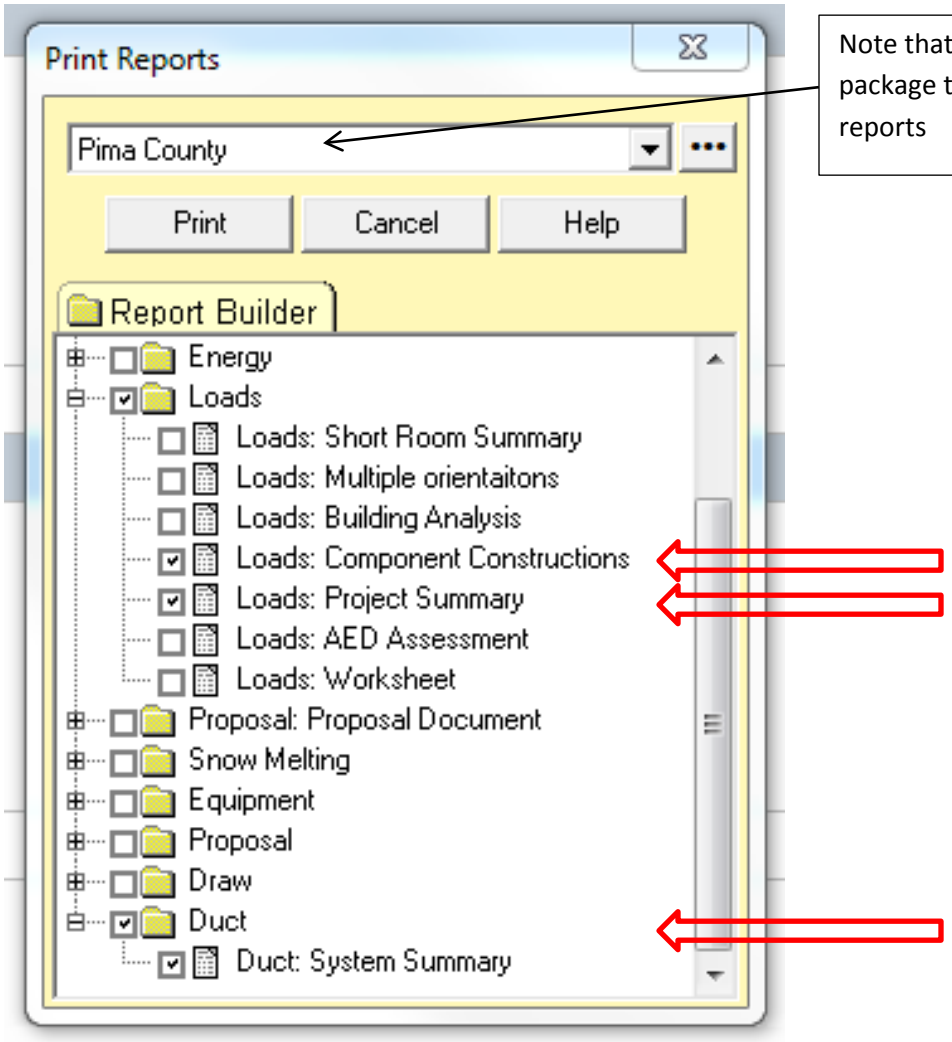
Submit ONLY the following:

- ☐ **The Selected Equipment Make and Model,**
- ☐ **The extended ratings for the selected equipment (This is *not* the AHRI sheet. Sample extended ratings are provided at the end of this handout),**
- ☐ **ONLY the following reports:**



Note that users can define a report package that is just for Pima County reports

wrightsoft

Component Constructions
Entire House
PIMA COUNTY DEVELOPMENT SERVICES

Job:
Date: Nov 28, 2012
By:

Project Information

For:

Design Conditions

Location:
Tucson International AP, AZ, US
Elevation: 2556 ft
Latitude: 32°N

32 +/- 2 degrees
104 +/- 2 degrees

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	34	104
Daily range (°F)	-	25 (M)
Wet bulb (°F)	-	66
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	34	29
Relative humidity (%)	50	50
Moisture difference (gr/lb)	30.3	-25.9

Infiltration:
Method: Simplified
Construction quality: Tight
Fireplaces: 0

New Construction: Tight or Semi Tight
Replacement: Average, Semi-Loose, Loose

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btu		
Walls								
12C-0sw: Frm wall, stucco ext, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm	n	180	0.091	13.0	3.06	550	2.98	536
	e	225	0.091	13.0	3.06	688	2.98	670
	s	189	0.091	13.0	3.06	578	2.98	562
	w	213	0.091	13.0	3.06	651	2.98	634
	all	807	0.091	13.0	3.06	2467	2.98	2401
Partitions								
(none)								
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk	n	24	0.570	0	19.2	460	27.8	668
	s	36	0.570	0	19.2	689	33.5	1208
	w	12	0.570	0	19.2	230	69.9	839
	all	72	0.570	0	19.2	1379	37.7	2715
Doors								
11D0: Door, wd sc type	n	21	0.390	0	13.1	275	14.7	309
Ceilings								
18A-38ad: Rf/clg ceiling, asphalt shingles roof mat, frm cons, 1/2" gypsum board int fnsh, 12" thkns, r-38 ceil ins		625	0.029	38.0	0.97	609	0.96	602
Floors								
22A-cpl: Bg floor, light dry soil, on grade depth, carpet flr fnsh		100	0.989	0	33.2	3323	0	0

New Construction: Confirm construction matches plans

Replacement: Check basic construction type on Assessors record; confirm reasonable construction types, R, U and SHGC

Project Summary
Entire House
PIMA COUNTY DEVELOPMENT SERVICES

Job:
Date: Nov 28, 2012
By:

Project Information

For:

Notes:

Design Information

Weather: Tucson International AP, AZ, US

Winter Design Conditions

Outside db	34	°F
Inside db	68	°F
Design TD	34	°F

Summer Design Conditions

Outside db	104	°F
Inside db	75	
Design TD	29	
Daily range	M	
Relative humidity	50	
Moisture difference	-26	

Must be 1.00. Go to 'Options' in top menu, then uncheck 'Adjust Load for AHRI Standard Rating'

Heating Summary

	717	Btuh
	0	Btuh
	0	Btuh
	0	Btuh
	0	Btuh
	717	Btuh

Area of home:
New construction matches plans
Replacement = +/- 10% of Assessors record

Sensible Cooling Equipment Load

Structure	6323	
Ducts	0	
Central vent (0 cfm)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	1.00	
Equipment sensible load	6866	Btuh

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	0

	Heating	Cooling
Area (ft²)	625	625
Volume (ft³)	5625	5625
Air changes/hour	0.21	0.11
Equiv. AVF (cfm)	20	10

Latent Cooling Equipment Load Sizing

Structure	-166	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Equipment latent load	0	Btuh
Equipment total load	6866	Btuh
Req. total capacity at 0.70 SHR	0.8	ton

Heating Equipment Summary

Make		
Trade		
Model		
AHRI ref		
Efficiency		
Heating in		
Heating o		
Temperature rise	0	°F
Actual air flow	315	cfm
Air flow factor	0.036	cfm/Btuh
Static pressure		
Space thermosta		

Compare this number to selected equipment extended ratings for 105.

Equipment capacity shall be within +/- 6,000 Btuh of this number

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	315	cfm
Air flow factor	0.050	cfm/Btuh
ssure	0	in H2O
sible heat ratio	1.00	

This section MAY be based on AHRI, not extended conditions. Still need to check the extended ratings.

