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Duct System Summary
AHU #1
New Age Dimensions, L.L.C.

31

Job: Campus USA Lake City
Date: 05/08/13
By: John Pirkl
Plan: Manual J/D

14080 S.E. 122nd Lane Road, Ocklawaha, Fl 32179 Phone: (352) 288 - 0686 Fax: (352) 288 - 0684 Email: john.newage@gmail.com Web: www.newagedimensions.webs.com

Calculation method: EqualFric

Supply FR (in/100ft): 0.880

Return FR (in/100ft): 0.880

	Heating	Cooling
Equipment pressure losses (in H2O):	0.090	0.090
Duct system losses (in H2O):	20.652	20.616
Total fan pressure (in H2O):	20.742	20.706
Fan air flow (cfm):	3000	3000

Supply Branch Summary

Name	Htg Load (Btuh)	Clg Load (Btuh)	Design AVF (cfm)		Veloc (fpm)	Shape	Duct Size (in)	Duct Matl	Cumm. Loss (in H2O)
ATM Room	1060	4444	c	197	565	Round	8	VinlFlx	3.615
Breakroom	1871	4091	h	191	548	Round	8	VinlFlx	11.596
Breakroom-A	1871	4091	h	191	548	Round	8	VinlFlx	11.598
Conference	1586	4172	c	185	693	Round	7	VinlFlx	8.057
Conference-A	1586	4172	c	185	693	Round	7	VinlFlx	9.840
Custodial	364	646	h	37	426	Round	4	VinlFlx	6.277
Drive Thru Teller	1588	4566	c	203	581	Round	8	VinlFlx	4.500
Drive Thru Teller-A	1588	4566	c	203	581	Round	8	VinlFlx	5.385
Electrical	1330	3903	c	173	649	Round	7	VinlFlx	6.308
Lobby	1984	3759	h	203	581	Round	8	VinlFlx	12.529
Lobby-A	1983	3757	h	203	581	Round	8	VinlFlx	13.384
Lobby-B	1983	3757	h	203	581	Round	8	VinlFlx	11.633
Lobby-C	1983	3757	h	203	581	Round	8	VinlFlx	13.386
Lobby-D	1983	3757	h	203	581	Round	8	VinlFlx	11.635
Mech. Room	1378	3272	c	145	544	Round	7	VinlFlx	1.808
Office 108	2265	4815	h	232	664	Round	8	VinlFlx	10.766
RR 111	685	840	h	70	514	Round	5	VinlFlx	10.719
RR 112	929	1219	h	95	696	Round	5	VinlFlx	7.192
RR 113	579	1030	h	59	679	Round	4	VinlFlx	7.209
Smart Office	734	2937	c	130	664	Round	6	VinlFlx	9.855

5.10.2013

Supply Trunk Summary

Name	Htg Load (Btuh)	Clg Load (Btuh)	Design AVF (cfm)	Veloc (fpm)	Shape	Duct Size (in)	Duct Matl	Pres Loss (in H2O)
st26	23716	50700	h 2426	873	Rect	20 x 20	RectFbg	0.011
st25	25304	55267	h 2588	770	Rect	22 x 22	RectFbg	0.005
st24	26893	59833	h 2751	818	Rect	22 x 22	RectFbg	0.005
st23	27952	64276	h 2859	851	Rect	22 x 22	RectFbg	0.004
st22	27952	64276	h 2859	851	Rect	22 x 22	RectFbg	0.001
st2	29330	67548	h 3000	893	Rect	22 x 22	RectFbg	0.002
st27	22022	46151	h 2253	811	Rect	20 x 20	RectFbg	0.006
st28	20515	43903	h 2098	839	Rect	20 x 18	RectFbg	0.007
st29	18928	39731	h 1936	774	Rect	20 x 18	RectFbg	0.004
st30	6013	13194	h 615	886	Rect	10 x 10	RectFbg	0.007
st31	4427	9021	h 453	652	Rect	10 x 10	RectFbg	0.011
st32	3741	8181	h 383	551	Rect	10 x 10	RectFbg	0.006
st36	9917	18785	h 1014	869	Rect	12 x 14	RectFbg	0.004
st35	12182	23600	h 1246	831	Rect	18 x 12	RectFbg	0.010
st34	12916	26537	h 1321	881	Rect	18 x 12	RectFbg	0.010
st38	3966	7513	h 406	406	Rect	12 x 12	RectFbg	0.001
st37	5950	11272	h 609	609	Rect	12 x 12	RectFbg	0.005

