

W/CONT

10' equestrian & pedestrian trail see L. 725, F. 23

CLARKSVILLE PIKE
(common use)

N 89°

30'

Water Well

50" E

648.47'

asphalt drive

#14125

210'±

30.00'
27.10'

3.156± Ac.

150'

140'

747.95'

equestrian & pedestrian trail along common road

25' 35" W

S 73°

24' 00" E
347.25'

N 22°

Approved ~~Survey~~ ~~System~~ Plan
Howard County Health Department

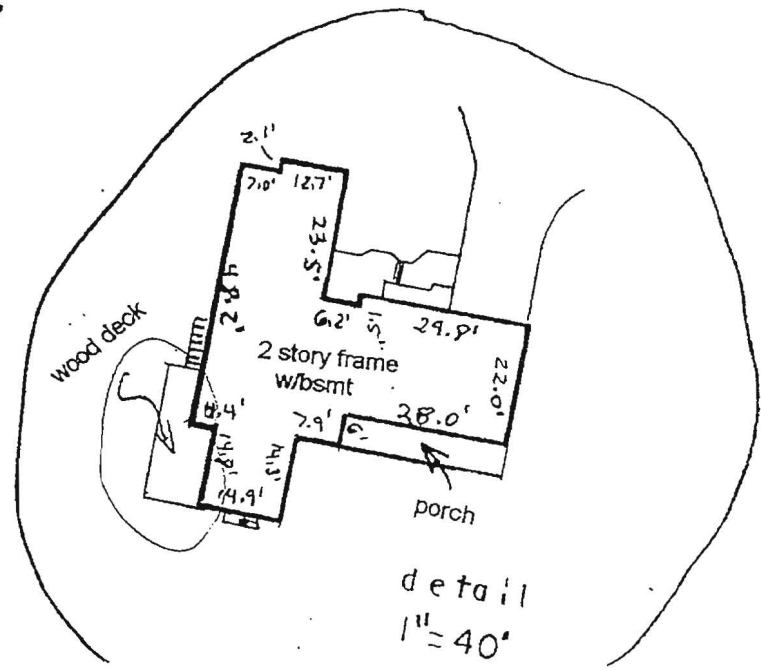
Approved for
Horizontal loop
as shown.

Signature

8/17/15
Date

P.O.B.

