

### **Schedule 1: Designer Information**

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

| A. Project Information  |                        |                                |                                      |          |
|---|------------------------|--------------------------------|--------------------------------------|----------|
| Building number, street name Baross   | sa 3                   |                                | Lot:                                 | 141      |
| \$38-3 Lo   | ot 141                 |                                | Lot/con.                             |          |
| Municipality Bradford   | Postal code            | Plan number/ other description |                                      |          |
| B. Individual who reviews and takes responsibility for design               | gn activities          |                                |                                      |          |
| Name David DaCosta  |                        | Firm                           | gtaDesigns Inc.                      |          |
| Street address 2985 Drew Roa  |                        |                                |                                      | Lot/con. |
| Municipality Mississauga  | Postal code<br>L4T 0A4 | Province<br>Ontario            | E-mail <u>hvac@gtadesi</u>           | gns.ca   |
| Telephone number<br>(905) 671-9800  | Fax number             |                                | Cell number                          |          |
| C. Design activities undertaken by individual identified in S               | ection B. [Bu          | ilding Code Table 3            | 3.5.2.1 of Division C]               |          |
| ☐ House ☑ HVAC – H  | louse                  |                                | ☐ Building Structural                |          |
| ☐ Small Buildings ☐ Building Se   | ervices                |                                | ☐ Plumbing – House                   |          |
| ☐ Large Buildings ☐ Detection,  | Lighting and Po        | wer                            | ☐ Plumbing – All Buildings           |          |
| ☐ Complex Buildings ☐ Fire Protect  | ction                  |                                | ☐ On-site Sewage Systems             | S        |
| Description of designer's work Mod  | del Certification      | 1                              | Project #:                           | PJ-00041 |
| Heating and Cooling Load Calculations Main                                  | X                      | Builder                        | Layout #:                            | JB-07271 |
| Heating and Cooling Load Calculations Main Air System Design Alternate      | ^                      | Project                        | Bayview Wellington Green Valley East |          |
| Residential mechanical ventilation Design Summary Area Sq ft:               | 2527                   |                                | Barossa 3                            |          |
| Residential System Design per CAN/CSA-F280-12                               |                        | Model                          | S38-3 Lot 141                        |          |
| Residential New Construction - Forced Air                                   |                        | SB-12                          | Package A1                           |          |
| D. Declaration of Designer  |                        |                                |                                      |          |
| David DaCosta   | declare that (d        | choose one as appro            | priate):                             |          |
| (print name)  |                        |                                |                                      |          |
| ☐ I review and take responsibility for the                                  |                        |                                |                                      |          |
| 3.2.4 Division C of the Building Coo<br>classes/categories.                 | de. I am qualified     | I, and the firm is registe     | ered, in the appropriate             |          |
| Individual BCIN:  |                        |                                |                                      |          |
| Firm BCIN:  |                        |                                | •                                    |          |
| ☑ I review and take responsibility for<br>"other designer" under subsection | •                      | •                              |                                      |          |
| Individual BCIN:  | 3290                   | 64                             |                                      |          |
| Basis for exemp   | tion from registr      | ation:                         | Division C 3.2.4.1. (4)              |          |
| ☐ The design work is exempt from the  | e registration an      | d qualification requirem       | ents of the Building Code.           |          |
| Basis for exemp   | tion from registr      | ation and qualification:       |                                      |          |
| I certify that:   |                        |                                |                                      |          |
| The information contained in this schedule is true to the best of n         | ny knowledge.          |                                |                                      |          |
| I have submitted this application with the knowledge and consent            | of the firm.           |                                |                                      |          |
| June 25, 2021   |                        | Mane So                        |                                      |          |
| Date  |                        | Signature of Des               | signer                               |          |

NOTE:

1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d), of Division C, Article 3.2.5.1. of Division C and all other persons who are exempt from qualifications under Subsections 3.2.4. and 3.2.5.of Division C.

2. Schedule 1 does not require to be completed a holder of a license, temporay license, or a certificate of authorization, issed by the Ontario Associstion of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited licence to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.