Return Branch Summary

Name	Htg Load (Btuh)	Clg Load (Btuh)	Design AVF (cfm)	Veloc (fpm)	Shape	Duct Size (in)	Duct Matl	Cumm. Loss (in H2O)
rb1	7308	21397	c 950	681	Round	16	VinlFlx	2.798
rb7	11425	21034	h 1169	661	Round	18	VinlFlx	3.712
rb4	3172	8344	c 371	679	Round	10	VinlFlx	4.599
rb8	734	2937	c 130	664	Round	6	VinlFlx	5.459
rb5	4427	9021	h 453	576	Round	12	VinlFlx	6.376
rb6	2265	4815	h 232	664	Round	8	VinlFlx	7.267

Return Trunk Summary

Name	Htg Load (Btuh)	Clg Load (Btuh)	Design AVF (cfm)	Veloc (fpm)	Shape	Duct Size (in)	Duct Matl	Pres Loss (in H2O)
rt11	29330	67548	h 3000	692	Rect	26 x 24	RectFbg	0.010
rt12	22022	46151	h 2253	676	Rect	24 x 20	RectFbg	0.013
rt13	10598	25117	c 1116	669	Rect	20 x 12	RectFbg	0.006
rt14	7425	16773	h 759	651	Rect	12 x 14	RectFbg	0.003
rt15	6691	13836	h 684	684	Rect	12 x 12	RectFbg	0.007
rt16	2265	4815	h 232	232	Rect	12 x 12	RectFbg	0.001
rt2	29330	67548	h 3000	692	Rect	26 x 24	RectFbg	0.001

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Duct System Summary
AHU #2
New Age Dimensions, L.L.C.

Job: Campus USA Lake City
Date: 05/08/13
By: John Pirkl
Plan: Manual J/D

14080 S.E. 122nd Lane Road, Ocklawaha, Fl 32179 Phone: (352) 288 - 0686 Fax: (352) 288 - 0684 Email: john.newage@gmail.com Web: www.newagedimensions.webs.com

Calculation method: EqualFric

Supply FR (in/100ft): 0.880

Return FR (in/100ft): 0.880

	Heating	Cooling
Equipment pressure losses (in H2O):	0.090	0.090
Duct system losses (in H2O):	21.569	21.531
Total fan pressure (in H2O):	21.659	21.621
Fan air flow (cfm):	3000	3000

Supply Branch Summary

Name	Htg Load (Btuh)	Clg Load (Btuh)	Design AVF (cfm)		Veloc (fpm)	Shape	Duct Size (in)	Duct Matl	Cumm. Loss (in H2O)
Head Teller	1468	6020	c	254	574	Round	9	VinlFlx	1.807
Office 104	2624	5653	h	273	619	Round	9	VinlFlx	10.763
Office 105	2346	5489	h	244	700	Round	8	VinlFlx	11.652
Office 106	2346	5489	h	244	700	Round	8	VinlFlx	12.538
Tellers	1394	5067	c	214	612	Round	8	VinlFlx	3.635
Tellers-A	1394	5067	c	214	612	Round	8	VinlFlx	6.294
Tellers-B	1394	5067	c	214	612	Round	8	VinlFlx	4.535
Waiting	1974	4075	h	206	589	Round	8	VinlFlx	4.559
Waiting-A	1974	4075	h	206	589	Round	8	VinlFlx	6.306
Waiting-B	1974	4075	h	206	589	Round	8	VinlFlx	5.403
Waiting-D	1974	4075	h	206	589	Round	8	VinlFlx	8.976
Waiting-E	1974	4075	h	206	589	Round	8	VinlFlx	8.987
Waiting-F	1974	4075	h	206	589	Round	8	VinlFlx	7.166
Waiting-G	1974	4075	h	206	589	Round	8	VinlFlx	9.863
Work Rm	2026	4778	h	211	604	Round	8	VinlFlx	13.424

Supply Trunk Summary

Name	Htg Load (Btuh)	Clg Load (Btuh)	Design AVF (cfm)	Veloc (fpm)	Shape	Duct Size (in)	Duct Matl	Pres Loss (in H2O)
st7	20607	46852	h 2146	772	Rect	20 x 20	RectFbg	0.002
st6	22581	50928	h 2351	846	Rect	20 x 20	RectFbg	0.004
st1	28812	71157	c 3000	893	Rect	22 x 22	RectFbg	0.008
st3	27344	65138	h 2847	847	Rect	22 x 22	RectFbg	0.012
st4	27344	65138	h 2847	847	Rect	22 x 22	RectFbg	0.002
st5	25949	60070	h 2702	884	Rect	20 x 22	RectFbg	0.005
st9	17239	37710	h 1795	808	Rect	20 x 16	RectFbg	0.005
st10	15265	33634	h 1589	715	Rect	20 x 16	RectFbg	0.003
st11	15265	33634	h 1589	715	Rect	20 x 16	RectFbg	0.005
st13	11317	25484	h 1178	884	Rect	16 x 12	RectFbg	0.015
st14	9343	21408	h 973	834	Rect	12 x 14	RectFbg	0.011
st15	6718	15755	h 700	600	Rect	12 x 14	RectFbg	0.008
st16	4372	10266	h 455	656	Rect	10 x 10	RectFbg	0.013
st17	2026	4778	h 211	304	Rect	10 x 10	RectFbg	0.002

