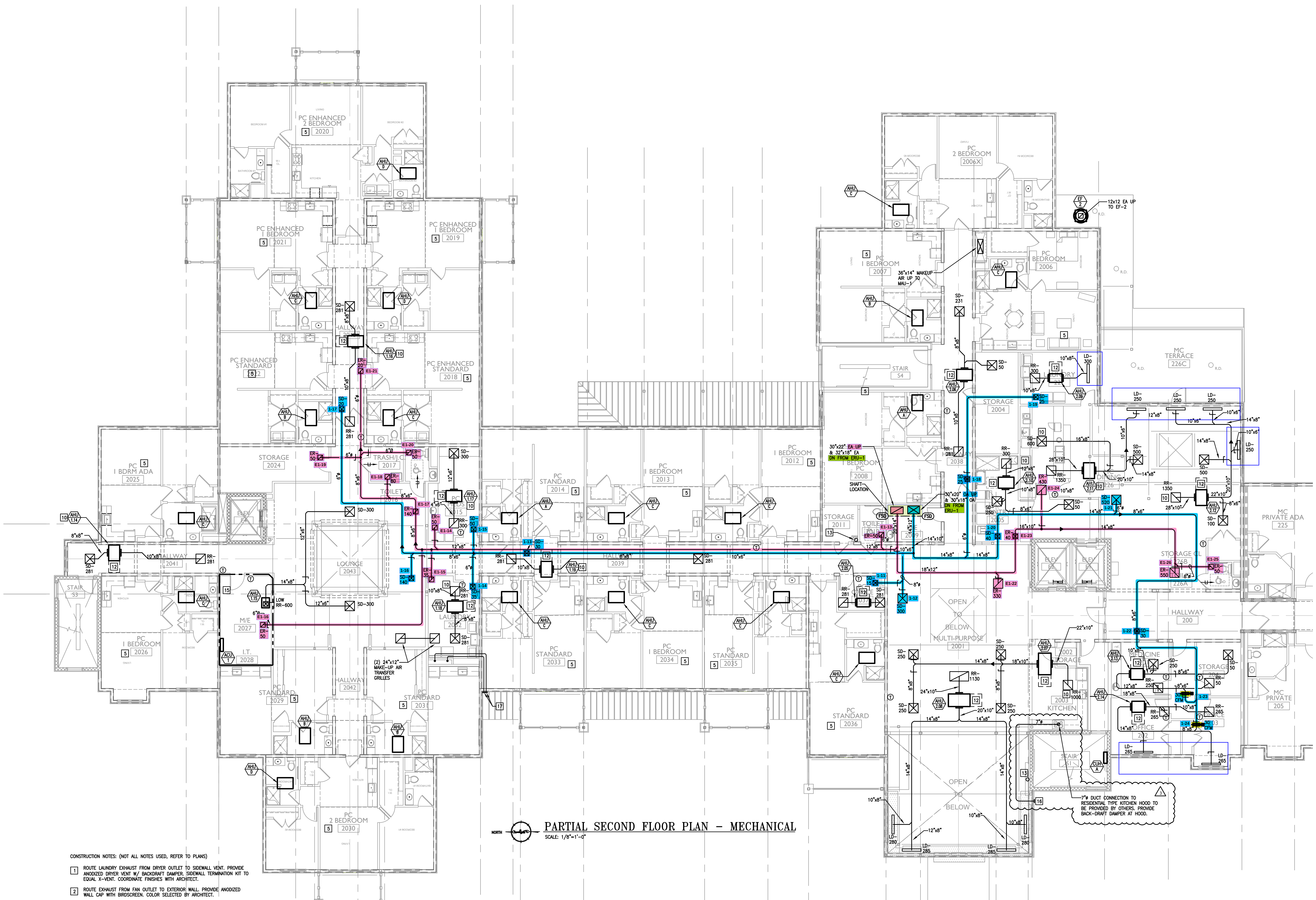
McHUGH ENGINEERING ASSOCIATES INC.

FIELD STONE @ CHESTER SPRINGS ASSISTED LIVING FACILITY
145 BYERS RD
CHESTER SPRINGS, PA 19475

Construction Issue Date:
Drawn By: ST/KG/KG
Checked By: MW
Scale: AS NOTED

Sheet Name: FIRST FLOOR PLAN
Progress Prints: 05.06.2022 PERMIT/BID SET
Revisions:

M1.2



PARTIAL SECOND FLOOR PLAN – MECHANICAL

SCALE: 1/8"=1'-0"

CONSTRUCTION NOTES: (NOT ALL NOTES USED, REFER TO PLANS)

