

ASHRAE Standard 62.1-2004-2010
By MFIA Inc.

System Ventilation Requirements

AHU Location	Description		Σ Vpz cfm	Ps People	Σ Pz People	D Ps / Σ Pz	Vou cfm	Vps cfm	Xs	Ev	Vot cfm	%OA Vot / Vps
Alternative 1												
Zone	RTU-2	Cooling	3,943	166	166	1.00	1,577	3,943	0.400	1.000	1,577	40.0
		Heating	3,943	166	166	1.00	1,577	3,943	0.400	0.900	1,752	44.4
Zone	RTU-3	Cooling	1,969	88	88	1.00	901	1,969	0.458	1.000	901	45.8
		Heating	1,969	88	88	1.00	901	1,969	0.458	0.886	1,017	51.7
Zone	RTU-1	Cooling	3,476	47	47	1.00	695	3,476	0.200	0.400	1,738	50.0
		Heating	3,476	47	47	1.00	695	3,476	0.200	0.400	1,738	50.0
Zone	HP-2	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
		Heating	0	0	0	0.00	0	0	0.000	0.000	0	0.0
Room	HP-3	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
		Heating	0	0	0	0.00	0	0	0.000	0.000	0	0.0
Zone	RTU-4	Cooling	1,022	6	6	1.00	174	1,022	0.170	0.993	175	17.2
		Heating	1,022	6	6	1.00	174	1,022	0.170	0.949	184	18.0
Zone	HP-1	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
		Heating	0	0	0	0.00	0	0	0.000	0.000	0	0.0
Zone	AC-1	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
		Heating	0	0	0	0.00	0	0	0.000	0.000	0	0.0

* Apply Single Zone Ventilation Calculation

Project Name: WS TRAVEL CENTER, INC

Dataset Name: WS TRAVEL CENTER, INC

TRACE6 700 v6.3.2 calculated at 06:39 PM on 06/21/2016
Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 1 of 4

ASHRAE Standard 62.1-2004-2010
By MFIA Inc.

Ventilation Parameters

System Zone Room	Occupancy Category	Rp cfm / p	Pz People	Ra cfm/ft²	Az ft²	Vbz cfm	Std 170 Min OA ach	— Cooling — Ez	Voz cfm	— Heating — Ez	Voz cfm
Alternative 1											
RTU-2	145 GAMING Game arcades	7.50	166.36	0.18	1,830	1,577		1.00	1,577	0.80	1,971
		7.50	166.36	0.18	1,830	1,577			1,577		1,971
RTU-3	138 DINING Restaurant dining rooms	7.50	88.33	0.18	1,325	901		1.00	901	0.80	1,126
		7.50	88.33	0.18	1,325	901			901		1,126
RTU-3	102 DRY GOODS Supermarket	7.50	88.33	0.18	1,325	901			901		1,126
		7.50	39.60	0.06	3,960	535		1.00	535	0.80	668
	119 CORRIDOR Corridors	0.00	2.48	0.06	745	45		1.00	45	0.80	56
		0.00	2.16	0.06	648	39		1.00	39	0.80	49
	112 HALL Corridors	0.00	0.71	0.06	212	13		1.00	13	0.80	16
		5.00	0.51	0.12	154	21	2.0	1.00	51	0.80	51
	127 RECEIVING Shipping/ receiving	0.00	0.47	0.12	142	17		1.00	17	0.80	21
		0.00	0.45	0.12	135	16		1.00	16	0.80	20
RTU-1	148 MANAGER Office space	5.00	0.92	0.06	92	10		1.00	10	0.80	13
		6.43	47.31	0.06	6,088	695			726		894
RTU-1	134 KITCHEN Kitchen - cooking	6.43	47.31	0.06	6,088	695			726		894
		7.50	5.23	0.12	1,045	165		1.00	165	0.80	206
RTU-4	131 ALCOVE Corridors	0.00	0.53	0.06	160	10		1.00	10	0.80	12
		6.81	5.76	0.11	1,205	174			174		218
RTU-4		6.81	5.76	0.11	1,205	174			174		218

Project Name: WS TRAVEL CENTER, INC

Dataset Name: WS TRAVEL CENTER, INC

TRACE6 700 v6.3.2 calculated at 06:52 PM on 06/21/2016
Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 2 of 4

ASHRAE Standard 62.1-2004-2010
By MFIA Inc.

