

three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
three eighths inch = one foot
one half inch = one foot
one quarter inch = one foot
one eighth inch = one foot

BUILT-UP AIR HANDLING UNIT SCHEDULE		
MARK	AHU1-102	
LOCATION	ROOF OF 9TH FLOOR	
SERVES	ISOLATION ROOMS	
DRAW THRU / BLOW THRU	UNIT TYPE ARANG.	DRAW-THRU
COOL / HEAT / COOL & HEAT		COOL & HEAT
VAV / DUAL DUCT / MULTI-ZONE		VAV
COOL MED / HEAT MED		
HORIZONTAL / VERTICAL		
FLOOR MOUNTED / CEILING SUSPENDED		
DISCHARGE		
PRESSURE CLASS (LOW / MED / HIGH)		
NOMINAL COIL FACE AREA (SQ. FEET)		
MANUFACTURER		
MODEL NUMBER		
UNIT COMPONENT CONFIGURATION (ORDER IS IN DIRECTION OF AIRFLOW)	OA INLET PRE FILTER SECTION FROST PROTECTION COIL ENERGY RECOVERY CUBE ACCESS SECTION AIR BLENDER ACCESS SECTION STEAM HEATING COIL STEAM HUMIDIFIER ACCESS SECTION CHILLED WATER COOLING COIL ACCESS SECTION FAN WALL FINAL FILTER SECTION ACCESS SECTION FRONT DISCH. SUP. AIR PLENUM	
MARK	PRE-FILTER	PF1-102
BOX CONSTRUCTION		ANGULAR FILTER SECTION
FILTER TYPE		THROUGH AWAY
RATED EFFICIENCY		
MAX. FACE VELOCITY (FPM)		
INITIAL / FINAL A.P.D. (IN. OF WATER)		
MARK	FROST PROTECTION COIL	HC1-102
CAPACITY (KW)		15
VOLTAGE/PHASE/Hz		480/3/60
AMPS		19%
TEMPERATURE CONTROLS	DUCT STAT BY HEATER MANUFACTURER	
HEATER ELEMENTS	OPEN COIL DUCT HEATERS	
CONTROL STEPS	SCR CONTROLLER	
AIRFLOW	HORIZONTAL	
MARK	PLATE & FRAME HEAT RECOVERY	HRC1-102
FACE VELOCITY (FPM)		295
AIRFLOW CFM		2,800
ENTERING AIR TEMP. D.B. / W.B. (°F)		SUMMER:92/76, WINTER:-10
LEAVING AIR TEMP. D.B. / W.B. (°F)	SUMMER:78/72, WINTER:53/36	
MAXIMUM A.P. DROP (IN. OF WATER)	0.55	
TYPE	PLATE AND FRAME	
TOTAL CAPACITY (MBH)	SUMMER:38.2, WINTER: 216.8	
MANUFACTURER	TEMTROL	
MODEL NUMBER	SV-100/R-101.6	
MARK	STEAM COIL	SC1-102
FACE AREA (SQ. FEET)		5.25
FACE VELOCITY (FPM)		533
AIRFLOW CFM		2,800
ENTERING AIR TEMP. D.B. / W.B. (°F)	53/36	
LEAVING AIR TEMP. D.B. / W.B. (°F)	93	
MAXIMUM A.P. DROP (IN. OF WATER)	0.1	
MINIMUM ROWS	1	
MAXIMUM FINS (PER INCH)	5	
TOTAL CAPACITY (MBH)	124	
HEAT TRANSFER MEDIA	STEAM	
STEAM PRESSURE (PSIG)	15	
MANUFACTURER	TEMTROL	
MODEL NUMBER	9NS-21X36X1-5AL	

BUILT-UP AIR HANDLING UNIT SCHEDULE		
MARK	HUMIDIFIER	H1-102
AIRFLOW CFM		2,800
ENTERING AIR DB (°F)		53
UPSTREAM HUMIDITY, %		50
LEAVING AIR, DB (°F)	HUMIDIFIER	93
AIR PRESSURE DROP, IN H2O		0.10
SENSIBLE CAPACITY (MBH)		124
CONDENSATION RATE, LB/HR		131
STEAM PRESSURE, PSIG	HUMIDIFIER	15
MANUFACTURER		TEMTROL
MODEL NUMBER		9NS-21X36X1-5AL
MARK	COOLING COIL	CC1-102
FACE AREA (SQ. FEET)		6.4
FACE VELOCITY (FPM)		440
AIRFLOW CFM		2,800
ENTERING AIR TEMP. D.B. / W.B. (°F)	COOLING COIL	78/72