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6. COORDINATE FINAL THERMOSTAT LOCATIONS WITH ARCHITECT AND OWNER.
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Construction Issue Date:
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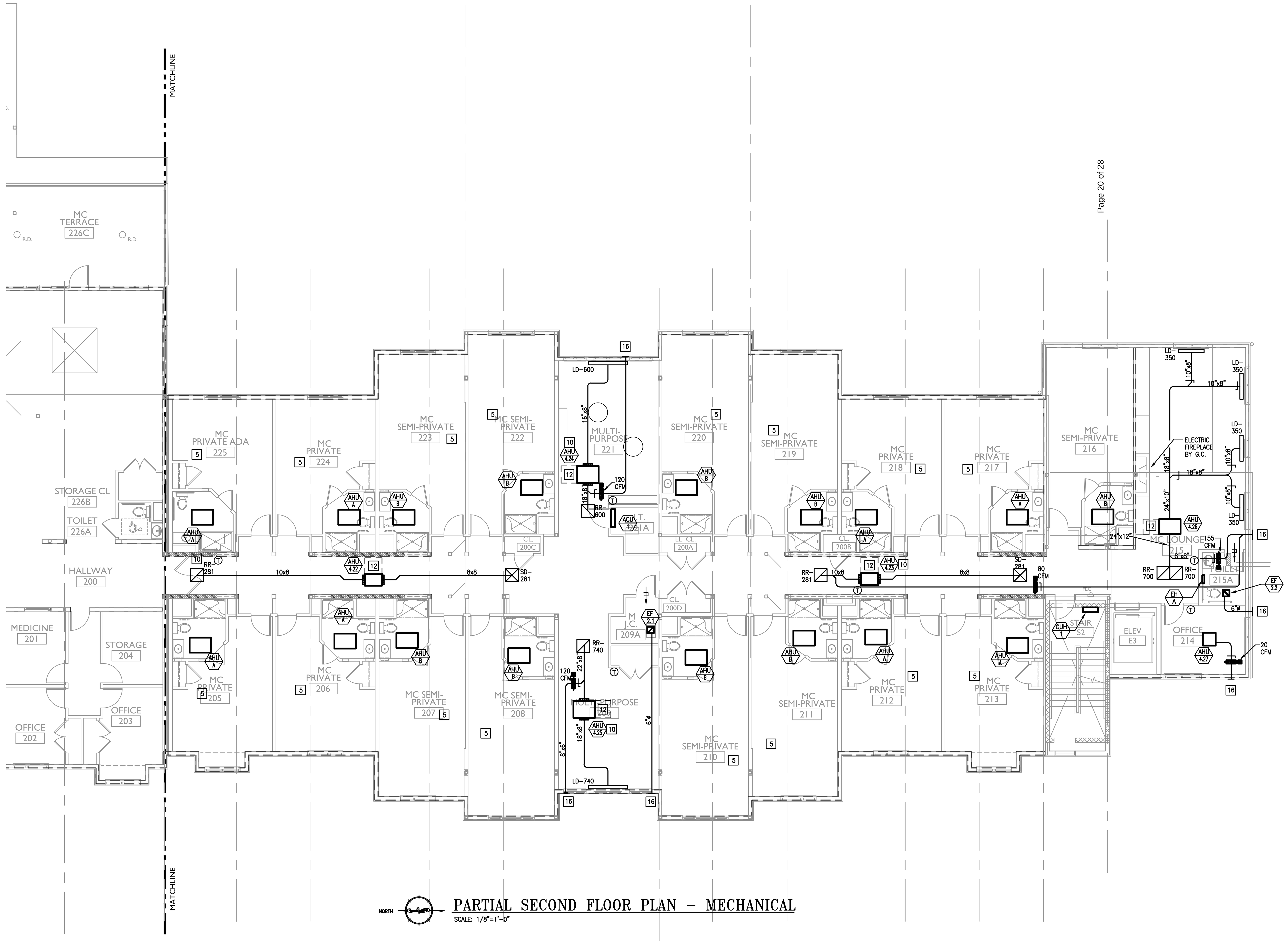
Sheet Name: SECOND FLOOR PLAN

Progress Prints:	Revisions:
05.06.2022 PERMIT/BID SET	
1 ADD.1 CONSTRUCTION SET-07.1.22	
2 VE ISSUE-10.5.22	
3 BULLETIN #5- 6.6.23	

M1.3



PARTIAL SECOND FLOOR PLAN – MECHANICAL

SCALE: 1/8"=1'-0"

MECHANICAL GENERAL NOTES:

1. ALL DUCTWORK SIZES INDICATED ARE INSIDE DIMENSIONS UNLESS OTHERWISE NOTED.
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7. RECTANGULAR WEB OPENINGS SHALL BE PROVIDED IN THE LIGHT-GUAGE METAL TRUSS SYSTEM AS REQUIRED FOR MECHANICAL DUCTWORK RUNS. WEB OPENINGS IN ADJACENT TRUSSES SHALL BE ALIGNED IN ORDER TO PASS THROUGH THE TRUSSES IN A STRAIGHT LINE. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED DUCTWORK RUN PENETRATIONS WITH THE LIGHT-GUAGE METAL TRUSS MANUFACTURER, MECHANICAL ENGINEER, AND GENERAL CONTRACTOR.
8. EVERY DIFFUSER BRANCH DUCT SHALL HAVE A VOLUME DAMPER. ALL ENERGY RECOVERY DUCTWORK SHALL USE A CONSTANT AIR REGULATOR.
9. ALL FAN COILS SHALL HAVE FLEXIBLE CONNECTIONS ON SUPPLY AND RETURN. ALL DUCTWORK CONNECTIONS SHALL HAVE A SMOOTH TAPER DUCT CONNECTOR.
10. ALL EXHAUSTS AND VENT TERMINALS FROM NON-RESIDENTIAL SOURCES MUST BE LOCATED AT LEAST 10'-0" FROM FRESH AIR INTAKE TERMINALS AND OPERABLE PORTIONS OF ANY WINDOW.
11. ALL EXHAUSTS AND VENT TERMINALS FROM APARTMENTS MUST BE LOCATED AT LEAST 10'-0" FROM FRESH AIR INTAKE TERMINALS AND AT LEAST 3'-0" FROM ANY OPERABLE PORTION OF A WINDOW.
12. ANY DUCTWORK THAT RUNS OUTSIDE OF THE BUILDING ENVELOPE SHALL HAVE ADDITIONAL INSULATION, REFER TO THE INSULATION SPECIFICATION FOR FURTHER DETAIL.

