

COMPUTER ROOM AIR-CONDITIONING UNIT SCHEDULE																									
SYMBOL	LOCATION	SERVICE	NOMINAL TONS	REFR. TYPE	REFR. CHARGE (OZ)	FAN			COOLING CAPACITY						FILTER			ELECTRICAL DATA			HUMIDIFIER / REHEAT (FLA/MOPD)	UNIT WEIGHT (LBS)	MFR. & MODEL NUMBER	REMARKS	
						CFM	EXT. S.P. IN.W.G.	H.P.	E.A.T.			MBH		FACE AREA SQ. FT.	NO. ROWS	TYPE	NO.	FILTER SIZE (INxINxIN)	VOLT/PH/Hz	FLA					MOPD
									(°F) DB	(°F) DB	%RH	TOTAL	SENS												
AC-1.1	ELEV MACH 153	ELEV MACH 153	3	R-407C	7	1,000	0.3	0.5	75	61	45	32.5	28.4	3.1	3	MERV-8	1	40x20x20	208/3/60	2.8	15	NONE	225	LIEBERT MMD36E7P00DG	CEILING MOUNT W/ 1" VIBRATION ISOLATORS
AC-1.2	ELEV MACH 143	ELEV MACH 143	3	R-407C	7	1,000	0.3	0.5	75	61	45	32.5	28.4	3.1	3	MERV-8	1	40x20x20	208/3/60	2.8	15	NONE	225	LIEBERT MMD36E7P00DG	CEILING MOUNT W/ 1" VIBRATION ISOLATORS
AC-1.3	COMM 151	COMM 151	5	R-407C	4	2,500	0.5	1.5	75	61	45	62.7	55.8	5.6	4	MERV-8	2	40x20x20	208/3/60	5.6	15	NONE	498	LIEBERT MMD60E7A00LG	CEILING MOUNT W/ 1" VIBRATION ISOLATORS
AC-2.1	COMM 217	COMM 217	3	R-407C	7	1,000	0.3	0.5	75	61	45	32.5	28.4	3.1	3	MERV-8	1	40x20x20	208/3/60	2.8	15	NONE	225	LIEBERT MMD36E7P00DG	CEILING MOUNT W/ 1" VIBRATION ISOLATORS
AC-2.2	LAN ROOM 240	LAN ROOM 240	3	R-407C	7	1,000	0.3	0.5	75	61	45	32.5	28.4	3.1	3	MERV-8	1	40x20x20	208/3/60	2.8	15	NONE	225	LIEBERT MMD36E7P00DG	CEILING MOUNT W/ 1" VIBRATION ISOLATORS
AC-3.1	COMM/ELEC 313	COMM/ELEC 313	3	R-407C	7	1,000	0.3	0.5	75	61	45	32.5	28.4	3.1	3	MERV-8	1	40x20x20	208/3/60	2.8	15	NONE	225	LIEBERT MMD36E7P00DG	CEILING MOUNT W/ 1" VIBRATION ISOLATORS

- FOR ALL UNITS:
1. PROVIDE HIGH LEVEL WATER LEVEL SENSOR WITH CUT OFF SWITCH AND BMS ALARM FOR ALL AC UNIT CONDENSATE DRAIN PANS.
2. PROVIDE CONDENSATE PUMP - PUMP TO BE POWERED FROM MAIN AC UNIT ELECTRICAL FEED.
3. INSULATE DISCHARGE LINE TO CONDENSING UNIT THROUGH & ABOVE ALL CONDITIONED SPACES.

COMPUTER ROOM AIR-COOLED CONDENSING UNIT SCHEDULE																			
SYMBOL	LOCATION	SERVICE	NOMINAL TONS	NO. OF COMPR.	REFR. TYPE	REFR. CHARGE (OZ.)	FAN			COOLING CAPACITY			ELECTRICAL DATA			HUMIDIFIER / REHEAT (FLA/MOPD)	UNIT WEIGHT (LBS)	MFR. & MODEL NUMBER	REMARKS
							CFM	EXT. S.P. IN.W.G.	H.P.	E.A.T. (°F) DB	FACE AREA SQ. FT.	NO. ROWS	VOLT/PH/Hz	FLA	MOPD				
CU-1.1	TUG TUNNEL	AC-1.1	3	1	R-407C	213	3,000	N/A	0.2	95	7.7	2	480/3/60	6.4	15	NONE	351	LIEBERT PFHZ37A-AL7	SUSPENDED W/ 1" VIBRATION ISOLATORS
CU-1.2	TUG TUNNEL	AC-1.2	3	1	R-407C	213	3,000	N/A	0.2	95	7.7	2	480/3/60	6.4	15	NONE	351	LIEBERT PFHZ37A-AL7	SUSPENDED W/ 1" VIBRATION ISOLATORS
CU-1.3	TUG TUNNEL	AC-1.3	5	1	R-407C	426	4,200	N/A	0.5	95	10.5	3	480/3/60	11.7	20	NONE	351	LIEBERT PFH067A-AL7	SUSPENDED W/ 1" VIBRATION ISOLATORS
CU-2.1	TUG TUNNEL	AC-2.1	3	1	R-407C	213	3,000	N/A	0.2	95	7.7	2	480/3/60	6.4	15	NONE	351	LIEBERT PFH037A-AL7	SUSPENDED W/ 1" VIBRATION ISOLATORS
CU-2.2	TUG TUNNEL	AC-2.2	3	1	R-407C	213	3,000	N/A	0.2	95	7.7	2	480/3/60	6.4	15	NONE	351	LIEBERT PFH037A-AL7	SUSPENDED W/ 1" VIBRATION ISOLATORS
CU-3.1	WEST LOW ROOF	AC-3.1	3	1	R-407C	213	3,000	N/A	0.2	95	7.7	2	480/3/60	6.4	15	NONE	351	LIEBERT PFH037A-AL7	ROOF MOUNTED; SEE SPECS

