Project Summary
Entire House
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Notes:

Design Information

Weather: Denver Stapleton Intl AP, CO, US

Winter Design Conditions

Outside db	0	°F
Inside db	70	°F
Design TD	70	°F

Summer Design Conditions

Outside db	91	°F
Inside db	75	°F
Design TD	16	°F
Daily range	H	
Relative humidity	50	%
Moisture difference	-34	gr/lb

Heating Summary

Structure	138300	Btuh
Ducts	12595	Btuh
Central vent (233 cfm)	14741	Btuh
Humidification	3683	Btuh
Piping	0	Btuh
Equipment load	169318	Btuh

Sensible Cooling Equipment Load Sizing

Structure	51024	Btuh
Ducts	8341	Btuh
Central vent (230 cfm)	3293	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.96	
Equipment sensible load	60026	Btuh

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

	Heating	Cooling
Area (ft²)	6930	4813
Volume (ft³)	49471	47377
Air changes/hour	0.13	0.07
Equiv. AVF (cfm)	107	55

Latent Cooling Equipment Load Sizing

Structure	-453	Btuh
Ducts	-137	Btuh
Central vent (230 cfm)	-4385	Btuh
Equipment latent load	0	Btuh
Equipment total load	60026	Btuh
Req. total capacity at 0.70 SHR	7.1	ton

Heating Equipment Summary

Make	n/a
Trade	n/a
Model	n/a
AHRI ref.	n/a
Efficiency	n/a
Heating input	
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	n/a

Cooling Equipment Summary

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref.	n/a
Efficiency	n/a
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Summary
Basement Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

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Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Notes:

Design Information

Weather: Denver Stapleton Intl AP, CO, US

Winter Design Conditions

Outside db	0	°F
Inside db	70	°F
Design TD	70	°F

Summer Design Conditions

Outside db	91	°F
Inside db	75	°F
Design TD	16	°F
Daily range	H	
Relative humidity	50	%
Moisture difference	-34	gr/lb

Heating Summary

Structure	3676	Btuh
Ducts	0	Btuh
Central vent (2 cfm)	150	Btuh
Humidification	184	Btuh
Piping	0	Btuh
Equipment load	4010	Btuh

Sensible Cooling Equipment Load Sizing

Structure	0	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.96	
Equipment sensible load	0	Btuh

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

	Heating	Cooling
Area (ft²)	536	0
Volume (ft³)	536	0
Air changes/hour	0.17	0
Equiv. AVF (cfm)	2	0

Latent Cooling Equipment Load Sizing

Structure	0	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Equipment latent load	0	Btuh
Equipment total load	0	Btuh
Req. total capacity at 0.70 SHR	0	ton

Heating Equipment Summary

Make		
Trade		
Model		
AHRI ref		
Efficiency	80	AFUE
Heating input	0	MBtuh
Heating output	0	Btuh
Temperature rise	0	°F
Actual air flow	0	cfm
Air flow factor	0	cfm/Btuh
Static pressure	0	in H2O
Space thermostat		

Cooling Equipment Summary

Make		
Trade		
Cond		
Coil		
AHRI ref		
Efficiency	0	SEER
Sensible cooling	0	Btuh
Latent cooling	0	Btuh
Total cooling	0	Btuh
Actual air flow	0	cfm
Air flow factor	0	cfm/Btuh
Static pressure	0	in H2O
Load sensible heat ratio	0	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Summary
Conservatory Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

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Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Notes:

Design Information

Weather: Denver Stapleton Intl AP, CO, US

Winter Design Conditions

Outside db	0	°F
Inside db	70	°F
Design TD	70	°F

Summer Design Conditions

Outside db	91	°F
Inside db	75	°F
Design TD	16	°F
Daily range	H	
Relative humidity	50	%
Moisture difference	-34	gr/lb

Heating Summary

Structure	19234	Btuh
Ducts	3710	Btuh
Central vent (41 cfm)	2626	Btuh
Humidification	3116	Btuh
Piping	0	Btuh
Equipment load	28686	Btuh

Sensible Cooling Equipment Load Sizing

Structure	15598	Btuh
Ducts	1726	Btuh
Central vent (41 cfm)	593	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.96	
Equipment sensible load	17165	Btuh

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

	Heating	Cooling
Area (ft²)	580	580
Volume (ft³)	9286	9286
Air changes/hour	0.15	0.08
Equiv. AVF (cfm)	24	13

Latent Cooling Equipment Load Sizing

Structure	-243	Btuh
Ducts	-33	Btuh
Central vent (41 cfm)	-789	Btuh
Equipment latent load	0	Btuh
Equipment total load	17165	Btuh
Req. total capacity at 0.85 SHR	1.7	ton

Heating Equipment Summary

Make	Carrier
Trade	Carrier
Model	59SP5A060E17-14
AHRI ref	4702805

Efficiency	96.5 AFUE	
Heating input	47520	MBtuh
Heating output	45936	Btuh
Temperature rise	51	°F
Actual air flow	1000	cfm
Air flow factor	0.044	cfm/Btuh
Static pressure	1.00	in H2O
Space thermostat		

Cooling Equipment Summary

Make	Carrier
Trade	Comfort 13
Cond	24ABB324A31
Coil	CNPVP3617A
AHRI ref	3250468

Efficiency	12.2 EER, 14.5 SEER	
Sensible cooling	19890	Btuh
Latent cooling	3510	Btuh
Total cooling	23400	Btuh
Actual air flow	1000	cfm
Air flow factor	0.058	cfm/Btuh
Static pressure	1.00	in H2O
Load sensible heat ratio	1.00	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Summary
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

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Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Notes:

Design Information

Weather: Denver Stapleton Intl AP, CO, US

Winter Design Conditions

Outside db	0	°F
Inside db	70	°F
Design TD	70	°F

Summer Design Conditions

Outside db	91	°F
Inside db	75	°F
Design TD	16	°F
Daily range	H	
Relative humidity	50	%
Moisture difference	-34	gr/lb

Heating Summary

Structure	62844	Btuh
Ducts	0	Btuh
Central vent (107 cfm)	6773	Btuh
Humidification	7390	Btuh
Piping	0	Btuh
Equipment load	77007	Btuh

Sensible Cooling Equipment Load Sizing

Structure	18004	Btuh
Ducts	0	Btuh
Central vent (107 cfm)	1529	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.96	
Equipment sensible load	18712	Btuh

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

	Heating	Cooling
Area (ft²)	3846	2265
Volume (ft³)	21941	20384
Air changes/hour	0.12	0.06
Equiv. AVF (cfm)	42	21

Latent Cooling Equipment Load Sizing

Structure	-203	Btuh
Ducts	0	Btuh
Central vent (107 cfm)	-2035	Btuh
Equipment latent load	0	Btuh
Equipment total load	18712	Btuh
Req. total capacity at 0.85 SHR	1.8	ton

Heating Equipment Summary

Make	Carrier
Trade	Carrier
Model	59SP5A100E21-20
AHRI ref	4702807

Efficiency	96.5 AFUE	
Heating input	79200	MBtuh
Heating output	77616	Btuh
Temperature rise	61	°F
Actual air flow	1400	cfm
Air flow factor	0.022	cfm/Btuh
Static pressure	1.00	in H2O
Space thermostat		

Cooling Equipment Summary

Make	Carrier
Trade	Comfort 13
Cond	24ABB330A31
Coil	CNPVP3621A
AHRI ref	3250525

Efficiency	10.8 EER, 13 SEER	
Sensible cooling	23290	Btuh
Latent cooling	4110	Btuh
Total cooling	27400	Btuh
Actual air flow	1400	cfm
Air flow factor	0.078	cfm/Btuh
Static pressure	1.00	in H2O
Load sensible heat ratio	1.00	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Summary
Upper Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Notes:

Design Information

Weather: Denver Stapleton Intl AP, CO, US

Winter Design Conditions

Outside db	0	°F
Inside db	70	°F
Design TD	70	°F

Summer Design Conditions

Outside db	91	°F
Inside db	75	°F
Design TD	16	°F
Daily range	H	
Relative humidity	50	%
Moisture difference	-34	gr/lb

Heating Summary

Structure	52546	Btuh
Ducts	8885	Btuh
Central vent (82 cfm)	5192	Btuh
Humidification	5917	Btuh
Piping	0	Btuh
Equipment load	72540	Btuh

Sensible Cooling Equipment Load Sizing

Structure	17944	Btuh
Ducts	6700	Btuh
Central vent (82 cfm)	1172	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.96	
Equipment sensible load	24732	Btuh

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

	Heating	Cooling
Area (ft²)	1967	1967
Volume (ft³)	17707	17707
Air changes/hour	0.13	0.07
Equiv. AVF (cfm)	40	21

Latent Cooling Equipment Load Sizing

Structure	-7	Btuh
Ducts	-104	Btuh
Central vent (82 cfm)	-1560	Btuh
Equipment latent load	0	Btuh
Equipment total load	24732	Btuh
Req. total capacity at 0.85 SHR	2.4	ton

Heating Equipment Summary

Make	Carrier
Trade	Carrier
Model	59SP5A100E21-20
AHRI ref	5285422

Efficiency	96.3 AFUE	
Heating input	79200	MBtuh
Heating output	76824	Btuh
Temperature rise	61	°F
Actual air flow	1400	cfm
Air flow factor	0.023	cfm/Btuh
Static pressure	1.00	in H2O
Space thermostat		

Cooling Equipment Summary

Make	Carrier
Trade	Base 13
Cond	24ABB336A31
Coil	CNPHP4821A
AHRI ref	4741459

Efficiency	11.7 EER, 14 SEER	
Sensible cooling	28900	Btuh
Latent cooling	5100	Btuh
Total cooling	34000	Btuh
Actual air flow	1400	cfm
Air flow factor	0.057	cfm/Btuh
Static pressure	1.00	in H2O
Load sensible heat ratio	1.00	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

AED Assessment
Entire House
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

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Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

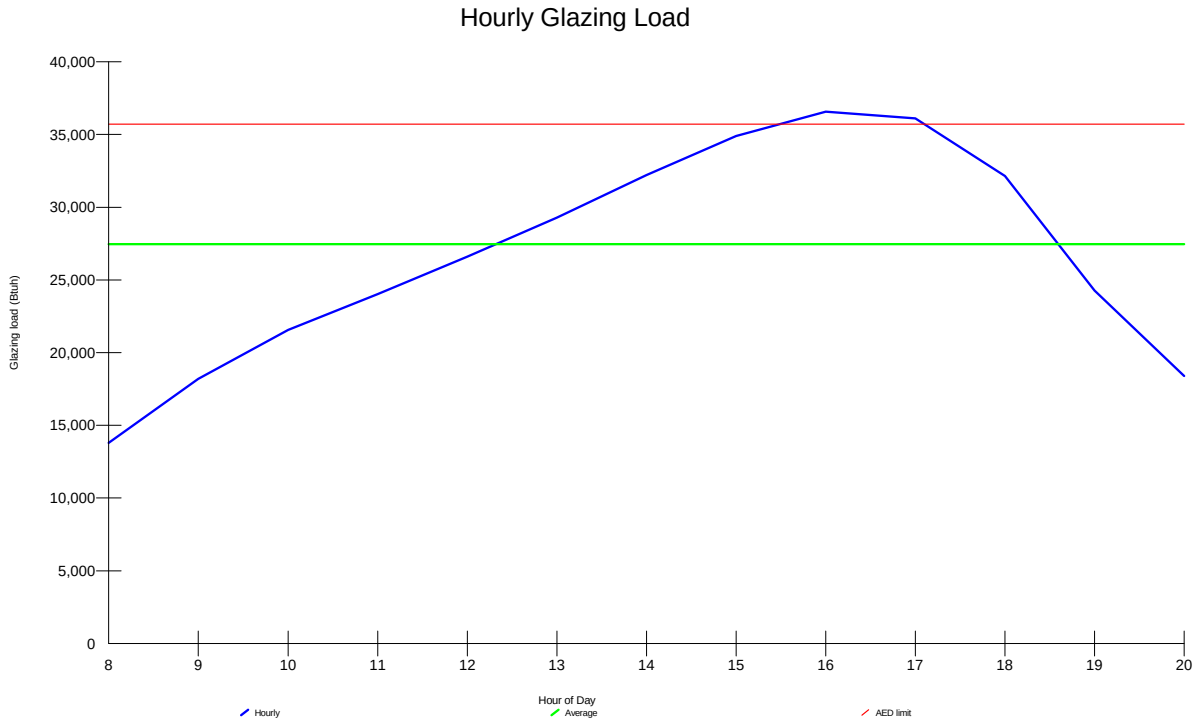
Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 33.1%.

House does not have adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 846 Btuh (PFG - 1.3*AFG)

AED Assessment
Basement Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

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Project Information

For: Sample Two
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Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

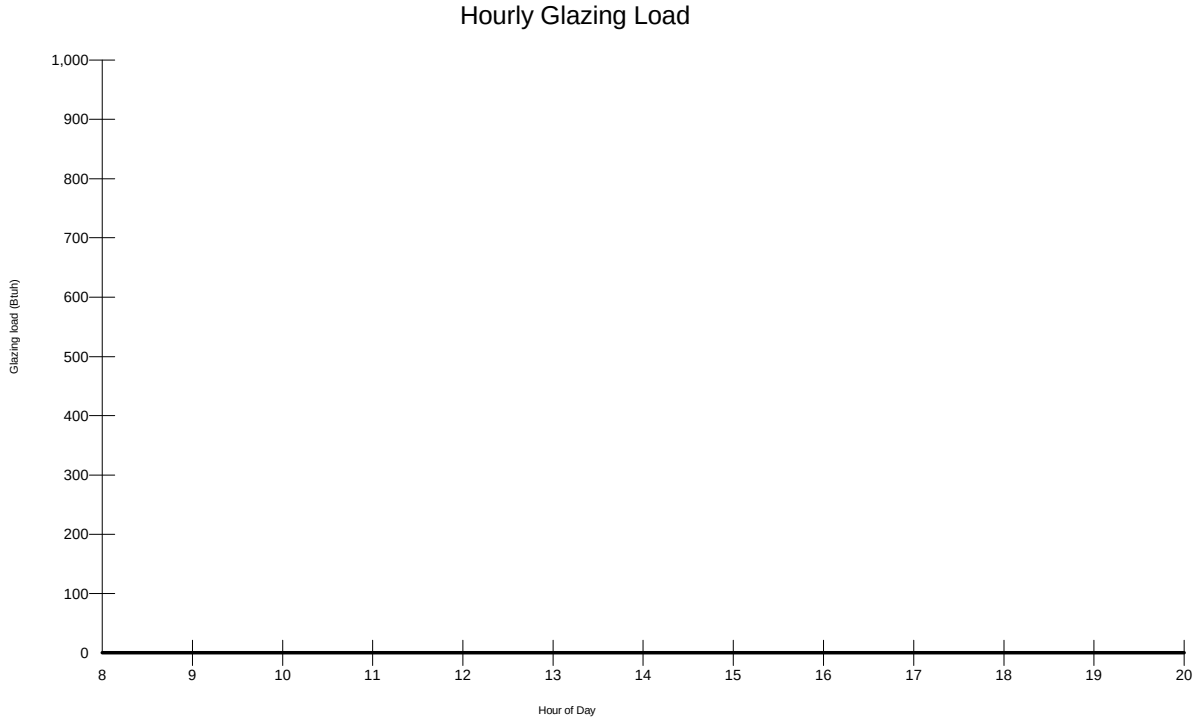
Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 0.0%.

Zone has adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 0 Btuh

AED Assessment
Conservatory Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

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Project Information

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Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

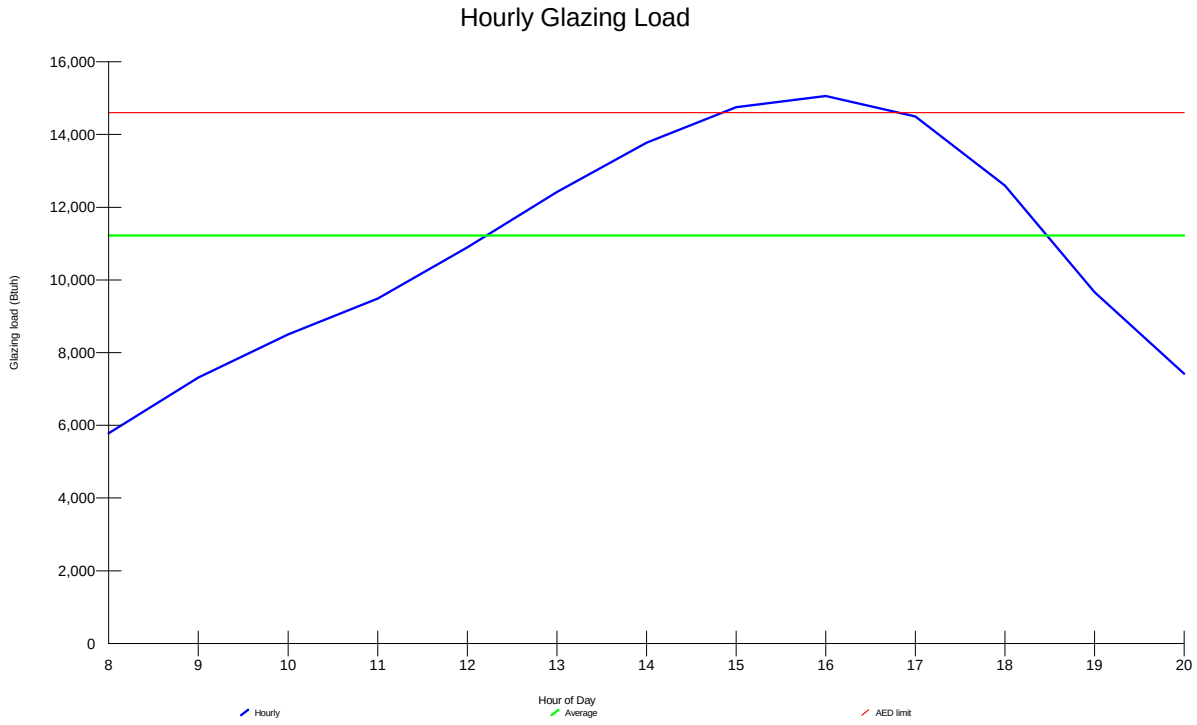
Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 34.1%.