CONSTRUCTION NOTES: (NOT ALL NOTES USED, REFER TO PLANS)

1. ROUTE LAUNDRY EXHAUST FROM DRYER OUTLET TO SIDEWALL VENT. PROVIDE ANODIZED DRYER VENT W/ BACKDRAFT DAMPER. SIDEWALL TERMINATION KIT TO EQUAL X-VENT. COORDINATE FINISHES WITH ARCHITECT.
2. ROUTE EXHAUST FROM FAN OUTLET TO EXTERIOR WALL. PROVIDE ANODIZED WALL CAP WITH BIRDSCREEN. COLOR SELECTED BY ARCHITECT.
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4. ROUTE REFRIGERANT PIPING FROM FREEZER/ REFRIGERATOR UP TO CONDENSER(S) ON ROOF PER MANUFACTURER'S REQUIREMENTS. CONDENSERS SHALL BE OUTDOOR, REMOTE MOUNTED, AND SHALL NOT REJECT HEAT TO THE SPACE.
5. REFER TO TYPICAL UNIT PLAN DRAWINGS ON SHEETS M2.1, M2.2, M2.3, AND M2.4, FOR EQUIPMENT LOCATIONS AND ASSOCIATED WORK IN THE RESIDENT UNITS.
6. COMBINATION FIRE AND SMOKE DAMPER. COORDINATE W/ EC AND FA CONTRACTORS IN ORDER TO INTEGRATE INTO SMOKE DETECTOR(S) AND FACP. CONTRACTOR SHALL INSTALL DAMPER WITH PROPER CLEARANCES AND ACCESS FOR MAINTENANCE. PROVIDE ACCESS PANELS (RATED) WHERE REQUIRED.
7. TYPE 1 COMMERCIAL KITCHEN HOOD GREASE DUCT WELDED STEEL W/ ZERO CLEARANCE WRAP FROM HOOD TO FAN INLET.
8. TYPE 2 DISHWASHER EXHAUST HOOD DUCT ALUMINUM FROM HOOD TO FAN INLET.
9. PROVIDE 18"x18" RECESSED FIRE RATED ACCESS PANEL W/ PERFORATED MUDRING FRAME. EQUAL TO ACUDOR FWC-5015 IN DRYWALL CEILINGS, AND FB-5060-TD IN WOOD CEILINGS. FINAL LOCATION SELECTED BY ARCHITECT AND OWNER DURING SHOP DRAWING PHASE OF PROJECT.
10. PROVIDE FILTERED RETURN GRILLE. NO FILTERED REQUIRED AT FAN COIL. REFER TO DIFFUSER SCHEDULE FOR SIZING.
11. PROVIDE 78"x64" O.A LOUVER 23,000 CFM, .1" @ 1000 FPM. BASED ON GREENHECK "ESU-153" LOUVER PAINT IN COLOR SELECTED BY ARCHITECT.
12. PROVIDE 30" CLEARANCE ON CONDUIT SIDE OF UNIT
13. PROVIDE 6"ø VENT FROM FIRE PLACE TO ROOF. SIZING TO BE CONFIRMED BY THE MANUFACTURER PRIOR TO ROUGH IN.
14. EXTEND DUCTWORK TO ROOF. REFER TO ROOF PLAN FOR CONTINUATION.
15. NO DUCTWORK IS ALLOWED TO RUN ABOVE ELECTRICAL PANELS.
16. SIDEWALL TERMINATION KIT TO EQUAL X-VENT. COORDINATE FINISHES WITH ARCHITECT.
17. 4"ø DRYER EXHAUST DUCTS SHALL HAVE A SMOOTH INTERIOR FINISH AND SHALL BE CONSTRUCTED OF 26 GAUGE SHEET METAL. NO SCREWS ARE ALLOWED TO PROTRUDE THROUGH THE DUCT. VENT DRYER EXHAUST THROUGH SIDEWALL FOR FIRST AND SECOND FLOOR LOCATIONS, THRU ROOF FOR THIRD FLOOR LOCATIONS. SIDEWALL TERMINATION KIT TO EQUAL X-VENT (SINGLE/COMBINATION). PER DETAIL, PROVIDE DRYER WALL BOX, CLEAN OUT, & BOOSTER FAN *WHERE REQUIRED) IN LAUNDRY ROOM.