- FOR ALL UNITS:
1. PROVIDE HIGH LEVEL WATER LEVEL SENSOR WITH CUT OFF SWITCH AND BMS ALARM FOR ALL AC UNIT CONDENSATE DRAIN PANS.
2. PROVIDE INSECT SCREEN ON CONDENSING UNIT INLET/OUTLET.
3. PROVIDE LOW AMBIENT KIT (30 DEG F)
4. CONDENSER FAN MUST BE HORIZONTAL DISCHARGE FOR UNITS AC-1.1 THRU 2.2

PLATE & FRAME HEAT EXCHANGER SCHEDULE															
UNIT NO.	SERVICE	LOCATION	HEAT EXCHANGED (MBH)	COLD SIDE				HOT SIDE				MFR. AND MODEL NO.	SURFACE AREA SQ. FT.	OPERATING WEIGHT (LBS)	REMARKS
				GPM	EWT (°F)	LWT (°F)	PD FT.	GPM	EWT (°F)	LWT (°F)	PD FT.				
HX-1	TUG TUNNEL RAMP SNOW MELT	301 MECHANICAL RM	360.3	40	85	105	7.47	36.9	160	140	6.16	ALFA LAVAL AQ2-FG	16	306	SEE BELOW

- NOTES:
1. COLD SIDE IS 50% ETHYLENE GLYCOL MIXTURE.
2. FRAME SHALL BE SIZED SUCH THAT PLATES CAN BE ADDED FOR TOTAL HEAT EXCHANGE CAPACITY OF 2266 MBH AT SAME TEMPERATURES (211 GPM HOT, 229 GPM COLD), 116 SQ FT SURFACE AREA, 422 LBS OPERATING WEIGHT

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Reynolds, Smith and Hills, Inc.

4525 Airport Approach Rd, Ste A
Duluth, Minnesota 55811
218-722-1227 Fax: 218-722-1052
www.rsandh.com



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AUTHORITY

DULUTH
INTERNATIONAL
AIRPORT
DULUTH, MN

NEW PASSENGER
TERMINAL

CONSULTANTS

Interior Architects:

SJA ARCHITECTS

11 E Superior Street Ste 340, Duluth MN 55802
TEL: (218) 724-8578 / FAX: (218) 724-8717

Structural Engineers:

MBJ CONSULTING ENG.

501 Lake Avenue South, Suite 300, Duluth MN 55802
TEL: (218) 722-1056 / FAX: (218) 722-9306

M/E/P/FP Engineers:

COSENTINI ASSOCIATES INC.

1 South Wacker Drive, 37th Floor, Chicago IL 60606
TEL: (312) 201-7408 / FAX: (312) 201-0031

Baggage Handling Systems Consultants:

BNP ASSOCIATES INC.

101 East Ridge Office Park, Suite 103, Danbury CT 06810
TEL: (203) 792-3000 / FAX: (203) 792-4900

Landscape Consultants:

APPOLD DESIGN

2432 East First Street, Duluth MN 55812
TEL: (218) 591-5079

ENGINEER CERTIFICATION

I hereby certify that the engineering plans, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.
Print Name: Douglas C. Moss

Signature:

Date: 08/16/10

Reg. No.: 21067

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 1	6.11.10
	CONFORMANCE SET	7.12.10
3	PERMIT REVISIONS	7.23.10
	BUILDING PERMIT	8.16.10
	100% REVIEW	12.17.10
	BID PACKAGE 2A	1.24.11
△	BP2A ADDENDUM 2	2.25.11

DATE ISSUED: 02-25-11

REVIEWED BY: MXB

DRAWN BY: MXB

DESIGNED BY: MXB

AEP PROJECT NUMBER

213-1882-091

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SHEET TITLE

MECHANICAL
EQUIPMENT
SCHEDULES III

SHEET NUMBER

M403

BID PACKAGE 2A
ADDENDUM 2