Zone does not have adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 459 Btuh (PFG - 1.3*AFG)

AED Assessment
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

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Project Information

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Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

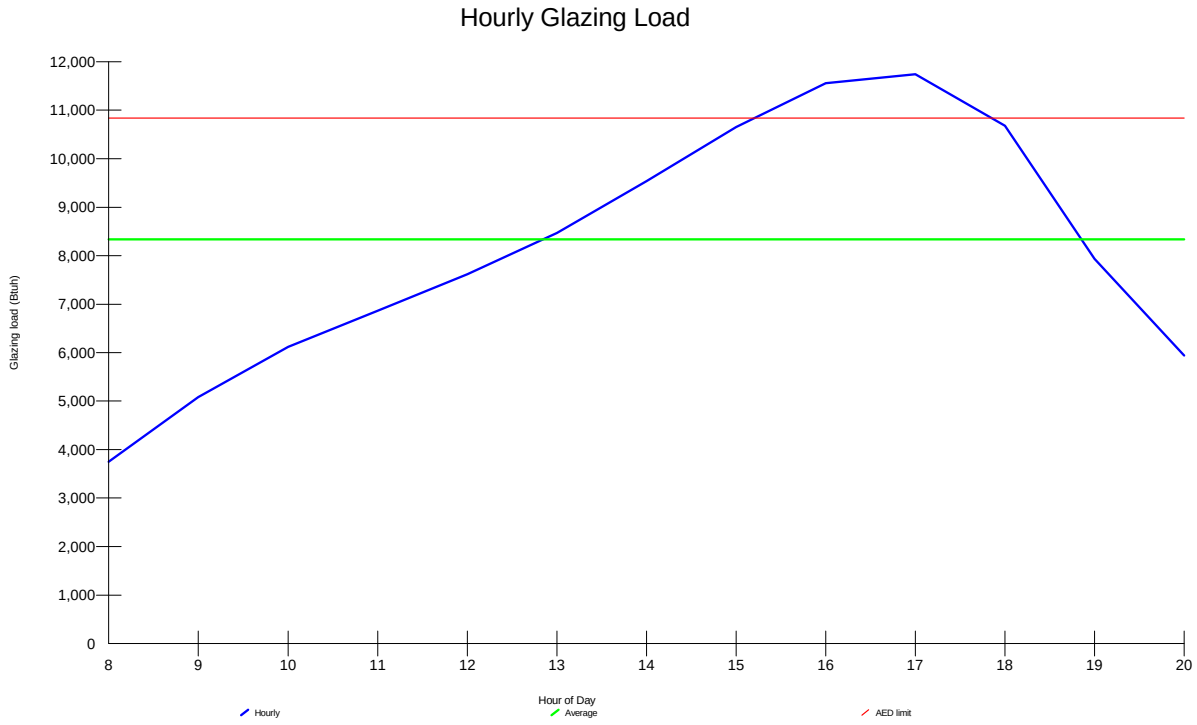
Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 40.9%.

Zone does not have adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 909 Btuh (PFG - 1.3*AFG)

AED Assessment
Upper Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

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Project Information

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Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

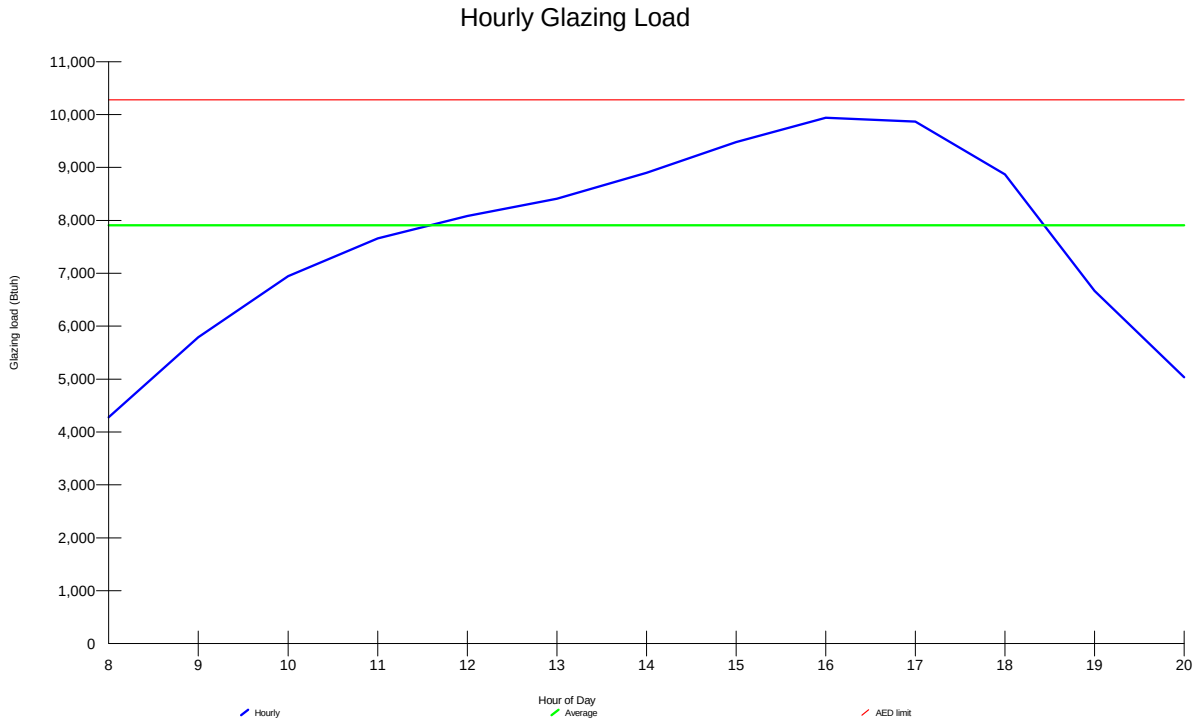
Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 25.7%.

Zone has adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 0 Btuh

Building Analysis
Entire House
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

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Project Information

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Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

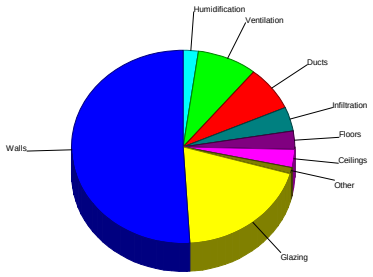
Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0
Infiltration:		
Method	Simplified	
Construction quality	Tight	
Fireplaces	1 (Tight)	

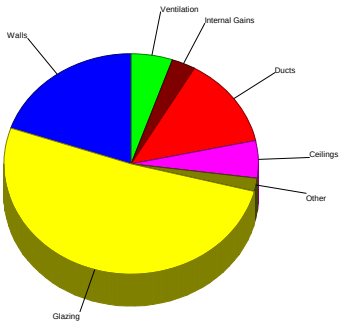
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	13.2	86271	51.0
Glazing	24.1	33119	19.6
Doors	27.3	1764	1.0
Ceilings	1.9	5117	3.0
Floors	1.8	5234	3.1
Infiltration	1.2	6794	4.0
Ducts		12595	7.4
Piping		0	0
Humidification		3683	2.2
Ventilation		14741	8.7
Adjustments		0	
Total		**169318**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.9	12361	19.7
Glazing	23.4	32129	51.3
Doors	6.3	410	0.7
Ceilings	1.3	3443	5.5
Floors	0	0	0
Infiltration	0.1	791	1.3
Ducts		8341	13.3
Ventilation		3293	5.3
Internal gains		1890	3.0
Blower		0	0
Adjustments		0	
Total		**62658**	**100.0**



Latent Cooling Load = 0 Btuh
Overall U-value = 0.141 Btuh/ft²-°F

Data entries checked.

Building Analysis
Basement Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

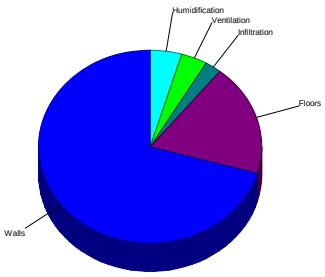
Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.8	2829	70.5
Glazing	0	0	0
Doors	0	0	0
Ceilings	0	0	0
Floors	1.4	751	18.7
Infiltration	1.2	96	2.4
Ducts		0	0
Piping		0	0
Humidification		184	4.6
Ventilation		150	3.7
Adjustments		0	
Total		**4010**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0	0	0
Glazing	0	0	0
Doors	0	0	0
Ceilings	0	0	0
Floors	0	0	0
Infiltration	0	0	0
Ducts		0	0
Ventilation		0	0
Internal gains		0	0
Blower		0	0
Adjustments		0	
Total		**0**	**0**

Latent Cooling Load = 0 Btuh
Overall U-value = 0.037 Btuh/ft²-°F

WARNING: window to floor area ratio = 0.0% - less than 5%.

Building Analysis
Conservatory Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

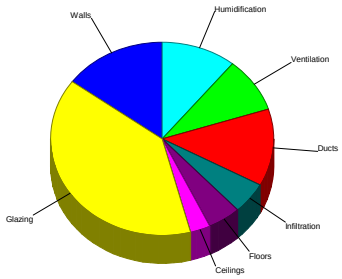
Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:	
Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

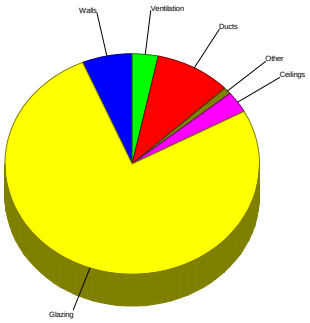
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	4.5	4284	14.9
Glazing	23.3	11233	39.2
Doors	0	0	0
Ceilings	1.9	834	2.9
Floors	2.4	1383	4.8
Infiltration	1.2	1501	5.2
Ducts		3710	12.9
Piping		0	0
Humidification		3116	10.9
Ventilation		2626	9.2
Adjustments		0	
Total		**28686**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.2	1138	6.4
Glazing	28.5	13717	76.6
Doors	0	0	0
Ceilings	1.3	561	3.1
Floors	0	0	0
Infiltration	0.1	182	1.0
Ducts		1726	9.6
Ventilation		593	3.3
Internal gains		0	0
Blower		0	0
Adjustments		0	
Total		**17917**	**100.0**



Latent Cooling Load = 0 Btuh
Overall U-value = 0.103 Btuh/ft²-°F

WARNING: window to floor area ratio = 83.0% - more than 25%.

Building Analysis
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

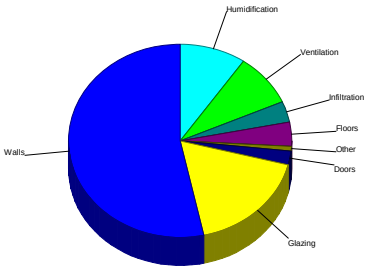
Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0
Infiltration:		
Method	Simplified	
Construction quality	Tight	
Fireplaces	1 (Tight)	

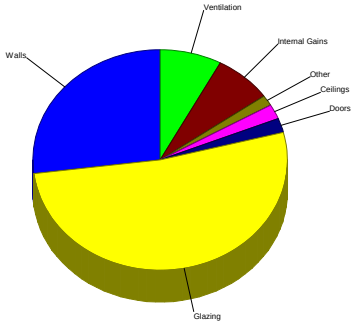
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	14.0	41114	53.4
Glazing	24.5	13562	17.6
Doors	27.3	1764	2.3
Ceilings	2.1	625	0.8
Floors	1.8	3100	4.0
Infiltration	1.2	2679	3.5
Ducts		0	0
Piping		0	0
Humidification		7390	9.6
Ventilation		6773	8.8
Adjustments		0	
Total		**77007**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.8	5269	27.0
Glazing	18.4	10172	52.1
Doors	6.3	410	2.1
Ceilings	1.4	421	2.2
Floors	0	0	0
Infiltration	0.1	303	1.5
Ducts		0	0
Ventilation		1529	7.8
Internal gains		1430	7.3
Blower		0	0
Adjustments		0	
Total		**19533**	**100.0**



Latent Cooling Load = 0 Btuh
Overall U-value = 0.158 Btuh/ft²-°F

Data entries checked.

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

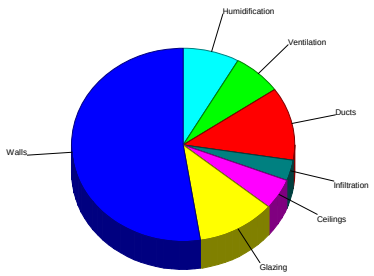
Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0
Infiltration:		
Method	Simplified	
Construction quality	Tight	
Fireplaces	1 (Tight)	

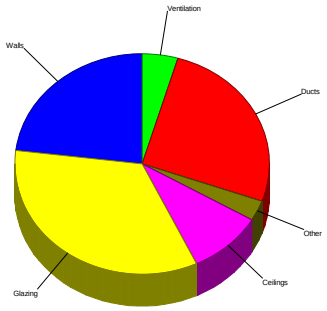
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	20.5	38044	52.4
Glazing	24.5	8325	11.5
Doors	0	0	0
Ceilings	1.9	3658	5.0
Floors	0	0	0
Infiltration	1.2	2519	3.5
Ducts		8885	12.2
Piping		0	0
Humidification		5917	8.2
Ventilation		5192	7.2
Adjustments		0	
Total		**72540**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	3.2	5953	23.1
Glazing	25.8	8763	33.9
Doors	0	0	0
Ceilings	1.3	2461	9.5
Floors	0	0	0
Infiltration	0.1	306	1.2
Ducts		6700	26.0
Ventilation		1172	4.5
Internal gains		460	1.8
Blower		0	0
Adjustments		0	
Total		**25816**	**100.0**



Latent Cooling Load = 0 Btuh
Overall U-value = 0.172 Btuh/ft²-°F

Data entries checked.

Component Constructions
Entire House
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	Heating	Cooling
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	Heating	Cooling
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

Construction descriptions	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
14E-0: Blk wall, brk 4" ext, 4" thk, 1/2" gypsum board int fnsh	n	11	0.388	0	27.2	292	4.04	43
	ne	540	0.388	0	27.2	14663	4.04	2179
	se	906	0.388	0	27.2	24598	4.04	3655
	s	8	0.388	0	27.2	223	4.04	33
	sw	290	0.388	0	27.2	7874	4.04	1170
	w	11	0.388	0	27.2	292	4.04	43
	nw	686	0.388	0	27.2	18626	4.04	2767
	all	2451	0.388	0	27.2	66569	4.04	9890
15B-0c-8: Bg wall, heavy damp soil, concrete wall, 8" thk	n	24	0.117	0	8.19	193	0	0
	ne	127	0.117	0	4.09	520	0	0
	se	418	0.117	0	5.19	2171	0	0
	sw	151	0.117	0	8.19	1239	0	0
	w	24	0.117	0	8.19	193	0	0
	nw	263	0.117	0	8.19	2157	0	0
	all	1007	0.117	0	6.43	6473	0	0
12C-0bw: Frm wall, brk 4" ext, 1/2" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm	ne	84	0.091	13.0	6.37	532	0	0
15B13-0wc-8: Bg wall, heavy damp soil, 2"x4" wood int frm, concrete wall, r-13 cav ins, 8" thk, 1/2" gypsum board int fnsh	ne	68	0.049	13.0	3.77	257	0	0
	se	225	0.049	13.0	3.77	849	0	0
	sw	227	0.049	13.0	3.77	857	0	0
	nw	396	0.049	13.0	3.63	1435	0	0
	all	916	0.049	13.0	3.71	3399	0	0
STD - Frame - R-13 - Stucco: Stucco Ext, 1/2" Wood Shth, 2"x 4" Frm Wall, R-13 Cavity Insulation, 1/2" Gypsum Board	ne	47	0.090	13.0	6.28	297	1.67	79
STD - Frame - R-19 - Stucco: Stucco Ext, 1/2" Wood Shth, 2"x 6" Frm Wall, R-19 Cav Ins, 1/2" Gypsum Board Int Fnsh	ne	399	0.064	19.0	4.48	1789	1.19	475
	se	407	0.064	19.0	4.48	1823	1.19	485
	sw	582	0.064	19.0	4.48	2611	1.19	694
	nw	620	0.064	19.0	4.48	2778	1.19	738
	all	2007	0.064	19.0	4.48	9002	1.19	2392

Partitions
(none)

Windows

U-35 SHGC-22: U-35 SHGC-22 - Windows; NFRC rated (SHGC=0.22)	n	16	0.350	0	24.5	386	9.79	154
	ne	15	0.350	0	24.5	368	19.2	288
	ne	146	0.350	0	24.5	3571	19.2	2799
	se	81	0.350	0	24.5	1993	22.8	1858
	sw	9	0.350	0	24.5	221	22.8	206
	sw	230	0.350	0	24.5	5633	22.8	5251
	w	16	0.350	0	24.5	386	26.3	414
	nw	39	0.350	0	24.5	943	19.2	739
	nw	168	0.350	0	24.5	4106	19.2	3218
	all	719	0.350	0	24.5	17605	20.8	14928
U-35 SHGC-27: U-35 SHGC-27 - Windows; NFRC rated (SHGC=0.27)	ne	40	0.350	0	24.5	980	0	0
	ne	42	0.350	0	24.5	1017	22.3	926
	se	105	0.350	0	24.5	2569	26.8	2808
	se	48	0.350	0	24.5	1184	0	0
	s	8	0.350	0	24.5	202	16.5	137
	sw	12	0.350	0	24.5	294	26.8	321
	nw	48	0.350	0	24.5	1166	22.3	1062
	all	303	0.350	0	24.5	7413	17.4	5254
U-35 SHGC-27 GD: U-35 SHGC-27 - Glass Door; NFRC rated (SHGC=0.27)	ne	40	0.350	0	24.5	980	0	0
	sw	21	0.350	0	24.5	523	26.8	571
	nw	70	0.350	0	24.5	1724	22.3	1570
	all	132	0.350	0	24.5	3226	16.3	2141
U-35 SHGC-22 GD: U-35 SHGC-22 - Glass Door; NFRC rated (SHGC=0.22)	sw	71	0.350	0	24.5	1731	22.8	1614
Skylight - U-35 SHGC-35: U-35 SHGC-35 - Skylight; NFRC rated (SHGC=0.35)		16	0.350	0	24.5	392	78.5	1256
Skylight - U-29 SHGC-18: U-29 SHGC-18 - Skylight; NFRC rated (SHGC=0.18)	ne	48	0.290	0	20.3	974	44.1	2117
	se	20	0.290	0	20.3	407	45.8	917
	sw	47	0.290	0	20.3	964	45.8	2173
	nw	20	0.290	0	20.3	407	44.1	884
	all	136	0.290	0	20.3	2752	44.9	6091

Doors

11D0: Door, wd sc type	ne	18	0.390	0	27.3	488	9.20	164
	ne	20	0.390	0	27.3	549	0	0
	se	27	0.390	0	27.3	728	9.20	245
	all	65	0.390	0	27.3	1764	6.34	410