14125 CLARKSVILLE PIKE
3.145 acres, metes and bounds description
liber 885, folio 217,
Howard County, Maryland.



SITE INSPECTION SHEET

OWNER: _____ PHONE #: _____

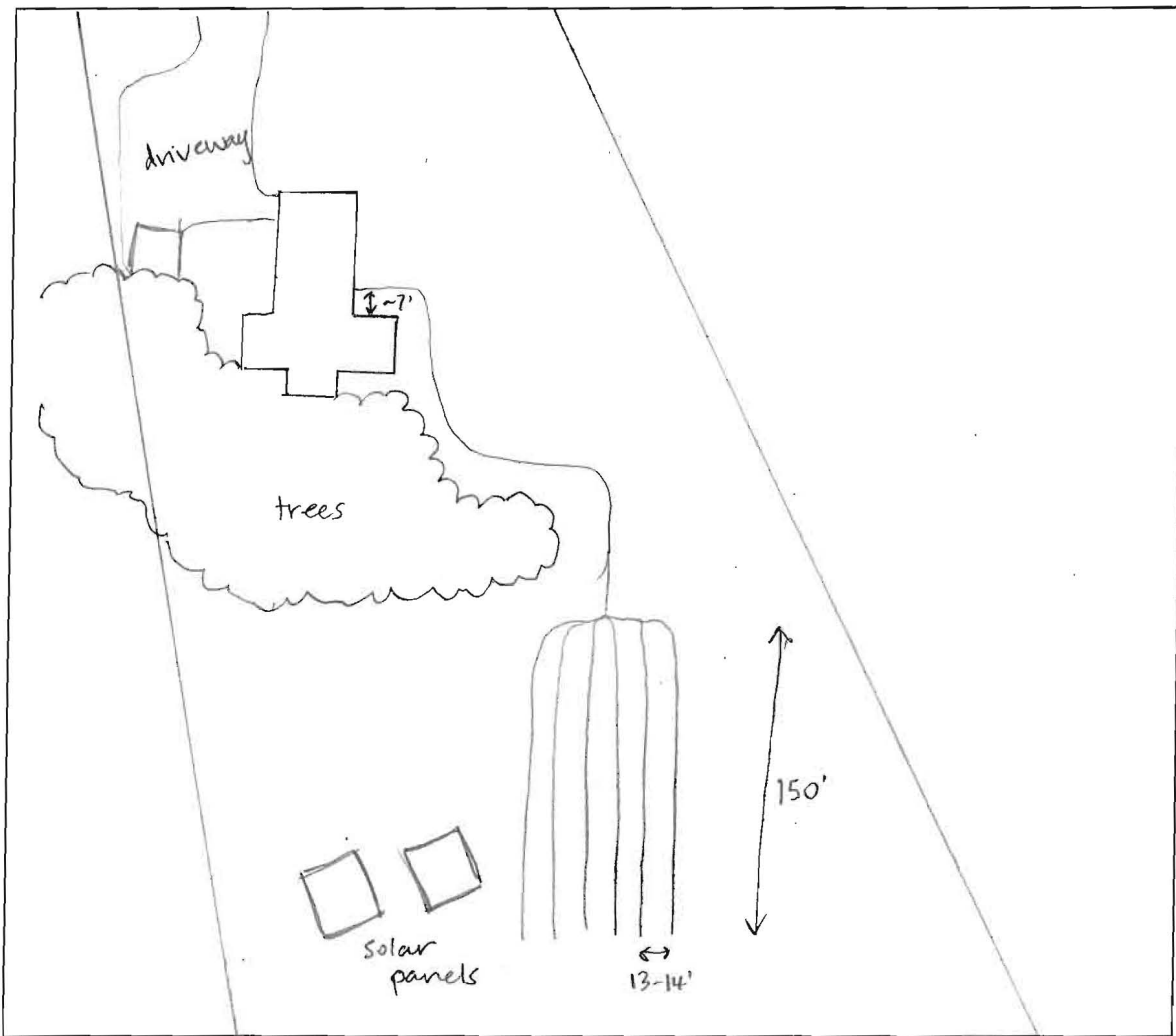
ADDRESS: 14125 Clarksville Pike CONTRACTOR: _____

_____ WELL TAG #: _____

SUBDIVISION: _____ LOT: _____ COUNTY #: _____

PROPOSAL: Install horizontal loop

LOCATION DIAGRAM



COMMENTS: Ground loop on site working on inside mechanics. Loop already installed - 150' trenches with 800' 3/4" pipe (coiled), 5' deep. 2" pipe running to house, ~3.5' deep at house. Inside piping installed 7/17/15; outside work done afterwards, 1-2 weeks ago. Project manager is Jason at 410-836-1706. Everything covered, dirt is fresh.

DATE: 8/11/15 INSPECTOR: Sarah Collins

~~8/12/15~~ Permit issued. meets setbacks to well/spkr. DILP notified.

(-KMW)

DEPARTMENT OF INSPECTIONS, LICENSES & PERMITS 3430 COURT HOUSE DRIVE ELLICOTT CITY, MD 21043 PERMITS (410) 313-2455 INSPECTIONS (410) 313-1850	HOWARD COUNTY RESIDENTIAL HEATING-VENTILATION-AIR CONDITIONING AND REFRIGERATION PERMIT APPLICATION	HVACR PERMIT # <u>M15000730</u> BUILDING PERMIT #
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BUILDING ADDRESS: <u>14125 Clarksville Pike</u> <u>Highland, MD 20777</u> SUBDIVISION: CENSUS TRACT: SECTION: AREA: LOT: <u>P16</u> TAX MAP: <u>0040</u> PARCEL: <u>0455</u> BLOCK: ZONE:	SUITE/APT: OWNERS NAME: <u>Anthony Meoni</u> ADDRESS: <u>14125 Clarksville Pike</u> CITY: <u>Highland</u> STATE: <u>MD</u> ZIP CODE: <u>20777</u> HOME PHONE: <u>240-304-8205</u> WORK PHONE:
PROPERTY ID: MAP COORDINATES: TYPE OF IMPROVEMENTS: USE:	