2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

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| These documents issued for the use of and may not be used by any other persons without authorization. Documents  Building   Address (Model): S38-3 Lot 141  Model: Barossa 3  City and Province: Bradford | ·  |
|---|--|
| Address (Model): S38-3 Lot 141  Model: Barossa 3  | _ocation   |
| Address (Model): S38-3 Lot 141  Model: Barossa 3  |  |
| Address (Model): S38-3 Lot 141  Model: Barossa 3  |  |
|   |  |
| City and Province: Bradford   | Lot: 141   |
| Only and Frovince. Diadroid   | Postal code:   |
| Calculations  | s based on   |
| Dimensional information based on:   | VA3 Design11/May/2012                                    |
| Attachment: Detached  | Front facing: East/West Assumed? Yes                     |
| No. of Levels: 3 Ventilated? Included   | Air tightness: 1961-Present (ACH=3.57) Assumed? Yes      |
| Weather location: Bradford  | Wind exposure: Sheltered                                 |
| HRV? VanEE 65H HRV  | Internal shading: Light-translucent Occupants: 5         |
| Sensible Eff. at -25C 60% Apparent Effect. at -0C 83%   | Units: Imperial Area Sq ft: 2527                         |
| Sensible Eff. at -0C 75%  |  |
| Heating design conditions   | Cooling design conditions                                |
| Outdoor temp -9.4 Indoor temp: 72 Mean soil temp: 48  | Outdoor temp 86 Indoor temp: 75 Latitude: 44             |
| Above grade walls   | Below grade walls  |
| Style A: As per OBC SB12 Package A1 R 22  | Style A: As per OBC SB12 Package A1 R 20ci               |
| Style B:  | Style B:   |
| Style C:  | Style C:   |
| Style D:  | Style D:   |
| Floors on soil  | Ceilings   |
| Style A: As per Selected OBC SB12 Package A1  | Style A: As per Selected OBC SB12 Package A1 R 60        |
| Style B:  | Style B: As per Selected OBC SB12 Package A1 R 31        |
| Exposed floors  | Style C:   |
| Style A: As per Selected OBC SB12 Package A1 R 3  | Doors  |
| Style B:  | Style A: As per Selected OBC SB12 Package A1 R 4.00      |
| Windows   | Style B:   |
| Style A: As per Selected OBC SB12 Package A1 R 3.5  | Style C:   |
| Style B:  | Skylights  |
| Style C:  | Style A: As per Selected OBC SB12 Package A1 R 2.03      |
| Style D:  | Style B:   |
| Attached documents: As per Shedule 1 Heat Loss/   | Gain Caculations based on CSA-F280-12 Effective R-Values |
| Notes: Residential New 0  | Construction - Forced Air                                |
| Calculations p  | performed by   |
| Name: David DaCosta   | Postal code: L4T 0A4                                     |
| Company: gtaDesigns Inc.  | Telephone: (905) 671-9800                                |
| Address: 2985 Drew Road, Suite 202  | Fax:   |
| City: Mississauga   | E-mail hvac@gtadesigns.ca                                |



Builder:

Trunk

Bayview Wellington

Date:

Z Z Z Y Y

### Air System Design

Package A1

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

SB-12 June 25, 2021

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under Division C subsection 3.2.5. of the

