DEDICATED OUTDOOR AIR UNIT (DOAS) SCHEDULE

SYMBOL	SERVES	ASSOCIATED EQUIPMENT	TOTAL CFM	% OA	EXT SP	SUPPLY FAN DATA							DX COOLING COIL DATA							ELECTRIC RE-HEAT COIL DATA					ELECT CHAR	UNIT WEIGHT	NOTES	BASIS OF DESIGN
						CFM	DRIVE	TYPE	DESIGN RPM	BHP	HP	TOT SP	EAT °F		LAT °F		SP IN	TOT MBH	SENS MBH	EAT °F	LAT °F	SP IN	TOT KW	STEPS OF CONTROL				
													DB	WB	DB	WB				DB	DB							
DOAS-1	NORTH	ACCU-10	850	100	1.9	850	DIRECT	DWDI	1900.0	0.7	1.0	2.5	87.0	76.5	51.6	51.5	0.43	72.0	33.0	51	70	0.10	5	SCR	208/60/3	260	1, 2, 3	TRANE BCHE
DOAS-2	SOUTH	ACCU-11	1200	100	1.8	1200	DIRECT	DWDI	1939.0	1.0	1.5	2.5	87.0	76.5	53.0	52.9	0.45	97.2	44.8	53	77	0.09	10	SCR	208/60/3	275	1, 2, 3	TRANE BCHE

NOTES:

1. DOAS UNITS SHALLBE PROVIDED WITH SINGLE POINT POWER CONNECTION.
2. OUTDOOR AIR FILTER NOT REQUIRED. FILTRATION BEING FACILITATED VIA FILTER BANKS UP STREAM OF THE IFB COILS.
3. PROVIDE CONDENSATE PUMP CAPABLE OF 0.5 GPM @ 20' HEAD. LITTLE GIANT MODEL VCMX-20 OR APPROVED EQUAL.