<table> <tr> <th><u>CHECK ONE</u></th> <th><u>HOW MANY</u></th> </tr> <tr> <td>SINGLE FAMILY DWELLING ☒</td> <td><u>1</u> ZONES</td> </tr> <tr> <td>SINGLE FAMILY TOWNHOUSE ☐</td> <td>___ ZONES</td> </tr> <tr> <td>MULTI-FAMILY / HOTEL/MOTEL ☐</td> <td>___ ROOMS</td> </tr> <tr> <td>ASSISTED LIVING HOMES (16 OR FEWER RESIDENTS) ☐</td> <td>___ ROOMS</td> </tr> </table>	<u>CHECK ONE</u>	<u>HOW MANY</u>	SINGLE FAMILY DWELLING ☒	<u>1</u> ZONES	SINGLE FAMILY TOWNHOUSE ☐	___ ZONES	MULTI-FAMILY / HOTEL/MOTEL ☐	___ ROOMS	ASSISTED LIVING HOMES (16 OR FEWER RESIDENTS) ☐	___ ROOMS	COMPANY NAME: <u>Ground Loop Heating & Air Cond., Inc.</u> LICENSEE NAME: <u>Michael E. Cullum</u> ADDRESS: <u>1701 Whiteford Road</u> CITY: <u>Darlington</u> STATE: <u>MD</u> ZIP CODE: <u>21034</u> PHONE: <u>410-836-1706</u> HVACR LICENSE NO: <u>6539</u>
<u>CHECK ONE</u>	<u>HOW MANY</u>										
SINGLE FAMILY DWELLING ☒	<u>1</u> ZONES										
SINGLE FAMILY TOWNHOUSE ☐	___ ZONES										
MULTI-FAMILY / HOTEL/MOTEL ☐	___ ROOMS										
ASSISTED LIVING HOMES (16 OR FEWER RESIDENTS) ☐	___ ROOMS										

New ☐ Heating and Air Conditioning ☒ Geo Thermal System	☐ Heating System Only ☐ Ductless Mini Splits	☐ Other Work (Describe): ☐ Thru The Wall Systems
Replacement ☐ Heating ☐ Air Conditioning ☐ Heating and Air Conditioning	<u>Water Furnace</u> <u>NVV036 3ton</u> <u>NDZ038 3ton</u>	Additions and Alterations ☐ Heating ☐ Air Conditioning ☐ Heating and Air Conditioning

****Replacement Geo Thermal Systems are not required; However, if a tax credit is being sought a permit is required****

Zones Permit Fee = # of Zones x \$40 = <u>40.00</u> Technology Fee (10% of Permit Fee) = <u>4.00</u> Plus Application Fee <u>\$50.00</u> Total Fees Due = <u>94.00</u>	Rooms Permit Fee = # of Rooms x \$80 = _____ Technology Fee (10% of Permit Fee) = _____ Plus Application Fee \$50 <u>\$50.00</u> Total Fees Due = _____
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I HAVE CAREFULLY EXAMINED AND READ THIS APPLICATION AND KNOW IT IS TRUE AND CORRECT. THE WORK DESCRIBED HEREIN WILL BE PERFORMED BY A STATE HVACR LICENSED PERSON(S), AND ALL WORK WILL BE PERFORMED IN COMPLIANCE WITH APPLICABLE CODES AND STANDARDS OF HOWARD COUNTY THE STATE OF MARYLAND. <u>Michael Cullum</u> SIGNATURE OF LICENSEE <u>Michael Cullum</u> PRINT NAME OF LICENSEE <u>linda @ ground loop . com</u> Email Address	<u>7/15/15</u> DATE RECEIVED <u>well + septic</u> JUL 17 2015	Validation Check Number: <u>22962</u> Cash: _____ Receipt Number: <u>410310</u>
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Make check payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

Word doc: T:\Updated Forms\hvac application
Rev:10.2009

8/17/15 K. A. Hagg
LICENSES & PERMITS
DIVISION

detail
1" = 40'

M15000730



Load Short Form Entire House

Job:
Date: May 15, 2014
By:

Project Information

For: Tony Meoni

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	12	94	Method	Simplified
Inside db (°F)	72	70	Construction quality	Average
Design TD (°F)	60	24	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	27	47		

HEATING EQUIPMENT

Make
Trade
Model
AHRI ref

Efficiency 80 AFUE

Heating input 0 Btuh

Heating output 0 Btuh

Temperature rise 0 °F

Actual air flow 1874 cfm

Air flow factor 0.038 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 1874 cfm