Return Branch Summary

Name	Htg Load (Btuh)	Clg Load (Btuh)	Design AVF (cfm)	Veloc (fpm)	Shape	Duct Size (in)	Duct Matl	Cumm. Loss (in H2O)
rb3	7677	26000	c 1096	620	Round	18	VinlFlx	2.793
rb9	13818	28527	h 1439	659	Round	20	VinlFlx	3.699
rb10	2624	5653	h 273	619	Round	9	VinlFlx	6.377
rb11	2346	5489	h 244	700	Round	8	VinlFlx	7.291
rb12	2346	5489	h 244	700	Round	8	VinlFlx	8.145

Return Trunk Summary

Name	Htg Load (Btuh)	Clg Load (Btuh)	Design AVF (cfm)	Veloc (fpm)	Shape	Duct Size (in)	Duct Matl	Pres Loss (in H2O)
rt3	28812	71157	h 3000	692	Rect	26 x 24	RectFbg	0.009
rt4	21134	45158	h 2201	660	Rect	24 x 20	RectFbg	0.008
rt5	7317	16631	h 762	653	Rect	14 x 12	RectFbg	0.006
rt7	7317	16631	h 762	653	Rect	14 x 12	RectFbg	0.008
rt8	4692	10978	h 489	586	Rect	12 x 10	RectFbg	0.009
rt9	2346	5489	h 244	352	Rect	10 x 10	RectFbg	0.004
rt6	7317	16631	h 762	653	Rect	14 x 12	RectFbg	0.023
rt1	28812	71157	h 3000	692	Rect	26 x 24	RectFbg	0.001

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Right-Suite® Universal 2012 Short Form
AHU #1
New Age Dimensions, L.L.C.

Job: Campus USA Lake City
Date: 05/08/13
By: John Pirkl
Plan: Manual J/D

14080 S.E. 122nd Lane Road, Ocklawaha, Fl 32179 Phone: (352) 288 - 0686 Fax: (352) 288 - 0684 Email: john.newage@gmail.com Web: www.newagedimensions.webs.com

Project Information

For: Newmans Heating & Air Conditioning, Inc.
P.O. Box 5425, Gainesville, FL 32627
Phone: (352) 375 - 8555 Fax: (352) 375 - 0275
Web: www.newmansac.com Email: ednewman@bellsouth.net

		Htg	Clg			Htg	Clg
Outside db	(°F)	33	92	Inside db	(°F)	70	75
Outside RH	(%)	-	49	Inside RH	(%)	-	50
Outside wb	(°F)	-	76	Inside wb	(°F)	-	62
Daily range	(°F)	-	18	Design TD	(°F)	37	17
Moisture diff.	(gr/lb)	-	47				

Heating Equipment

Make	Trane	
Model	TWA090A300	
Type	Split ASHP	
Efficiency	8 HSPF	
Heating Input		
Heating Output	90.0	MBtuh @ 47°F
Humidifier	17.8	gpd
Leaving Air Temp	97.4	°F
Actual Heating Fan	3000	cfm

Cooling Equipment

Make	Trane	
Model	TWA090A300	
Type	Split ASHP	
COP / EER / SEER	11.7	
Sensible Cooling	63.0	MBtuh
Latent Cooling	27.0	MBtuh
Total Cooling	90.0	MBtuh
Leaving Air Temp	55.0	°F
Actual Cooling Fan	3000	cfm

Equipment Location	AHU #1	
System Type	PEAKCV	
Fan Motor Heat Type	PACKAGE	
Fan & Motor Combined Efficiency	0	%
Static Pressure Across Fan	0	in H2O

NAME	Area ft²	Heat Loss	Sensible Gain	Latent Gain	Htg cfm	Clg cfm	Time
Mech. Room	129	1378	3223	0	141	145	Jul 1600 LDT
ATM Room	88	1548	4664	360	108	197	Jul 1600 LDT
Drive Thru Teller	180	5190	9873	1427	325	406	Jul 1600 LDT
Electrical	55	1586	4015	106	136	173	Jul 1600 LDT
Custodial	40	466	664	70	37	29	Jul 1600 LDT
RR 112	72	2568	1718	927	95	54	Jul 1600 LDT
Conference	201	6137	9364	2547	324	371	Jul 1600 LDT
RR 113	64	2162	1524	913	59	46	Jul 1600 LDT
RR 111	49	2262	1329	887	70	37	Jul 1600 LDT
Breakroom	210	4968	8601	720	383	363	Jul 1600 LDT
Smart Office	95	1475	3207	720	75	130	Jul 1600 LDT
Office 108	138	3240	5138	720	232	214	Jul 1600 LDT
Lobby	702	15759	20195	4564	1014	834	Jul 1600 LDT

AHU #1	2022	48739	73515	13963	3000	3000	Jul 1600 LDT

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Right-Suite® Universal 2012 Short Form
AHU #2
New Age Dimensions, L.L.C.