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

Duct System Summary
Entire House
PIMA COUNTY DEVELOPMENT SERVICES

Job:
Date: Nov 28, 2012
By:

Project Information

For:

	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	315 cfm	315 cfm
Total effective length (TEL)	0 ft	

+/- 10% of value on plans

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
Room1	c 2031	91	101	0	0	0x0	ShMt	0	0	
Room1-A	c 2031	91	101	0	0	0x0	ShMt	0	0	
Room2	h 1011	62	50	0	0	0x0	ShMt	0	0	
Room3	h 1250	70	62	0	0	0x0	ShMt	0	0	

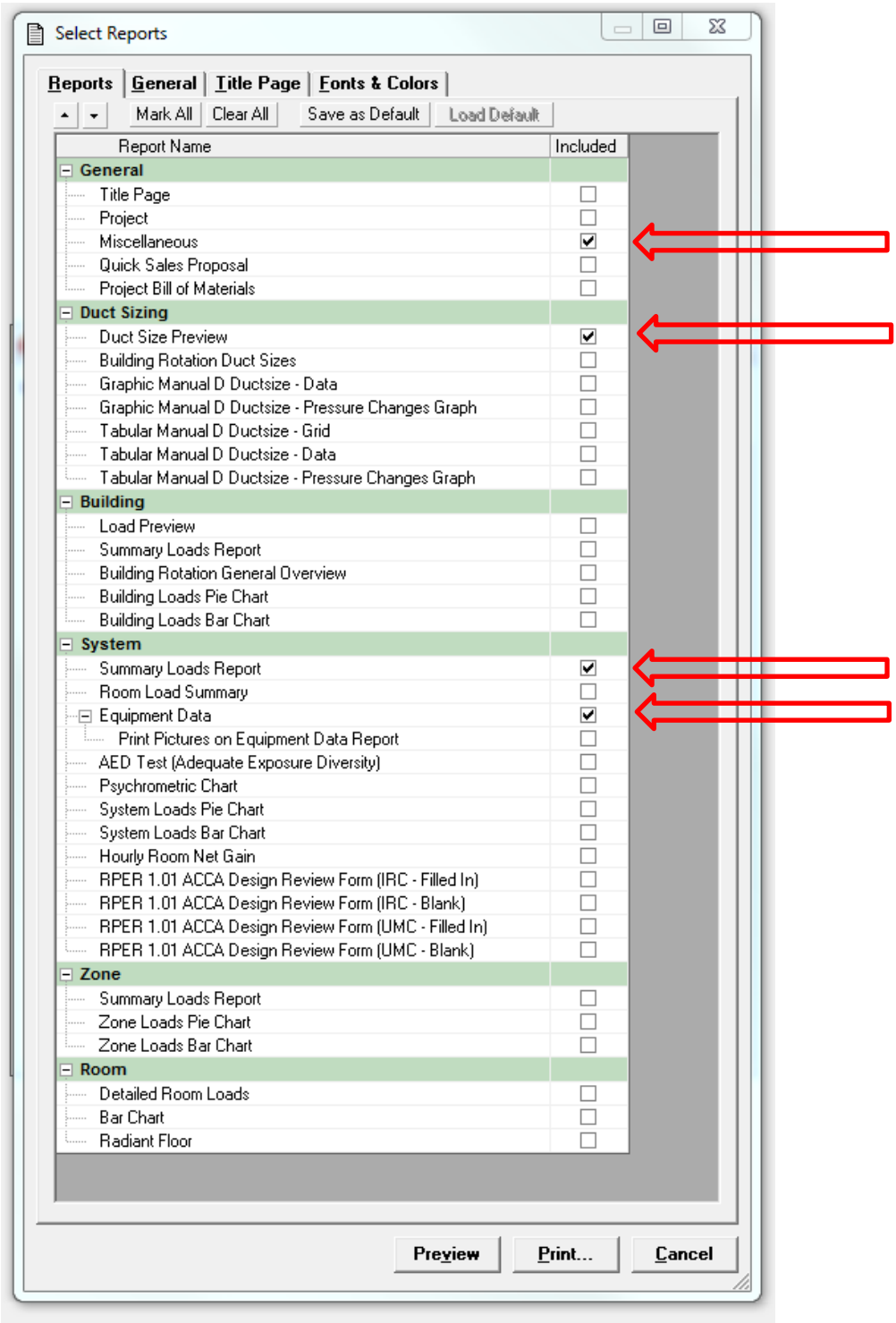
Return Branch Detail Table

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	0x0	315	315	0	0	0	0	0x 0		ShMt	

Elite Rhvac Report Set Up for Permit Submittal

Submit ONLY the following:

- ☐ **The Selected Equipment Make and Model,**
- ☐ **The extended ratings for the selected equipment (This is *not* the AHRI sheet. Sample extended ratings are provided at the end of this handout),**
- ☐ **ONLY the following reports:**



Miscellaneous Report

32 +/- 2 degrees
104 +/- 2 degrees

System 1 Main Floor Input Data	Outdoor Dry Bulb	Outdoor Wet Bulb	Outdoor Rel.Hum	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	32	29.82	80%	n/a	72	n/a
Summer:	104	66	13%	50%	75	-26.74

Duct Sizing Inputs

	Main Trunk		Runouts	
Calculate:	Yes		Yes	
Use Schedule:	No		No	
Roughness Factor:	0.00300		0.01000	
Pressure Drop:	0.1000	in.wg./100 ft.	0.1000	in.wg./100 ft.
Minimum Velocity:	650	ft./min	450	ft./min
Maximum Velocity:	900	ft./min	750	ft./min
Minimum Height:	0	in.	0	in.
Maximum Height:	0	in.	0	in.

Outside Air Data

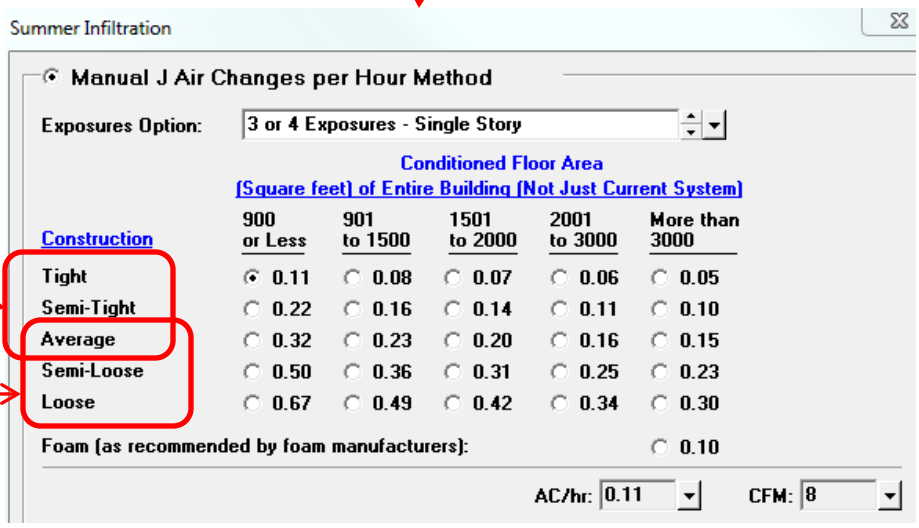
	Winter		Summer	
Infiltration Specified:	1.050	AC/hr	0.550	AC/hr
	78	CFM	41	CFM
Infiltration Actual:	1.050	AC/hr	0.550	AC/hr
Above Grade Volume:	X 4,440	Cu.ft.	X 4,440	Cu.ft.
	4,662	Cu.ft./hr	2,442	Cu.ft./hr
	X 0.0167		X 0.0167	
Total Building Infiltration:	78	CFM	41	CFM
Total Building Ventilation:	0	CFM	0	CFM

---System 1---

Infiltration & Ventilation Sensible Gain Multiplier: 29.06 = (1.10 X 0.911 X 29.00 Summer Temp. Difference)
Infiltration & Ventilation Latent Gain Multiplier: -16.56 = (0.68 X 0.911 X -26.74 Grains Difference)
Infiltration & Ventilation Sensible Loss Multiplier: 40.08 = (1.10 X 0.911 X 40.00 Winter Temp. Difference)
Winter Infiltration Specified: 1.050 AC/hr (78 CFM)
Summer Infiltration Specified: 0.550 AC/hr (41 CFM)