Air flow factor 0.058 cfm/Btuh

Static pressure 0 in H2O

Load sensible heat ratio 0.85

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
1st	1313	34016	19819	1285	1151
2nd	715	15593	12462	589	724
Entire House	2028	49609	32281	1874	1874
Other equip loads		0	0		
Equip. @ 1.00 RSM			32281		
Latent cooling			5741		
TOTALS	2028	49609	38022	1874	1874

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

Project Information

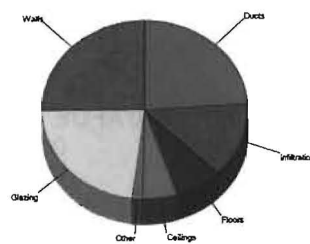
For: Tony Meoni

Design Conditions

Location:		Indoor:		Heating	Cooling
Baltimore, MD, US		Indoor temperature (°F)		72	70
Elevation: 154 ft		Design TD (°F)		60	24
Latitude: 39°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		26.8	47.0
Outdoor:		Heating	Cooling		
Dry bulb (°F)	12	94			
Daily range (°F)	-	19 (M)			
Wet bulb (°F)	-	75			
Wind speed (mph)	15.0	7.5			
		Infiltration:			
		Method	Simplified		
		Construction quality	Average		
		Fireplaces	0		

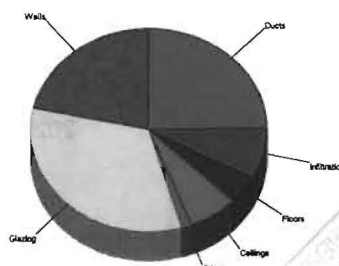
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	5.8	12479	25.2
Glazing	35.0	11394	23.0
Doors	23.3	815	1.6
Ceilings	2.0	2665	5.4
Floors	2.8	3729	7.5
Infiltration	2.7	6681	13.5
Ducts		11845	23.9
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		49609	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	3.2	6971	21.6
Glazing	32.6	10620	32.9
Doors	13.9	488	1.5
Ceilings	1.6	2137	6.6
Floors	1.1	1474	4.6
Infiltration	1.0	2641	8.2
Ducts		7949	24.6
Ventilation		0	0
Internal gains		0	0
Blower		0	0
Adjustments		0	0
Total		32281	100.0



Latent Cooling Load = 5741 Btuh
Overall U-value = 0.106 Btuh/ft²·°F

Data entries checked.

WRIGHTSOFT
JUL 24 2015

Project Information

For: Tony Meoni

Design Conditions

Location:		Indoor:		Heating	Cooling
Baltimore, MD, US		Indoor temperature (°F)		72	70
Elevation: 154 ft		Design TD (°F)		60	24
Latitude: 39°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		26.8	47.0
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	12	94	Method	Simplified	
Daily range (°F)	-	19 (M)	Construction quality	Average	
Wet bulb (°F)	-	75	Fireplaces	0	
Wind speed (mph)	15.0	7.5			

Construction descriptions

	Or	Area ft²	U-value Btu/ft²·°F	Insul R ft²·°F/Btu	Htg HTM Btu/ft²	Loss Btu/h	Clg HTM Btu/ft²	Gain Btu/h
Walls								
12B-0sw: Frm wall, wd ext, 3/8" wood shth, r-11 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm	n	717	0.097	11.0	5.79	4152	3.23	2319
	e	408	0.097	11.0	5.79	2363	3.23	1320
	s	625	0.097	11.0	5.79	3619	3.23	2022
	w	405	0.097	11.0	5.79	2345	3.23	1310
	all	2155	0.097	11.0	5.79	12479	3.23	6971

Partitions (none)

Windows

10B-c: 2 glazing, clr outr, air gas, clad wd frm mat, clr innr, 1/4" gap, 1/4" thk; 6.67 ft head ht	n	35	0.600	0	35.8	1254	15.2	533
	n	4	0.570	0	34.0	136	24.4	97
	e	35	0.600	0	35.8	1254	35.7	1250
	e	4	0.570	0	34.0	136	66.4	266
	s	98	0.600	0	35.8	3510	20.8	2042
	s	88	0.570	0	34.0	2995	35.9	3157
	w	42	0.570	0	34.0	1429	66.4	2788
	all	306	0.570	0	35.0	10714	33.1	10133
1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/4" thk; 6.67 ft head ht	n	20	0.570	0	34.0	681	24.4	487