LEAVING AIR TEMP. D.B. / W.B. (°F)		53.5/53.5
TOTAL COOLING CAPACITY (MBH)		163.3
SENSIBLE COOLING CAPACITY (MBH)		71.8
WATER FLOW RATE (GPM)	COOLING COIL	27
WATER TEMPERATURE EWT/LWT (DEG F)		44/56
TYPE OF FLUID		WATER
WATER PRESSURE DROP (FT. OF WATER)		5.76
MANUFACTURER	COOLING COIL	TEMTROL
MODEL NUMBER		5WC-10-25.5X36X6-10AL
MARK	SUPPLY FAN	SFW1-102
AIRFLOW CFM		2,800
EXTERNAL S.P. (IN. OF WATER)		2.0
TOTAL S.P. (IN. OF WATER)		6.0
BHP / RPM	SUPPLY FAN	4.8/4,200
VARIABLE CONTROL		YES
UNIT VIBRATION ISOLATORS		YES
WHEEL (NO / SIZE / BLADE TYPE)		2/13"
MANUFACTURER	SUPPLY FAN	TEMTROL
MODEL NUMBER		
MARK	FINAL FILTER ASSEMBLY	FF1-102
AIRFLOW CFM		2,800
MAX. FACE VELOCITY (FPM)		500
INITIAL / FINAL A.P.D. (IN. OF WATER)		1
FILTER EFFICIENCY	FINAL FILTER ASSEMBLY	MERV 8
BOX CONSTRUCTION		
MANUFACTURER		TEMTROL
MODEL NUMBER		
REMARKS:	1, 2, 3, 4, 5	
REMARKS:	1. SEE MECHANICAL/ELECTRICAL COORDINATION SCHEDULE FOR ELECTRICAL DATA. 2. PROVIDE VIBRATION ISOLATION ROOF CURB A MINIMUM 12" IN HEIGHT. 3. PROVIDE A VIBRO-ACOUSTIC SPRING ISOLATION CURB FOR ADDITIONAL NOISE REDUCTION TO SPACES BELOW. 4. PROVIDE END WALL OUTSIDE AIR 30"x15" RUSKIN CD 60 MOTORIZED DAMPER WITH EXTERIOR WEATHERHOOD ACCESSORY ON OUTDOOR AIR INTAKE. 5. VFD TO BE PROVIDED BY JOHNSON CONTROLS.	

MECHANICAL / ELECTRICAL COORDINATION SCHEDULE														
ABBREVIATION:														
E	ELECTRICAL CONTRACTOR	HP	HORSEPOWER	4X	NEMA 4X	V	VOLTAGE							
M	MECHANICAL CONTRACTOR	KW	KILOWATTS	PH	PHASE	VFD	VARIABLE FREQUENCY DRIVE							
I	INTEGRAL WITH EQUIPMENT	MR	PER MANUFACTURER'S RECOMMENDATION	RE	REVERSING	2S	TWO SPEED							
C	COMBINATION STARTER AND SAFETY SWITCH	NF	NON-FUSED	SF	FUSE HOLDER WITH SWITCH	3S	THREE SPEED							
CB	CIRCUIT BREAKER	NR	NON-REVERSING	SS	SAFETY SWITCH	W	WATTS							
FV	FULL VOLTAGE	N1	NEMA 1	SH	HP RATED SWITCH									
FLA	FULL LOAD AMPS	3R	NEMA 3R	STE	THERMAL ELEM. SWITCH									
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS														
MARK	DESCRIPTION	RATING			DISCONNECT				MOTOR STARTER			NAMEPLATE	REMARKS	
		LOAD	V	PH	FURNISH/INSTALL BY	TYPE	RATING (AMPS)	FUSE SIZE	ENCL.	FURNISH/INSTALL BY	TYPE/ NEMA SIZE	ENCL.		MINIMUM SCCR (AMPS)
FC-1	CEILING HUNG HORIZONTAL	2.2 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-2	CEILING HUNG HORIZONTAL	2.2 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-3	CONSOLE TYPE	1.4 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-4	CONSOLE TYPE	1.4 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-5	CEILING HUNG HORIZONTAL	1.4 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-6	CEILING HUNG HORIZONTAL	