SPLIT INDOOR AIR HANDLING UNIT SCHEDULE

SYMBOL	SERVES	ASSOCIATED EQUIPMENT	TOTAL CFM	OA CFM	EXT SP	SUPPLY FAN DATA								DX COOLING COIL DATA							HOT WATER HEATING COIL							FILTER DATA		ELECT CHAR	MCA	MOCP	UNIT WEIGHT	NOTES	BASIS OF DESIGN
						CFM	DRIVE TYPE	MOTOR TYPE	AIR FLOW	DESIGN RPM	BHP	HP	TOT SP	VFD	EAT °F		LAT °F		SP IN	TOT MBH	SENS MBH	EAT °F	LAT °F	SP IN	TOT MBH	GPM	EWT °F	LWT °F	WPD	TYPE						
															DB	WB	DB	WB				DB	DB						PRE	FINAL					
AHU-1	REWARD ROOM	ACCU-1	925	160	1.50	925	DIRECT DRIVE	ECM	CONSTANT VOLUME	1760	0.6	1.00	2.1	NONE	75.0	63.0	53.6	52.6	0.25	27.9	21.7	68.0	85.0	0.06	17.0	0.6	180.0	160.0	0.2	MERV8	MERV13	208/60/1	9.7	15.0	221	NOTE 1	TRANE BCHE036
AHU-2	1ST FLOOR ICR	ACCU-2	550	120	1.50	550	DIRECT DRIVE	ECM	CONSTANT VOLUME	1716	0.4	0.50	2.1	NONE	75.0	63.0	53.2	52.3	0.23	17.1	13.2	68.0	85.0	0.06	16.1	1.0	180.0	160.0	0.3	MERV8	MERV13	208/60/1	5.3	15.0	170	NOTE 1	TRANE BCHE024
AHU-3	BREAKROOM AREA	ACCU-3	800	250	1.50	800	DIRECT DRIVE	ECM	CONSTANT VOLUME	1674	0.5	0.75	2.0	NONE	75.0	63.0	52.8	51.9	0.20	25.6	19.5	68.0	85.0	0.05	23.4	1.0	180.0	160.0	0.4	MERV8	MERV13	208/60/1	5.3	15.0	216	NOTE 1	TRANE BCHE036
AHU-4	REC ROOM	ACCU-4	650	250	1.50	650	DIRECT DRIVE	ECM	CONSTANT VOLUME	2052	0.6	1.00	2.8	NONE	75.0	63.0	54.1	53.2	0.80	18.5	15.0	68.0	85.0	0.16	19.0	2.4	180.0	160.0	3.4	MERV8	MERV13	208/60/1	9.7	15.0	165	NOTE 1	TRANE BCHE018
AHU-5	BEDROOM 9-12	ACCU-5	750	190	1.50	750	DIRECT DRIVE	ECM	CONSTANT VOLUME	1954	0.7	1.00	2.4	NONE	75.0	63.0	54.8	53.5	0.40	21.0	16.6	68.0	85.0	0.10	22.0	1.8	180.0	160.0	0.9	MERV8	MERV13	208/60/1	9.7	15.0	175	NOTE 1	TRANE BCHE024
AHU-6	BEDROOM 6-8, ICR	ACCU-6	750	190	1.50	750	DIRECT DRIVE	ECM	CONSTANT VOLUME	1954	0.7	1.00	2.4	NONE	75.0	63.0	54.8	53.5	0.40	21.0	16.6	68.0	85.0	0.10	22.0	1.8	180.0	160.0	0.9	MERV8	MERV13	208/60/1	9.7	15.0	175	NOTE 1	TRANE BCHE024
AHU-7	2ND OFFICES	ACCU-7	750	165	1.50	750	DIRECT DRIVE	ECM	CONSTANT VOLUME	1954	0.7	1.00	2.4	NONE	75.0	63.0	54.8	53.5	0.40	21.0	16.6	68.0	85.0	0.10	22.0	1.8	180.0	160.0	0.9	MERV8	MERV13	208/60/1	9.7	15.0	175	NOTE 1	TRANE BCHE024
AHU-8	GROUP THERAPY	ACCU-8	550	120	1.50	550	DIRECT DRIVE	ECM	CONSTANT VOLUME	1716	0.4	0.50	2.1	NONE	75.0	63.0	53.2	52.3	0.23	17.1	13.2	68.0	85.0	0.06	16.1	1.0	180.0	160.0	0.3	MERV8	MERV13	208/60/1	5.3	15.0	170	NOTE 1	TRANE BCHE024
AHU-9	GROUP THERAPY	ACCU-9	450	165	1.50	450	DIRECT DRIVE	ECM	CONSTANT VOLUME	2027	0.4	0.50	2.8	NONE	75.0	63.0	50.6	50.4	0.90	16.0	12.0	68.0	85.0	0.13	13.2	1.4	180.0	160.0	1.2	MERV8	MERV13	208/60/1	5.3	15.0	155	NOTE 1	TRANE BCHE012

NOTES:

1. PROVIDE CONDENSATE PUMP CAPABLE OF 0.5 GPM @ 20' HEAD. LITTLE GIANT MODEL VCMX-20 OR APPROVED EQUAL.

AIR COOLED CONDENSING UNIT AND HEAT PUMP SCHEDULE

SYMBOL	ASSOCIATED EQUIPMENT	COOLING CAPACITY MBH	HEATING CAPACITY MBH	CONDENSOR FANS					COMPRESSOR			ELECT CHAR	MCA	MOCP	UNIT WT	NOTES:	BASIS OF DESIGN
				QTY	HP EA	RPM	TOTAL CFM	FLA	QTY	RLA EA	LRA EA						
ACCU-1	AHU-1	28.2	N/A	1	1/8	850	2435	0.64	1	12.8	67.8	208/60/1	17	25	180	1,2	TRANE 4TTL6030A
ACCU-2	AHU-2	18	N/A	1	1/12	810	2400	0.54	1	9.0	48.0	208/60/1	12	20	165	1,2	TRANE 4TTL6018A
ACCU-3	AHU-3	28.2	N/A	1	1/8	850	2435	0.64	1	12.8	67.8	208/60/1	17	25	180	1,2	TRANE 4TTL6030A
ACCU-4	AHU-4	18	N/A	1	1/12	810	2400	0.54	1	9.0	48.0	208/60/1	12	20	165	1,2	TRANE 4TTL6018A
ACCU-5	AHU-5	24	N/A	1	1/12	810	2400	0.54	1	10.1	52.0	208/60/1	13	20	165	1,2	TRANE 4TTL6024A
ACCU-6	AHU-6	24	N/A	1	1/12	810	2400	0.54	1	10.1	52.0	208/60/1	13	20	165	1,2	TRANE 4TTL6024A
ACCU-7	AHU-7	18	N/A	1	1/12	810	2400	0.54	1	9.0	48.0	208/60/1	12	20	165	1,2	TRANE 4TTL6018A
ACCU-8	AHU-8	18	N/A	1	1/12	810	2400	0.54	1	9.0	48.0	208/60/1	12	20	165	1,2	TRANE 4TTL6018A
ACCU-9	AHU-9	18	N/A	1	1/12	810	2400	0.54	1	9.0	48.0	208/60/1	12	20	165	1,2	TRANE 4TTL6018A
ACCU-10	DOAS-1	76	N/A	1	1/2	1100	SEE NOTE 3	2.2	1	22.4	149	208/60/3	30	50	328	1,2,4	TRANE TWA072
ACCU-11	DOAS-2	84	N/A	1	1/2	1100	SEE NOTE 3	2.2	1	28.6	208	208/60/3	38	60	333	1,2,4	TRANE TWA090
ACCU-12	SS-1, SS-2, SS-3	22	25	1	SEE NOTE 3		2150	2.4	1	20.0	28.8	208/60/1	30.5	40	189	1,2	TRANE NTXMPH24
ACCU-13	SS-4, SS-5, SS-6	22	25	1	SEE NOTE 3		2150	2.4	1	20.0	28.8	208/60/1	30.5	40	189	1,2	TRANE NTXMPH24
ACCU-14	SS-7	9	10.9	1	SEE NOTE 3		1229	0.5	1	6.7	7.7	208/60/1	9	15	81	1,2	TRANE NTXSST09A112AB

NOTES:

1. COOLING CAPACITIES BASED ON 95°F AMBIENT TEMPERATURE. HEATING CAPACITIES BASED ON 5°F AMBIENT TEMPERATURE.
2. CAPACITIES BASED ON R-410A REFRIGERANT.
3. INFORMATION NOT PROVIDED BY MANUFACTURER
4. PROVIDE LEAD COMPRESSOR WITH AN UNLOADER (WITH LEAVING AIR TEMPERATURE CONTROL) AS OUTLINED IN THE SPECIFICATIONS.

SPLIT SYSTEM HEAT PUMP INDOOR UNIT SCHEDULE

SYMBOL	SERVES	ASSOCIATED EQUIPMENT	NOMINAL CFM	OA CFM	COOLING CAPACITY MBH	HEATING CAPACITY MBH	ELECT CHAR	UNIT WIGHT LBS	BASIS OF DESIGN
SS-1	017 - SUPERVISOR	ACCU-12	237	0	6.0	7.2	NOTE 1, 3	22	TRANE NTXWST06A112A
SS-2	016 - COUNSELOR #3	ACCU-12	237	0	6.0	7.2	NOTE 1, 3	22	TRANE NTXWST06A112A
SS-3	015 - CORRIDOR	ACCU-12	237	0	6.0	7.2	NOTE 1, 2, 3	22	TRANE NTXWST06A112A
SS-4	004 - COUNSELOR #2	ACCU-13	237	0	6.0	7.2	NOTE 1, 3	22	TRANE NTXWST06A112A
SS-5	003 - COUNSELOR #1	ACCU-13	237	0	6.0	7.2	NOTE 1, 3	22	TRANE NTXWST06A112A
SS-6	001 - CORRIDOR	ACCU-13	237	0	6.0	7.2	NOTE 1, 3	22	TRANE NTXWST06A112A
SS-7	012 - IT	ACCU-14	237	0	9.0	10.9	NOTE 1, 3	22	TRANE NTXWST09A112A