Duct Load Factor Scenarios for System 1

No.	Type	Description	Location	Attic Ceiling	Duct Leakage	Duct Insulation	Surface Area	From [T]MDD
1	Supply	Main	Attic	16B	0.12	6	150	No
1	Return	Main	Attic	16B	0.24	6	56	No



New Construction

Replacement

Duct Size Preview

Room or Duct Name	Source	Minimum Velocity	Maximum Velocity	Rough. Factor	Design L/100	SP Loss	Duct Velocity	Duct Length	Htg Flow	Clg Flow	Act. Flow	Duct Size
System 1												
Supply Runouts												
Zone 1												
1-Living Room	Built-In	450	750	0	0.1		596.1		103	393	393	1--11
2-Kitchen	Built-In	450	750	0	0.1		459.2		42	160	160	1--8
3-Bedroom	Built-In	450	750	0	0.1		584.8		87	156	156	1--7
Other Ducts in System 1												
Supply Main Trunk	Built-In	650	900	0	0.1		730.2		232	710	710	10x14

Summary	
System 1	
Heating Flow:	232
Cooling Flow:	710

+/- 10% of value on plans

System 1 Main Floor Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
1G-cm-s: Glazing-Double pane with storm, clear, metal frame no break, u-value 0.55, SHGC 0.62	21	462	0	603	603
1C-cb: Glazing-Single pane window with storm, clear, metal frame with break, external shade screen coefficient of 0.25 and 100% coverage, u-value 0.65, SHGC 0.67	42	1,092	0	1,588	1,588
1A-cw-o: Glazing-Single pane, operable window, clear, wood frame, u-value 0.9, SHGC 0.64	4	144	0	183	183
9Bc-sww: Glazing-Skylight, Dome double pane clear plastic, transmittance = 0.87, small curb, wood sash, wood curb, no insulation, plywood shaft, no insulation, with a tilt angle of 30°, u-value 0.88, SHGC 0.52	12	422	0	1,881	1,881
1C-cm: Glazing-Single pane window with storm, clear, metal frame no break, light color drapes with medium weave with 100% coverage, u-value 0.87, SHGC 0.67	24	[illegible]	[illegible]	835	835
11F: Door-Wood - Solid Core With Metal Storm	21	235	0	206	206
12C-2sw: Wall-Frame, R-13 insulation in 2 x 4 stud cavity, R-2 board insulation, siding finish, wood studs	312	1,011	0	720	720
12B-2sw: Wall-Frame, R-11 insulation in 2 x 4 stud cavity, R-2 board insulation, siding finish, wood studs	96	[illegible]	[illegible]	[illegible]	252
12E-2sw: Wall-Frame, R-19 insulation in 2 x 6 stud cavity, R-2 board insulation, siding finish, wood studs	312	[illegible]	[illegible]	[illegible]	477
16A-38: Roof/Ceiling-Under Attic with Insulation on Attic Floor (also use for Knee Walls and Partition Ceilings), Unvented Attic, No Radiant Barrier, Any Roofing Material, Any Roof Color, R-38 insulation	318	[illegible]	[illegible]	[illegible]	653
18B-38: Roof/Ceiling-Roof Joists Between Roof Deck and Ceiling or Foam Encapsulated Roof Joists, White or Light Color Asphalt Shingle, Any Wood Shake, Dark or Medium Color Tile, Slate or Concrete, Light or Unpainted Metal, Light or Silver Membrane, Light Tar and Gravel, R-38 blanket or loose fill	225	[illegible]	[illegible]	[illegible]	170
18C-38: Roof/Ceiling-Roof Joists Between Roof Deck and Ceiling or Foam Encapsulated Roof Joists, White or Light Color Tile, Slate or Concrete, White Metal, White Membrane, R-38 blanket or loose fill	180	209	0	115	115
22A-pl: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, light dry soil	40	1,582	0	0	0
22A-pl-t: Floor-Slab on grade, No edge insulation, no insulation below floor, tile covering, passive, light dry soil	64	2,532	0	0	0
Subtotals for structure:		10,233	0	7,683	7,683
People:	5		1,000	1,150	2,150
Equipment:			[illegible]	1,500	2,300
Lighting:				0	0
Ductwork:			[illegible]	2,630	2,488
Infiltration: Winter CFM: 78, Summer CFM: 41			[illegible]	1,183	509
Ventilation: Winter CFM: 0, Summer CFM: 0			0	0	0
AED Excursion:		0	0	82	82
System 1 Main Floor Load Totals:		16,243	984	14,228	15,212

New Construction:
Confirm construction matches plans

Replacement:
Check basic construction type on Assessors record; confirm reasonable construction types, R, U and SHGC

Area of home:
New construction matches plans
Replacement = +/- 10% of Assessors record

Check Figures

Supply CFM:	710	CFM Per Square ft.:	1.279
Square ft. of Room Area:	555	Square ft. Per Ton:	438

System 1 Main Floor Summary Loads (cont'd)

Check Figures

Volume (ft³) of Cond. Space: 4,440

System Loads

Total Heating Required Including Ventilation Air:	16,243	Btuh	16.243	MBH
Total Sensible Gain:	14,228	Btuh	94	%
Total Latent Gain:	984	Btuh	6	%
Total Cooling Required Including Ventilation Air:	15,212	Btuh	1.27	Tons (Based On Sensible + Latent)

Notes

Rhvac is an ACCA approved Manual J and Manual D computer program.
Calculations are performed per ACCA Manual J 8th Edition, Version 2, and ACCA Manual D.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads according to the manufacturer's performance data at your design conditions.

Compare this number to selected equipment extended ratings for 105.

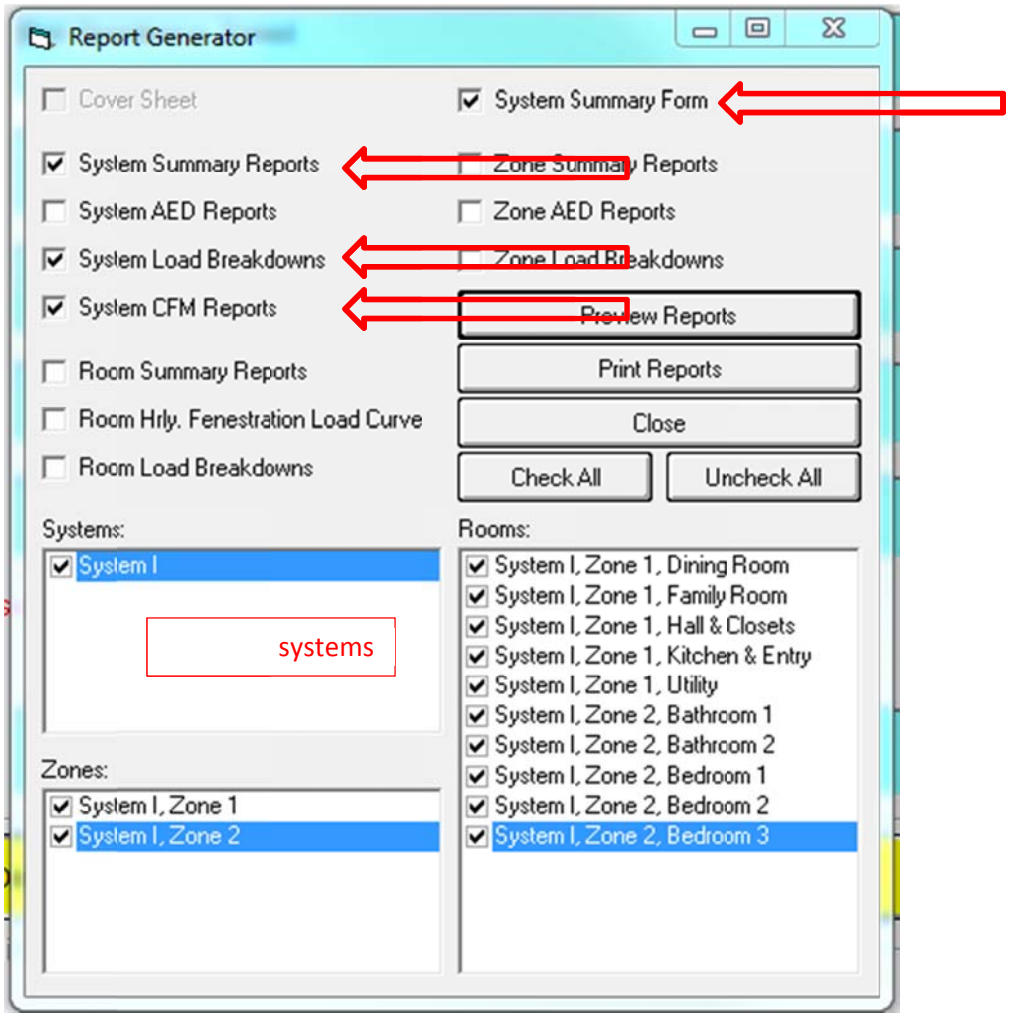
Equipment capacity shall be within +/- 6,000 Btuh of this number