Ceilings

STD - Attic CLG - R-30: Attic ceiling, Asphalt Shingles, R-30 Ceiling Insulation, 1/2" Gypsum Board		127	0.034	30.0	2.39	303	1.61	204
STD - Attic CLG - R-38: Attic Ceiling, Asphalt Shingles, R-38 Ceiling Insulation, 1/2" Gypsum Board		2568	0.027	38.0	1.87	4814	1.26	3239

Floors

21A-32t: Bg floor, heavy damp soil, 8' depth		2050	0.020	0	1.40	2871	0	0
22A-tph: Bg floor, heavy damp soil, on grade depth		7	1.358	0	95.1	628	0	0
STD Floor - R-30: Framed Floor Over Outside Air, R-30 Cavity Insulation, Wood Floor		728	0.034	30.0	2.38	1735	0	0

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
15B13-0wc-8: Bg wall, heavy damp soil, 2"x4" wood int frm, concrete wall, r-13 cav ins, 8" thk, 1/2" gypsum board int fnsh	ne	68	0.049	13.0	3.77	257	0	0
	se	225	0.049	13.0	3.77	849	0	0
	sw	227	0.049	13.0	3.77	857	0	0
	nw	230	0.049	13.0	3.77	866	0	0
	all	750	0.049	13.0	3.77	2829	0	0
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
(none)								
Floors								
21A-32t: Bg floor, heavy damp soil, 8' depth		536	0.020	0	1.40	751	0	0

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Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
STD - Frame - R-19 - Stucco: Stucco Ext, 1/2" Wood Shth, 2"x 6" Frm Wall, R-19 Cav Ins, 1/2" Gypsum Board Int Fnsh	ne	317	0.064	19.0	4.48	1422	1.19	378
	se	39	0.064	19.0	4.48	173	1.19	46
	sw	332	0.064	19.0	4.48	1489	1.19	396
	nw	267	0.064	19.0	4.48	1199	1.19	319
	all	955	0.064	19.0	4.48	4284	1.19	1138
Partitions								
(none)								
Windows								
U-35 SHGC-22: U-35 SHGC-22 - Windows; NFRC rated (SHGC=0.22)	ne	138	0.350	0	24.5	3369	19.2	2641
	sw	96	0.350	0	24.5	2352	22.8	2193
	nw	66	0.350	0	24.5	1617	19.2	1268
	all	300	0.350	0	24.5	7338	20.4	6101
U-35 SHGC-22 GD: U-35 SHGC-22 - Glass Door; NFRC rated (SHGC=0.22)	sw	47	0.350	0	24.5	1143	22.8	1066
Skylight - U-29 SHGC-18: U-29 SHGC-18 - Skylight; NFRC rated (SHGC=0.18)	ne	48	0.290	0	20.3	974	44.1	2117
	se	20	0.290	0	20.3	407	45.8	917
	sw	47	0.290	0	20.3	964	45.8	2173
	nw	20	0.290	0	20.3	407	44.1	884
	all	136	0.290	0	20.3	2752	44.9	6091
Doors								
(none)								
Ceilings								
STD - Attic CLG - R-38: Attic Ceiling, Asphalt Shingles, R-38 Ceiling Insulation, 1/2" Gypsum Board		445	0.027	38.0	1.87	834	1.26	561
Floors								
STD Floor - R-30: Framed Floor Over Outside Air, R-30 Cavity Insulation, Wood Floor		580	0.034	30.0	2.38	1383	0	0

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14E-0: Blk wall, brk 4" ext, 4" thk, 1/2" gypsum board int fnsh	n	11	0.388	0	27.2	292	4.04	43
	ne	290	0.388	0	27.2	7880	4.04	1171
	se	443	0.388	0	27.2	12041	4.04	1789
	s	8	0.388	0	27.2	223	4.04	33
	sw	140	0.388	0	27.2	3800	4.04	565
	w	11	0.388	0	27.2	292	4.04	43
	nw	242	0.388	0	27.2	6566	4.04	976
	all	1145	0.388	0	27.2	31094	4.04	4620
15B-0c-8: Bg wall, heavy damp soil, concrete wall, 8" thk	n	24	0.117	0	8.19	193	0	0
	ne	127	0.117	0	4.09	520	0	0
	se	418	0.117	0	5.19	2171	0	0
	sw	151	0.117	0	8.19	1239	0	0
	w	24	0.117	0	8.19	193	0	0
	nw	263	0.117	0	8.19	2157	0	0
	all	1007	0.117	0	6.43	6473	0	0
12C-0bw: Frm wall, brk 4" ext, 1/2" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm	ne	84	0.091	13.0	6.37	532	0	0
15B13-0wc-8: Bg wall, heavy damp soil, 2"x4" wood int frm, concrete wall, r-13 cav ins, 8" thk, 1/2" gypsum board int fnsh	nw	166	0.049	13.0	3.43	569	0	0
STD - Frame - R-19 - Stucco: Stucco Ext, 1/2" Wood Shth, 2"x 6" Frm Wall, R-19 Cav Ins, 1/2" Gypsum Board Int Fnsh	ne	60	0.064	19.0	4.48	269	1.19	72
	se	190	0.064	19.0	4.48	854	1.19	227
	sw	132	0.064	19.0	4.48	593	1.19	158
	nw	163	0.064	19.0	4.48	729	1.19	194
	all	545	0.064	19.0	4.48	2445	1.19	650

Partitions
(none)

Windows

U-35 SHGC-22: U-35 SHGC-22 - Windows; NFRC rated (SHGC=0.22)	n	16	0.350	0	24.5	386	9.79	154
	ne	15	0.350	0	24.5	368	19.2	288
	ne	8	0.350	0	24.5	202	19.2	158
	se	35	0.350	0	24.5	849	22.8	792
	sw	9	0.350	0	24.5	221	22.8	206
	sw	71	0.350	0	24.5	1742	22.8	1624
	w	16	0.350	0	24.5	386	26.3	414
	nw	39	0.350	0	24.5	943	19.2	739
	nw	67	0.350	0	24.5	1639	19.2	1285
	all	275	0.350	0	24.5	6735	20.6	5660
U-35 SHGC-27: U-35 SHGC-27 - Windows; NFRC rated (SHGC=0.27)	ne	40	0.350	0	24.5	980	0	0
	ne	18	0.350	0	24.5	429	22.3	390
	se	42	0.350	0	24.5	1034	26.8	1130
	se	48	0.350	0	24.5	1184	0	0
	s	8	0.350	0	24.5	202	16.5	137
	nw	4	0.350	0	24.5	86	22.3	78
	all	160	0.350	0	24.5	3915	10.9	1735
U-35 SHGC-27 GD: U-35 SHGC-27 - Glass Door; NFRC rated (SHGC=0.27)	ne	40	0.350	0	24.5	980	0	0
	sw	21	0.350	0	24.5	523	26.8	571
	nw	34	0.350	0	24.5	821	22.3	747
	all	95	0.350	0	24.5	2323	13.9	1319
U-35 SHGC-22 GD: U-35 SHGC-22 - Glass Door; NFRC rated (SHGC=0.22)	sw	24	0.350	0	24.5	588	22.8	548

Doors

11D0: Door, wd sc type	ne	18	0.390	0	27.3	488	9.20	164
	ne	20	0.390	0	27.3	549	0	0
	se	27	0.390	0	27.3	728	9.20	245
	all	65	0.390	0	27.3	1764	6.34	410

Ceilings

STD - Attic CLG - R-30: Attic ceiling, Asphalt Shingles, R-30 Ceiling Insulation, 1/2" Gypsum Board		127	0.034	30.0	2.39	303	1.61	204
STD - Attic CLG - R-38: Attic Ceiling, Asphalt Shingles, R-38 Ceiling Insulation, 1/2" Gypsum Board		172	0.027	38.0	1.87	322	1.26	216

Floors

21A-32t: Bg floor, heavy damp soil, 8' depth		1514	0.020	0	1.40	2120	0	0
22A-tph: Bg floor, heavy damp soil, on grade depth		7	1.358	0	95.1	628	0	0
STD Floor - R-30: Framed Floor Over Outside Air, R-30 Cavity Insulation, Wood Floor		148	0.034	30.0	2.38	352	0	0

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Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Conditions

Location:
Denver Stapleton Intl AP, CO, US
Elevation: 5285 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	0	91
Daily range (°F)	-	27 (H)
Wet bulb (°F)	-	60
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	70	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	61.4	-34.0

Infiltration:

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

Construction descriptions	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
14E-0: Blk wall, brk 4" ext, 4" thk, 1/2" gypsum board int fnsh	ne	250	0.388	0	27.2	6783	4.04	1008
	se	462	0.388	0	27.2	12557	4.04	1866
	sw	150	0.388	0	27.2	4074	4.04	605
	nw	444	0.388	0	27.2	12060	4.04	1792
	all	1306	0.388	0	27.2	35475	4.04	5271
STD - Frame - R-13 - Stucco: Stucco Ext, 1/2" Wood Shth, 2"x 4" Frm Wall, R-13 Cavity Insulation, 1/2" Gypsum Board	ne	47	0.090	13.0	6.28	297	1.67	79
STD - Frame - R-19 - Stucco: Stucco Ext, 1/2" Wood Shth, 2"x 6" Frm Wall, R-19 Cav Ins, 1/2" Gypsum Board Int Fnsh	ne	22	0.064	19.0	4.48	98	1.19	26
	se	178	0.064	19.0	4.48	796	1.19	212
	sw	118	0.064	19.0	4.48	529	1.19	141
	nw	190	0.064	19.0	4.48	850	1.19	226
	all	507	0.064	19.0	4.48	2273	1.19	604
Partitions								
(none)								
Windows								
U-35 SHGC-22: U-35 SHGC-22 - Windows; NFRC rated (SHGC=0.22)	se	47	0.350	0	24.5	1143	22.8	1066
	sw	63	0.350	0	24.5	1539	22.8	1435
	nw	35	0.350	0	24.5	849	19.2	666
	all	144	0.350	0	24.5	3532	22.0	3167
U-35 SHGC-27: U-35 SHGC-27 - Windows; NFRC rated (SHGC=0.27)	ne	24	0.350	0	24.5	588	22.3	535
	se	63	0.350	0	24.5	1535	26.8	1678
	sw	12	0.350	0	24.5	294	26.8	321
	nw	44	0.350	0	24.5	1080	22.3	984
	all	143	0.350	0	24.5	3498	24.6	3519
U-35 SHGC-27 GD: U-35 SHGC-27 - Glass Door; NFRC rated (SHGC=0.27)	nw	37	0.350	0	24.5	903	22.3	822
Skylight - U-35 SHGC-35: U-35 SHGC-35 - Skylight; NFRC rated (SHGC=0.35)		16	0.350	0	24.5	392	78.5	1256
Doors								
(none)								

Ceilings

STD - Attic CLG - R-38: Attic Ceiling, Asphalt Shingles, R-38 Ceiling Insulation, 1/2" Gypsum Board	1951	0.027	38.0	1.87	3658	1.26	2461

Floors

(none)

Right-J® Worksheet
Entire House
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Entire House				Basement Zone			
1	Room name													
2	Exposed wall						820.5 ft				83.3 ft			
3	Room height						9.4 ft		d		9.0 ft		d	
4	Room dimensions													
5	Room area						6929.8 ft²				536.4 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	27.16	4.04	27	11	292	43	0	0	0	0
.	└G	U-35 SHGC-22	0.350	n	24.50	9.79	16	0	386	154	0	0	0	0
.	W	15B-0c-8	0.488	n	8.19	0.00	24	24	193	0	0	0	0	0
.	W	12C-0bw	0.091	ne	6.37	0.00	164	84	532	0	0	0	0	0
11	├G	U-35 SHGC-27	0.350	ne	24.50	0.00	40	0	980	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	ne	24.50	0.00	40	0	980	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	614	540	14663	2179	0	0	0	0
	├G	U-35 SHGC-22	0.350	ne	24.50	19.20	15	0	368	288	0	0	0	0
	├G	U-35 SHGC-27	0.350	ne	24.50	22.31	42	0	1017	926	0	0	0	0
	└D	11D0	0.390	ne	27.30	9.20	18	18	488	164	0	0	0	0
	W	15B-0c-8	0.488	ne	4.09	0.00	147	127	520	0	0	0	0	0
	└D	11D0	0.390	ne	27.30	0.00	20	20	549	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	3.77	0.00	68	68	257	0	68	68	257	0
	W	STD - Frame - R-13 -	0.090	ne	6.28	1.67	47	47	297	79	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	545	399	1789	475	0	0	0	0
	└G	U-35 SHGC-22	0.350	ne	24.50	19.20	146	0	3571	2799	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	1037	906	24598	3655	0	0	0	0
	├G	U-35 SHGC-27	0.350	se	24.50	26.77	105	0	2569	2808	0	0	0	0
	└D	11D0	0.390	se	27.30	9.20	27	27	728	245	0	0	0	0
	W	15B-0c-8	0.488	se	5.19	0.00	467	418	2171	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	se	24.50	0.00	48	0	1184	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	3.77	0.00	225	225	849	0	225	225	849	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	488	407	1823	485	0	0	0	0
	└G	U-35 SHGC-22	0.350	se	24.50	22.84	81	0	1993	1858	0	0	0	0
	W	14E-0	0.388	s	27.16	4.04	16	8	223	33	0	0	0	0
	└G	U-35 SHGC-27	0.350	s	24.50	16.55	8	0	202	137	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	332	290	7874	1170	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	9	0	221	206	0	0	0	0
	├G	U-35 SHGC-27	0.350	sw	24.50	26.77	12	0	294	321	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	sw	24.50	26.77	21	0	523	571	0	0	0	0
	W	15B-0c-8	0.488	sw	8.19	0.00	151	151	1239	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	3.77	0.00	227	227	857	0	227	227	857	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	883	582	2611	694	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	230	0	5633	5251	0	0	0	0
	└G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	71	0	1731	1614	0	0	0	0
	W	14E-0	0.388	w	27.16	4.04	27	11	292	43	0	0	0	0
	└G	U-35 SHGC-22	0.350	w	24.50	26.30	16	0	386	414	0	0	0	0
	W	15B-0c-8	0.488	w	8.19	0.00	24	24	193	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	842	686	18626	2767	0	0	0	0
	├G	U-35 SHGC-22	0.350	nw	24.50	19.20	39	0	943	739	0	0	0	0
	├G	U-35 SHGC-27	0.350	nw	24.50	22.31	48	0	1166	1062	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	70	0	1724	1570	0	0	0	0
	W	15B-0c-8	0.488	nw	8.19	0.00	263	263	2157	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	3.63	0.00	396	396	1435	0	230	230	866	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	787	620	2778	738	0	0	0	0
	└G	U-35 SHGC-22	0.350	nw	24.50	19.20	168	0	4106	3218	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	2.39	1.61	127	127	303	204	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	2719	2568	4814	3239	0	0	0	0
	├G	Skylight - U-35 SHGC	0.350	-	24.50	78.50	16	0	392	1256	0	0	0	0
	└G	Skylight - U-29 SHGC	0.290	ne	20.30	44.11	48	0	974	2117	0	0	0	0
6	c) AED excursion									846				0
	Envelope loss/gain								131506	48343			3580	0
12	a) Infiltration								6794	791			96	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					4			690	0			0
		Appliances/other								1200				0
	Subtotal (lines 6 to 13)								138300	51024			3676	0
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								138300	51024			3676	0
15	Duct loads						9%	17%	12595	8341	0%	0%	0	0
	Total room load								150895	59365			3676	0
	Air required (cfm)								3843	3800			43	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Entire House
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Main Zone				Conservatory Zone			
1	Room name													
2	Exposed wall						413.2 ft				81.3 ft			
3	Room height						8.6 ft		d		16.0 ft		d	
4	Room dimensions													
5	Room area						3845.6 ft²				580.4 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	27.16	4.04	27	11	292	43	0	0	0	0
.	G	U-35 SHGC-22	0.350	n	24.50	9.79	16	0	386	154	0	0	0	0
.	W	15B-0c-8	0.488	n	8.19	0.00	24	24	193	0	0	0	0	0
.	W	12C-0bw	0.091	ne	6.37	0.00	164	84	532	0	0	0	0	0
11	G	U-35 SHGC-27	0.350	ne	24.50	0.00	40	0	980	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	ne	24.50	0.00	40	0	980	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	341	290	7880	1171	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	24.50	19.20	15	0	368	288	0	0	0	0
	G	U-35 SHGC-27	0.350	ne	24.50	22.31	18	0	429	390	0	0	0	0
	D	11D0	0.390	ne	27.30	9.20	18	18	488	164	0	0	0	0
	W	15B-0c-8	0.488	ne	4.09	0.00	147	127	520	0	0	0	0	0
	D	11D0	0.390	ne	27.30	0.00	20	20	549	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	3.77	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	6.28	1.67	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	68	60	269	72	455	317	1422	378
	G	U-35 SHGC-22	0.350	ne	24.50	19.20	8	0	202	158	138	0	3369	2641
	W	14E-0	0.388	se	27.16	4.04	512	443	12041	1789	0	0	0	0
	G	U-35 SHGC-27	0.350	se	24.50	26.77	42	0	1034	1130	0	0	0	0
	D	11D0	0.390	se	27.30	9.20	27	27	728	245	0	0	0	0
	W	15B-0c-8	0.488	se	5.19	0.00	467	418	2171	0	0	0	0	0
	G	U-35 SHGC-27	0.350	se	24.50	0.00	48	0	1184	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	3.77	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	225	190	854	227	39	39	173	46
	G	U-35 SHGC-22	0.350	se	24.50	22.84	35	0	849	792	0	0	0	0
	W	14E-0	0.388	s	27.16	4.04	16	8	223	33	0	0	0	0
	G	U-35 SHGC-27	0.350	s	24.50	16.55	8	0	202	137	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	170	140	3800	565	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	24.50	22.84	9	0	221	206	0	0	0	0
	G	U-35 SHGC-27	0.350	sw	24.50	26.77	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	sw	24.50	26.77	21	0	523	571	0	0	0	0
	W	15B-0c-8	0.488	sw	8.19	0.00	151	151	1239	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	3.77	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	227	132	593	158	475	332	1489	396
	G	U-35 SHGC-22	0.350	sw	24.50	22.84	71	0	1742	1624	96	0	2352	2193
	G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	24	0	588	548	47	0	1143	1066
	W	14E-0	0.388	w	27.16	4.04	27	11	292	43	0	0	0	0
	G	U-35 SHGC-22	0.350	w	24.50	26.30	16	0	386	414	0	0	0	0
	W	15B-0c-8	0.488	w	8.19	0.00	24	24	193	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	317	242	6566	976	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	24.50	19.20	39	0	943	739	0	0	0	0
	G	U-35 SHGC-27	0.350	nw	24.50	22.31	4	0	86	78	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	34	0	821	747	0	0	0	0
	W	15B-0c-8	0.488	nw	8.19	0.00	263	263	2157	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	3.63	0.00	166	166	569	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	230	163	729	194	333	267	1199	319
	G	U-35 SHGC-22	0.350	nw	24.50	19.20	67	0	1639	1285	66	0	1617	1268
	C	STD - Attic CLG - R-	0.034	-	2.39	1.61	127	127	303	204	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	172	172	322	216	580	445	834	561
	G	Skylight - U-35 SHGC	0.350	-	24.50	78.50	0	0	0	0	0	0	0	0
	G	Skylight - U-29 SHGC	0.290	ne	20.30	44.11	0	0	0	0	48	0	974	2117
6	c) AED excursion									909				459
	Envelope loss/gain								60165	16271			17733	15416
12	a) Infiltration								2679	303			1501	182
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					2			230	0			0
		Appliances/other								1200				0
	Subtotal (lines 6 to 13)								62844	18004			19234	15598
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								62844	18004			19234	15598
15	Duct loads						0%	0%	0	0	19%	11%	3710	1726
	Total room load								62844	18004			22944	17325
	Air required (cfm)								1400	1400			1000	1000