Doors

11D0: Door, wd sc type	n	35	0.390	0	23.3	815	13.9	488
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Ceilings

16B-28ad: Attic ceiling, asphalt shingles roof mat, r-28 ceil ins, 1/2" gypsum board int fnsh		715	0.034	28.0	2.03	1451	2.01	1440
18A-30ad: Rf/clg ceiling, asphalt shingles roof mat, frm cons, 1/2" gypsum board int fnsh, 8" thkns, r-28 ceil ins		598	0.034	30.0	2.03	1214	1.16	696

Floors

19A-13cswp: Flr floor, frm flr, 10" thkns, hrd wd flr fnsh, r-13 cav ins, tight cowl ovr		1313	0.065	13.0	2.84	3729	1.12	1474
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JUL 24 2015

Project Information

For: Tony Meoni

Design Conditions

Location:		Indoor:		Heating	Cooling
Baltimore, MD, US		Indoor temperature (°F)		72	70
Elevation: 154 ft		Design TD (°F)		60	24
Latitude: 39°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		26.8	47.0
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	12	94	Method		
Daily range (°F)	-	19 (M)	Construction quality		
Wet bulb (°F)	-	75	Simplified		
Wind speed (mph)	15.0	7.5	Average		
			0		

Construction descriptions	Or	Area ft²	U-value Btu/ft²·°F	Insul R ft²·°F/Btu	Htg HTM Btu/ft²	Loss Btu/h	Clg HTM Btu/ft²	Gain Btu/h
Walls								
12B-0sw: Frm wall, wd ext, 3/8" wood shth, r-11 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm	n	437	0.097	11.0	5.79	2531	3.23	1414
	e	240	0.097	11.0	5.79	1390	3.23	776
	s	403	0.097	11.0	5.79	2334	3.23	1304
	w	237	0.097	11.0	5.79	1372	3.23	767
	all	1317	0.097	11.0	5.79	7627	3.23	4260
Partitions								
(none)								
Windows								
10B-c: 2 glazing, clr outr, air gas, clad wd frm mat, clr innr, 1/4" gap, 1/4" thk; 6.67 ft head ht	n	35	0.600	0	35.8	1254	15.2	533
	n	4	0.570	0	34.0	136	24.4	97
	e	35	0.600	0	35.8	1254	35.7	1250
	e	4	0.570	0	34.0	136	66.4	266
	s	98	0.600	0	35.8	3510	20.8	2042
	s	30	0.570	0	34.0	1021	35.9	1076
	w	42	0.570	0	34.0	1429	66.4	2788
	all	248	0.570	0	35.2	8740	32.5	8053
1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/4" thk; 6.67 ft head ht	n	20	0.570	0	34.0	681	24.4	487
Doors								
11D0: Door, wd sc type	n	35	0.390	0	23.3	815	13.9	488
Ceilings								
18A-30ad: Rf/clg ceiling, asphalt shingles roof mat, frm cons, 1/2" gypsum board int fnsh, 8" thkns, r-28 ceil ins		598	0.034	30.0	2.03	1214	1.16	696
Floors								
19A-13cswp: Flr floor, frm flr, 10" thkns, hrd wd flr fnsh, r-13 cav ins, tight cowl ovr		1313	0.065	13.0	2.84	3729	1.12	1474

Project Information

For: Tony Meoni

Design Conditions

Location:		Indoor:		Heating	Cooling
Baltimore, MD, US		Indoor temperature (°F)		72	70
Elevation: 154 ft		Design TD (°F)		60	24
Latitude: 39°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		26.8	47.0
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	12	94	Method		
Daily range (°F)	-	19 (M)	Simplified		
Wet bulb (°F)	-	75	Construction quality		
Wind speed (mph)	15.0	7.5	Fireplaces		
				Average	0

Construction descriptions

Construction descriptions	Or	Area ft²	U-value Btu/h-ft²-°F	Insul R ft²-°F/Btu/h	Htg HTM Btu/h-ft²	Loss Btu/h	Clg HTM Btu/h-ft²	Gain Btu/h
Walls								
12B-0sw: Frm wall, wd ext, 3/8" wood shth, r-11 cav ins, 1/2" gypsum	n	280	0.097	11.0	5.79	1621	3.23	906
board int fnsh, 2"x4" wood frm	e	168	0.097	11.0	5.79	973	3.23	543
	s	222	0.097	11.0	5.79	1286	3.23	718
	w	168	0.097	11.0	5.79	973	3.23	543
	all	838	0.097	11.0	5.79	4853	3.23	2711