Adtek Report Set Up for Permit Submittal

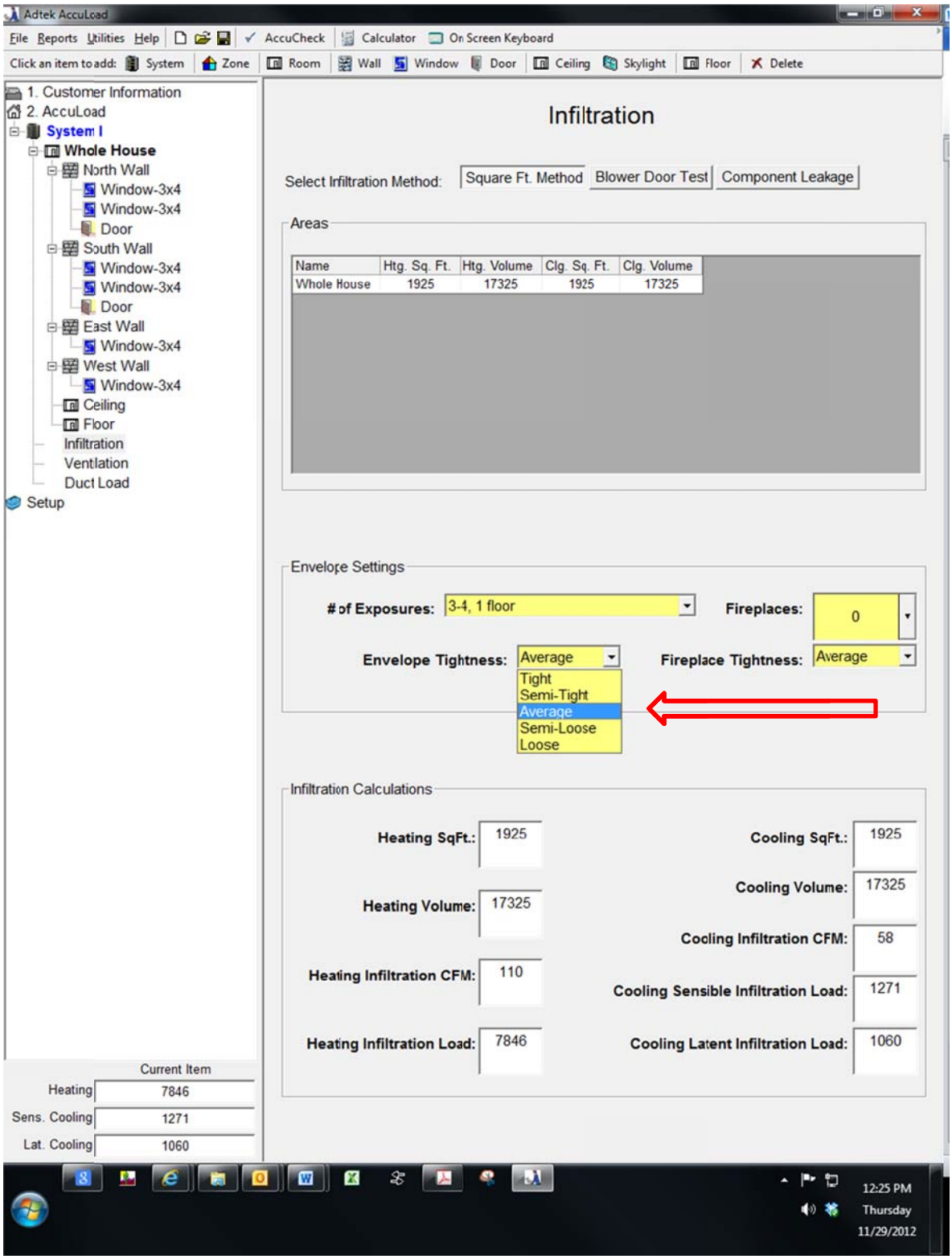
Submit ONLY the following:

- ☐ **The Selected Equipment Make and Model,**
- ☐ **The extended ratings for the selected equipment (This is *not* the AHRI sheet. Sample extended ratings are provided at the end of this handout),**
- ☐ **Provide the infiltration selected in the permit application description, and (See next page)**