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Entire House
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

1	Room name						Upper Zone								
2	Exposed wall						242.7 ft								
3	Room height						9.0 ft			d					
4	Room dimensions														
5	Room area						1967.4 ft²								
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	27.16	4.04	0	0	0	0				
.	└G	U-35 SHGC-22	0.350	n	24.50	9.79	0	0	0	0				
.	W	15B-0c-8	0.488	n	8.19	0.00	0	0	0	0				
.	W	12C-0bw	0.091	ne	6.37	0.00	0	0	0	0				
11	├G	U-35 SHGC-27	0.350	ne	24.50	0.00	0	0	0	0				
	└G	U-35 SHGC-27 GD	0.350	ne	24.50	0.00	0	0	0	0				
	W	14E-0	0.388	ne	27.16	4.04	274	250	6783	1008				
	├G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0				
	├G	U-35 SHGC-27	0.350	ne	24.50	22.31	24	0	588	535				
	└D	11D0	0.390	ne	27.30	9.20	0	0	0	0				
	W	15B-0c-8	0.488	ne	4.09	0.00	0	0	0	0				
	└D	11D0	0.390	ne	27.30	0.00	0	0	0	0				
	W	15B13-0wc-8	0.093	ne	3.77	0.00	0	0	0	0				
	W	STD - Frame - R-13 -	0.090	ne	6.28	1.67	47	47	297	79				
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	22	22	98	26				
	└G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0				
	W	14E-0	0.388	se	27.16	4.04	525	462	12557	1866				
	├G	U-35 SHGC-27	0.350	se	24.50	26.77	63	0	1535	1678				
	└D	11D0	0.390	se	27.30	9.20	0	0	0	0				
	W	15B-0c-8	0.488	se	5.19	0.00	0	0	0	0				
	└G	U-35 SHGC-27	0.350	se	24.50	0.00	0	0	0	0				
	W	15B13-0wc-8	0.093	se	3.77	0.00	0	0	0	0				
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	224	178	796	212				
	└G	U-35 SHGC-22	0.350	se	24.50	22.84	47	0	1143	1066				
	W	14E-0	0.388	s	27.16	4.04	0	0	0	0				
	└G	U-35 SHGC-27	0.350	s	24.50	16.55	0	0	0	0				
	W	14E-0	0.388	sw	27.16	4.04	162	150	4074	605				
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0				
	├G	U-35 SHGC-27	0.350	sw	24.50	26.77	12	0	294	321				
	└G	U-35 SHGC-27 GD	0.350	sw	24.50	26.77	0	0	0	0				
	W	15B-0c-8	0.488	sw	8.19	0.00	0	0	0	0				
	W	15B13-0wc-8	0.093	sw	3.77	0.00	0	0	0	0				
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	181	118	529	141				
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	63	0	1539	1435				
	└G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	0	0	0	0				
	W	14E-0	0.388	w	27.16	4.04	0	0	0	0				
	└G	U-35 SHGC-22	0.350	w	24.50	26.30	0	0	0	0				
	W	15B-0c-8	0.488	w	8.19	0.00	0	0	0	0				
	W	14E-0	0.388	nw	27.16	4.04	525	444	12060	1792				
	├G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0				
	├G	U-35 SHGC-27	0.350	nw	24.50	22.31	44	0	1080	984				
	└G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	37	0	903	822				
	W	15B-0c-8	0.488	nw	8.19	0.00	0	0	0	0				
	W	15B13-0wc-8	0.093	nw	3.63	0.00	0	0	0	0				
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	224	190	850	226				
	└G	U-35 SHGC-22	0.350	nw	24.50	19.20	35	0	849	666				
	C	STD - Attic CLG - R-	0.034	-	2.39	1.61	0	0	0	0				
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	1967	1951	3658	2461				
	├G	Skylight - U-35 SHGC	0.350	-	24.50	78.50	16	0	392	1256				
	└G	Skylight - U-29 SHGC	0.290	ne	20.30	44.11	0	0	0	0				
6	c) AED excursion									0				
	Envelope loss/gain								50027	17178				
12	a) Infiltration								2519	306				
	b) Room ventilation								0	0				
13	Internal gains:	Occupants @ 230					2			460				
		Appliances/other								0				
	Subtotal (lines 6 to 13)								52546	17944				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								0	0				
14	Subtotal								52546	17944				
15	Duct loads						17%	37%	8885	6700				
	Total room load								61431	24644				
	Air required (cfm)								1400	1400				

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Basement Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Basement Zone				Dn Library			
1	Room name							83.3 ft				48.3 ft		
2	Exposed wall						9.0 ft		d		9.0 ft		heat only	
3	Room height											1.0 x	385.4 ft	
4	Room dimensions													
5	Room area						536.4 ft²				385.4 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	0.00	0.00	0	0	0	0	0	0	0	0
.	G	U-35 SHGC-22	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	3.77	0.00	68	68	257	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	3.77	0.00	225	225	849	0	225	225	849	0
	W	STD - Frame - R-19 -	0.064	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	3.77	0.00	227	227	857	0	147	147	555	0
	W	STD - Frame - R-19 -	0.064	sw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	3.77	0.00	230	230	866	0	62	62	235	0
	W	STD - Frame - R-19 -	0.064	nw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	0.00	0.00	0	0	0	0	0	0	0	0
	G	Skylight - U-35 SHGC	0.350	-	0.00	0.00	0	0	0	0	0	0	0	0
	G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									0				0
	Envelope loss/gain								3580	0			2178	0
12	a) Infiltration								96	0			56	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								3676	0			2233	0
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								3676	0			2233	0
15	Duct loads						0%	0%	0	0	-0%	0%	0	0
	Total room load								3676	0			2233	0
	Air required (cfm)								43	0			26	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Basement Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Dn Mech 1 20.6 ft 9.0 ft heat only 1.0 x 95.2 ft 95.2 ft²				Dn Storage 14.5 ft 9.0 ft heat only 1.0 x 55.9 ft 55.9 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
1	Room name													
2	Exposed wall													
3	Room height													
4	Room dimensions													
5	Room area													
6	W	14E-0	0.388	n	0.00	0.00	0	0	0	0	0	0	0	0
.	└G	U-35 SHGC-22	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	3.77	0.00	0	0	0	0	68	68	257	0
	W	STD - Frame - R-13 -	0.090	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	3.77	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	3.77	0.00	80	80	303	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	3.77	0.00	105	105	396	0	62	62	235	0
	W	STD - Frame - R-19 -	0.064	nw	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	0.00	0.00	0	0	0	0	0	0	0	0
	├G	Skylight - U-35 SHGC	0.350	-	0.00	0.00	0	0	0	0	0	0	0	0
	└G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									0				0
	Envelope loss/gain								832	0			570	0
12	a) Infiltration								24	0			17	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								856	0			587	0
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								856	0			587	0
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								856	0			587	0
	Air required (cfm)								10	0			7	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Conservatory Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Conservatory Zone				Conservatory			
1	Room name						81.3 ft				81.3 ft			
2	Exposed wall						16.0 ft		d		16.0 ft		heat/cool	
3	Room height										1.0 x	580.4 ft		
4	Room dimensions													
5	Room area						580.4 ft²				580.4 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	0.00	0.00	0	0	0	0	0	0	0	0
.	└G	U-35 SHGC-22	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	455	317	1422	378	455	317	1422	378
	└G	U-35 SHGC-22	0.350	ne	24.50	19.20	138	0	3369	2641	138	0	3369	2641
	W	14E-0	0.388	se	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	39	39	173	46	39	39	173	46
	└G	U-35 SHGC-22	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	475	332	1489	396	475	332	1489	396
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	96	0	2352	2193	96	0	2352	2193
	└G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	47	0	1143	1066	47	0	1143	1066
	W	14E-0	0.388	w	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	333	267	1199	319	333	267	1199	319
	└G	U-35 SHGC-22	0.350	nw	24.50	19.20	66	0	1617	1268	66	0	1617	1268
	C	STD - Attic CLG - R-	0.034	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	580	445	834	561	580	445	834	561
	├G	Skylight - U-35 SHGC	0.350	-	0.00	0.00	0	0	0	0	0	0	0	0
	└G	Skylight - U-29 SHGC	0.290	ne	20.30	44.11	48	0	974	2117	48	0	974	2117
6	c) AED excursion									459				459
	Envelope loss/gain								17733	15416			17733	15416
12	a) Infiltration								1501	182			1501	182
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								19234	15598			19234	15598
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								19234	15598			19234	15598
15	Duct loads						19%	11%	3710	1726	19%	11%	3710	1726
	Total room load								22944	17325			22944	17325
	Air required (cfm)								1000	1000			1000	1000

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Main Zone				Library			
1	Room name													
2	Exposed wall						413.2 ft				83.3 ft			
3	Room height						8.6 ft		d		9.0 ft		heat/cool	
4	Room dimensions										1.0 x 536.4 ft			
5	Room area						3845.6 ft²				536.4 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	27.16	4.04	27	11	292	43	0	0	0	0
.	G	U-35 SHGC-22	0.350	n	24.50	9.79	16	0	386	154	0	0	0	0
.	W	15B-0c-8	0.488	n	8.19	0.00	24	24	193	0	0	0	0	0
.	W	12C-0bw	0.091	ne	6.37	0.00	164	84	532	0	0	0	0	0
11	G	U-35 SHGC-27	0.350	ne	24.50	0.00	40	0	980	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	ne	24.50	0.00	40	0	980	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	341	290	7880	1171	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	24.50	19.20	15	0	368	288	0	0	0	0
	G	U-35 SHGC-27	0.350	ne	24.50	22.31	18	0	429	390	0	0	0	0
	D	11D0	0.390	ne	27.30	9.20	18	18	488	164	0	0	0	0
	W	15B-0c-8	0.488	ne	4.09	0.00	147	127	520	0	0	0	0	0
	D	11D0	0.390	ne	27.30	0.00	20	20	549	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	68	60	269	72	68	60	269	72
	G	U-35 SHGC-22	0.350	ne	24.50	19.20	8	0	202	158	8	0	202	158
	W	14E-0	0.388	se	27.16	4.04	512	443	12041	1789	0	0	0	0
	G	U-35 SHGC-27	0.350	se	24.50	26.77	42	0	1034	1130	0	0	0	0
	D	11D0	0.390	se	27.30	9.20	27	27	728	245	0	0	0	0
	W	15B-0c-8	0.488	se	5.19	0.00	467	418	2171	0	0	0	0	0
	G	U-35 SHGC-27	0.350	se	24.50	0.00	48	0	1184	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	225	190	854	227	225	190	854	227
	G	U-35 SHGC-22	0.350	se	24.50	22.84	35	0	849	792	35	0	849	792
	W	14E-0	0.388	s	27.16	4.04	16	8	223	33	0	0	0	0
	G	U-35 SHGC-27	0.350	s	24.50	16.55	8	0	202	137	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	170	140	3800	565	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	24.50	22.84	9	0	221	206	0	0	0	0
	G	U-35 SHGC-27	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	sw	24.50	26.77	21	0	523	571	0	0	0	0
	W	15B-0c-8	0.488	sw	8.19	0.00	151	151	1239	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	227	132	593	158	227	132	593	158
	G	U-35 SHGC-22	0.350	sw	24.50	22.84	71	0	1742	1624	71	0	1742	1624
	G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	24	0	588	548	24	0	588	548
	W	14E-0	0.388	w	27.16	4.04	27	11	292	43	0	0	0	0
	G	U-35 SHGC-22	0.350	w	24.50	26.30	16	0	386	414	0	0	0	0
	W	15B-0c-8	0.488	w	8.19	0.00	24	24	193	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	317	242	6566	976	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	24.50	19.20	39	0	943	739	0	0	0	0
	G	U-35 SHGC-27	0.350	nw	24.50	22.31	4	0	86	78	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	34	0	821	747	0	0	0	0
	W	15B-0c-8	0.488	nw	8.19	0.00	263	263	2157	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	3.43	0.00	166	166	569	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	230	163	729	194	230	163	729	194
	G	U-35 SHGC-22	0.350	nw	24.50	19.20	67	0	1639	1285	67	0	1639	1285
	C	STD - Attic CLG - R-	0.034	-	2.39	1.61	127	127	303	204	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	172	172	322	216	86	86	162	109
	G	Skylight - U-35 SHGC	0.350	-	0.00	0.00	0	0	0	0	0	0	0	0
	G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									909				567
	Envelope loss/gain								60165	16271			7627	5732
12	a) Infiltration								2679	303			865	105
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					2			230	0			0
		Appliances/other								1200				0
	Subtotal (lines 6 to 13)								62844	18004			8492	5837
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								62844	18004			8492	5837
15	Duct loads						0%	0%	0	0	-0%	0%	0	0
	Total room load								62844	18004			8492	5837
	Air required (cfm)								1400	1400			189	454

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

1	Room name						Living				Entry			
2	Exposed wall						55.3 ft				12.7 ft			
3	Room height						9.0 ft		heat/cool		9.0 ft		heat/cool	
4	Room dimensions						1.0	x 627.6 ft			1.0	x 175.2 ft		
5	Room area						627.6 ft²				175.2 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	27.16	4.04	0	0	0	0	0	0	0	0
.	└G	U-35 SHGC-22	0.350	n	24.50	9.79	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	8.19	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	6.37	0.00	0	0	0	0	0	0	0	0
11	├G	U-35 SHGC-27	0.350	ne	24.50	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	ne	24.50	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	ne	24.50	22.31	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	27.30	9.20	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	4.09	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	27.30	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	272	236	6410	952	114	87	2372	352
	├G	U-35 SHGC-27	0.350	se	24.50	26.77	36	0	887	969	0	0	0	0
	└D	11D0	0.390	se	27.30	9.20	0	0	0	0	27	27	728	245
	W	15B-0c-8	0.488	se	5.19	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	se	24.50	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	se	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	27.16	4.04	16	8	223	33	0	0	0	0
	└G	U-35 SHGC-27	0.350	s	24.50	16.55	8	0	202	137	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	27	27	733	109	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	sw	24.50	26.77	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	8.19	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	27.16	4.04	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	w	24.50	26.30	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	8.19	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	182	149	4040	600	0	0	0	0
	├G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	34	0	821	747	0	0	0	0
	W	15B-0c-8	0.488	nw	8.19	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	3.43	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	2.39	1.61	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	7	7	14	9	0	0	0	0
	├G	Skylight - U-35 SHGC	0.350	-	0.00	0.00	0	0	0	0	0	0	0	0
	└G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-136				-23
	Envelope loss/gain								13380	3422			3100	575
12	a) Infiltration								574	70			131	16
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								13954	3491			3231	591
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								13954	3491			3231	591
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								13954	3491			3231	591
	Air required (cfm)								311	272			72	46

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Powder				K Entry			
1	Room name													
2	Exposed wall						9.3 ft				16.6 ft			
3	Room height						9.0 ft			heat/cool	9.0 ft			heat/cool
4	Room dimensions							1.0 x 49.9 ft				9.2 x 8.3 ft		
5	Room area						49.9 ft²				76.4 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	27.16	4.04	0	0	0	0	0	0	0	0
.	└G	U-35 SHGC-22	0.350	n	24.50	9.79	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	8.19	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	6.37	0.00	0	0	0	0	0	0	0	0
11	├G	U-35 SHGC-27	0.350	ne	24.50	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	ne	24.50	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	32	32	856	127	75	57	1552	231
	├G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	ne	24.50	22.31	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	27.30	9.20	0	0	0	0	18	18	488	164
	W	15B-0c-8	0.488	ne	4.09	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	27.30	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	52	52	1406	209	74	68	1854	275
	├G	U-35 SHGC-27	0.350	se	24.50	26.77	0	0	0	0	6	0	147	161
	└D	11D0	0.390	se	27.30	9.20	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	5.19	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	se	24.50	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	se	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	27.16	4.04	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	s	24.50	16.55	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	sw	24.50	26.77	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	8.19	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	27.16	4.04	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	w	24.50	26.30	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	8.19	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	8.19	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	3.43	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	2.39	1.61	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	1	1	2	1	45	45	84	56
	├G	Skylight - U-35 SHGC	0.350	-	0.00	0.00	0	0	0	0	0	0	0	0
	└G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-13				-16
	Envelope loss/gain								2263	324			4124	871
12	a) Infiltration								96	12			172	21
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								2359	336			4296	892
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								2359	336			4296	892
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								2359	336			4296	892
	Air required (cfm)								53	26			96	69