NOTES:

1. INDOOR UNITS SHALL RECEIVE POWER FROM OUTDOOR UNIT VIA INTERCONNECTED WIRING.
2. SS-3 IN BASE BID #2 AND BASE BID #3 ONLY. NOT INCLUDED IN BASE BID #1.
3. PROVIDE INTEGRAL CONDENSATE PUMP WITH INDOOR SPLIT SYSTEM UNIT.

PUMP SCHEDULE

PUMP No.	TYPE	SYSTEM	OPERATION DUTY/STAND-BY	FLUID TYPE	GPM	FEET HD	EFF %	BHP	MOTOR HP	RPM	ELECT CHAR	EMERGENCY POWER	VARIBLE FREQ DRIVE	OPERATING CONDITIONS		IMPELLER SIZE	BASIS OF DESIGN
HWP-1	VERTICAL INLINE	HOT WATER	DUTY	WATER	20	55	37	0.75	1.50	1760	208/60/3	YES	NO	GPM	50	7.44	ARMSTRONG 4380 - 1.5x1.5x8
					39	50	50	0.98						FT HD	45		
					65	35	42	1.37						EFF	49.5		
HWP-2	VERTICAL INLINE	HOT WATER	STAND-BY	WATER	20	55	37	0.75	1.50	1760	208/60/3	YES	NO	GPM	50	7.44	ARMSTRONG 4380 - 1.5x1.5x8
					39	50	50	0.98						FT HD	45		
					65	35	42	1.37						EFF	49.5		

NOTES:

1. REFER TO SCHEMATIC FLOW DIAGRAM FOR CONDENSATE PUMP SYSTEM DATA

HORIZONTAL UNIT HEATER SCHEDULE

SYMBOL	SERVES	CFM	MOTOR WATTS	ELECT CHAR	MBH	GPM	PD FT	EWT °F	WTD °F	EAT °F	FAT °F	MOUNTING HEIGHT	BASIS OF DESIGN
HUH-1	3RD NORTH	450	16	120/60/1	17.4	1.8	0.014	180	19.3	60	96	6'	STERLING HS-024B
HUH-2	3RD SOUTH	450	16	120/60/1	17.4	1.8	0.014	180	19.3	60	96	6'	STERLING HS-024B
HUH-3	3RD CENTER	450	16	120/60/1	17.4	1.8	0.014	180	19.3	60	96	6'	STERLING HS-024B

NOTES:

1. INSTALL ELECTRIC THERMOSTAT ON 0'-6" CONDUIT EXTENSION FROM BOTTOM OF UNIT HEATER.
2. SUPPLY ALL UNIT HEATERS W/ DOUBLE DEFLECTION LOUVERS.

CONVERTER SCHEDULE

SYMBOL	LOCATION	CIRCULATING FLUID (TUBES)					STEAM PSIG (SHELL)		CONTROL VALVE LBS/HR	TRAP LBS/HR	FOULING FACTOR	BASIS OF DESIGN
		FLUID	GPM	IN °F	OUT °F	PD FT	ENTERING PSIG	LEAVING PSIG				
HX-1	MECH ROOM	WATER	40	160	180	0.10	5	1	415	800	0.00014	ARMSTRONG WS-0602
HX-2	MECH ROOM	WATER	40	160	180	0.09	5	1	415	800	0.00014	ARMSTRONG WS-0602