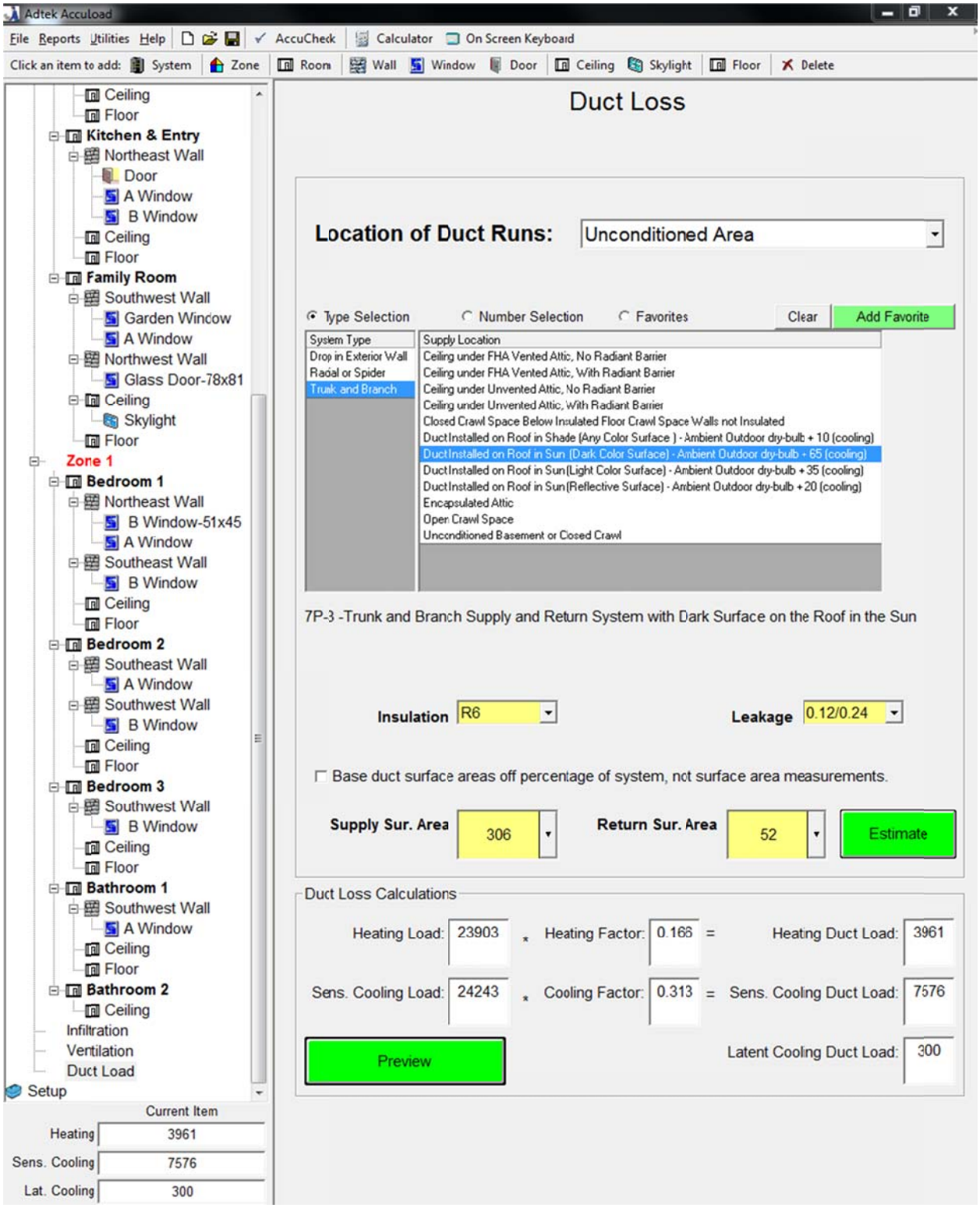
- ☐ **ONLY the following reports:**



Provide the selected infiltration information in your permit application:



If Duct Load is high ask for screen shot of Duct Load screen:



Adtek Software Co

105 S Main St - Toluca, Ill 61369

815-452-2345 - sales@adteksoft.com

Sales Consultant:

Job#: Report Template

Date: 10/30/2006

Area of home:
New construction matches plans
Replacement = +/- 10% of
Assessors record

System I (Average Load Procedure)

32 +/- 2 degrees
104 +/- 2 degrees

Design Conditions

Location:	Tucson AP, Arizona		Elevation:	2641 ft	Daily Range:	High
Input Data:	Outdoor Dry Bulb	Indoor Dry Bulb	Latitude:	32° N	Design Grains:	-30
Summer:	104	75	Heated Area	1288 Sq.Ft.		
Winter:	32	70	Cooled Area	1288 Sq.Ft.		

Heat/Loss Summary (July Heat Load Calculations)

	Gross Area	Loss	Sensible Gain	Latent Gain
Walls	1494	2320	1259	0
Windows	230.4375	6800	8365	[illegible]
Doors	42	958	908	
Ceilings	1462	1413	2230	
Skylights	32	1264	5775	
Floors	164	2137	0	
Room Internal Loads		0	4520	1000
Blower Load			1707	0
Hot Water Piping Load		0	0	0
Winter Humidification Load		0	0	0
Infiltration		1189	454	-290
Ventilation		923	616	-347
Duct Loss/Gain EHLF=0 ESGF=0		0	0	0
AED Excursion		n/a	2299	n/a
Subtotal		17004	28133	363

Compare this number to selected equipment extended ratings for 105.

Equipment capacity shall be within +/- 6,000 Btuh of this number

Total Heating	17004	Btuh
Total Cooling	28496	Btuh

Approved ACCA MJ8 Calculations

*Calculations are based on the ACCA Manual J 8th Edition and are approved by ACCA. All computed calculations are estimates based on building use, weather data, and inputted values such as R-Values, window types, duct loss, etc. Equipment selection should meet both the latent and sensible gain as well as building heat loss.

This application has glass areas that produce relatively large cooling loads for part of the day. Variable air volume devices may be required to overcome spikes in solar load for one or more rooms. A zoned system may be required, or some rooms may require zone control (provided by individual, motorized, thermostatically controlled dampers).

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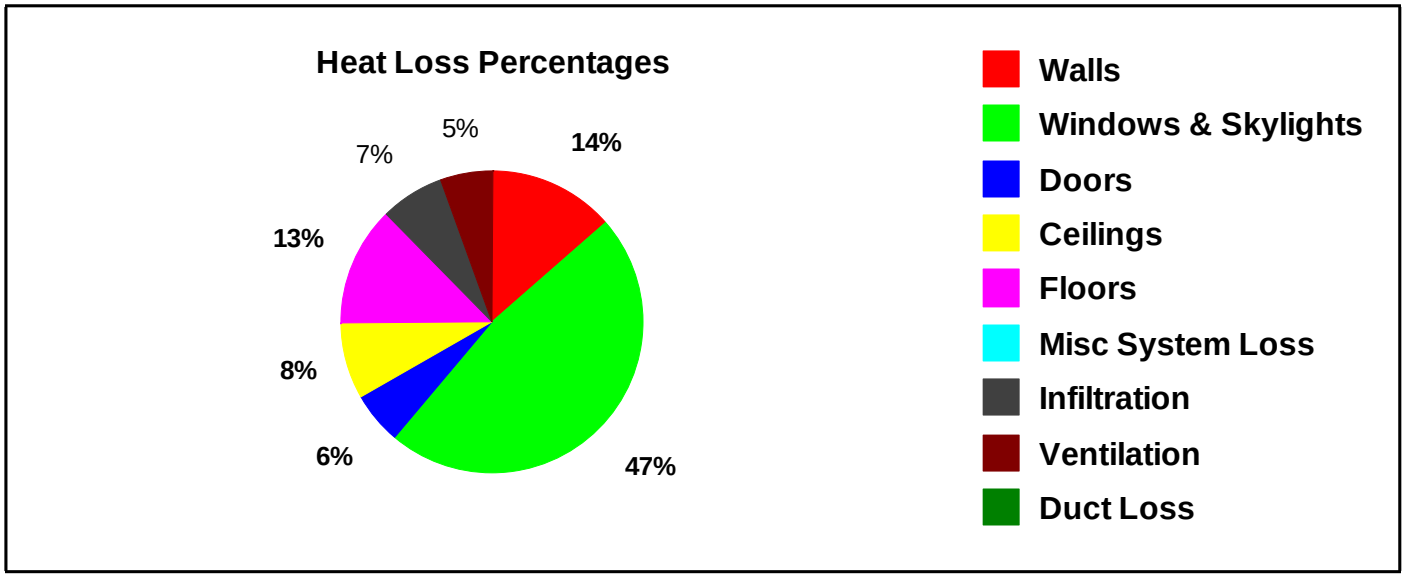
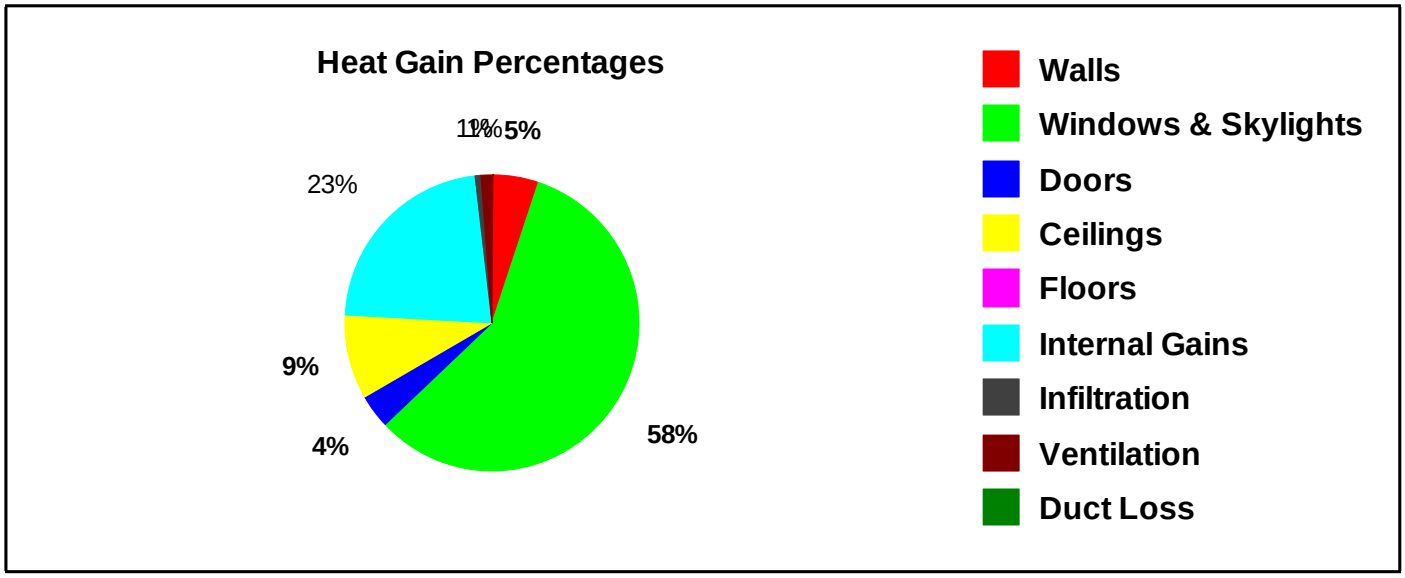
Job#: Report Template
Date: 10/30/2006