NOTICE

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Sheet Name: SECOND FLOOR PLAN

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FIELD STONE @ CHESTER SPRINGS ASSISTED LIVING FACILITY

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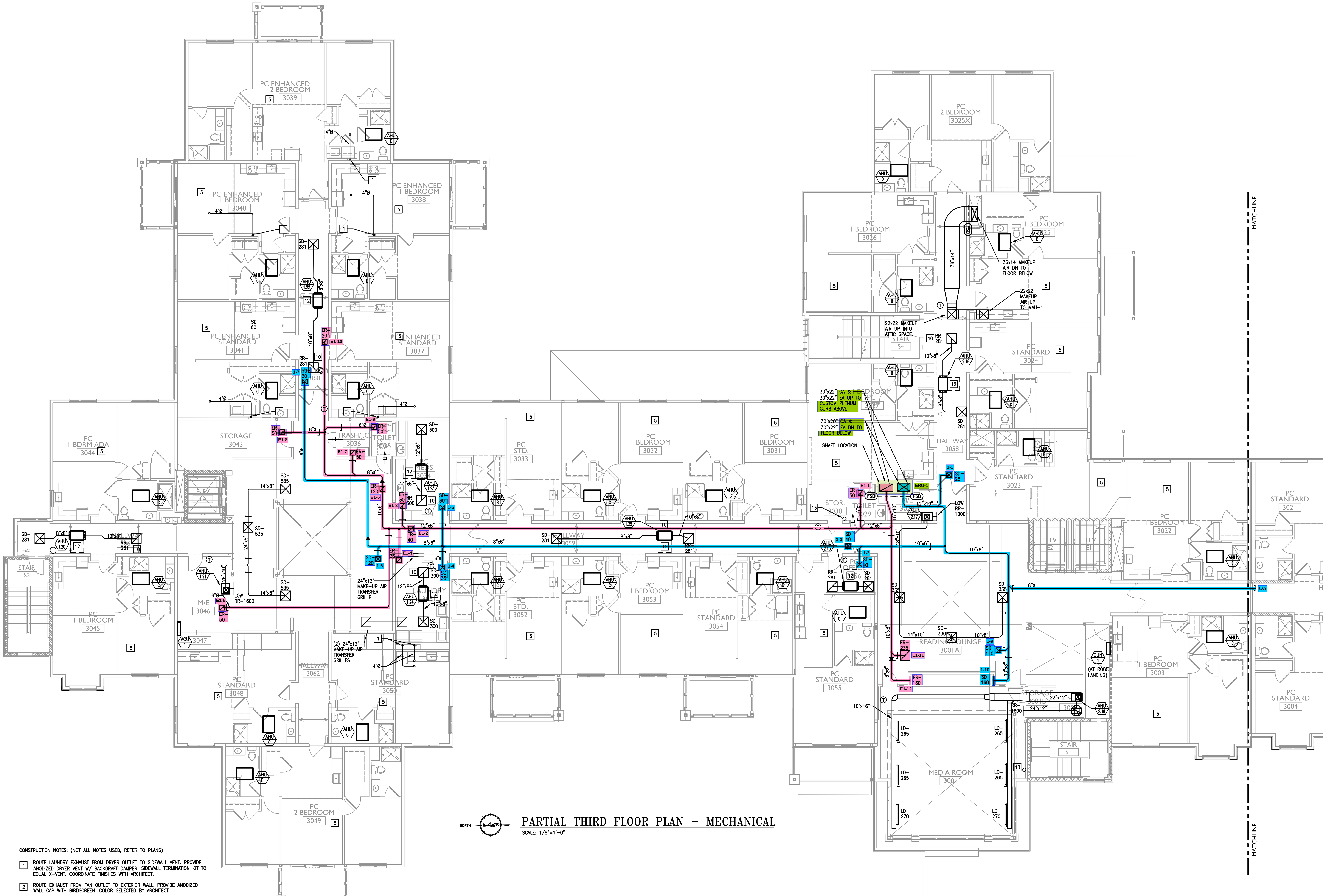
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER MICHAEL WITKOWSKI
05/06/22

M1.4

Date: 1/28/2026



PARTIAL THIRD FLOOR PLAN – MECHANICAL

SCALE: 1/8"=1'-0"

CONSTRUCTION NOTES: (NOT ALL NOTES USED, REFER TO PLANS)