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Dining				Kitchen			
1	Room name						Dining				Kitchen			
2	Exposed wall						36.7 ft				17.2 ft			
3	Room height						9.0 ft			heat/cool	9.0 ft			heat/cool
4	Room dimensions							1.0 x 302.3 ft				1.0 x 370.3 ft		
5	Room area						302.3 ft²				370.3 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	27.16	4.04	27	11	292	43	0	0	0	0
.	└G	U-35 SHGC-22	0.350	n	24.50	9.79	16	0	386	154	0	0	0	0
.	W	15B-0c-8	0.488	n	8.19	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	6.37	0.00	0	0	0	0	0	0	0	0
11	├G	U-35 SHGC-27	0.350	ne	24.50	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	ne	24.50	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	20	20	550	82	155	137	3721	553
	├G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	ne	24.50	22.31	0	0	0	0	18	0	429	390
	└D	11D0	0.390	ne	27.30	9.20	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	4.09	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	27.30	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	se	24.50	26.77	0	0	0	0	0	0	0	0
	└D	11D0	0.390	se	27.30	9.20	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	5.19	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	se	24.50	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	se	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	27.16	4.04	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	s	24.50	16.55	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	143	113	3067	456	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	9	0	221	206	0	0	0	0
	├G	U-35 SHGC-27	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	sw	24.50	26.77	21	0	523	571	0	0	0	0
	W	15B-0c-8	0.488	sw	8.19	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	27.16	4.04	27	11	292	43	0	0	0	0
	└G	U-35 SHGC-22	0.350	w	24.50	26.30	16	0	386	414	0	0	0	0
	W	15B-0c-8	0.488	w	8.19	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	114	76	2051	305	0	0	0	0
	├G	U-35 SHGC-22	0.350	nw	24.50	19.20	39	0	943	739	0	0	0	0
	├G	U-35 SHGC-27	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	8.19	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	3.43	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	2.39	1.61	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	25	25	48	32	7	7	13	9
	├G	Skylight - U-35 SHGC	0.350	-	0.00	0.00	0	0	0	0	0	0	0	0
	└G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									612				-81
	Envelope loss/gain								8758	3658			4163	871
12	a) Infiltration								381	46			178	22
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				1			230	0			0
		Appliances/other								0				1200
	Subtotal (lines 6 to 13)								9139	3934			4341	2092
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								9139	3934			4341	2092
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								9139	3934			4341	2092
	Air required (cfm)								204	306			97	163

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Pantry				Nook			
1	Room name						Pantry				Nook			
2	Exposed wall						2.3 ft				6.6 ft			
3	Room height						9.0 ft				9.0 ft			
4	Room dimensions						heat/cool				heat/cool			
5	Room area						1.0 x 34.1 ft				14.1 x 6.6 ft			
							34.1 ft²				92.7 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	27.16	4.04	0	0	0	0	0	0	0	0
.	└G	U-35 SHGC-22	0.350	n	24.50	9.79	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	8.19	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	6.37	0.00	0	0	0	0	0	0	0	0
11	├G	U-35 SHGC-27	0.350	ne	24.50	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	ne	24.50	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	0	0	0	0	59	44	1202	179
	├G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	15	0	368	288
	├G	U-35 SHGC-27	0.350	ne	24.50	22.31	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	27.30	9.20	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	4.09	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	27.30	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	se	24.50	26.77	0	0	0	0	0	0	0	0
	└D	11D0	0.390	se	27.30	9.20	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	5.19	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	se	24.50	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	se	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	27.16	4.04	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	s	24.50	16.55	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	sw	24.50	26.77	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	8.19	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	27.16	4.04	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	w	24.50	26.30	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	8.19	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	21	18	475	71	0	0	0	0
	├G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	nw	24.50	22.31	4	0	86	78	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	8.19	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	3.43	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	2.39	1.61	34	34	81	55	93	93	222	149
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	0	0	0	0	0	0	0	0
	├G	Skylight - U-35 SHGC	0.350	-	0.00	0.00	0	0	0	0	0	0	0	0
	└G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									22				-23
	Envelope loss/gain								724	226			2012	593
12	a) Infiltration								24	3			68	8
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								748	229			2080	601
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								748	229			2080	601
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								748	229			2080	601
	Air required (cfm)								17	18			46	47

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Dn Mech 2 43.8 ft 8.0 ft heat only 1.0 x 300.9 ft 300.9 ft²				Dn Bath 24.8 ft 8.0 ft heat only 1.0 x 122.8 ft 122.8 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	27.16	4.04	0	0	0	0	0	0	0	0
.	G	U-35 SHGC-22	0.350	n	24.50	9.79	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	8.19	0.00	24	24	193	0	0	0	0	0
.	W	12C-0bw	0.091	ne	6.37	0.00	0	0	0	0	0	0	0	0
11	G	U-35 SHGC-27	0.350	ne	24.50	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	ne	24.50	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	ne	24.50	22.31	0	0	0	0	0	0	0	0
	D	11D0	0.390	ne	27.30	9.20	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	4.09	0.00	61	41	-190	0	87	87	710	0
	D	11D0	0.390	ne	27.30	0.00	20	20	549	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	se	24.50	26.77	0	0	0	0	0	0	0	0
	D	11D0	0.390	se	27.30	9.20	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	5.19	0.00	0	0	0	0	112	96	376	0
	G	U-35 SHGC-27	0.350	se	24.50	0.00	0	0	0	0	16	0	388	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	se	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	s	24.50	16.55	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	sw	24.50	26.77	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	8.19	0.00	142	142	1163	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	w	24.50	26.30	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	8.19	0.00	24	24	193	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	8.19	0.00	101	101	830	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	3.43	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	2.39	1.61	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	0	0	0	0	0	0	0	0
	G	Skylight - U-35 SHGC	0.350	-	0.00	0.00	0	0	0	0	0	0	0	0
	G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									0				0
	Envelope loss/gain								3159	0			1646	0
12	a) Infiltration								0	0			0	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								3159	0			1646	0
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								3159	0			1646	0
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								3159	0			1646	0
	Air required (cfm)								70	0			37	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Dn Bedroom 38.9 ft 8.0 ft heat only 1.0 x 392.2 ft 392.2 ft²				Dn Game 65.8 ft 8.0 ft heat only 1.0 x 764.8 ft 764.8 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	27.16	4.04	0	0	0	0	0	0	0	0
.	G	U-35 SHGC-22	0.350	n	24.50	9.79	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	8.19	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	6.37	0.00	164	84	532	0	0	0	0	0
11	G	U-35 SHGC-27	0.350	ne	24.50	0.00	40	0	980	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	ne	24.50	0.00	40	0	980	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	ne	24.50	22.31	0	0	0	0	0	0	0	0
	D	11D0	0.390	ne	27.30	9.20	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	4.09	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	ne	27.30	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	24.50	19.20	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	se	24.50	26.77	0	0	0	0	0	0	0	0
	D	11D0	0.390	se	27.30	9.20	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	5.19	0.00	0	0	0	0	355	322	1795	0
	G	U-35 SHGC-27	0.350	se	24.50	0.00	0	0	0	0	33	0	796	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	se	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	s	24.50	16.55	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	sw	24.50	26.77	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	8.19	0.00	0	0	0	0	9	9	76	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22 GD	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	w	24.50	26.30	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	8.19	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	8.19	0.00	0	0	0	0	162	162	1327	0
	W	15B13-0wc-8	0.093	nw	3.43	0.00	166	166	569	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	2.39	1.61	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	0	0	0	0	0	0	0	0
	G	Skylight - U-35 SHGC	0.350	-	0.00	0.00	0	0	0	0	0	0	0	0
	G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									0				0
	Envelope loss/gain								4145	0			5065	0
12	a) Infiltration								189	0			0	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					1			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								4334	0			5065	0
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								4334	0			5065	0
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								4334	0			5065	0
	Air required (cfm)								97	0			113	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Upper Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Upper Zone				Dressing			
1	Room name													
2	Exposed wall						242.7 ft				72.3 ft			
3	Room height						9.0 ft		d		9.0 ft		heat/cool	
4	Room dimensions										1.0	x 441.2 ft		
5	Room area						1967.4 ft²				441.2 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	0.00	0.00	0	0	0	0	0	0	0	0
.	└G	U-35 SHGC-22	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	274	250	6783	1008	0	0	0	0
	├G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	ne	24.50	22.31	24	0	588	535	0	0	0	0
	└D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	6.28	1.67	47	47	297	79	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	22	22	98	26	22	22	98	26
	└G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	525	462	12557	1866	0	0	0	0
	├G	U-35 SHGC-27	0.350	se	24.50	26.77	63	0	1535	1678	0	0	0	0
	└D	11D0	0.390	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	224	178	796	212	224	178	796	212
	└G	U-35 SHGC-22	0.350	se	24.50	22.84	47	0	1143	1066	47	0	1143	1066
	W	14E-0	0.388	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	162	150	4074	605	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	sw	24.50	26.77	12	0	294	321	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	181	118	529	141	181	118	529	141
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	63	0	1539	1435	63	0	1539	1435
	└G	U-35 SHGC-22 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	525	444	12060	1792	0	0	0	0
	├G	U-35 SHGC-22	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	nw	24.50	22.31	44	0	1080	984	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	37	0	903	822	0	0	0	0
	W	15B-0c-8	0.488	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	224	190	850	226	224	190	850	226
	└G	U-35 SHGC-22	0.350	nw	24.50	19.20	35	0	849	666	35	0	849	666
	C	STD - Attic CLG - R-	0.034	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	1967	1951	3658	2461	441	441	827	557
	├G	Skylight - U-35 SHGC	0.350	-	24.50	78.50	16	0	392	1256	0	0	0	0
	└G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									0				41
	Envelope loss/gain								50027	17178			6632	4369
12	a) Infiltration								2519	306			751	91
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					2			460	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								52546	17944			7383	4460
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								52546	17944			7383	4460
15	Duct loads						17%	37%	8885	6700	17%	37%	1248	1665
	Total room load								61431	24644			8631	6125
	Air required (cfm)								1400	1400			197	348

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Upper Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

1	Room name						Hall				Bath 2			
2	Exposed wall						16.3 ft				5.3 ft			
3	Room height						9.0 ft			heat/cool	9.0 ft			heat/cool
4	Room dimensions						1.0	x	195.6 ft		5.1	x	8.3 ft	
5	Room area						195.6 ft²				42.4 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	0.00	0.00	0	0	0	0	0	0	0	0
.	G	U-35 SHGC-22	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	32	32	856	127	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	ne	24.50	22.31	0	0	0	0	0	0	0	0
	D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	6.28	1.67	0	0	0	0	47	47	297	79
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	115	100	2718	404	0	0	0	0
	G	U-35 SHGC-27	0.350	se	24.50	26.77	15	0	359	393	0	0	0	0
	D	11D0	0.390	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	se	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	sw	24.50	26.77	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	196	180	337	227	42	42	79	53
	G	Skylight - U-35 SHGC	0.350	-	24.50	78.50	16	0	392	1256	0	0	0	0
	G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-92				-5
	Envelope loss/gain								4662	2314			376	127
12	a) Infiltration								169	20			54	7
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								4831	2335			430	134
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								4831	2335			430	134
15	Duct loads						17%	37%	817	872	17%	37%	73	50
	Total room load								5647	3207			503	183
	Air required (cfm)								129	182			11	10

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Upper Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

							Bedroom 2				Bath 1			
1	Room name						Bedroom 2				Bath 1			
2	Exposed wall						42.0 ft				7.2 ft			
3	Room height						9.0 ft			heat/cool	9.0 ft			heat/cool
4	Room dimensions						1.0	x	254.9 ft		7.7	x	9.8 ft	
5	Room area						254.9 ft²				75.4 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	0.00	0.00	0	0	0	0	0	0	0	0
.	└G	U-35 SHGC-22	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	179	155	4217	626	0	0	0	0
	├G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	ne	24.50	22.31	24	0	588	535	0	0	0	0
	└D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	6.28	1.67	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	77	77	2078	309	0	0	0	0
	├G	U-35 SHGC-27	0.350	se	24.50	26.77	0	0	0	0	0	0	0	0
	└D	11D0	0.390	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	se	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	sw	24.50	26.77	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-27 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	0.00	0.00	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	122	110	2994	445	65	53	1426	212
	├G	U-35 SHGC-22	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	├G	U-35 SHGC-27	0.350	nw	24.50	22.31	12	0	294	268	12	0	294	268
	└G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	0	0	0	0	0	0	0	0
	└G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	255	255	478	321	75	75	141	95
	├G	Skylight - U-35 SHGC	0.350	-	24.50	78.50	0	0	0	0	0	0	0	0
	└G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-97				81
	Envelope loss/gain								10648	2408			1861	656
12	a) Infiltration								436	53			74	9
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								11084	2461			1936	665
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								11084	2461			1936	665
15	Duct loads						17%	37%	1874	919	17%	37%	327	248
	Total room load								12959	3380			2263	914
	Air required (cfm)								295	192			52	52

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Upper Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

1	Room name						M Bath						Bedroom 1			
2	Exposed wall						15.8 ft						38.9 ft			
3	Room height						9.0 ft				heat/cool		9.0 ft			heat/cool
4	Room dimensions						15.8 x 11.8 ft						1.0 x 318.3 ft			
5	Room area						187.4 ft²						318.3 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	0.00	0.00	0	0	0	0	0	0	0	0
.	G	U-35 SHGC-22	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B-0c-8	0.488	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27 GD	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	ne	27.16	4.04	0	0	0	0	63	63	1711	254
	G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	ne	24.50	22.31	0	0	0	0	0	0	0	0
	D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	ne	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-13 -	0.090	ne	6.28	1.67	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	se	27.16	4.04	143	119	3218	478	0	0	0	0
	G	U-35 SHGC-27	0.350	se	24.50	26.77	24	0	588	643	0	0	0	0
	D	11D0	0.390	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	se	24.50	22.84	0	0	0	0	0	0	0	0
	W	14E-0	0.388	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	sw	27.16	4.04	0	0	0	0	136	124	3361	499
	G	U-35 SHGC-22	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	sw	24.50	26.77	0	0	0	0	12	0	294	321
	G	U-35 SHGC-27 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22 GD	0.350	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14E-0	0.388	nw	27.16	4.04	0	0	0	0	152	131	3569	530
	G	U-35 SHGC-22	0.350	nw	0.00	0.00	0	0	0	0	0	0	0	0
	G	U-35 SHGC-27	0.350	nw	24.50	22.31	0	0	0	0	20	0	492	448
	G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	0	0	0	0	0	0	0	0
	W	15B-0c-8	0.488	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-0wc-8	0.093	nw	0.00	0.00	0	0	0	0	0	0	0	0
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	0	0	0	0	0	0	0	0
	G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.034	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	187	187	351	236	318	318	597	401
	G	Skylight - U-35 SHGC	0.350	-	24.50	78.50	0	0	0	0	0	0	0	0
	G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									20				200
	Envelope loss/gain								4158	1377			10024	2655
12	a) Infiltration								164	20			404	49
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								4322	1397			10428	2704
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								4322	1397			10428	2704
15	Duct loads						17%	37%	731	522	17%	37%	1763	1009
	Total room load								5053	1919			12191	3713
	Air required (cfm)								115	109			278	211

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Upper Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

1	Room name					M Bedroom									
2	Exposed wall					44.9 ft									
3	Room height					9.0 ft				heat/cool					
4	Room dimensions					1.0 x 452.3 ft									
5	Room area					452.3 ft²									
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area or perimeter (ft²) (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14E-0	0.388	n	0.00	0.00	0	0	0	0				
.	└G	U-35 SHGC-22	0.350	n	0.00	0.00	0	0	0	0				
.	W	15B-0c-8	0.488	n	0.00	0.00	0	0	0	0				
.	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0				
11	├G	U-35 SHGC-27	0.350	ne	0.00	0.00	0	0	0	0				
	└G	U-35 SHGC-27 GD	0.350	ne	0.00	0.00	0	0	0	0				
	W	14E-0	0.388	ne	27.16	4.04	0	0	0	0				
	├G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0				
	├G	U-35 SHGC-27	0.350	ne	24.50	22.31	0	0	0	0				
	└D	11D0	0.390	ne	0.00	0.00	0	0	0	0				
	W	15B-0c-8	0.488	ne	0.00	0.00	0	0	0	0				
	└D	11D0	0.390	ne	0.00	0.00	0	0	0	0				
	W	15B13-0wc-8	0.093	ne	0.00	0.00	0	0	0	0				
	W	STD - Frame - R-13 -	0.090	ne	6.28	1.67	0	0	0	0				
	W	STD - Frame - R-19 -	0.064	ne	4.48	1.19	0	0	0	0				
	└G	U-35 SHGC-22	0.350	ne	0.00	0.00	0	0	0	0				
	W	14E-0	0.388	se	27.16	4.04	191	167	4543	675				
	├G	U-35 SHGC-27	0.350	se	24.50	26.77	24	0	588	643				
	└D	11D0	0.390	se	0.00	0.00	0	0	0	0				
	W	15B-0c-8	0.488	se	0.00	0.00	0	0	0	0				
	└G	U-35 SHGC-27	0.350	se	0.00	0.00	0	0	0	0				
	W	15B13-0wc-8	0.093	se	0.00	0.00	0	0	0	0				
	W	STD - Frame - R-19 -	0.064	se	4.48	1.19	0	0	0	0				
	└G	U-35 SHGC-22	0.350	se	24.50	22.84	0	0	0	0				
	W	14E-0	0.388	s	0.00	0.00	0	0	0	0				
	└G	U-35 SHGC-27	0.350	s	0.00	0.00	0	0	0	0				
	W	14E-0	0.388	sw	27.16	4.04	26	26	713	106				
	├G	U-35 SHGC-22	0.350	sw	0.00	0.00	0	0	0	0				
	├G	U-35 SHGC-27	0.350	sw	24.50	26.77	0	0	0	0				
	└G	U-35 SHGC-27 GD	0.350	sw	0.00	0.00	0	0	0	0				
	W	15B-0c-8	0.488	sw	0.00	0.00	0	0	0	0				
	W	15B13-0wc-8	0.093	sw	0.00	0.00	0	0	0	0				
	W	STD - Frame - R-19 -	0.064	sw	4.48	1.19	0	0	0	0				
	├G	U-35 SHGC-22	0.350	sw	24.50	22.84	0	0	0	0				
	└G	U-35 SHGC-22 GD	0.350	sw	0.00	0.00	0	0	0	0				
	W	14E-0	0.388	w	0.00	0.00	0	0	0	0				
	└G	U-35 SHGC-22	0.350	w	0.00	0.00	0	0	0	0				
	W	15B-0c-8	0.488	w	0.00	0.00	0	0	0	0				
	W	14E-0	0.388	nw	27.16	4.04	187	150	4071	605				
	├G	U-35 SHGC-22	0.350	nw	0.00	0.00	0	0	0	0				
	├G	U-35 SHGC-27	0.350	nw	24.50	22.31	0	0	0	0				
	└G	U-35 SHGC-27 GD	0.350	nw	24.50	22.31	37	0	903	822				
	W	15B-0c-8	0.488	nw	0.00	0.00	0	0	0	0				
	W	15B13-0wc-8	0.093	nw	0.00	0.00	0	0	0	0				
	W	STD - Frame - R-19 -	0.064	nw	4.48	1.19	0	0	0	0				
	└G	U-35 SHGC-22	0.350	nw	24.50	19.20	0	0	0	0				
	C	STD - Attic CLG - R-	0.034	-	0.00	0.00	0	0	0	0				
	C	STD - Attic CLG - R-	0.027	-	1.87	1.26	452	452	848	571				
	├G	Skylight - U-35 SHGC	0.350	-	24.50	78.50	0	0	0	0				
	└G	Skylight - U-29 SHGC	0.290	ne	0.00	0.00	0	0	0	0				
6	c) AED excursion									-149				
	Envelope loss/gain								11665	3272				
12	a) Infiltration								466	57				
	b) Room ventilation								0	0				
13	Internal gains:	Occupants @ 230					2			460				
		Appliances/other								0				
	Subtotal (lines 6 to 13)								12132	3789				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								0	0				
14	Subtotal								12132	3789				
15	Duct loads						17%	37%	2051	1415				
	Total room load								14183	5203				
	Air required (cfm)								323	296				