System I Load Chart





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815-452-2345 - sales@adteksoft.com

Sales Consultant:
Job#: Report Template
Date: 10/30/2006

System I Breakdown

Item Name	U-Value /SHGC	Net Area	Htg. HTM.	Clg. HTM	Sens. Htg.	Sens. Clg.	Lat. Clg.	Total Clg.
Construction Type								
System I					0	1707	0	1707
Zone 1					0			0
Bathroom 1					0			0
Ceiling	0	234	0.988	1.56	231	365	0	365
	16|B|38							
Floor	0.343	6	13.034	0	78	0	0	0
	Concrete Slab-On-Grade Floor|NA|Passive|Horizontal Board - 4ft with Vertical Edge Cover|R-10 board|NA|NA|Heavy Dry or Light Wet							
Southwest Wall	0.05	45.56	1.9	1.03	87	47	0	47
	Alternative Construction|Structural Foam Panel|NA|NA|Expanded Polystyrene Monolith - 6.5 inches|NA|NA|Brick Veneer|Above Grade							
A Window	0.64/0.65	8.44	24.32	17.19	205	145	0	145
	Clear|2 Pane|Normal Window							
Bathroom 2					0	0	0	0
Ceiling	0	35	0.988	1.57	35	55	0	55
	16|B|38							
Bedroom 1					0	700	0	700
Ceiling	0	234	0.988	1.56	231	365	0	365
	16|B|38							
Floor	0.343	31	13.034	0	404	0	0	0
	Concrete Slab-On-Grade Floor|NA|Passive|Horizontal Board - 4ft with Vertical Edge Cover|R-10 board|NA|NA|Heavy Dry or Light Wet							
Southeast Wall	0.05	101.06	1.9	1.03	192	104	0	104

New Construction: Confirm construction matches plans

Replacement: Check basic construction type on Assessors record; confirm reasonable construction types, R, U and SHGC

Codes can be looked up in the Manual J hard copy

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105 S Main St - Toluca, Ill 61369
815-452-2345 - sales@adteksoft.com

Sales Consultant:
Job#: Report Template
Date: 10/30/2006

System I CFM

Duct sizes and velocities based on settings selected in the setup screen.

*Duct sizes calculated using this CFM.

Item Name	Return Velocity	RA Duct Size	Supply Velocity	SA Duct Size	Winter Calculated CFM	Summer Calculated CFM	Winter System CFM	Summer System CFM
System I	576	30 x 10	675	32 x 8	309	1174	1200	* 1200
Zone 1	530	16 x 8	606	14 x 8	101	* 471	391	289
Bathroom 1	468	1-14" Run	563	16 x 8	12	* 55	48	34
Bathroom 2	468	0-14" Run	563	16 x 8	1	* 3	3	2
Bedroom 1	468	1-14" Run	563	16 x 8	44	* 189	171	116
Bedroom 2	468	1-14" Run	563	16 x 8	29	* 151	111	93
Bedroom 3	468	1-14" Run	563	16 x 8	15	* 73	58	45
Zone 3	585	30 x 10	686	32 x 8	208	* 1218	809	749
Dining Room	468	1-14" Run	563	16 x 8	54	* 174	211	107
Family Room	468	2-14" Runs	563	16 x 8	104	* 813	405	500
Hall & Closets	468	1-14" Run	563	16 x 8	4	* 10	16	6
Kitchen & Entry	468	1-14" Run	563	16 x 8	34	* 165	133	102
Main Living Area	468	1-14" Run	563	16 x 8	11	* 55	43	34

+/- 10% of value on plans

Speedsheet Report Set Up for Permit Submittal

The ACCA Speedsheet can only be used for homes that meet the abridged version criteria as stated on the "Read Me" tab of the speedsheet, including:

– Single zone

– Glass area <15% of Floor area

– Dark Shingle Roof

– Ducts in conditioned space

Few homes in Pima County meet all of the criteria.

If the home meets the abridged version criteria, submit ONLY the following:

- ☐ **The Selected Equipment Make and Model,**
- ☐ **The extended ratings for the selected equipment (This is *not* the AHRI sheet. Sample extended ratings are provided at the end of this handout),**
- ☐ **ONLY the following spreadsheet tabs shall be printed**
  - **J1 Form**
  - **Glass**
  - **Walls**
  - **Ceilings**
  - **Floors**

J1 Form tab

FORM J1$_{AE}$ • ABRIDGED VERSION of MANUAL J, 8TH EDITIOI

Project		Design State & City	Arizona	Tuscon Ap			
Indoor Design Heating db	70	@ Outdoor (Winter) 99% db	32	32 +/- 2 degrees.	HTD	38	
Indoor Design Cooling db	75	@ Outdoor (Summer) 1% db	104	104 +/- 2 degrees	CTD	29	
Indoor Design Cooling RH	50%	Grains Difference	-30		nge	High	
Latitude	32	Elevation	2641		ACF	0.910	Block Load

		Glass Direction	Construction Detail	Heating HTM	Cooling HTM	Net Area	Heating BTUH	Cooling BTUH
6A	Windows & Glass Doors	N	8Bc-4, Flat Clear, Double Pane, Wood	35.72	13.00	40	1429	520
		E/W	8Bc-4, Flat Clear, Double Pane, Wood	35.72	43.00	20	714	860
		E/W	8Bc-4, Flat Clear, Double Pane, Wood	35.72	43.00	40	1429	1720
		S	8Bc-4, Flat Clear, Double Pane, Wood	35.72	21.00	60	2143	1260
6B	Skylights							
7	Wood & Metal Doors	a						
		b						
		c						
8	Above Grade Walls	a	13C-2oc, OC Block, R2 Board, R13 Cavity, Any finish, Car port	2.85	1.65	350	998	578
		b	13C-2oc, OC Block, R2 Board, R13 Cavity, Any finish, Car port	2.85	1.65	400	1140	660
		c	13C-2oc, OC Block, R2 Board, R13 Cavity, Any finish, Car port	2.85	1.65	350	998	578
		d	13C-2oc, OC Block, R2 Board, R13 Cavity, Any finish, Car port	2.85	1.65	400	1140	660
		e						
	Partition Walls	f						
		g						
9	Below Grade Walls	a						
		b						
10	Ceilings	a	16B-19; FHA Vented Attic; R19; Asphalt Shingles; Dark	1.86	2.70	1400	2607	3773
		b						
		c						
	Partition Ceilings							
11	Passive Floors							
	Exposed Floors	c						
	Slab (Perimeter Ft.)	d	22B-10ph; Slab floor; R10; heavy moist	18.28		150	2742	
	Basement Floor	e						
	Partition Floors	f						
		g						