1. ROUTE LAUNDRY EXHAUST FROM DRYER OUTLET TO SIDEWALL VENT. PROVIDE ANODIZED DRYER VENT W/ BACKDRAFT DAMPER. SIDEWALL TERMINATION KIT TO EQUAL X-VENT. COORDINATE FINISHES WITH ARCHITECT.
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4. ROUTE REFRIGERANT PIPING FROM FREEZER/ REFRIGERATOR UP TO CONDENSER(S) ON ROOF PER MANUFACTURER'S REQUIREMENTS. CONDENSERS SHALL BE OUTDOOR, REMOTE MOUNTED, AND SHALL NOT REJECT HEAT TO THE SPACE.
5. REFER TO TYPICAL UNIT PLAN DRAWINGS ON SHEETS M2.1, M2.2, M2.3, AND M2.4, FOR EQUIPMENT LOCATIONS AND ASSOCIATED WORK IN THE RESIDENT UNITS.
6. COMBINATION FIRE AND SMOKE DAMPER. COORDINATE W/ EC AND FA CONTRACTORS IN ORDER TO INTEGRATE INTO SMOKE DETECTOR(S) AND FACP. CONTRACTOR SHALL INSTALL DAMPER WITH PROPER CLEARANCES AND ACCESS FOR MAINTENANCE. PROVIDE ACCESS PANELS (RATED) WHERE REQUIRED.
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9. PROVIDE 18"x18" RECESSED FIRE RATED ACCESS PANEL W/ PERFORATED MUDRING FRAME. EQUAL TO ACUDOR FWC-5015 IN DRYWALL CEILINGS, AND FB-5060-TD IN WOOD CEILINGS. FINAL LOCATION SELECTED BY ARCHITECT AND OWNER DURING SHOP DRAWING PHASE OF PROJECT.
10. PROVIDE FILTERED RETURN GRILLE. NO FILTERED REQUIRED AT FAN COIL. REFER TO DIFFUSER SCHEDULE FOR SIZING.
11. PROVIDE 78"x64" O.A LOUVER 23,000 CFM, .1" @ 1000 FPM. BASED ON GREENHECK "ESU-153" LOUVER PAINT IN COLOR SELECTED BY ARCHITECT.
12. PROVIDE 30" CLEARANCE ON CONDUIT SIDE OF UNIT
13. PROVIDE 6"ø VENT FROM FIRE PLACE TO ROOF. SIZING TO BE CONFIRMED BY THE MANUFACTURER PRIOR TO ROUGH IN.
14. EXTEND DUCTWORK TO ROOF. REFER TO ROOF PLAN FOR CONTINUATION.
15. NO DUCTWORK IS ALLOWED TO RUN ABOVE ELECTRICAL PANELS.
16. SIDEWALL TERMINATION KIT TO EQUAL X-VENT. COORDINATE FINISHES WITH ARCHITECT.
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MECHANICAL GENERAL NOTES:

1. ALL DUCTWORK SIZES INDICATED ARE INSIDE DIMENSIONS UNLESS OTHERWISE NOTED.
2. DUCT SIZES INDICATED ON DRAWING ARE BASED AFTER THE LAST DIFFUSER AND/OR BRANCH TAKE-OFF.
3. CONTRACTOR TO PROVIDE A CLEAN OUT AT EVERY CHANGE IN DIRECTION OF A CONDENSATE LINE AND AT 50 FT. CENTERS.
4. RUN ALL CONDENSATE PIPING TO POINT OF DISCHARGE, PROVIDE REQUIRED AIR GAP AT DISCHARGE POINT, REFER TO PLANS & SPECIFICATIONS FOR SIZES AND REQUIREMENTS.
5. ALL DUCTWORK SERVING THE ENERGY RECOVERY UNIT SHALL BE MINIMAL 26 GAUGE SHEET METAL FROM THE ERU TO THE AIR DEVICE. NO FLEXIBLE DUCTWORK IS ALLOWED. THIS SHALL COMPLY WITH THE IBC 2015 717.5.4 FIRE PARTITIONS EXCEPTION #4.
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MICHAEL WITKOWSKI
ENGINEER
No. PE073794

05/06/22

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Drawn By:	ST/KG/KG
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Sheet Name: THIRD FLOOR PLAN

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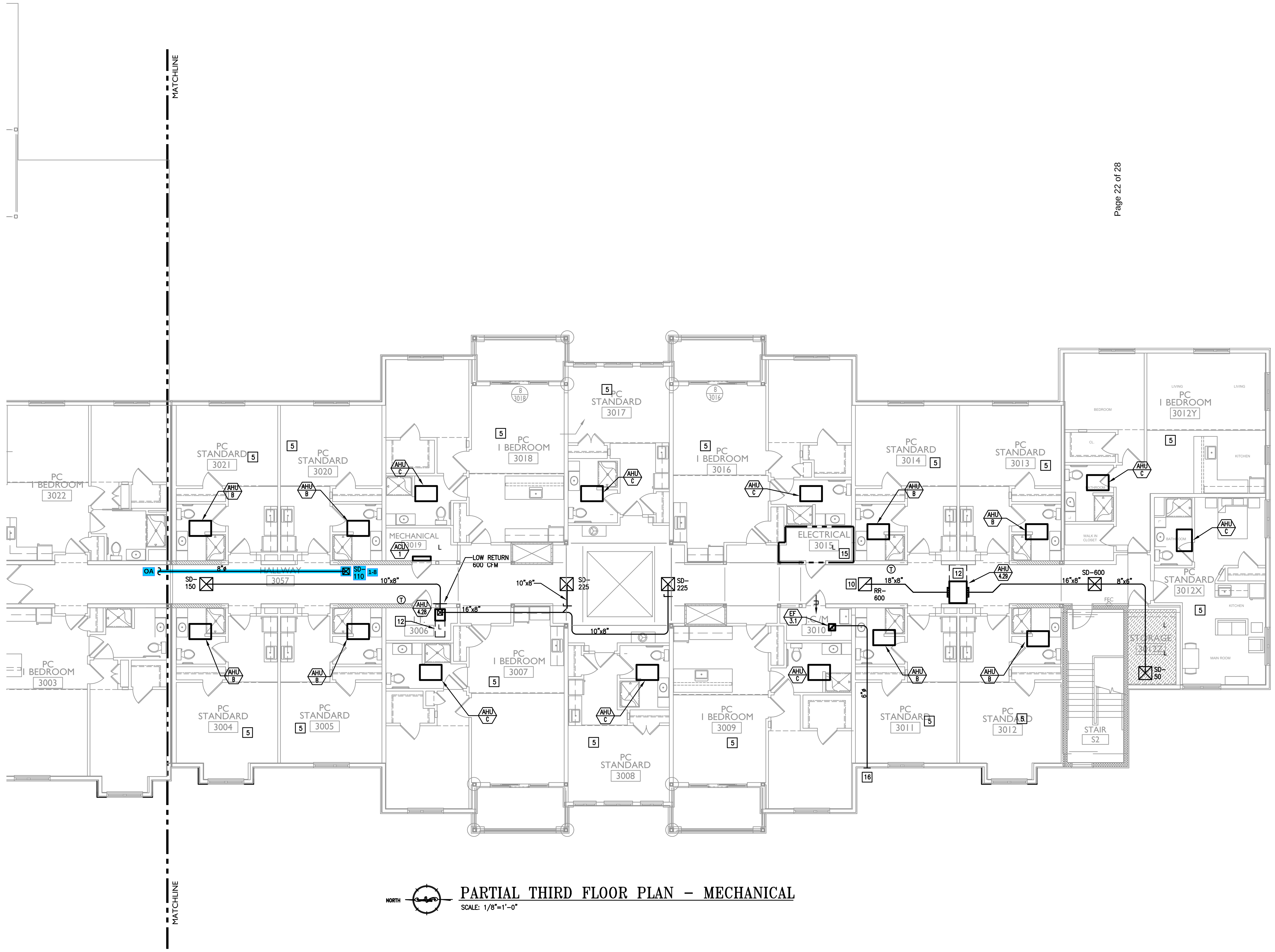
Date: 1/28/2026