1.4 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-7	CONSOLE TYPE	1.4 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-8	CEILING HUNG HORIZONTAL	2.2 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-9	CEILING HUNG HORIZONTAL	2.2 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-10	CEILING HUNG HORIZONTAL	2.2 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-11	CEILING HUNG HORIZONTAL	2.2 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-12	CONSOLE TYPE	1.4 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-13	CONSOLE TYPE	1.4 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-14	CONSOLE TYPE	1.4 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-15	CEILING HUNG HORIZONTAL	2.2 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-16	CEILING HUNG HORIZONTAL	2.2 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
FC-17	CEILING HUNG HORIZONTAL	2.2 A	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
AHU1-102	ISOLATION ROOM ROOF MOUNTED AIR-HANDLING UNIT (SUPPLY FAN ONLY)	5 HP	208	3	I	SS	60	MR	3R	I	VFD	3R	10,000	2, 4
HC1-102	FROST PROTECTION ELECTRIC HEATING COIL	15.0 KW	480	3	E/E	SS	60	MR	3R	-	-	-	-	-
RTU-1	POLICE STATION ROOF-TOP UNIT	27.1	480	3	I	SS	60	MR	3R	I	VFD	3R	22,000	2, 4
EF1-101	DIRECT DRIVE CENTRIFUGAL ROOF EXHAUST FAN	2 HP	208	1	I	SS	30	MR	3R	I	VFD	3R	10,000	2, 4
EF1-102	STROBIC FAN FOR ISOLATION ROOM AIR-HANDLING UNIT	5 HP	208	3	I	SS	60	MR	3R	I	VFD	3R	10,000	2, 4
EF1-103	EXHAUST FAN - 8TH FLOOR	1/2 W	120	1	I	-	-	-	-	-	-	-	-	-
EF1-104	STAIR TOWER EXHAUST FAN	2 HP	208	1	I	SS	30	MR	3R	I	VFD	3R	10,000	2, 4
EF1-105	HOLDING 1W76	1/10 HP	120	1	E/E	SH	15	MR	N1	-	-	-	-	-
AC-1	AIR-CURTAIN	28.1	480	3	E/E	SH	15	MR	N1	-	-	-	-	-
CU-1	ELECTRICAL ROOM SPLIT SYSTEM CONDENSING UNIT	10 A	208	1	E/E	SS	30	MR	3R	-	-	-	-	-
SS-1	ELECTRICAL ROOM SPLIT SYSTEM INTERIOR UNIT	-	208	1	E/E	SS	30	MR	N1	-	-	-	-	-
CU-2	TELECOM ROOM SPLIT SYSTEM CONDENSING UNIT	10 A	208	1	E/E	SS	30	MR	3R	-	-	-	-	-
SS-2	TELECOM ROOM SPLIT SYSTEM INTERIOR UNIT	-	208	1	E/E	SS	30	MR	N1	-	-	-	-	-
CUH-1	CABINET UNIT HEATER	9.6 A	208	1	I	-	-	-	-	-	-	-	-	-
SP-1	SUB-SOIL DRAINAGE SUMP PUMP	15.0 A	120	1	E/E	RECEPT	20	-	3R	-	-	-	-	-
GENERAL NOTES:														
A. VERIFY/COORDINATE ALL RATINGS FOR EQUIPMENT. WHERE SUCH RATINGS ARE OTHER THAN THAT INDICATED ON MECHANICAL/ELECTRICAL COORDINATION SCHEDULE, PROVIDE DISCONNECTS, MOTOR STARTERS, OVERCURRENT DEVICES AND RELATED REVISIONS ACCORDINGLY. WHERE EQUIPMENT IS PROVIDED WITH RATINGS OTHER THAN THAT INDICATED, CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND ASSOCIATED COSTS FOR REVISIONS.														