For New Construction: Confirm location matches plans or RESCheck
For Equip Replacement, confirm that reasonable window locations

New construction: Semi-tight, or Tight
Equip replacement: Average, semi-loose. or loose

New construction: Area matches plans
Equip replacement: area matches Assessors record

12	Infiltration	Envelope Leakage	Average	Heated & Cooled Floor Area = Sq. Ft.	1400	Above Grade = Cu. Ft.		
		No. of Fireplaces						
13	Internal Gains		Number of Bedrooms		3	Occupants	4	920
			Appliance - 1200 BTUH					1200
14	Sub Totals						15339	12728
15	Duct Loss & Gain		7E-T&B SA in Attic, RA Riser in Floor to Ceiling Chase, Perimeter Supply Outlets				2672	3639
			R-Value = 6	Leakage Class .12/.24	0.174 ☑	0.286 ☑		
			Installed Square Feet of Surface or Default = 1		Supply 1	Return 1		
16	Ventilation	Combustion Air From Conditioned Space	☐ Furnace	☐ Water Heater	None			
19	Blower Heat Gain		Manufacturer's performance data has no blower heat discount					1707
20	Total Sensible Loss or Gain						18011	18074

Compare this number to the selected equipment extended ratings for 105
Equipment capacity shall be within +/- 6,000 Btuh of this number

Latent Infiltration load for cooling				
Latent load for occupants				800
Latent load for plants	Small	Medium	Large	
Latent load for duct in unconditioned space				
Latent ventilation load for cooling				
Total Latent Gain				800

Enter Company Phone Numbers Here
Enter Website or Email Address Here

Glass Tab

Table 2A/3A -- Construction Numbers 1 through 7 & 10 -- Vertical Glass Heat Loss	Heating	Cooling HTM			
Enter Construction Number, Glass Type, # Panes, Sash Type, Frame Type, Shading	U-Value	N	NE/NW	E/W	SE/SW
8Bc-4, Flat Clear, Double Pane, Wood	0.940	13	30	43	37

Table 2A/3A -- Construction Numbers 8 & 9 -- Skylight Heat Loss	Heating	Cooling HTM			
Enter Construction Number, Glass Type, # Panes, Sash Type	U-Value	N	NE/NW	E/W	SE/SW

For New Construction: Confirm window spec and location matches plans or RESCheck
For Equip Replacement, confirm that reasonable window types are used

Walls Tab

Table 4A -- Constructions 12, 13 & 15 -- Above Grade Walls	U-Value	Group	Shaded Wall
Construction Number; Wall Type; Board R-Value; Cavity R-Value, Exterior Finish			
13C-2oc, OC Block, R2 Board, R13 Cavity, Any finish, Car port	0.075	I	No
			No
			No
			No
			No
			No
			No
			No
			No
			No
Table 4A -- Constructions 12 & 13 -- Partitions	U-Value	PTDH	PTDC
Construction Number; Wall Type; Board R-Value; Cavity R-Value, Finish			
Table 4A -- Construction Number 15 -- Below Grade Walls	U-Value		
Construction Number; Wall Type; Board R-Value; Cavity R-Value, Floor Depth			

For New Construction: Confirm wall construction matches plans or RESCheck
For Equip Replacement, confirm that resonable wall types are used

Ceilings Tab

Table 4A -- Construction Numbers 16, 17 & 18 -- Ceilings	U-Value	CLTD	
Construction Number; Type of Ceiling; R-Value; Roof Material and Roof Color			
16B-19; FHA Vented Attic; R19; Asphalt Shingles; Dark	0.049	55	
Construction Number; R-Value; Partition	U-Value	PTDH	PTDC

For New Construction: Confirm that roof/ ceiling insulation matches plans or RESCheck
For Equip Replacement, confirm that reasonable insulation is used

Floors Tab

Table 4A -- Floors	U-Value	PTDH	PTDC
Construction Number 19 -- Floor Over Enclosed Unconditioned Crawlspace or Basement			
Construction Number 20 -- Floor Over Open Crawlspace or Garage	U-Value		
Construction Numbers 19 & 20, Partition Floors	U-Value	PTDH	PTDC
Construction Number 21, Basement Floor	U-Value		
Construction Number 22, Concrete Slab-On-Grade	F-Value		
22B-10ph; Slab floor; R10; heavy moist	0.481		

PERFORMANCE DATA

574D--A36

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
CFM/BF	EWB °F (°C)	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW
1050/0.04	57 (13.8)	35.66	35.66	2.38	32.84	32.84	2.71	30.06	30.06	3.07	27.32	27.32	3.47	24.62	24.62	3.91	21.93	21.93	4.39
	62 (16.6)	37.06	32.25	2.39	33.82	30.46	2.71	30.65	28.68	3.07	27.56	26.88	3.47	24.62	24.62	3.91	21.93	21.93	4.39
	63* (17.2)	37.87	26.52	2.39	34.55	24.93	2.71	31.28	23.37	3.08	28.09	21.82	3.48	24.95	20.29	3.91	21.88	18.77	4.39
	67 (19.4)	40.79	27.41	2.39	37.23	25.80	2.72	33.74	24.21	3.08	30.32	22.64	3.48	26.96	21.09	3.92	23.65	19.54	4.39
	72 (22.2)	44.91	22.49	2.39	41.02	21.04	2.72	37.19	19.62	3.09	33.45	18.21	3.49	29.78	16.82	3.93	26.16	15.44	4.40
1200/0.04	57 (13.8)	37.24	37.24	2.43	34.27	34.27	2.76	31.33	31.33	3.12	28.44	28.44	3.52	25.58	25.58	3.96	22.76	22.76	4.44
	62 (16.6)	37.97	34.65	2.43	34.64	32.72	2.76	31.35	31.35	3.12	28.43	28.43	3.52	25.58	25.58	3.96	22.75	22.75	4.44
	63* (17.2)	38.73	28.25	2.43	35.29	26.59	2.76	31.91	24.95	3.12	28.60	23.33	3.52	25.37	21.73	3.96	22.21	20.12	4.44
	67 (19.4)	41.71	29.24	2.44	38.02	27.56	2.76	34.40	25.90	3.13	30.86	24.26	3.53	27.40	22.63	3.97	24.00	21.00	4.44
	72 (22.2)	45.90	23.65	2.44	41.86	22.16	2.77	37.91	20.68	3.13	34.05	19.23	3.54	30.26	17.79	3.98	26.53	16.36	4.45
1350/0.05	57 (13.8)	38.59	38.59	2.48	35.47	35.47	2.81	32.40	32.40	3.17	29.37	29.37	3.57	26.39	26.39	4.01	23.43	23.43	4.49
	62 (16.6)	38.77	36.79	2.48	35.46	35.46	2.81	32.39	32.39	3.17	29.37	29.37	3.57	26.38	26.38	4.01	23.43	23.43	4.49
	63* (17.2)	39.40	29.91	2.48	35.85	28.18	2.81	32.38	26.47	3.17	28.99	24.78	3.57	25.69	23.09	4.01	22.46	21.40	4.49
	67 (19.4)	42.41	31.01	2.48	38.61	29.26	2.81	34.89	27.52	3.18	31.27	25.81	3.58	27.72	24.10	4.02	24.26	22.39	4.49
	72 (22.2)	46.65	24.77	2.49	42.51	23.22	2.82	38.45	21.70	3.18	34.49	20.20	3.58	30.61	18.72	4.03	26.80	17.24	4.50

See Legend and Notes on Page 19.