Ventilation Calculations for Cooling Design

System Zone Room	Box Type	Vpz cfm	Vfan cfm	Vdz cfm	Vpz-min cfm	Voz-clg cfm	Zd	Ep	Er	Fa	Fb	Fc	Evz
Alternative 1													
RTU-2	145 GAMING Single Fan CV	3,943	3,943	3,943	0	1,577	0.400	1.00	1.00	1.00	1.00	1.00	1.000 *
		3,943	3,943	3,943	0	1,577							1.000
RTU-2	138 DINING Single Fan CV	3,943	3,943	3,943	0	1,577							1.000
		1,969	1,969	1,969	0	901	0.458	1.00	1.00	1.00	1.00	1.00	1.000 *
RTU-3	102 DRY GOODS Single Fan CV	1,969	1,969	1,969	0	901							1.000
		1,969	1,969	1,969	0	901							1.000
	119 CORRIDOR Single Fan CV	2,588	2,588	2,588	0	535	0.207	1.00	1.00	1.00	1.00	1.00	0.993
		281	281	281	0	45	0.159	1.00	1.00	1.00	1.00	1.00	1.000
	140 CORRIDOR Single Fan CV	247	247	247	0	39	0.157	1.00	1.00	1.00	1.00	1.00	1.000
		80	80	80	0	13	0.159	1.00	1.00	1.00	1.00	1.00	1.000
	126 LAUNDRY Single Fan CV	64	64	64	0	51	0.800	1.00	1.00	1.00	1.00	1.00	0.400 *
		65	65	65	0	17	0.262	1.00	1.00	1.00	1.00	1.00	0.938
	127 RECEIVING Single Fan CV	61	61	61	0	16	0.286	1.00	1.00	1.00	1.00	1.00	0.934
		89	89	89	0	10	0.113	1.00	1.00	1.00	1.00	1.00	1.000
RTU-1	148 MANAGER Single Fan CV	3,476	3,476	3,476	0	726							0.400
		3,476	3,476	3,476	0	726							0.400
HP-2		0	0	0	0	0							0.000
		0	0	0	0	0							0.000
HP-3		0	0	0	0	0							0.000
		0	0	0	0	0							0.000
HP-3		0	0	0	0	0							0.000
		0	0	0	0	0							0.000
RTU-4	134 KITCHEN Single Fan CV	928	928	928	0	165	0.177	1.00	1.00	1.00	1.00	1.00	0.993 *
		94	94	94	0	10	0.103	1.00	1.00	1.00	1.00	1.00	1.000
RTU-4	131 ALCOVE Single Fan CV	1,022	1,022	1,022	0	174							0.993
		1,022	1,022	1,022	0	174							0.993
HP-1		0	0	0	0	0							0.000
		0	0	0	0	0							0.000
HP-1		0	0	0	0	0							0.000
		0	0	0	0	0							0.000
AC-1		0	0	0	0	0							0.000
		0	0	0	0	0							0.000

Project Name: WS TRAVEL CENTER, INC

Dataset Name: WS TRAVEL CENTER, INC

TRACE6 700 v6.3.2 calculated at 06:52 PM on 06/21/2016
Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 3 of 4

ASHRAE Standard 62.1-2004-2010

By MFIA Inc.

Ventilation Calculations for Heating Design

System Zone Room	Box Type	Vpz cfm	Vfan cfm	Vdz cfm	Vpz-min cfm	Voz-htg cfm	Zd	Ep	Er	Fa	Fb	Fc	Evz
Alternative 1													
145 GAMING	Single Fan CV	3,943	3,943	3,943	0	1,971	0.500	1.00	1.00	1.00	1.00	1.00	0.900 *
RTU-2		3,943	3,943	3,943	0	1,971							0.900
RTU-2		3,943	3,943	3,943	0	1,971							0.900
138 DINING	Single Fan CV	1,969	1,969	1,969	0	1,126	0.572	1.00	1.00	1.00	1.00	1.00	0.886 *
RTU-3		1,969	1,969	1,969	0	1,126							0.886
RTU-3		1,969	1,969	1,969	0	1,126							0.886
102 DRY GOODS	Single Fan CV	2,588	2,588	2,588	0	668	0.258	1.00	1.00	1.00	1.00	1.00	0.942
119 CORRIDOR	Single Fan CV	281	281	281	0	56	0.199	1.00	1.00	1.00	1.00	1.00	1.000
140 CORRIDOR	Single Fan CV	247	247	247	0	49	0.196	1.00	1.00	1.00	1.00	1.00	1.000
112 HALL	Single Fan CV	80	80	80	0	16	0.199	1.00	1.00	1.00	1.00	1.00	1.000
126 LAUNDRY	Single Fan CV	64	64	64	0	51	0.800	1.00	1.00	1.00	1.00	1.00	0.400 *
127 RECEIVING	Single Fan CV	65	65	65	0	21	0.328	1.00	1.00	1.00	1.00	1.00	0.872
118 STORAGE	Single Fan CV	61	61	61	0	20	0.333	1.00	1.00	1.00	1.00	1.00	0.868
148 MANAGER	Single Fan CV	89	89	89	0	13	0.142	1.00	1.00	1.00	1.00	1.00	1.000
RTU-1		3,476	3,476	3,476	0	894							0.400
RTU-1		3,476	3,476	3,476	0	894							0.400
HP-2		0	0	0	0	0							0.000
HP-2		0	0	0	0	0							0.000
HP-3		0	0	0	0	0							0.000
HP-3		0	0	0	0	0							0.000
134 KITCHEN	Single Fan CV	928	928	928	0	206	0.222	1.00	1.00	1.00	1.00	1.00	0.949 *
131 ALCOVE	Single Fan CV	94	94	94	0	12	0.128	1.00	1.00	1.00	1.00	1.00	1.000
RTU-4		1,022	1,022	1,022	0	218							0.949
RTU-4		1,022	1,022	1,022	0	218							0.949
HP-1		0	0	0	0	0							0.000
HP-1		0	0	0	0	0							0.000
AC-1		0	0	0	0	0							0.000
AC-1		0	0	0	0	0							0.000

Project Name: WS TRAVEL CENTER.ttc
Dataset Name:

TRACER 709 v6.3.2 calculated at 06:52 PM on 06/21/2016
Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 4 of 4