Partitions (none)

Windows

1D-c2oc: 2 glazing, clr outr, air gas, clad wd frm mat, clr innr, 1/4" gap, 1/4" thk; 6.67 ft head ht	s	58	0.570	0	34.0	1974	35.9	2081
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Doors (none)

Ceilings

16B-28ad: Attic ceiling, asphalt shingles roof mat, r-28 ceil ins, 1/2" gypsum board int fnsh		715	0.034	28.0	2.03	1451	2.01	1440
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Floors (none)

Project Information

For: Tony Meoni

Notes:

Design Information

Weather: Baltimore, MD, US

Winter Design Conditions

Outside db	12 °F
Inside db	72 °F
Design TD	60 °F

Summer Design Conditions

Outside db	94 °F
Inside db	70 °F
Design TD	24 °F
Daily range	M
Relative humidity	50 %
Moisture difference	47 gr/lb

Heating Summary

Structure	37764 Btuh
Ducts	11845 Btuh
Central vent (0 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	49609 Btuh

Sensible Cooling Equipment Load Sizing

Structure	24332 Btuh
Ducts	7949 Btuh
Central vent (0 cfm)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	32281 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	2028	2028
Volume (ft³)	17537	17537
Air changes/hour	0.35	0.35
Equiv. AVF (cfm)	102	102

Latent Cooling Equipment Load Sizing

Structure	3253 Btuh
Ducts	2488 Btuh
Central vent (0 cfm)	0 Btuh
Equipment latent load	5741 Btuh
Equipment total load	38022 Btuh
Req. total capacity at 0.70 SHR	3.8 ton

Heating Equipment Summary

Make	
Trade	
Model	
AHRI ref	
Efficiency	80 AFUE
Heating input	0 Btuh
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	1874 cfm
Air flow factor	0.038 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	1874 cfm
Air flow factor	0.058 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.85

Bold/italic values have been manually overridden

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

Project Information

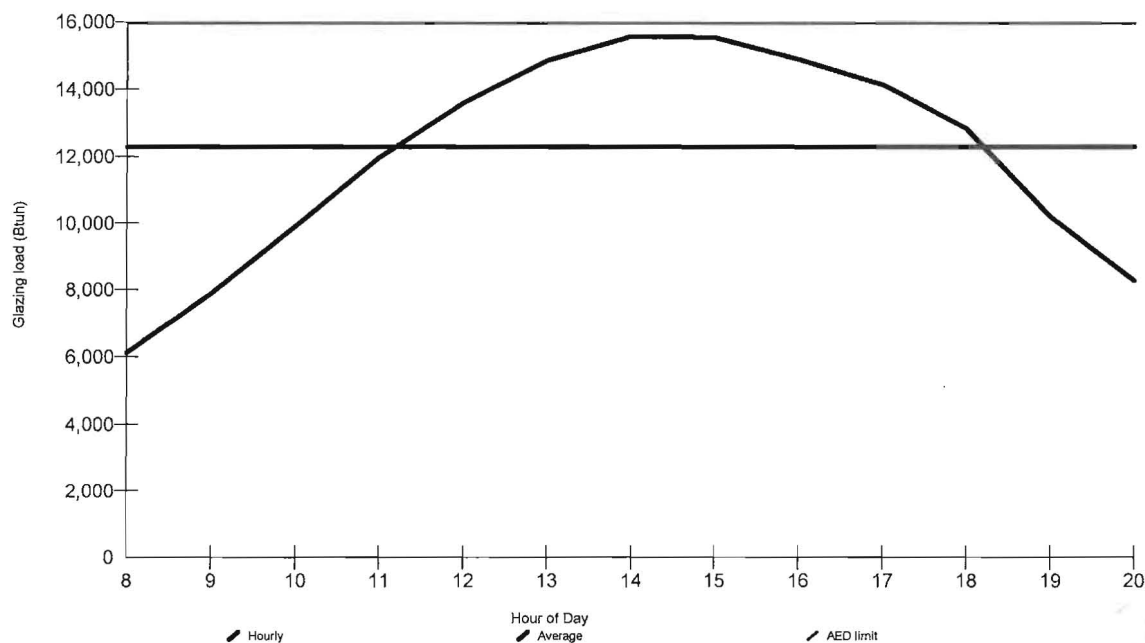
For: Tony Meoni

Design Conditions

Location:		Indoor:		Heating	Cooling
Baltimore, MD, US		Indoor temperature (°F)		72	70
Elevation: 154 ft		Design TD (°F)		60	24
Latitude: 39°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		26.8	47.0
Outdoor:		Heating	Cooling	Infiltration:	
Dry bulb (°F)		12	94		
Daily range (°F)		-	19 (M)		
Wet bulb (°F)		-	75		
Wind speed (mph)		15.0	7.5		