Latent cooling = 5,270 / 2 = 2,600

Sensible cooling = 23,330
Plus 1/2 the latent = 2,600
total capacity = 25,830

13.5 SEER RATING

574D--A

Sample Extended Rating

Sample Extended Rating

LENNOX

Design Conditions			
Indoor Entering Wet Bulb Temperature (F):	: 63	Outdoor Dry Bulb Temperature (F):	: 105
Indoor Air Volume (CFM):	: 1200	Indoor Entering Dry Bulb Temperature (F):	: 75
Cooling capacity calculation results:			
Total cooling capacity (kBTUH) :	32.17	Sensible to Total Ratio (S/T):	0.8
Sensible cooling capacity (kBTUH) :	25.73	Latent cooling capacity (kBTUH):	6.44
Heating mode outdoor temperature:	0		
Heating capacity calculation results:			

XC16-036-05 - C33-36B/C-6F + SL280UH090V36B - Cooling Performance (Minimum Capacity)

Note: information based upon published performance data dated - Monday, July 29, 2013

Entering Wet Bulb Temperature	Total Air Volume	75° F					85° F					95° F					105° F				
		Total Cool Cap.	Comp Motor Input	Sensible to Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp Motor Input	Sensible to Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp Motor Input	Sensible to Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp Motor Input	Sensible to Total Ratio (S/T) Dry Bulb		
	cfm	kBtuh	kW	75° F	80° F	85° F	kBtuh	kW	75° F	80° F	85° F	kBtuh	kW	75° F	80° F	85° F	kBtuh	kW	75° F	80° F	85° F
59° F	700	24.8	1.19	.90	1.00	1.00	23.8	1.37	.92	1.00	1.00	22.8	1.59	.95	1.00	1.00	21.6	1.84	.97	1.00	1.00
	785	25.6	1.18	.93	1.00	1.00	24.6	1.36	.95	1.00	1.00	23.6	1.58	.98	1.00	1.00	22.4	1.83	1.00	1.00	1.00
	875	26.6	1.17	.96	1.00	1.00	25.6	1.35	.98	1.00	1.00	24.4	1.57	1.00	1.00	1.00	23.2	1.82	1.00	1.00	1.00
63° F	700	25.8	1.17	.74	.87	.99	24.6	1.36	.75	.89	1.00	23.4	1.58	.77	.91	1.00	22.0	1.83	.79	.94	1.00
	785	26.4	1.17	.76	.90	1.00	25.2	1.36	.77	.92	1.00	24.0	1.57	.79	.94	1.00	22.6	1.83	.81	.97	1.00
	875	27.2	1.16	.78	.93	1.00	25.8	1.35	.80	.95	1.00	24.6	1.57	.82	.98	1.00	23.2	1.82	.84	1.00	1.00
67° F	700	27.0	1.16	.59	.71	.83	26.0	1.35	.60	.73	.85	24.6	1.57	.61	.74	.87	23.2	1.82	.62	.76	.90
	785	27.8	1.16	.60	.73	.86	26.6	1.34	.61	.75	.88	25.4	1.56	.62	.77	.91	24.0	1.81	.63	.79	.94
	875	28.6	1.15	.62	.76	.89	27.2	1.33	.63	.77	.92	26.0	1.56	.64	.79	.94	24.4	1.81	.65	.82	.97
71° F	700	28.2	1.16	.45	.57	.69	27.2	1.34	.46	.58	.70	25.8	1.56	.46	.59	.72	24.4	1.81	.47	.60	.74
	785	29.2	1.15	.46	.59	.71	27.8	1.33	.46	.60	.72	26.6	1.55	.47	.61	.74	25.2	1.81	.47	.62	.76
	875	30.0	1.14	.46	.60	.73	28.6	1.33	.47	.61	.75	27.2	1.55	.47	.62	.77	25.8	1.80	.48	.64	.79

XC16-036-05 - C33-36B/C-6F + SL280UH090V36B - Cooling Performance (Maximum Capacity)

Note: information based upon published performance data dated - Monday, July 29, 2013

Entering Wet Bulb Temperature	Total Air Volume	85° F					95° F					105° F					115° F					125° F				
		Total Cool Cap	Comp Motor Input	Sensible to Total Ratio (S/T) Dry Bulb			Total Cool Cap	Comp Motor Input	Sensible to Total Ratio (S/T) Dry Bulb			Total Cool Cap	Comp Motor Input	Sensible to Total Ratio (S/T) Dry Bulb			Total Cool Cap	Comp Motor Input	Sensible to Total Ratio (S/T) Dry Bulb			Total Cool Cap	Comp Motor Input	Sensible to Total Ratio (S/T) Dry Bulb		
	cfm	kBtuh	kW	75° F	80° F	85° F	kBtuh	kW	75° F	80° F	85° F	kBtuh	kW	75° F	80° F	85° F	kBtuh	kW	75° F	80° F	85° F	kBtuh	kW	75° F	80° F	85° F
59° F	1055	33.6	2.06	.92	1.00	1.00	32.4	2.33	.95	1.00	1.00	31.0	2.63	.97	1.00	1.00	29.2	2.98	1.00	1.00	1.00	27.4	3.39	1.00	1.00	1.00
	1250	35.4	2.07	.97	1.00	1.00	34.0	2.34	.99	1.00	1.00	32.4	2.64	1.00	1.00	1.00	30.6	2.99	1.00	1.00	1.00	28.8	3.39	1.00	1.00	1.00
	1390	36.4	2.08	1.00	1.00	1.00	35.0	2.34	1.00	1.00	1.00	33.4	2.64	1.00	1.00	1.00	31.6	3.00	1.00	1.00	1.00	29.4	3.39	1.00	1.00	1.00
63° F	1055	34.8	2.06	.76	.89	1.00	33.2	2.33	.77	.91	1.00	31.6	2.64	.79	.94	1.00	29.6	2.99	.81	.97	1.00	27.4	3.39	.84	1.00	1.00
	1250	36.0	2.07	.79	.94	1.00	34.4	2.34	.81	.97	1.00	32.6	2.64	.83	.99	1.00	30.8	2.99	.86	1.00	1.00	28.6	3.39	.89	1.00	1.00
	1390	36.8	2.08	.82	.97	1.00	35.2	2.34	.84	.99	1.00	33.4	2.65	.86	1.00	1.00	31.4	2.99	.89	1.00	1.00	29.4	3.39	.93	1.00	1.00
67° F	1055	36.6	2.08	.60	.73	.86	34.8	2.34	.61	.75	.88	33.2	2.64	.62	.76	.91	31.2	2.99	.64	.79	.94	28.8	3.39	.65	.82	.97
	1250	37.8	2.09	.63	.77	.91	36.0	2.35	.64	.79	.94	34.2	2.65	.65	.81	.96	32.0	3.00	.67	.84	.99	29.6	3.40	.69	.87	1.00
	1390	38.5	2.09	.64	.80	.95	36.8	2.35	.65	.81	.97	34.8	2.66	.67	.84	.99	32.6	3.00	.69	.87	1.00	30.0	3.40	.71	.91	1.00
71° F	1055	38.0	2.09	.46	.59	.71	36.4	2.35	.46	.60	.72	34.6	2.65	.47	.61	.74	32.6	3.00	.48	.62	.76	30.2	3.40	.48	.64	.79
	1250	39.5	2.10	.48	.61	.75	37.8	2.36	.48	.62	.77	35.8	2.66	.49	.64	.79	33.6	3.01	.49	.66	.81	31.2	3.41	.50	.68	.85
	1390	40.5	2.11	.48	.63	.77	38.5	2.37	.49	.64	.79	36.6	2.67	.50	.66	.82	34.2	3.02	.50	.68	.85	31.6	3.41	.52	.70	.89

Disclaimer: Due to Lennox's ongoing commitment to quality, specifications, ratings and performance data are subject to change with notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and service agency. The capacities listed in the performance data are gross capacities and do not include the effects of blower motor heat.

Sizing based on Maximum (Second Stage)

Sensible capacity = 31.6 x .79 = 24.9

Latent capacity = 31.6 - 24.9 = 6.7 / 2 = 3.3

Sensible + 1/2 Latent = 28.2