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Load Short Form
Entire House
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Information

	Htg	Clg
Outside db (°F)	0	91
Inside db (°F)	70	75
Design TD (°F)	70	16
Daily range	-	H
Inside humidity (%)	50	50
Moisture difference (gr/lb)	61	-34

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

HEATING EQUIPMENT

Make	n/a		
Trade	n/a		
Model	n/a		
AHRI ref	n/a		
Efficiency		n/a	
Heating input			
Heating output		0	Btuh
Temperature rise		0	°F
Actual air flow		0	cfm
Air flow factor		0	cfm/Btuh
Static pressure		0	in H2O
Space thermostat	n/a		

COOLING EQUIPMENT

Make	n/a		
Trade	n/a		
Cond	n/a		
Coil	n/a		
AHRI ref	n/a		
Efficiency		n/a	
Sensible cooling		0	Btuh
Latent cooling		0	Btuh
Total cooling		0	Btuh
Actual air flow		0	cfm
Air flow factor		0	cfm/Btuh
Static pressure		0	in H2O
Load sensible heat ratio		0	

ROOM NAME		Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Basement Zone	d	536	3676	0	43	0
Main Zone	d	3846	62844	18004	1400	1400
Conservatory Zone	d	580	22944	17325	1000	1000
Upper Zone	d	1967	61431	24644	1400	1400
Entire House	d	6930	150895	59365	3843	3800
Other equip loads			18423	3293		
Equip. @ 0.96 RSM				60026		
Latent cooling				0		
TOTALS		6930	169318	60026	3843	3800

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Load Short Form
Basement Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Information

	Htg	Clg
Outside db (°F)	0	91
Inside db (°F)	70	75
Design TD (°F)	70	16
Daily range	-	H
Inside humidity (%)	50	50
Moisture difference (gr/lb)	61	-34

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

HEATING EQUIPMENT

Make		
Trade		
Model		
AHRI ref		
Efficiency	80 AFUE	
Heating input	0	MBtuh
Heating output	0	Btuh
Temperature rise	0	°F
Actual air flow	0	cfm
Air flow factor	0	cfm/Btuh
Static pressure	0	in H2O
Space thermostat		

COOLING EQUIPMENT

Make		
Trade		
Cond		
Coil		
AHRI ref		
Efficiency	0 SEER	
Sensible cooling	0	Btuh
Latent cooling	0	Btuh
Total cooling	0	Btuh
Actual air flow	0	cfm
Air flow factor	0	cfm/Btuh
Static pressure	0	in H2O
Load sensible heat ratio	0	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Dn Library	385	2233	0	26	0
Dn Mech 1	95	856	0	10	0
Dn Storage	56	587	0	7	0
Basement Zone d	536	3676	0	43	0
Other equip loads		334	0		
Equip. @ 0.96 RSM			0		
Latent cooling			0		
TOTALS	536	4010	0	43	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Load Short Form
Conservatory Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Information

	Htg	Clg
Outside db (°F)	0	91
Inside db (°F)	70	75
Design TD (°F)	70	16
Daily range	-	H
Inside humidity (%)	50	50
Moisture difference (gr/lb)	61	-34

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

HEATING EQUIPMENT

Make	Carrier
Trade	Carrier
Model	59SP5A060E17-14
AHRI ref	4702805

Efficiency	96.5 AFUE	
Heating input	47520	MBtuh
Heating output	45936	Btuh
Temperature rise	51	°F
Actual air flow	1000	cfm
Air flow factor	0.044	cfm/Btuh
Static pressure	1.00	in H2O
Space thermostat		

COOLING EQUIPMENT

Make	Carrier
Trade	Comfort 13
Cond	24ABB324A31
Coil	CNPVP3617A
AHRI ref	3250468

Efficiency	12.2 EER, 14.5 SEER	
Sensible cooling	19890	Btuh
Latent cooling	3510	Btuh
Total cooling	23400	Btuh
Actual air flow	1000	cfm
Air flow factor	0.058	cfm/Btuh
Static pressure	1.00	in H2O
Load sensible heat ratio	1.00	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Conservatory	580	22944	17325	1000	1000
Conservatory Zone d	580	22944	17325	1000	1000
Other equip loads		5742	593		
Equip. @ 0.96 RSM			17165		
Latent cooling			0		
TOTALS	580	28686	17165	1000	1000

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Load Short Form
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Information

	Htg	Clg
Outside db (°F)	0	91
Inside db (°F)	70	75
Design TD (°F)	70	16
Daily range	-	H
Inside humidity (%)	50	50
Moisture difference (gr/lb)	61	-34

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

HEATING EQUIPMENT

Make	Carrier
Trade	Carrier
Model	59SP5A100E21-20
AHRI ref	4702807

Efficiency	96.5 AFUE	
Heating input	79200	MBtuh
Heating output	77616	Btuh
Temperature rise	61	°F
Actual air flow	1400	cfm
Air flow factor	0.022	cfm/Btuh
Static pressure	1.00	in H2O
Space thermostat		

COOLING EQUIPMENT

Make	Carrier
Trade	Comfort 13
Cond	24ABB330A31
Coil	CNPVP3621A
AHRI ref	3250525

Efficiency	10.8 EER, 13 SEER	
Sensible cooling	23290	Btuh
Latent cooling	4110	Btuh
Total cooling	27400	Btuh
Actual air flow	1400	cfm
Air flow factor	0.078	cfm/Btuh
Static pressure	1.00	in H2O
Load sensible heat ratio	1.00	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Library	536	8492	5837	189	454
Living	628	13954	3491	311	272
Entry	175	3231	591	72	46
Powder	50	2359	336	53	26
K Entry	76	4296	892	96	69
Dining	302	9139	3934	204	306
Kitchen	370	4341	2092	97	163
Pantry	34	748	229	17	18
Nook	93	2080	601	46	47
Dn Mech 2	301	3159	0	70	0
Dn Bath	123	1646	0	37	0
Dn Bedroom	392	4334	0	97	0
Dn Game	765	5065	0	113	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Main Zone Other equip loads Equip. @ 0.96 RSM Latent cooling	d	3846	62844 14163	18004 1529 18712 0	1400	1400
TOTALS		3846	77007	18712	1400	1400

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Load Short Form
Upper Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

Design Information

	Htg	Clg
Outside db (°F)	0	91
Inside db (°F)	70	75
Design TD (°F)	70	16
Daily range	-	H
Inside humidity (%)	50	50
Moisture difference (gr/lb)	61	-34

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	1 (Tight)

HEATING EQUIPMENT

Make	Carrier
Trade	Carrier
Model	59SP5A100E21-20
AHRI ref	5285422

Efficiency	96.3 AFUE	
Heating input	79200	MBtuh
Heating output	76824	Btuh
Temperature rise	61	°F
Actual air flow	1400	cfm
Air flow factor	0.023	cfm/Btuh
Static pressure	1.00	in H2O
Space thermostat		

COOLING EQUIPMENT

Make	Carrier
Trade	Base 13
Cond	24ABB336A31
Coil	CNPHP4821A
AHRI ref	4741459

Efficiency	11.7 EER, 14 SEER	
Sensible cooling	28900	Btuh
Latent cooling	5100	Btuh
Total cooling	34000	Btuh
Actual air flow	1400	cfm
Air flow factor	0.057	cfm/Btuh
Static pressure	1.00	in H2O
Load sensible heat ratio	1.00	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Dressing	441	8631	6125	197	348
Hall	196	5647	3207	129	182
Bath 2	42	503	183	11	10
Bedroom 2	255	12959	3380	295	192
Bath 1	75	2263	914	52	52
M Bath	187	5053	1919	115	109
Bedroom 1	318	12191	3713	278	211
M Bedroom	452	14183	5203	323	296

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Upper Zone Other equip loads Equip. @ 0.96 RSM Latent cooling	d	1967	61431 11109	24644 1172 24732 0	1400	1400
TOTALS		1967	72540	24732	1400	1400

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Load Multizone Summary Report

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

Authority Air Designs, LLC.

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Infiltration Summary

ZONE NAME	Heating Volume ft³	Heating ACH	Heating AVF cfm	Heating HTM Btuh/ft²	Cooling Volume ft³	Cooling ACH	Cooling AVF cfm	Cooling HTM Btuh/ft²
Basement Zone	536	0.17	2	1.2	0	0	0	0
Main Zone	21941	0.12	42	1.2	20384	0.06	21	0.1
Conservatory Zone	9286	0.15	24	1.2	9286	0.08	13	0.1
Upper Zone	17707	0.13	40	1.2	17707	0.07	21	0.1
Entire House	49471	0.13	107	1.2	47377	0.07	55	0.1

Load and AVF Summary

ROOM NAME	Area ft²	Htg load Btuh	Clg load Btuh	Htg AVF cfm	Clg AVF cfm
Dn Library	385	2233	0	26	0
Dn Mech 1	95	856	0	10	0
Dn Storage	56	587	0	7	0
Basement Zone	536	3676	0	43	0
Library	536	8492	5837	189	454
Living	628	13954	3491	311	272
Entry	175	3231	591	72	46
Powder	50	2359	336	53	26
K Entry	76	4296	892	96	69
Dining	302	9139	3934	204	306
Kitchen	370	4341	2092	97	163
Pantry	34	748	229	17	18
Nook	93	2080	601	46	47
Dn Mech 2	301	3159	0	70	0
Dn Bath	123	1646	0	37	0
Dn Bedroom	392	4334	0	97	0
Dn Game	765	5065	0	113	0
Main Zone	3846	62844	18004	1400	1400
Conservatory	580	22944	17325	1000	1000
Conservatory Zone	580	22944	17325	1000	1000
Dressing	441	8631	6125	197	348
Hall	196	5647	3207	129	182
Bath 2	42	503	183	11	10
Bedroom 2	255	12959	3380	295	192
Bath 1	75	2263	914	52	52
M Bath	187	5053	1919	115	109
Bedroom 1	318	12191	3713	278	211
M Bedroom	452	14183	5203	323	296
Upper Zone	1967	61431	24644	1400	1400
Entire House	6930	150895	59365	3843	3800

Duct System Summary
Basement Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

	Heating	Cooling
External static pressure	0 in H2O	0 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0 in H2O	0 in H2O
Supply / return available pressure	0.00 / 0.00 in H2O	0.00 / 0.00 in H2O
Lowest friction rate	0 in/100ft	0 in/100ft
Actual air flow	0 cfm	0 cfm
Total effective length (TEL)	0 ft	

Duct System Summary
Conservatory Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

	Heating	Cooling
External static pressure	1.00 in H2O	1.00 in H2O
Pressure losses	0.40 in H2O	0.40 in H2O
Available static pressure	0.60 in H2O	0.60 in H2O
Supply / return available pressure	0.39 / 0.21 in H2O	0.39 / 0.21 in H2O
Lowest friction rate	0.153 in/100ft	0.153 in/100ft
Actual air flow	1000 cfm	1000 cfm
Total effective length (TEL)	392 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Conservatory-E	c 3278	143	143	0.184	6.0	0x 0	ShMt	12.0	200.0	st2
Conservatory-F	c 3278	143	143	0.168	6.0	0x 0	ShMt	32.2	200.0	st2
Conservatory-G	c 3278	143	143	0.186	6.0	0x 0	ShMt	24.7	185.0	st2
Conservatory-I	c 3278	143	143	0.153	7.0	0x 0	ShMt	29.6	225.0	st2
Conservatory-J	c 3278	143	143	0.154	7.0	0x 0	ShMt	43.2	210.0	st2
Conservatory-K	c 3278	143	143	0.190	6.0	0x 0	ShMt	20.5	185.0	st2
Conservatory-L	c 3278	143	143	0.173	6.0	0x 0	ShMt	35.2	190.0	st2

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st2	Peak AVF	1000	1000	0.153	842	14.3	10 x 20	DctLinr	

Return Branch Detail Table

Name	Grill Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb4	10x 21	571	571	137.2	0.153	610	11.9	10x 16		DcLn	rt2
rb13	6x 33	429	429	120.2	0.175	643	9.0	8x 12		ShMt	rt2

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rt2	Peak AVF	1000	1000	0.153	696	14.3	10 x 24	DctLinr	

Duct System Summary
Main Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

	Heating	Cooling
External static pressure	1.00 in H2O	1.00 in H2O
Pressure losses	0.44 in H2O	0.44 in H2O
Available static pressure	0.56 in H2O	0.56 in H2O
Supply / return available pressure	0.28 / 0.28 in H2O	0.28 / 0.28 in H2O
Lowest friction rate	0.086 in/100ft	0.086 in/100ft
Actual air flow	1400 cfm	1400 cfm
Total effective length (TEL)	649 ft	

Supply Branch Detail Table

Name		Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Dining	c	1311	68	102	0.100	6.0	0x 0	ShMt	19.2	260.0	st3
Dining-A	c	1311	68	102	0.089	6.0	0x 0	ShMt	23.8	290.0	st3
Dining-B	c	1311	68	102	0.100	6.0	0x 0	ShMt	11.7	265.0	st3
Dn Bath	h	1646	37	0	0.091	5.0	0x 0	ShMt	49.3	255.0	st3
Dn Bedroom	h	4334	97	0	0.108	6.0	0x 0	ShMt	33.4	225.0	st3
Dn Game	h	2532	56	0	0.098	5.0	0x 0	ShMt	38.3	245.0	st4
Dn Game-A	h	2532	56	0	0.101	5.0	0x 0	ShMt	26.6	250.0	st4
Dn Mech 2	h	3159	70	0	0.102	6.0	0x 0	ShMt	18.7	255.0	st3
Entry	h	3231	72	46	0.088	6.0	0x 0	ShMt	27.5	290.0	st4
K Entry	h	4296	96	69	0.094	6.0	0x 0	ShMt	45.3	250.0	st3
Kitchen	c	1046	48	81	0.089	6.0	0x 0	ShMt	43.4	270.0	st3
Kitchen-A	c	1046	48	81	0.102	6.0	0x 0	ShMt	33.1	240.0	st3
Library-A	c	1459	47	113	0.086	7.0	0x 0	ShMt	62.1	260.0	st4
Library-B	c	1459	47	113	0.092	7.0	0x 0	ShMt	42.3	260.0	st4A
Library-C	c	1459	47	113	0.089	7.0	0x 0	ShMt	56.3	255.0	st4A
Library-D	c	1459	47	113	0.094	7.0	0x 0	ShMt	50.4	245.0	st4A
Living	h	4651	104	91	0.100	6.0	0x 0	ShMt	22.8	255.0	st4
Living-A	h	4651	104	91	0.099	6.0	0x 0	ShMt	41.6	240.0	st4
Living-B	h	4651	104	91	0.105	6.0	0x 0	ShMt	30.4	235.0	st4
Nook	c	601	46	47	0.098	5.0	0x 0	ShMt	38.9	245.0	st3
Pantry	c	229	17	18	0.100	4.0	0x 0	ShMt	22.9	255.0	st3
Powder	h	2359	53	26	0.092	5.0	0x 0	ShMt	46.9	255.0	st3

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st4A	Peak AVF	142	340	0.089	438	9.4	8 x 14	ShtMetl	st4
st4	Peak AVF	685	771	0.086	771	12.9	8 x 18	ShtMetl	
st3	Peak AVF	715	629	0.089	715	12.5	8 x 18	ShtMetl	

Return Branch Detail Table

Name	Grill Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x 0	171	149	326.8	0.086	489	8.0	0x 0		ShMt	rt4
rb2	20x 17	704	725	290.3	0.097	594	12.2	8x 22		ShMt	rt4
rb6	0x 0	216	197	216.4	0.130	619	8.0	0x 0		ShMt	rt5
rb10	6x 15	193	145	189.8	0.149	554	8.0	0x 0		ShMt	rt5
rb9	6x 14	116	183	321.0	0.088	525	8.0	0x 0		ShMt	rt5

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rt4	Peak AVF	874	874	0.086	715	13.5	8 x 22	ShtMetl	rt3
rt5	Peak AVF	526	526	0.088	430	11.5	8 x 22	ShtMetl	rt3
rt3	Peak AVF	1400	1400	0.086	600	16.1	14 x 24	ShtMetl	

Duct System Summary
Upper Zone
Authority Air Designs, LLC.