PARTIAL THIRD FLOOR PLAN – MECHANICAL

SCALE: 1/8"=1'-0"

NORTH

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M1.6

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8. EVERY DIFFUSER BRANCH DUCT SHALL HAVE A VOLUME DAMPER.
9. ALL FAN COILS SHALL HAVE FLEXIBLE CONNECTIONS ON SUPPLY AND RETURN. ALL DUCTWORK CONNECTIONS SHALL HAVE A SMOOTH TAPER DUCT CONNECTOR.

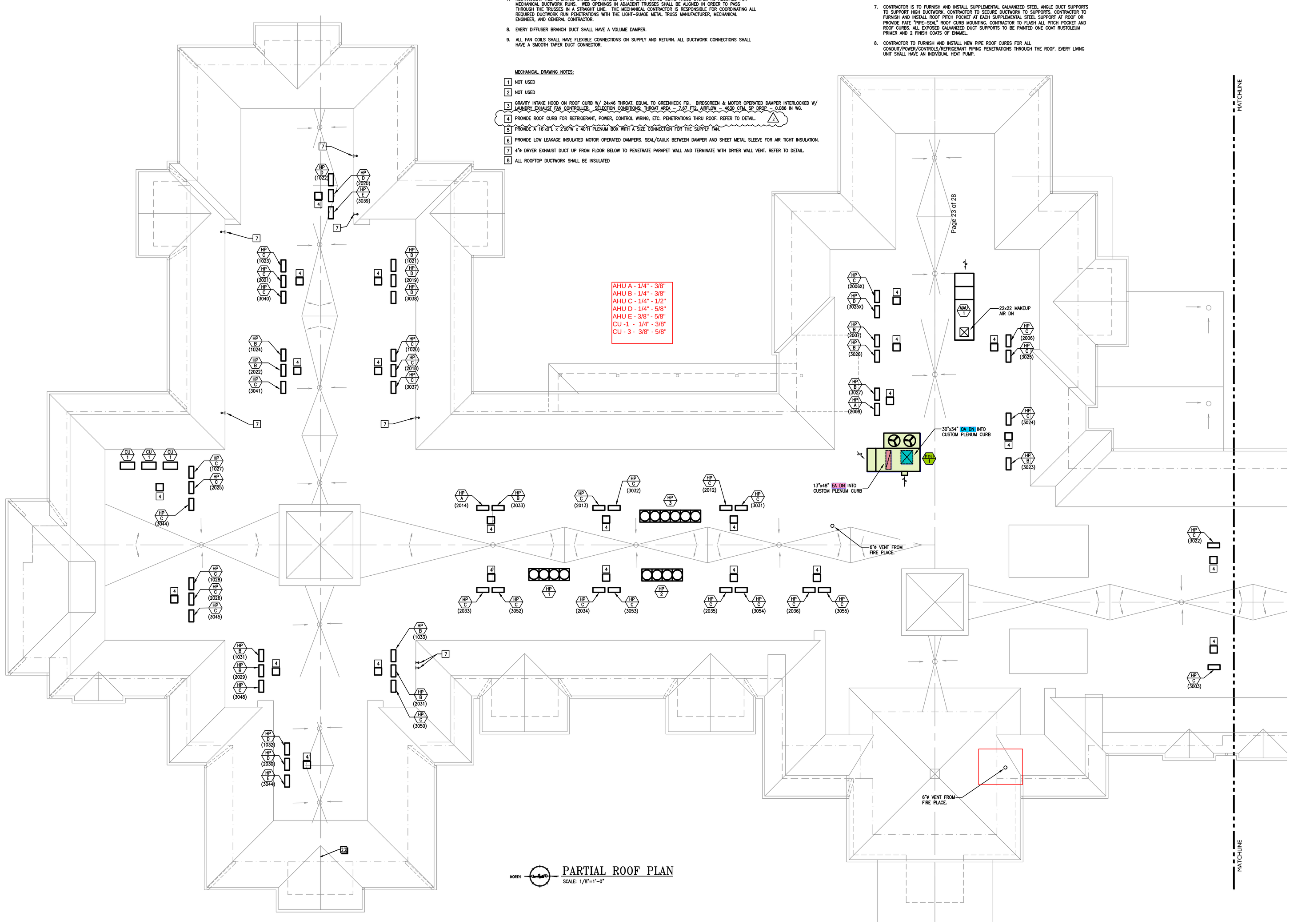
ROOF DUCT WORK NOTES:

1. ALL DUCTWORK SIZES ARE INSIDE DIMENSIONS UNLESS NOTED OTHERWISE.
2. ALL EXTERIOR DUCTWORK TO BE 4" WATERGAUGE DUCT CONSTRUCTION WITH 2" RIGID INSULATION AND WEATHERPROOF COVERING IN ADDITION TO 1" LINING. SEE SPEC.
3. ALL BOTTOM OF DUCTWORK TO BE MINIMUM 2'-0" ABOVE FINISHED ROOF.
4. ALL TOPS OF EXTERIOR DUCTWORK TO SLOPE SO NOT TO ALLOW WATER ACCUMULATION.
5. CONTRACTOR TO FURNISH AND INSTALL ROOF MOUNTED DUCT CURBS TO SUPPORT EXTERIOR DUCTWORK AT ALL CHANGES OF DIRECTION AND AT A MAXIMUM OF 8'-0" O.C. PATE OR EQUAL.
6. CONTRACTOR SHALL PAINT ALL EXPOSED DUCT SUPPORTS ONE COAT RUSTOLEUM PRIMER AND 2 FINISH COATS OF ENAMEL.
7. CONTRACTOR IS TO FURNISH AND INSTALL SUPPLEMENTAL GALVANIZED STEEL ANGLE DUCT SUPPORTS TO SUPPORT HIGH DUCTWORK. CONTRACTOR TO SECURE DUCTWORK TO SUPPORTS. CONTRACTOR TO FURNISH AND INSTALL ROOF PITCH POCKET AT EACH SUPPLEMENTAL STEEL SUPPORT AT ROOF OR PROVIDE PATE "PIPE-SEAL" ROOF CURB MOUNTING. CONTRACTOR TO FLASH ALL PITCH POCKET AND ROOF CURBS. ALL EXPOSED GALVANIZED DUCT SUPPORTS TO BE PAINTED ONE COAT RUSTOLEUM PRIMER AND 2 FINISH COATS OF ENAMEL.
8. CONTRACTOR TO FURNISH AND INSTALL NEW PIPE ROOF CURBS FOR ALL CONDUIT/POWER/CONTROLS/REFRIGERANT PIPING PENETRATIONS THROUGH THE ROOF. EVERY LIVING UNIT SHALL HAVE AN INDIVIDUAL HEAT PUMP.

MECHANICAL DRAWING NOTES:

1. NOT USED
2. NOT USED
3. GRAVITY INTAKE HOOD ON ROOF CURB W/ 24x46 THROAT. EQUAL TO GREENHECK FGI. BIRDSCREEN & MOTOR OPERATED DAMPER INTERLOCKED W/ LAUNDRY EXHAUST FAN CONTROLLER. SELECTION CONDITIONS: THROAT AREA = 7.67 FT2, AIRFLOW = 4630 CFM, SP DROP = 0.086 IN WG.
4. PROVIDE ROOF CURB FOR REFRIGERANT, POWER, CONTROL WIRING, ETC. PENETRATIONS THRU ROOF. REFER TO DETAIL. 3
5. PROVIDE A 16'x0'-L x 2'x0"W x 40"H PLENUM BOX WITH A SIZE CONNECTION FOR THE SUPPLY FAN.
6. PROVIDE LOW LEAKAGE INSULATED MOTOR OPERATED DAMPERS. SEAL/CAULK BETWEEN DAMPER AND SHEET METAL SLEEVE FOR AIR TIGHT INSULATION.
7. 4"ø DRYER EXHAUST DUCT UP FROM FLOOR BELOW TO PENETRATE PARAPET WALL AND TERMINATE WITH DRYER WALL VENT. REFER TO DETAIL.
8. ALL ROOFTOP DUCTWORK SHALL BE INSULATED

AHU A - 1/4" - 3/8"
AHU B - 1/4" - 3/8"
AHU C - 1/4" - 1/2"
AHU D - 1/4" - 5/8"
AHU E - 3/8" - 5/8"
CU -1 - 1/4" - 3/8"
CU - 3 - 3/8" - 5/8"



NORTH

PARTIAL ROOF PLAN
SCALE: 1/8"=1'-0"

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Date: 1/29/2026

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Construction Issue Date:			
	Drawn By: STK/GK/KG	Checked By: MW	Scale: AS NOTED

Sheet Name: ROOF PLAN

Progress Prints:	Revisions:
05.06.2022 PERMIT/BID SET	
ADD 1 CONSTRUCTION SET-07.1.22	
RE ISSUE-10.5.22	