Job: Campus USA Lake City
Date: 05/08/13
By: John Pirkl
Plan: Manual J/D

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		Htg	Clg			Htg	Clg
Outside db	(°F)	33	92	Inside db	(°F)	70	75
Outside RH	(%)	-	49	Inside RH	(%)	-	50
Outside wb	(°F)	-	76	Inside wb	(°F)	-	62
Daily range	(°F)	-	18	Design TD	(°F)	37	17
Moisture diff.	(gr/lb)	-	47				

Heating Equipment

Make	Trane	
Model	TWA090A300	
Type	Split ASHP	
Efficiency	8 HSPF	
Heating Input		
Heating Output	90.0	MBtuh @ 47°F
Humidifier	13.7	gpd
Leaving Air Temp	97.4	°F
Actual Heating Fan	3000	cfm

Cooling Equipment

Make	Trane	
Model	TWA090A300	
Type	Split ASHP	
COP / EER / SEER	11.7	
Sensible Cooling	63.0	MBtuh
Latent Cooling	27.0	MBtuh
Total Cooling	90.0	MBtuh
Leaving Air Temp	55.0	°F
Actual Cooling Fan	3000	cfm

Equipment Location	AHU #2	
System Type	PEAKCV	
Fan Motor Heat Type	PACKAGE	
Fan & Motor Combined Efficiency	0	%
Static Pressure Across Fan	0	in H2O

NAME	Area ft²	Heat Loss	Sensible Gain	Latent Gain	Htg cfm	Clg cfm	Time
Work Rm	105	3018	5124	562	211	201	Jul 1600 LDT
Office 106	165	3917	5983	1038	244	231	Jul 1600 LDT
Office 105	165	3917	5983	1038	244	231	Jul 1600 LDT
Office 104	173	4263	6191	1052	273	238	Jul 1600 LDT
Waiting	860	21114	30859	3815	1439	1203	Jul 1600 LDT
Tellers	445	5398	15637	1655	436	641	Jul 1600 LDT
Head Teller	193	3030	6593	1092	153	254	Jul 1600 LDT
AHU #2	2105	44657	76371	10252	3000	3000	Jul 1600 LDT

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Right-Suite® Universal 2012 Short Form
Mini Split
New Age Dimensions, L.L.C.

Job: Campus USA Lake City
Date: 05/08/13
By: John Pirkl
Plan: Manual J/D

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Project Information

For: Newmans Heating & Air Conditioning, Inc.
P.O. Box 5425, Gainesville, FL 32627
Phone: (352) 375 - 8555 Fax: (352) 375 - 0275
Web: www.newmansac.com Email: ednewman@bellsouth.net

		Htg	Clg			Htg	Clg
Outside db	(°F)	33	92	Inside db	(°F)	70	75
Outside RH	(%)	-	49	Inside RH	(%)	-	50
Outside wb	(°F)	-	76	Inside wb	(°F)	-	62
Daily range	(°F)	-	18	Design TD	(°F)	37	17
Moisture diff.	(gr/lb)	-	47				

Heating Equipment

Make	Mitsubishi Electric	
Model	MSY-GE18NA	
Type	Elec strip	
Efficiency	100 EFF	
Heating Input	1.5	kW
Heating Output	5.2	MBtuh
Humidifier	1.7	gpd
Leaving Air Temp	77.9	°F
Actual Heating Fan	600	cfm

Cooling Equipment

Make	Mitsubishi Electric	
Model	MUY-GE18NA-1	
Type	Split AC	
COP / EER / SEER	19.2	
Sensible Cooling	12.0	MBtuh
Latent Cooling	5.2	MBtuh
Total Cooling	17.2	MBtuh
Leaving Air Temp	55.0	°F
Actual Cooling Fan	600	cfm

Equipment Location	Mini Split	
System Type	PEAKCV	
Fan Motor Heat Type	PACKAGE	
Fan & Motor Combined Efficiency	0	%
Static Pressure Across Fan	0	in H2O

NAME	Area ft²	Heat Loss	Sensible Gain	Latent Gain	Htg cfm	Clg cfm	Time
IT Phone Room	233	5208	14402	1095	600	600	Jul 1600 LDT
Mini Split	233	5208	14402	1095	600	600	Jul 1600 LDT