Job: Sample Address
Date: Oct 12, 2012
By: Joe Colburn
Plan: Sample Design

6608 W. 95th Place, Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 Email: Joe@AuthorityAir.com Web: www.AuthorityAir.com

Project Information

For: Sample Two
Sample Address, Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
Web: www.SampleWebsite.com Email: Sample@Email.com

	Heating	Cooling
External static pressure	1.00 in H2O	1.00 in H2O
Pressure losses	0.33 in H2O	0.33 in H2O
Available static pressure	0.67 in H2O	0.67 in H2O
Supply / return available pressure	0.48 / 0.19 in H2O	0.48 / 0.19 in H2O
Lowest friction rate	0.072 in/100ft	0.072 in/100ft
Actual air flow	1400 cfm	1400 cfm
Total effective length (TEL)	931 ft	

Supply Branch Detail Table

Name		Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Bath 1	c	914	52	52	0.076	6.0	0x 0	VlFx	28.5	600.0	st1
Bath 2	h	503	11	10	0.101	4.0	0x 0	VlFx	37.6	435.0	st1
Bedroom 1	h	6096	139	105	0.077	8.0	0x 0	VlFx	21.8	600.0	st1
Bedroom 1-A	h	6096	139	105	0.072	8.0	0x 0	VlFx	28.8	635.0	st1
Bedroom 2	h	6479	148	96	0.083	8.0	0x 0	VlFx	37.3	535.0	st1
Bedroom 2-A	h	6479	148	96	0.076	8.0	0x 0	VlFx	38.3	590.0	st1
Dressing	c	2042	66	116	0.099	8.0	0x 0	VlFx	47.9	435.0	st1
Dressing-A	c	2042	66	116	0.077	8.0	0x 0	VlFx	47.5	570.0	st1
Dressing-B	c	2042	66	116	0.091	8.0	0x 0	VlFx	53.8	470.0	st1
Hall	c	1603	64	91	0.124	7.0	0x 0	VlFx	29.1	355.0	st1
Hall-A	c	1603	64	91	0.102	7.0	0x 0	VlFx	35.5	435.0	st1
M Bath	h	5053	115	109	0.215	6.0	0x 0	VlFx	16.7	205.0	st1
M Bedroom	h	4728	108	99	0.078	8.0	0x 0	VlFx	24.5	590.0	st1
M Bedroom-A	h	4728	108	99	0.182	7.0	0x 0	VlFx	23.0	240.0	st1
M Bedroom-B	h	4728	108	99	0.137	7.0	0x 0	VlFx	29.8	320.0	st1

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	1400	1400	0.072	698	18.6	18 x 18	DctLinr	

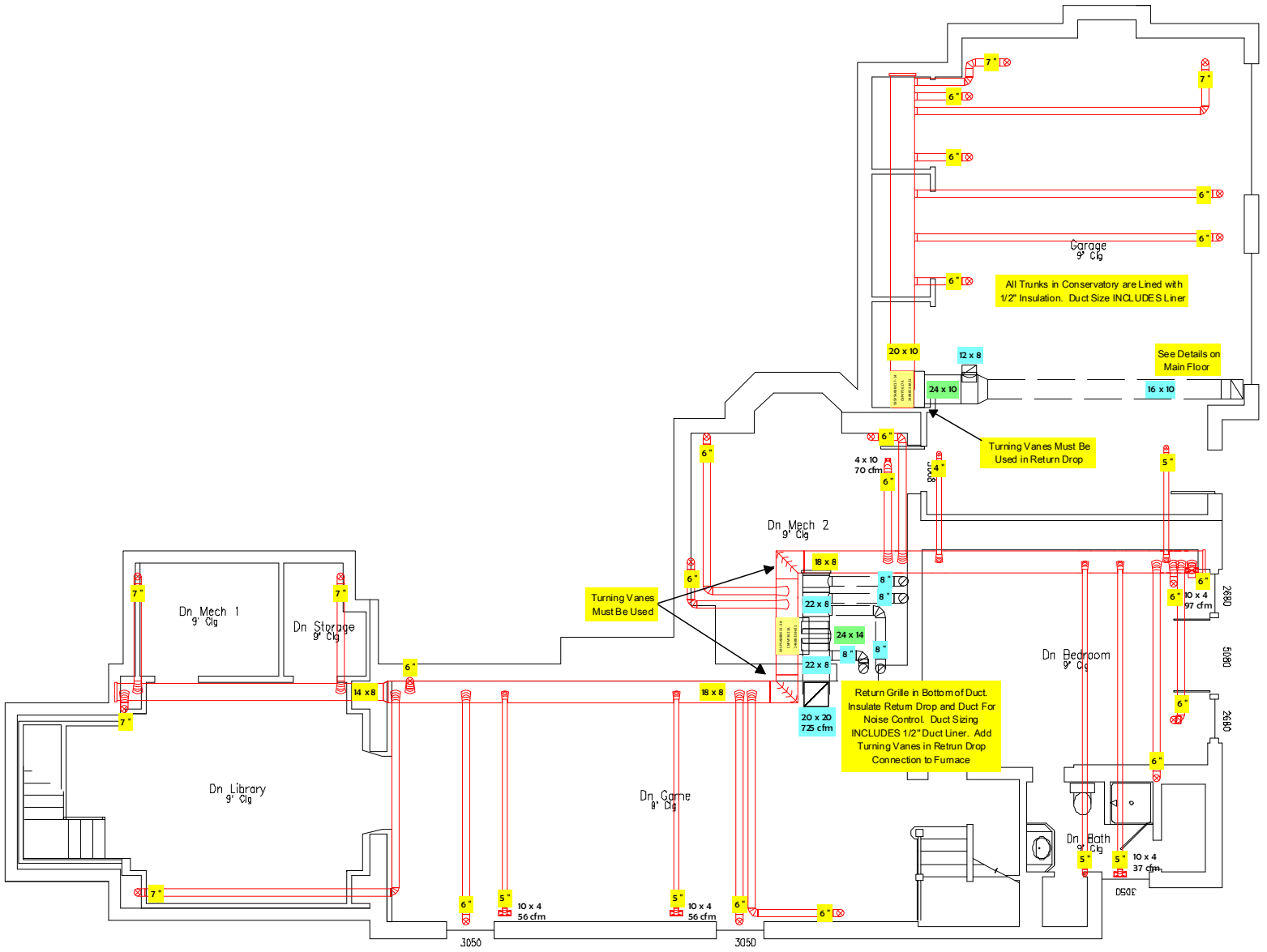
Return Branch Detail Table

Name	Grill Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb5	0x 0	197	348	161.9	0.119	443	12.0	0x 0		VlFx	rt1
rb3	16x 13	438	405	75.8	0.254	558	12.0	0x 0		VlFx	rt1
rb7	14x 10	307	202	267.3	0.072	391	12.0	0x 0		VlFx	rt1
rb11	12x 7	129	182	120.3	0.160	522	8.0	0x 0		VlFx	rt1
rb8	14x 11	329	263	85.0	0.226	604	10.0	0x 0		VlFx	rt1

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rt1	Peak AVF	1400	1400	0.072	698	18.6	18 x 18	DctLinr	

Basement



Job #: Sample Address
Performed by Joe Colburn for:
Sample Two
Sample Address
Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
www.SampleWebsite.com Sample@Email.com

Authority Air Designs, LLC.
6608 W. 95th Place
Westminster, CO 80021-6422
Phone: (720) 354-8105 Fax: (720) 254-8105
www.AuthorityAir.com Joe@AuthorityAir.com

Scale: 3/32" = 1'0"

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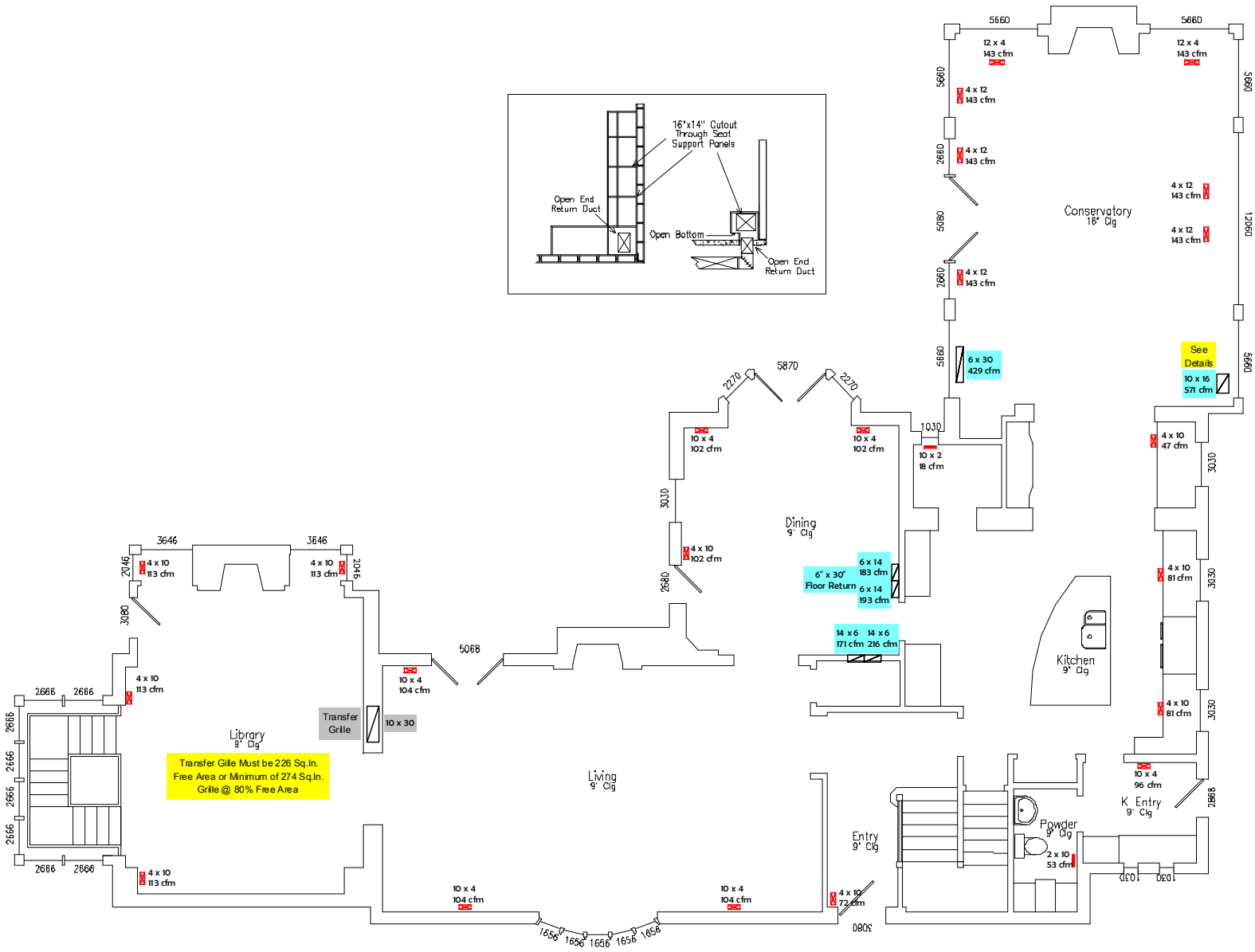
Main Floor



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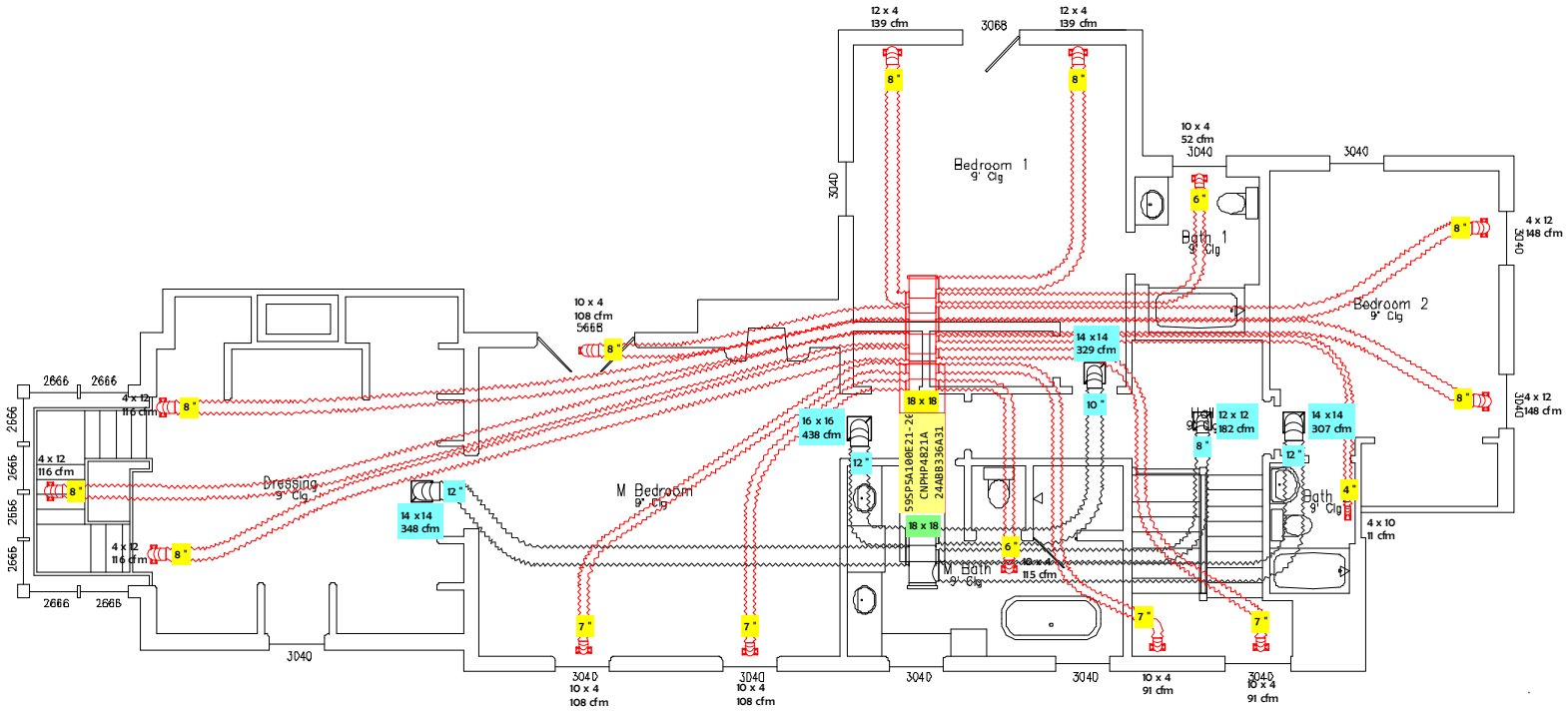
Upper Floor



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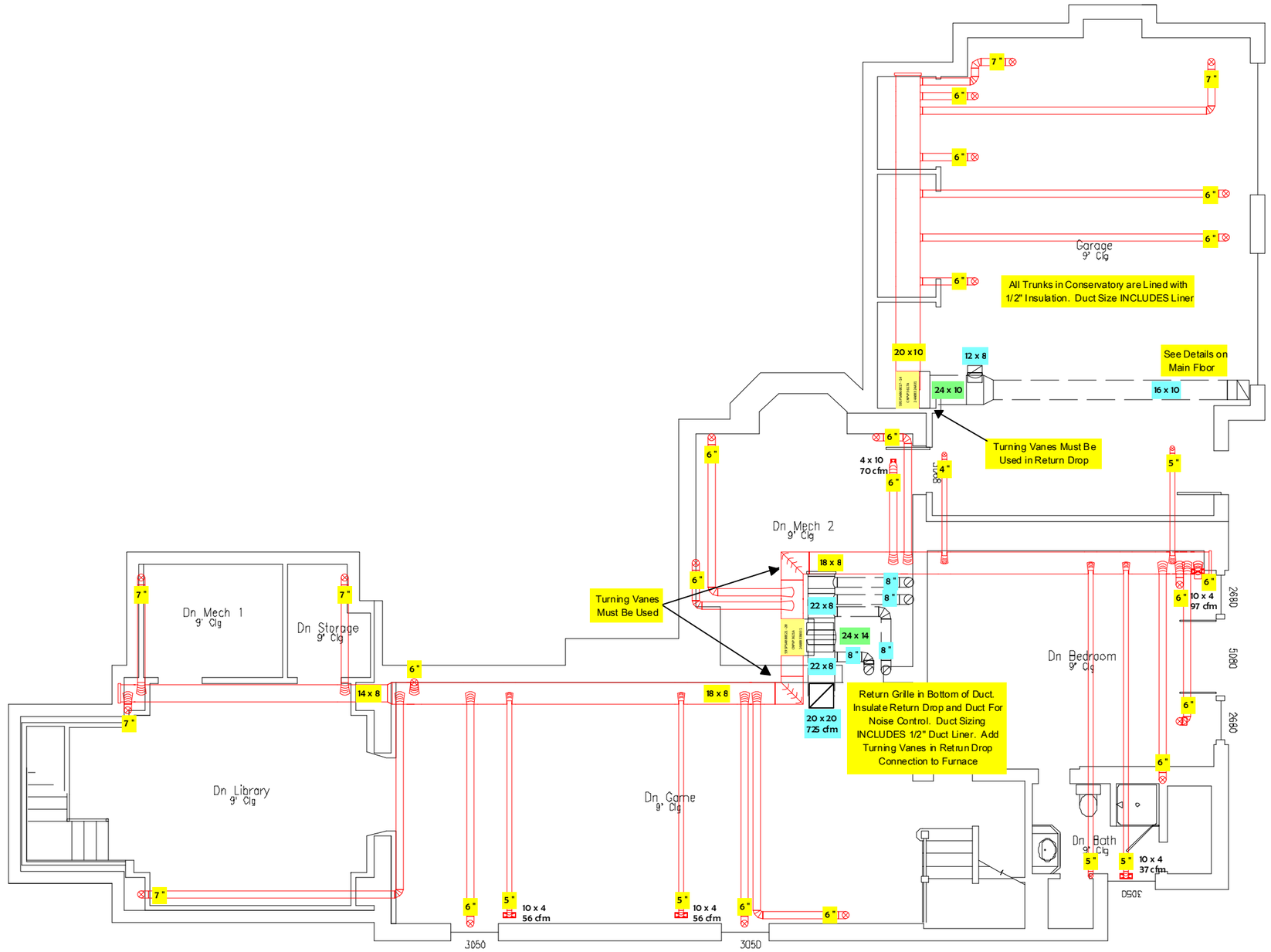
Basement



Job #: Sample Address
Performed by Joe Colburn for:
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Sample Address
Denver, CO 80000
Phone: (720) 354-8105 Fax: (720) 354-8105
www.SampleWebsite.com Sample@Email.com

Authority Air Designs, LLC.
6608 W. 95th Place
Westminster, CO 80021-6422
Phone: (720) 354-8105 Fax: (720) 254-8105
www.AuthorityAir.com Joe@AuthorityAir.com

Scale: 1/8" = 1'0"