M1.14

SQUARE DUCT TRAVERSE FORM

PROJECT	Fieldstone ALF			SYSTEM	ERU-1
LOCATION	3rd floor mech			SERVICE	3RD Floor fresh air
ALTITUDE	-	DENSITY	-	FACTOR	-

DUCT				REQUIRED		ACTUAL	
S.P.	0.26	TEMP	-	SCFM	-	SCFM	-
SIZE	10x12			FPM		FPM	974
AREA	0.83SQFT			CFM		CFM	811

DISTANCE FROM BOTTOM	*POSITION*	1	2	3	4	5	6	7	8	9	10	11	12
2	1	1587	1353	1280									
6	2	1159	989	809									
10	3	715	380	497									
DISTANCE FROM DUCT EDGE		1.67	5	8.33									
VELOCITY SUB - TOTALS													

REMARKS:

Traverse is right after the damper and readings are turbulent

TEST DATE: READINGS BY: PAGE:

SQUARE DUCT TRAVERSE FORM

PROJECT	Fieldstone ALF			SYSTEM	ERU-1
LOCATION	3rd floor mech			SERVICE	basement-2nd floor oa
ALTITUDE	-	DENSITY	-	FACTOR	-

DUCT				REQUIRED		ACTUAL	
S.P.	1.32"	TEMP	-	SCFM	-	SCFM	-
SIZE	30x22			FPM		FPM	1228
AREA	4.58			CFM		CFM	5630

DISTANCE FROM BOTTOM	*POSITION*	1	2	3	4	5	6	7	8	9	10	11	12
3	1	1279	1279	1236	1208								
9	2	1079	1304	1200	1179								
15	3	1187	1205	1238	1303								
21	4	1191	1249	1345	1331								
27	5	1213	1094	1170	1280								
DISTANCE FROM DUCT EDGE		2.75	8.25	13.5	18.75								
VELOCITY SUB - TOTALS													

REMARKS:

TEST DATE: READINGS BY: PAGE:

SQUARE DUCT TRAVERSE FORM

PROJECT	Fieldstone ALF			SYSTEM	ERU-1
LOCATION	Chester PA			SERVICE	Floors basement-2nd
ALTITUDE	-	DENSITY	-	FACTOR	-

DUCT				REQUIRED		ACTUAL	
S.P.	-0.92	TEMP	-	SCFM	-	SCFM	-
SIZE	32"X22"			FPM		FPM	894
AREA	4.89SQFT			CFM		CFM	4368

DISTANCE FROM BOTTOM	*POSITION*	1	2	3	4	5	6	7	8	9	10	11	12
2.67"	1	832	680	790	1203								
5.33"	2	689	610	1018	1273								
10.6"	3	663	552	988	1113								
16"	4	524	1052	867	1098								
21.3"	5	717	877	852	1062								
26.6"	6	843	856	1216	1104								
DISTANCE FROM DUCT EDGE		2.25"	5.5"	11"	16.5"								
VELOCITY SUB - TOTALS													

REMARKS:

TEST DATE: READINGS BY: PAGE:

SQUARE DUCT TRAVERSE FORM

PROJECT	Fieldstone ALF	SYSTEM	ERU-1
LOCATION	3rd floor mech	SERVICE	3rd floor exhaust
ALTITUDE	-	DENSITY	-
		FACTOR	-

DUCT				REQUIRED		ACTUAL	
S.P.	-0.36	TEMP	-	SCFM	-	SCFM	-
SIZE	16x10			FPM		FPM	772
AREA	1.11SQFT			SCFM		CFM	858

DISTANCE FROM BOTTOM	*POSITION*	1	2	3	4	5	6	7	8	9	10	11	12
1.6	1	669	737	717									
4.8	2	704	654	728									
8	3	732	561	596									
11.2	4	923	800	726									
14.4	5	998	1058	986									
	6												
	13												
DISTANCE FROM DUCT EDGE		1.67	5	8.33									
VELOCITY SUB - TOTALS													

REMARKS:

TEST DATE: READINGS BY: PAGE:

Project Summary

Included in the following report is a TAB evaluation for an Energy Recovery Unit servicing the Fieldstone Assisted living facility in Chester PA. An original TAB Report was provided with altered design CFMs for specific terminal devices that dropped the design supply CFM of the ERU to 6210 CFM and dropped the Exhaust rate of the ERU down to 4800CFM. It should be noted that the ERU is occupied 100% of the time and that the exhaust air stream cannot mix as return air with the supply stream since exhaust is pulled from restrooms through the facility. Original unit programming seemed incorrect for this application.

The unit was locked in 100% OA and 100% Exhaust and total system flow was established Via multiple traverses of the supply duct and the exhaust duct risers and branches as included at the end of the report. Once unit totals flows were set to design levels in the units programming, terminal devices were readout with a combination of a standard flow hood, a low flow hood, and traverse where applicable. independent testing of specific supply and exhaust grilles showed that a correction factor of 1.1 is necessary for the exhaust grilles and supply diffusers needed no correction. At this point all terminal devices were then balanced to within +/-10% unless otherwise stated and with reasoning provided.

Once all terminal devices were balanced final unit performance was recorded. Any observations with unit performance is noted within the remarks section of the report.