Test for Adequate Exposure Diversity

Hourly Glazing Load



Maximum hourly glazing load exceeds average by 26.6%.

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

AED excursion: 0 Btuh

Right-J® Worksheet Entire House

Job:
Date: May 15, 2014
By:

1	Room name					Entire House				1st				
2	Exposed wall					8.6 ft				180.0 ft				
3	Room height					292.0 ft				9.0 ft				
4	Room dimensions					2028.0 ft²				1.0 x 1313.0 ft				
5	Room area					2028.0 ft²				1313.0 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	12B-0sw	0.097	n	5.79	3.23	811	717	4152	2319	531	437	2531	1414
11	G	10B-c	0.600	n	35.82	15.23	35	0	1254	533	35	0	1254	533
	G	1D-c2oc	0.570	n	34.03	24.35	4	0	136	97	4	0	136	97
	G	1D-c2ow	0.570	n	34.03	24.35	20	0	681	487	20	0	681	487
	D	11D0	0.390	n	23.28	13.94	35	35	815	488	35	35	815	488
	W	12B-0sw	0.097	e	5.79	3.23	447	408	2363	1320	279	240	1390	776
	G	10B-c	0.600	e	35.82	35.72	35	0	1254	1250	35	0	1254	1250
	G	1D-c2oc	0.570	e	34.03	66.39	4	0	136	266	4	0	136	266
	W	12B-0sw	0.097	s	5.79	3.23	811	625	3619	2022	531	403	2334	1304
	G	10B-c	0.600	s	35.82	20.84	98	0	3510	2042	98	0	3510	2042
	G	1D-c2oc	0.570	s	34.03	35.87	88	0	2995	3157	30	0	1021	1076
	W	12B-0sw	0.097	w	5.79	3.23	447	405	2345	1310	279	237	1372	767
G	1D-c2oc	0.570	w	34.03	66.39	42	0	1429	2788	42	0	1429	2788	
C		16B-28ad	0.034	-	2.03	2.01	715	715	1451	1440	0	0	0	0
C		18A-30ad	0.034	-	2.03	1.16	598	598	1214	696	598	598	1214	696
F		19A-13cswp	0.065	-	2.84	1.12	1313	1313	3729	1474	1313	1313	3729	1474
6	c) AED excursion									0				-257
	Envelope loss/gain								31083	21691			22805	15202
12	a) Infiltration								6681	2641			4302	1700
	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)								37764	24332			27107	16902
14	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
	Subtotal								37764	24332			27107	16902
15	Duct loads						31%	33%	11845	7949	25%	17%	6909	2917
	Total room load								49609	32281			34016	19819
	Air required (cfm)								1874	1874			1285	1151

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



Right-J® Worksheet Entire House

Job:
Date: May 15, 2014
By:

1	Room name					2nd								
2	Exposed wall					112.0 ft								
3	Room height					8.0 ft				heat/cool				
4	Room dimensions					1.0 x 715.0 ft								
5	Room area					715.0 ft ²								
	Ty	Construction number	U-value (Btuh/ft ² ·°F)	Or	HTM (Btuh/ft ²)		Area (ft ²) 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	12B-0sw	0.097	n	5.79	3.23	280	280	1621	906				
	G	10B-c	0.600	n	35.82	15.23	0	0	0	0				
	G	1D-c2oc	0.570	n	34.03	24.35	0	0	0	0				
	G	1D-c2ow	0.570	n	34.03	24.35	0	0	0	0				
11	D	11D0	0.390	n	23.28	13.94	0	0	0	0				
	W	12B-0sw	0.097	e	5.79	3.23	168	168	973	543				
	G	10B-c	0.600	e	35.82	35.72	0	0	0	0				
	G	1D-c2oc	0.570	e	34.03	66.39	0	0	0	0				
	W	12B-0sw	0.097	s	5.79	3.23	280	222	1286	718				
	G	10B-c	0.600	s	35.82	20.84	0	0	0	0				
	G	1D-c2oc	0.570	s	34.03	35.87	58	0	1974	2081				
	W	12B-0sw	0.097	w	5.79	3.23	168	168	973	543				
	G	1D-c2oc	0.570	w	34.03	66.39	0	0	0	0				
	C	16B-28ad	0.034	-	2.03	2.01	715	715	1451	1440				
	C	18A-30ad	0.034	-	2.03	1.16	0	0	0	0				
	F	19A-13cswp	0.065	-	2.84	1.12	0	0	0	0				
6	c) AED excursion									257				
	Envelope loss/gain								8278	6489				
12	a) Infiltration								2379	940				
	b) Room ventilation								0	0				
13	Internal gains:		Occupants @	230			0			0				
			Appliances/other							0				
	Subtotal (lines 6 to 13)								10657	7429				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								0	0				
14	Subtotal								10657	7429				
15	Duct loads							46%	68%	4936	5032			
	Total room load									15593	12462			
	Air required (cfm)									589	724			

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

Project Information

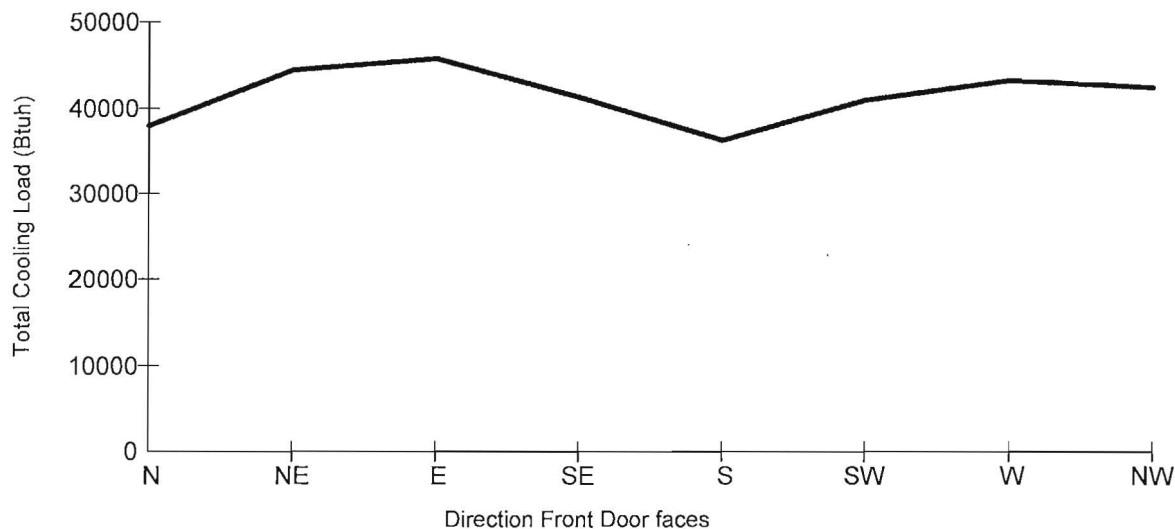
For: Tony Meoni

Design Conditions

Location:		Indoor:		Heating	Cooling
Baltimore, MD, US		Indoor temperature (°F)		72	70
Elevation: 154 ft		Design TD (°F)		60	24
Latitude: 39°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		26.8	47.0
Outdoor:		Heating	Cooling	Infiltration:	
Dry bulb (°F)	12	94			
Daily range (°F)	-	19 (M)			
Wet bulb (°F)	-	75			
Wind speed (mph)	15.0	7.5			

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	32281	38340	39631	35409	30603	35037	37203	36368
Latent Load (Btuh)	5741	6101	6120	5928	5656	5928	6022	6006
Total Load (Btuh)	38022	44441	45752	41338	36258	40965	43225	42374
Heating AVF (cfm)	1874	2219	2282	2048	1784	2036	2151	2108
Cooling AVF (cfm)	1874	2219	2282	2048	1784	2036	2151	2108

Building Orientation Cooling Load



Current Orientation: Front Door faces North
Highest Cooling Load: Front Door faces East

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

- Reminder to well locations 1, 2, 3 etc...
to emphasize