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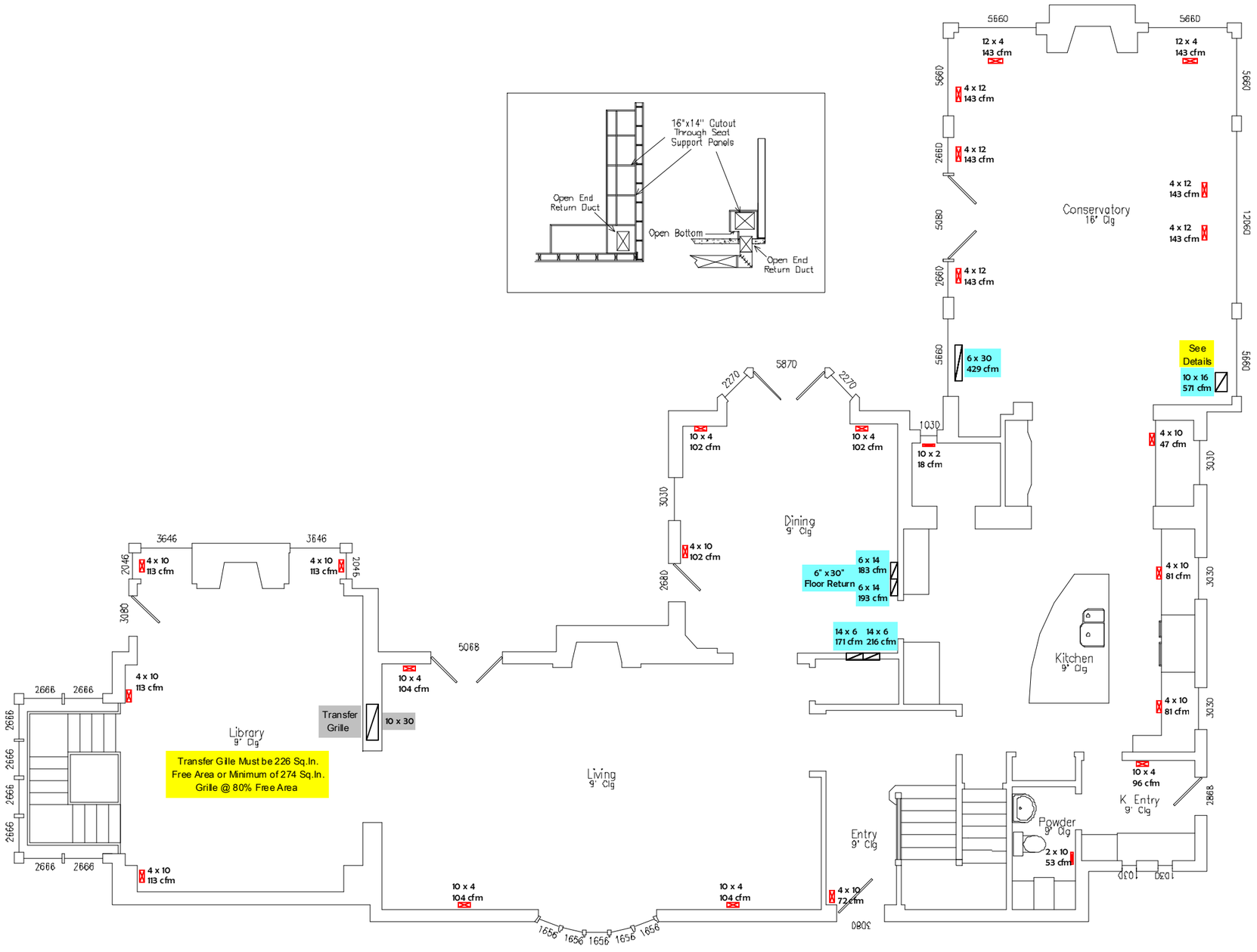
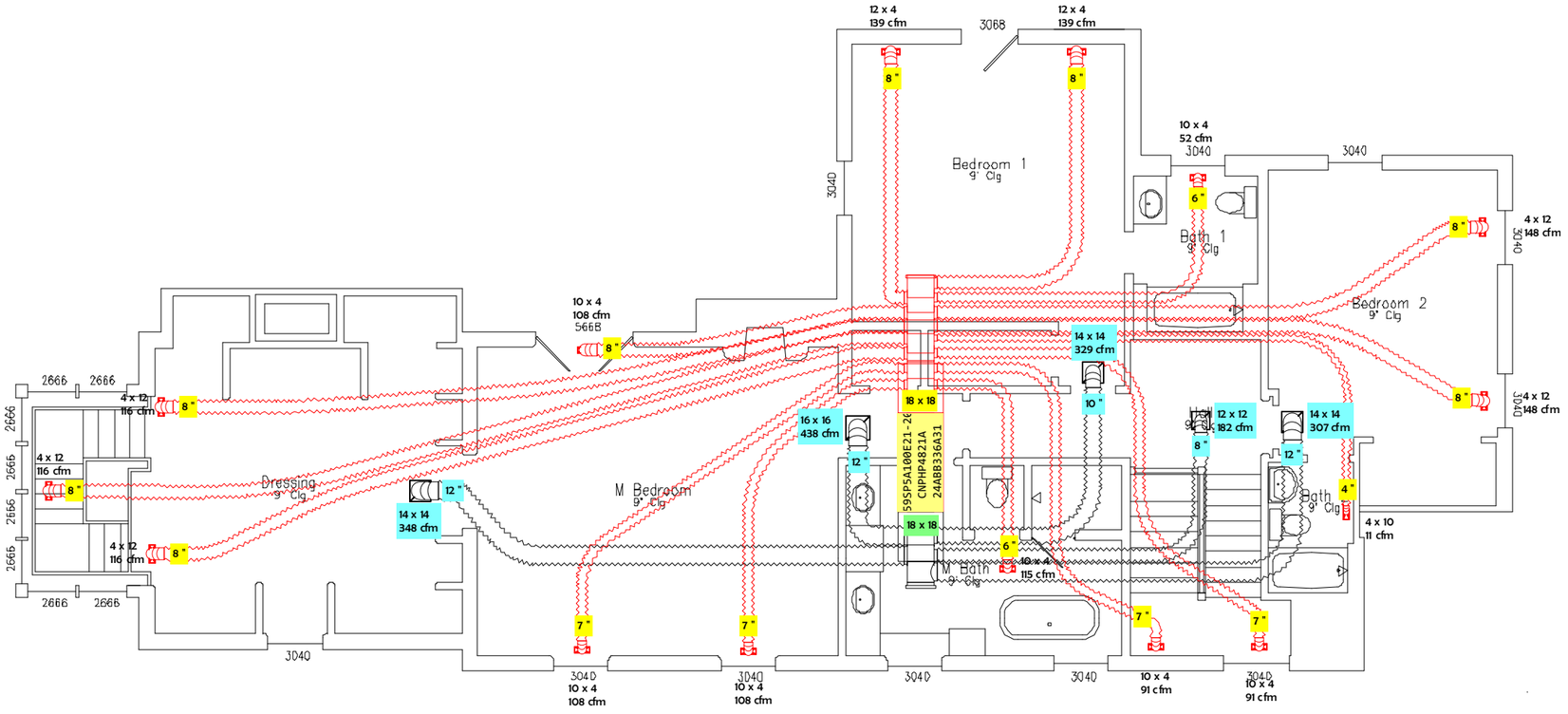
Main Floor



Job #: Sample Address **Performed by Joe Colburn for:** Sample Two Sample Address Denver, CO 80000 Phone: (720) 354-8105 Fax: (720) 354-8105 www.SampleWebsite.com Sample@Email.com	**Authority Air Designs, LLC.** 6608 W. 95th Place Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 www.AuthorityAir.com Joe@AuthorityAir.com	Scale: 1/8" = 1'0" Page 2 Uponor System Design Software 12.1.04 RSU09203 2013-Jan-02 16:45:53 ...Documents\Downloads\Sample 2.rup

Upper Floor



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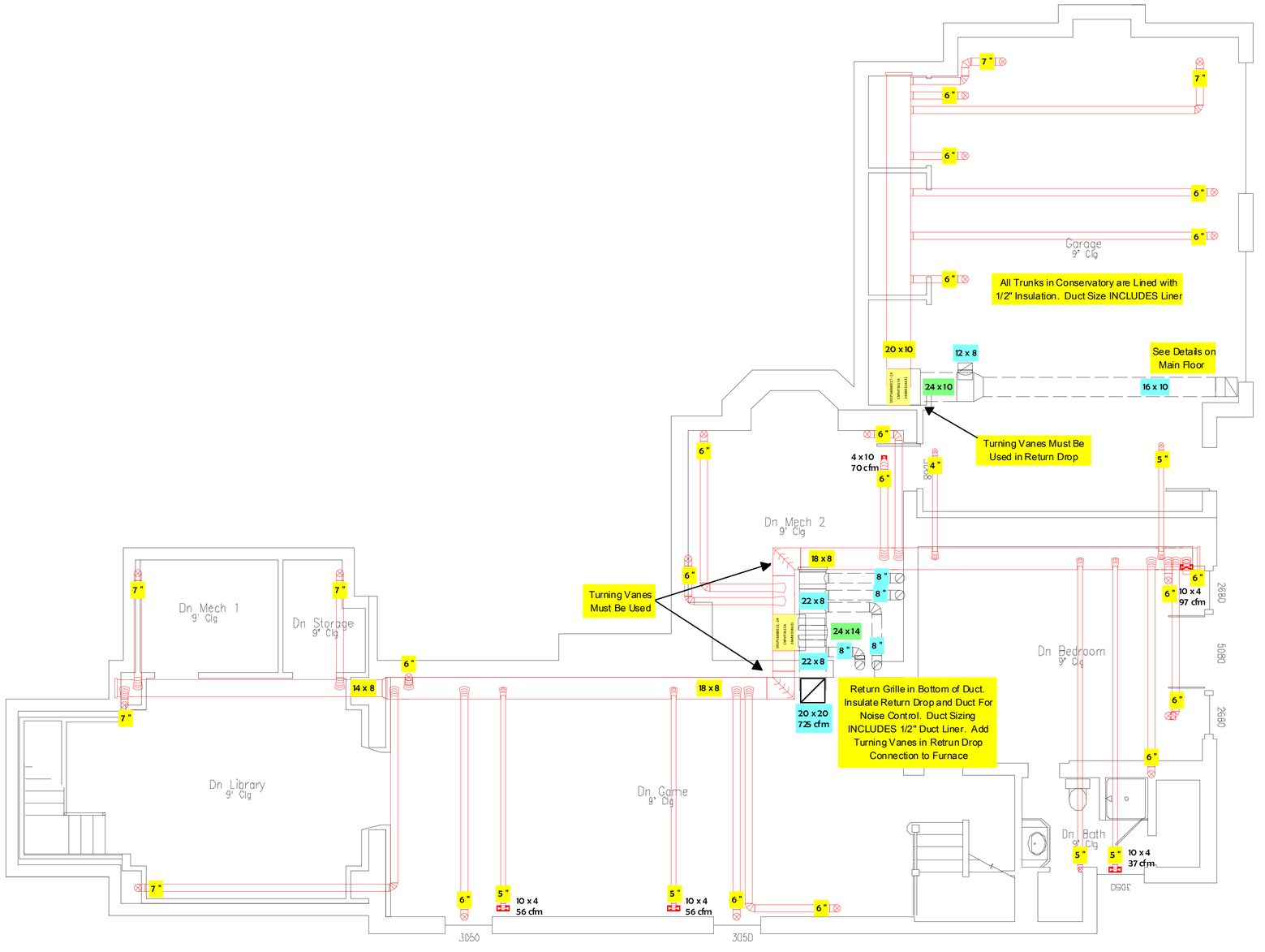
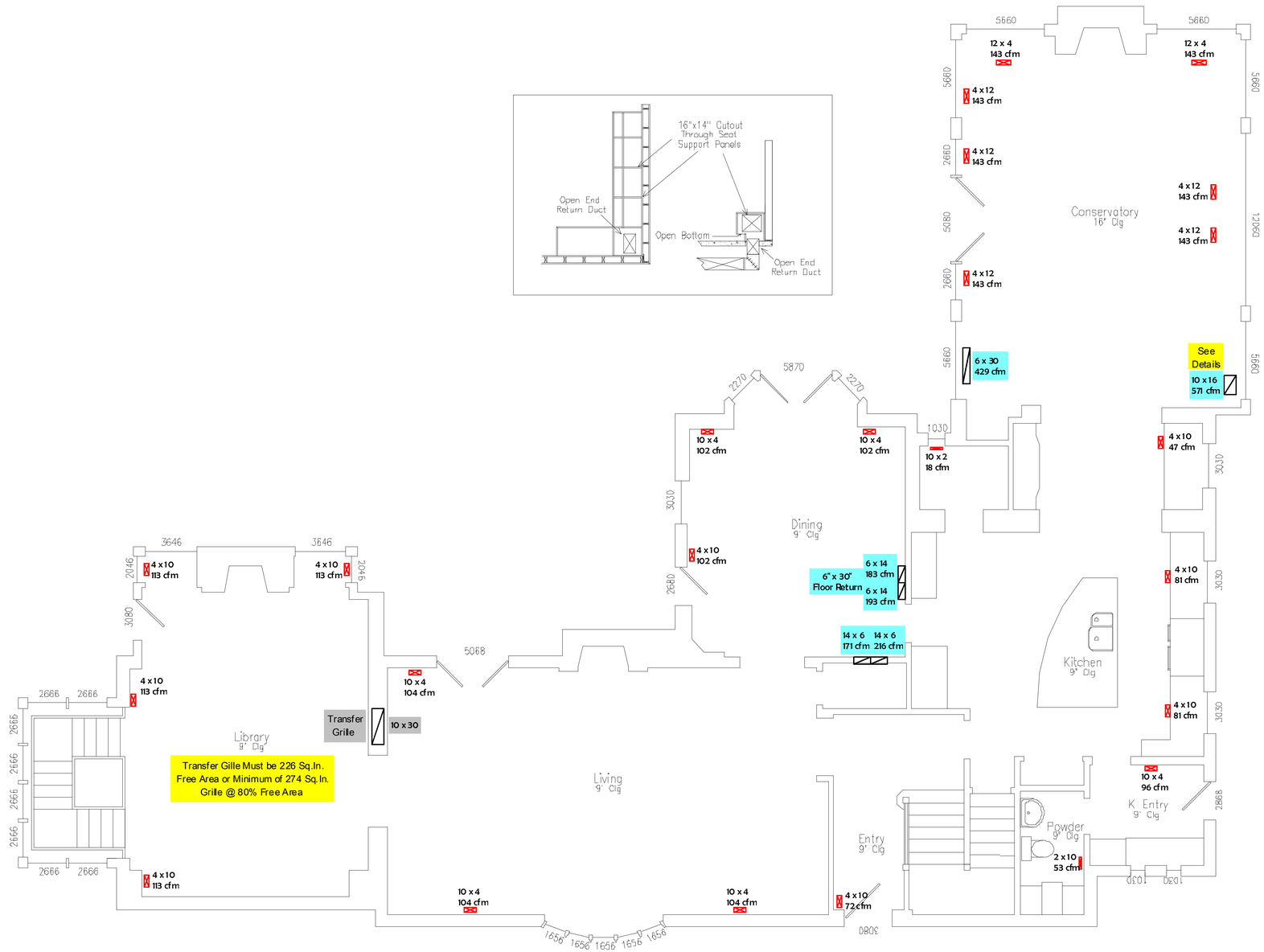
Basement



Job #: Sample Address **Performed by Joe Colburn for:** Sample Two Sample Address Denver, CO 80000 Phone: (720) 354-8105 Fax: (720) 354-8105 www.SampleWebsite.com Sample@Email.com	**Authority Air Designs, LLC.** 6608 W. 95th Place Westminster, CO 80021-6422 Phone: (720) 354-8105 Fax: (720) 254-8105 www.AuthorityAir.com Joe@AuthorityAir.com	Scale: 1/4" = 1'0" Page 1 Uponor System Design Software 12.1.04 RSU/0320 3 2013-Jan-02 16:46:31 ...Documents\Downloads\Sample 2.rup

Main Floor



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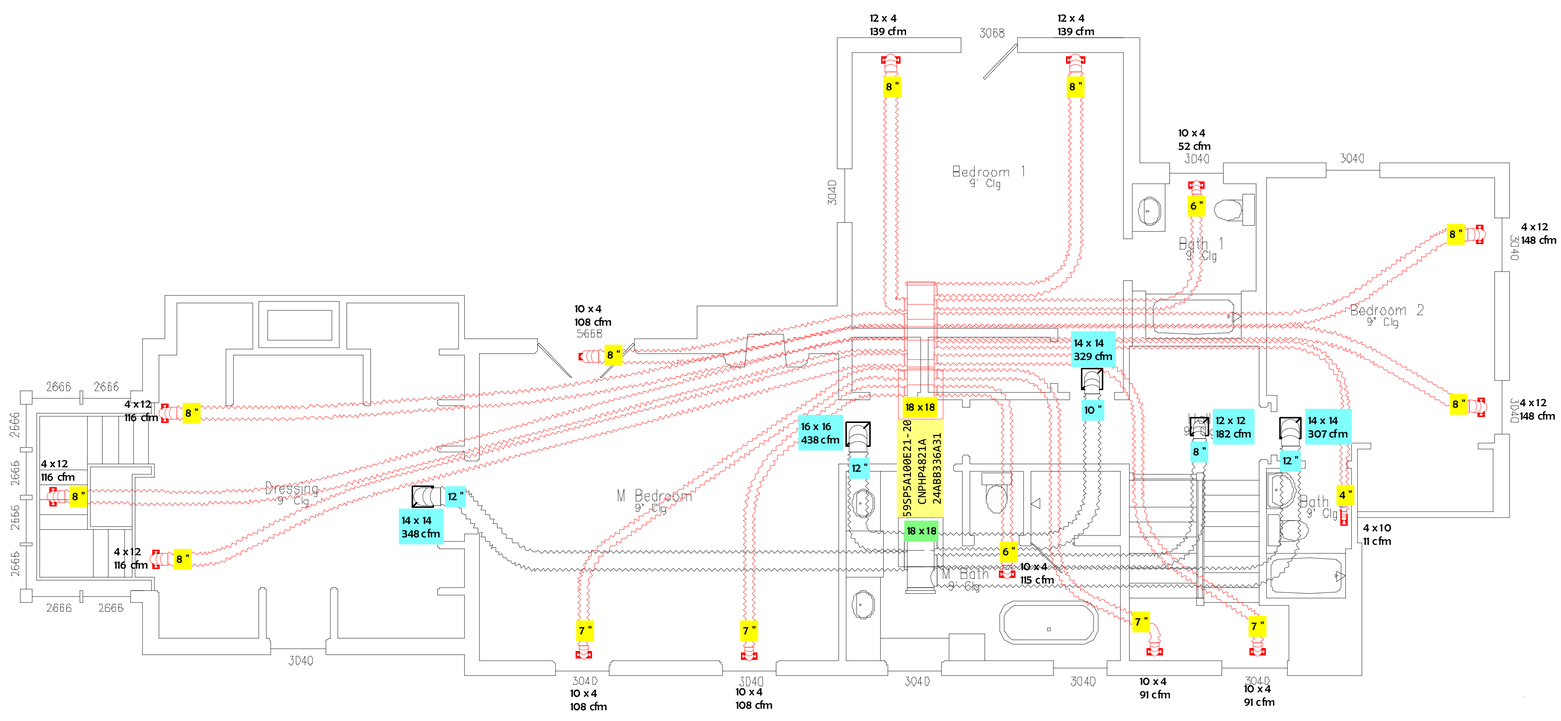
Upper Floor



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