EXHAUST FAN SCHEDULE

SYMBOL	LOCATION	SERVES	FAN CFM	RPM	STATIC PRESSURE	MOTOR TYPE	DRIVE	VFD	BHP	HP	ELECT CHAR	WEIGHT	BASIS OF DESIGN
EF-1	007 JANITOR	011, 006, 007	225	1168	0.3	ECM	DIRECT	NONE	0.03	0.1	120/60/1	49	GREENHECK SQ-90-VG
EF-2	ICR	ICR TOILET	50	808	0.2	ECM	DIRECT	NONE	0.008	0.025	120/60/1	12	GREENHECK SP-A50-90-VG
EF-3	STAFF BREAKROOM	STAFF BREAKROOM	75	887	0.3	ECM	DIRECT	NONE	0.008	0.025	120/60/1	12	GREENHECK SP-A50-90-VG
EF-4	1ST JANITOR	RR/LAUNDRY	270	1496	0.35	ECM	DIRECT	NONE	0.05	0.16	120/60/1	47	GREENHECK SQ-80-VG
EF-5	2ND JANITOR	TOILET/SHOWER	325	1348	0.35	ECM	DIRECT	NONE	0.04	0.1	120/60/1	49	GREENHECK SQ-90-VG
EF-6	2ND STAFF RR	2ND STAFF RR	100	950	0.21	ECM	DIRECT	NONE	0.01	0.025	120/60/1	17	GREENHECK SP-A110-VG
EF-7	MECH ROOM	MECH ROOM	100	1336	0.25	ECM	DIRECT	NONE	0.02	0.06	120/60/1	30	GREENHECK SQ-70-VG
EF-8	ENCLOSED PORCH	ENCLOSED PORCH	1000	1417	0.35	ECM	DIRECT	NONE	0.14	0.25	120/60/1	45	GREENHECK SQ-100-VG

NOTES:

1. ALL EC FAN MOTORS SHALL BE PROVIDED WITH MANUAL SPEED DIAL FOR BALANCING PURPOSES.

FACE AND BYPASS COIL SCHEDULE

SYMBOL	ASSOCIATED EQUIPMENT	CFM	COIL DATA				EAT °F	LAT °F	SP IN	TOT MBH	CASING SIZE WxH	OPERATING WEIGHT LBS	BASIS OF DESIGN
			EWT °F	WTD °F	WPD FT	GPM							
IFB-1	DOAS-1	850	180	9.6	1.3	14	0	72	0.54	66.4	26 1/2" x 20 3/4"	185	WING A-18-TR
IFB-2	DOAS-2	1200	180	12.6	2.0	15	0	72	0.59	93.7	32 1/2" x 20 3/4"	210	WING A-24-TR

NOTES:

1. HEATING CAPACITIES BASED ON 0°F EAT.

FINTUBE SCHEDULE

SYMBOL	BTU/LF	AVG W TEMP	EAT °F	TUBE SIZE	FIN SIZE	FIN PER FT	ENCLOSURE H x D	MOUNTING HEIGHT	BASIS OF DESIGN
FT-1	1238	170	68	3/4"	2 3/4" x 4"	40	36"x24"	16"	RITTLING
FT-2	1238	170	68	3/4"	2 3/" x 4"	40	28"x28"	16"	RITTLING

NOTES:

1. ENCLOSURE DIMENSION NOT FIELD VERIFIED. CONTRACTOR SHALL VERIFY DIMENSION AND REPORT ANY DISCREPANCIES TO THE PROFESSIONAL.
2. ALL FINNED TUBE SHALL BE PIPED WITH 3-WAY CONTROL VALVES.
3. PROVIDE SECURITY COVER FOR ALL FINNED TUBE. REFER TO FINNED TUBE SECURITY COVER DETAIL FOR ADDITIONAL INFORMATION.
4. SINGLE ROW FINNED TUBE MOUNTED SIDE BY SIDE. RETURN PIPING SHALL BE UN-INSULATED, ROUTED BELOW FINNED TUBE INSIDE ENCLOSURE.