B. PROVIDE FRACTIONAL HORSEPOWER MOTORS WITH INTEGRAL OVERLOAD PROTECTION.														
C. EQUIPMENT LISTED IN SCHEDULE MAY APPEAR IN NUMEROUS LOCATIONS. EQUIPMENT MARKS ARE DESIGNATED BY UNIQUE IDENTIFIERS ON THE PLANS; I.E., HP-1.1, HP-1.2. IN THESE INSTANCES, THE ELECTRICAL REQUIREMENTS DO NOT CHANGE FROM ONE MARK TO THE NEXT, ONLY THE UNIQUE IDENTIFIER CHANGES.														
D. HORSEPOWER RATED SWITCHES (SH): FOR 120 V MOTORS LESS THAN 1/2 HP, PROVIDE FUSEHOLDER WITH SWITCH. FUSED PER MANUFACTURER'S RECOMMENDATION AND NEC REQUIREMENTS. FOR 120 V MOTORS RATED 1/2 HP OR 3/4 HP, PROVIDE HP RATED TOGGLE SWITCH (WHERE BRANCH CIRCUIT OVERCURRENT DEVICE MEETS NEC REQUIREMENTS FOR SHORT-CIRCUIT PROTECTION) OR FUSED SAFETY SWITCH.														
E. INDUSTRIAL CONTROL PANELS AS DEFINED BY NEC ARTICLE 409, MOTOR CONTROLLERS, HERMETIC REFRIGERANT MOTOR COMPRESSORS AND EQUIPMENT SHALL BE MARKED WITH INFORMATION AS REQUIRED BY THE NATIONAL ELECTRICAL CODE (NEC). MARK IN ACCORDANCE WITH NEC ARTICLE 409.110 FOR INDUSTRIAL CONTROL PANELS, NEC ARTICLE 430.8 FOR CONTROLLERS AND NEC ARTICLE 440.4(B) FOR HERMETIC REFRIGERANT MOTOR COMPRESSORS AND EQUIPMENT. THE MARKED SHORT CIRCUIT CURRENT RATING (SCCR) SHALL BE NO LESS THAN THE VALUE INDICATED ABOVE.														
REMARKS:														
1. PROVIDE EXHAUST FAN MOTOR FACTORY-WIRED TO WEATHERPROOF JUNCTION BOX INTEGRAL WITH FAN. ELECTRICAL CONTRACTOR TO PROVIDE WEATHERPROOF HORSEPOWER RATED SWITCH (SEE GENERAL NOTES ABOVE).														
2. PROVIDE LOCKABLE DISCONNECT INTEGRAL WITH VFD.														
3. ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT AND STARTER INTEGRAL WITH MOTOR CONTROL CENTER.														
4. SCCR RATING OF MECHANICAL CONTROLS EQUIPMENT SHALL EXCEED SCCR RATING AS INDICATED IN SCHEDULE AND EXCEED AIC RATING OF PANELBOARD FEEDING LOAD. ELECTRICAL CONTRACTOR MUST PROVIDE ENGRAVED LABEL ON FRONT OF MECHANICAL CONTROL EQUIPMENT INDICATING AVAILABLE FAULT CURRENT RATING AND MECHANICAL EQUIPMENT PROVIDER MUST INDICATE SCCR RATING OF EQUIPMENT VISIBLE ON FRONT OF CONTROL EQUIPMENT.														

100% BID DOCUMENTS - FULLY SPRINKLERED

CONSULTANTS:		ARCHITECT/ENGINEERS:		Drawing Title	Project Title	Project Number	Office of Construction and Facilities Management	
FARRIS ENGINEERING OMAHA LINCOLN DES MOINES COLORADO SPRINGS farris-usa.com		KHA Kenneth Hahn Architects		MECHANICAL SCHEDULES	CORRECT LIFE SAFETY DEFICIENCIES	636A8-16-006		
1 - ADDENDUM 00005		1343 South 75th Street Omaha, NE 68124-1610 402.391.2111 www.kharch.com		Approved Project Director	Location	Drawing Number	VA U.S. Department of Veterans Affairs	
19 APR 2018		AE Project # 171-005		-	IOWA CITY VA HEALTH CARE SYSTEM	M4		
Revisions					Date	Checked	Volume 2 of 2 Dwg. 113 of 176	
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						HDS		