CABINET UNIT HEATER SCHEDULE

SYMBOL	CFM	MBH	GPM	EWT °F	WTD °F	PD FT	HP	ELECT CHAR	RECESS	NOTES	BASIS OF DESIGN
CUH-1	300	22.4	2.3	180	19.5	0.4	1/30	120/60/1	SEMI-WALL	1,2	RITTLING RRW-320-03
CUH-2	300	22.4	2.3	180	19.5	0.4	1/30	120/60/1	SEMI-WALL	1,2	RITTLING RRW-320-03
CUH-3	220	16.2	1.7	180	19	0.2	1/30	120/60/1	SEMI-WALL	1,2	RITTLING RRW-320-02
CUH-4	220	16.2	1.7	180	19	0.2	1/30	120/60/1	SEMI-WALL	1,2	RITTLING RRW-320-02

NOTES

1. PROVIDE ALLEN KEY CAM LOCK FASTENERS ON ALL ACCESS DOORS
2. PROVIDE FACTORY SECURITY PERFORATED GRILLES

DIFFUSER SCHEDULE

SYMBOL	SIZE	SECURITY	AIR TYPE	MOUNTING TYPE	BASIS OF DESIGN
SRC-1	10x4	SECURITY	SUPPLY	CEILING	ANEMOSTAT RRSG
SRC-2	8x8	SECURITY	SUPPLY	CEILING	ANEMOSTAT SV432
SRC-3	12x12	SECURITY	SUPPLY	CEILING	ANEMOSTAT SV432
SRC-4	16X16	SECURITY	SUPPLY	CEILING	ANEMOSTAT SV432
SRW-1	6x6	SECURITY	SUPPLY	WALL	ANEMOSTAT RRSG
SRW-2	8x8	SECURITY	SUPPLY	WALL	ANEMOSTAT RRSG
EGC-1	6x6	SECURITY	EXHAUST	CEILING	ANEMOSTAT RRSG
EGC-2	8x8	SECURITY	EXHAUST	CEILING	ANEMOSTAT RRSG
EGC-3	8x8	SECURITY	EXHAUST	CEILING	ANEMOSTAT RRSG
EGC-4	10x10	SECURITY	EXHAUST	CEILING	ANEMOSTAT RRSG
EGW-1	22x22	SECURITY	EXHAUST	WALL	ANEMOSTAT RRSG
RGC-1	6x6	SECURITY	RETURN	CEILING	ANEMOSTAT RRSG
RGC-2	8x8	SECURITY	RETURN	CEILING	ANEMOSTAT RRSG
RGC-3	10x10	SECURITY	RETURN	CEILING	ANEMOSTAT RRSG
RGC-4	12x12	SECURITY	RETURN	CEILING	ANEMOSTAT RRSG
RGC-5	14x14	SECURITY	RETURN	CEILING	ANEMOSTAT RRSG

NOTES:

1. ALL SUPPLY DIFFUSERS SHALL BE 4-WAY THROW UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL VERIFY REQUIRED SLEEVE LENGTH PRIOR TO CONSTRUCTION AND ORDERING OF MATERIAL.
3. REFER TO STRUCTURAL DRAWINGS FOR INSTALLATION DETAIL.

RECORD REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL WILLIAM ANDREW MINAHAN ENGINEER PE084434

PROFESSIONAL'S SIGNATURE DATE

UpStreet ARCHITECTS, INC.
541 PHILADELPHIA ST. INDIANA, PA 15701
911 MENOHER BLVD. JOHNSTOWN, PA 15905

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
C-0588-0015 PHASE 1

LOYSVILLE YOUTH DEVELOPMENT CENTER-RENOVATIONS TO ZIMMERMAN-BINGAMAN (ZB) COTTAGE
DEPARTMENT of HUMAN SERVICES
LOYSVILLE, TYRONE TOWNSHIP, PERRY COUNTY, PA

SCHEDULES - MECHANICAL

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:
0 — 1
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL.

DRAWN BY	DATE	SHEET No.
W. MINAHAN	27 JUNE 2023	M-701
CHECKED BY	SCALE	
T. HOVAN	AS NOTED	