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| Project: Green \   | /alley Eas  | st                               | ı                         | Model:   |                           |                                 | Baros<br>S38-3 L                 |                           |   |                              |                   | Sy   | stem 1           | 1                                     | E                         | Building Condition     | ode.                   | 32964  | ner design<br>Man      | ner" under                |                  | C subsec         | David DaCo        | or the               |                                      | ject #<br>yout # |                               | -00041<br>-07271 |
|--|---|----------------------------------|---------------------------|--|---------------------------|---------------------------------|----------------------------------|---------------------------|---|------------------------------|-------------------|--|------------------|---------------------------------------|---------------------------|------------------------|------------------------|--|------------------------|---------------------------|------------------|------------------|-------------------|----------------------|--------------------------------------|------------------|-------------------------------|------------------|
| DESIGN LOAD SPECIFICATION  | S   |                                  | A                         | AIR DISTR  | RIBUTION                  | & PRESSU                        | RE                               |                           |   |                              | F                 | URNACE/  | AIR HANI         | DLER DAT                              | Γ <b>A</b> :              |                        |                        | BOILER/W   | ATER HEA               | TER DAT                   | A:               |                  |                   | A                    | VC UNIT D                            | ATA:             |                               |                  |
| Level 1 Net Load<br>Level 2 Net Load<br>Level 3 Net Load<br>Level 4 Net Load<br>Total Heat Loss<br>Total Heat Gain | 20,363 b<br>19,093 b<br>17,969 b<br>0 b<br>57,425 b | otu/h<br>otu/h<br>otu/h<br>otu/h | <i>,</i><br>,<br>F<br>F   | Additional<br>Available I<br>Return Bra<br>R/A Plenu | l Equipme<br>Design Pre   | jest Effecti<br>e               | e Drop                           | h                         | 0.5 "\<br>0.225 "\<br>0.275 "\<br>300 ft<br>0.138 "\<br>0.14 "\ | w.c.<br>w.c.                 | N<br>II<br>C<br>E | Make<br>Model<br>nput Btu/h<br>Dutput Btu<br>E.s.p.<br>Vater Tem | ı/h              | Ama<br>AMEC960<br>8000<br>7680<br>0.5 | 803BNA<br>00<br>00<br>0 " | W.C.<br>leg. F.        |                        | Make<br>Model<br>Input Btu/h<br>Output Btu<br>Min.Output | /h                     |                           |                  | ype<br>WH        | wer DATA          | (                    | Amana<br>Cond<br>Coil                | <del>-</del>     | 3.0 To<br>3.0<br>3.0          | on               |
| Building Volume Vb<br>Ventilation Load<br>Ventilation PVC<br>Supply Branch and Grill Sizing                        | 31489 f<br>1,188 E<br>79.5 c                        | t³<br>Stuh.                      | (                         | leating A  | ir Flow Pro               | oportioning<br>oportioning<br>R | g Facter<br>:/A Temp<br>:/A Temp |                           | 0.0204 cf<br>0.0384 cf<br>70 dc                                 | fm/btuh<br>fm/btuh<br>eg. F. | A<br>A<br>S       | Vater Fem<br>AFUE<br>Aux. Heat<br>SB-12 Pack<br>Temp. Rise       | kage             | 969<br>Packag<br>61 0                 | %                         | ieg. i .               |                        | Blower Spe<br>Heating Ch                                 | eck                    | ed:<br>1172 ct<br>1172 ct |                  |                  |                   | E                    | Blower Typ<br>(Brushle<br>Cooling Ch | ess DC OE        | ECM<br>BC 12.3.1.5<br>1172 ct | :fm              |
|  |   |                                  |                           |  |                           |                                 | Leve                             | 11                        |   |                              |                   |  |                  |                                       |                           |                        |                        |  |                        |                           | Level            | 2                |                   |                      |                                      |                  |                               |                  |
| S/A Outlet No. Room Use Btu/Outlet   | 1<br>BASE<br>4073                                   | 2<br>BASE<br>4073                | 3<br>BASE<br>4073         | 4<br>BASE<br>4073                                    | 5<br>BASE<br>4073         |                                 | Leve                             | 1                         |   |                              |                   |  |                  |                                       | 6<br>GRT<br>3648          | 7<br>KIT<br>2238       | 8<br>KIT<br>2238       | 9<br>LAUND<br>2435                                       | 10<br>FOY<br>4303      | 11<br>DIN<br>4230         | Level            | 2                |                   |                      |                                      |                  |                               |                  |
| Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure   | 83<br>36<br>0.13                                    | 83<br>36<br>0.13                 | 83<br>36<br>0.13          | 83<br>36<br>0.13                                     | 83<br>36<br>0.13          | 0.13                            | 0.13                             | 0.13                      | 0.13  | 0.13                         | 0.13              | 0.13   | 0.13             | 0.13                                  | 74<br>110<br>0.13         | 46<br>101<br>0.13      | 46<br>101<br>0.13      | 50<br>43<br>0.13   | 88<br>102<br>0.13      | 86<br>104<br>0.13         | 0.13             | 0.13             | 0.13              | 0.13                 | 0.13                                 | 0.13             | 0.13                          | 0.13             |
| Actual Duct Length Equivalent Length Total Effective Length  | 52<br>100<br>152                                    | 40<br>130<br>170                 | 90<br>114                 | 26<br>70<br>96                                       | 20<br>120<br>140          | 70<br>70                        | 70<br>70                         | 70<br><b>70</b>           | 70<br><b>70</b>   | 70<br><b>70</b>              | 70<br><b>70</b>   | 70<br><b>70</b>  | 70<br>70         | 70<br><b>70</b>                       | 30<br>80<br>110           | 37<br>110<br>147       | 47<br>120<br>167       | 24<br>150<br>174   | 28<br>100<br>128       | 5<br>120<br>125           | 70<br>70         | 70<br>70         | 70<br>70          | 70<br>70             | 70<br>70                             | 70<br>70         | 70<br>70                      | 70<br>70         |
| Adjusted Pressure Duct Size Round Outlet Size Trunk  | 0.09<br>6<br>4x10<br>B                              | 0.08<br>6<br>4x10<br>B           | 0.11<br>6<br>4x10<br>A    | 0.14<br>6<br>4x10<br>A                               | 0.09<br>6<br>4x10<br>C    | 0.19<br>4x10                    | 0.19<br>4x10                     | 0.19<br>4x10              | 0.19<br>4x10  | 0.19<br>4x10                 | 0.19<br>4x10      | 0.19<br>4x10   | 0.19<br>4x10     | 0.19<br>4x10                          | 0.12<br>6<br>4x10<br>A    | 0.09<br>6<br>4x10<br>B | 0.08<br>6<br>4x10<br>B | 0.07<br>5<br>3x10<br>C                                   | 0.10<br>6<br>4x10<br>C | 0.10<br>6<br>4x10<br>A    | 0.19<br>4x10     | 0.19<br>4x10     | 0.19<br>4x10      | 0.19<br>4x10         | 0.19<br>4x10                         | 0.19<br>4x10     | 0.19<br>4x10                  | 0.19<br>4x10     |
|  | _   |                                  |                           |  |                           |                                 | Leve                             | 13                        |   |                              |                   |  |                  |                                       |                           | _                      |                        | ·  | ·                      |                           | Level            | 4                |                   |                      |                                      |                  |                               |                  |
| S/A Outlet No.<br>Room Use<br>Btu/Outlet<br>Heating Airflow Rate CFM   | 12<br>MAST<br>1696<br>35                            | 13<br>MAST<br>1696<br>35         | 14<br>BED 2<br>1744<br>36 | 15<br>BATH<br>1669<br>34                             | 16<br>BED 3<br>1746<br>36 | 17<br>BED 3<br>1746<br>36       | 18<br>LOFT<br>3907<br>80         | 19<br>BED 4<br>1359<br>28 | 20<br>ENS 2<br>635<br>13  | 21<br>ENS<br>1770<br>36      |                   |  |                  |                                       |                           |                        |                        |  |                        |                           |                  |                  |                   |                      |                                      |                  |                               |                  |
| Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length   | 48<br>0.13<br>51                                    | 48<br>0.13<br>74                 | 33<br>0.13<br>56          | 28<br>0.13<br>42                                     | 48<br>0.13<br>42          | 48<br>0.13<br>39                | 95<br>0.13<br>38                 | 40<br>0.13<br>16          | 13<br>0.13<br>27  | 32<br>0.13<br>41             | 0.13              | 0.13   | 0.13             | 0.13                                  | 0.13                      | 0.13                   | 0.13                   | 0.13   | 0.13                   | 0.13                      | 0.13             | 0.13             | 0.13              | 0.13                 | 0.13                                 | 0.13             | 0.13                          | 0.13             |
| Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round   | 130<br>181<br>0.07<br>5                             | 210<br>284<br>0.05<br>5          | 180<br>236<br>0.06<br>5   | 150<br>192<br>0.07<br>4                              | 130<br>172<br>0.08<br>5   | 120<br>159<br>0.08<br>5         | 110<br>148<br>0.09<br>6          | 90<br>106<br>0.12<br>4    | 160<br>187<br>0.07<br>3   | 140<br>181<br>0.07<br>4      | 70<br>70<br>0.19  | 70<br>70<br>0.19   | 70<br>70<br>0.19 | 70<br>70<br>0.19                      | 70<br>70<br>0.19          | 70<br>70<br>0.19       | 70<br>70<br>0.19       | 70<br>70<br>0.19   | 70<br>70<br>0.19       | 70<br>70<br>0.19          | 70<br>70<br>0.19 | 70<br>70<br>0.19 | 70<br>70<br>0.19  | 70<br>70<br>0.19     | 70<br>70<br>0.19                     | 70<br>70<br>0.19 | 70<br>70<br>0.19              | 70<br>70<br>0.19 |
| Outlet Size<br>Trunk   | 3x10<br>A   | 3x10<br>B                        | 3x10<br>B                 | 3x10<br>C  | 3x10<br>C                 | 3x10<br>C                       | 4x10<br>C                        | 3x10<br>A                 | 3x10<br>C   | 3x10<br>A                    | 4x10              | 4x10   | 4x10             | 4x10                                  | 4x10                      | 4x10                   | 4x10                   | 4x10   | 4x10                   | 4x10                      | 4x10             | 4x10             | 4x10              | 4x10                 | 4x10                                 | 4x10             | 4x10                          | 4x10             |
| Return Branch And Grill Sizing   |   | (                                | Grill Press               | ure Loss   |                           | 0.02 "                          | w.c                              |                           |   |                              |                   | R  | Return Tru       | unk Duct S                            | Sizing                    |                        |                        |  |                        | s                         | upply Tru        | nk Duct S        | Sizing            |                      |                                      |                  |                               |                  |
| R/A Inlet No.  | 1R  | 2R                               | 3R                        | 4R   | 5R                        | 6R                              | 7R                               | 8R                        | 9R  | 10R                          | 11R               | Т  | runk             | (                                     | CFM F                     | ress. R                | Round                  | Rect. S  | Size                   | Т                         | runk             | C                | CFM P             | ress. F              | Round                                | Rect. S          | iize                          |                  |
| Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length                                     | 208<br>0.12<br>7<br>150                             | 474<br>0.12<br>5<br>125          | 105<br>0.12<br>20<br>175  | 140<br>0.12<br>36<br>180                             | 140<br>0.12<br>39<br>185  | 105<br>0.12<br>44<br>140        | <b>0.12</b><br>50                | <b>0.12</b> 50            | <b>0.12</b><br>50   | <b>0.12</b><br>50            | 0.12<br>50        | Z<br>Y   |                  |                                       | 1172<br>1172<br>385       | 0.05<br>0.05<br>0.05   | 17.0<br>17.0<br>11.5   | 24x12<br>26x10   | 22x12<br>12x10         | A<br>B<br>C               |                  |                  | 754<br>328<br>419 | 0.05<br>0.05<br>0.07 | 14.5<br>10.5<br>11.0                 | 24x8<br>12x8     | 18x10<br>10x10<br>10x10       |                  |
| Total Effective Length Adjusted Pressure Duct Size Round   | 150<br>157<br>0.07<br>8.0                           | 130<br>0.09<br>11.0              | 175<br>195<br>0.06<br>6.0 | 216<br>0.05<br>7.0                                   | 224<br>0.05<br>7.0        | 184<br>0.06<br>6.0              | 50<br>50<br>0.24                 | 50<br>50<br>0.24          | 50<br>50<br>0.24  | 50<br>50<br>0.24             | 50<br>50<br>0.24  | т<br>х<br>v  | <b>v</b>         |                                       | 303                       | 0.05                   | 11.5                   | 14x8   | IZXIU                  | D<br>E<br>F               |                  |                  | 419               | 0.07                 | 11.0                                 | 14x8             | IUAIU                         |                  |
| Inlet Size   | FLC<br>x  | 8<br>x<br>30                     | 8<br>x<br>14              | 8<br>x<br>14   | 8<br>x<br>14              | 8<br>x<br>14                    | x                                | x                         | x   | x                            | x                 | u<br>T<br>S  | J<br>-           |                                       |                           |                        |                        |  |                        | G<br>H<br>I               |                  |                  |                   |                      |                                      |                  |                               |                  |



Total Heat Loss

Total Heat Gain

57,425 btu/h

30,486 btu/h

#### Heatloss/Gain Calculations CSA-F280-12

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800

e-mail hvac@gtadesigns.ca

|  |  |  | Builder:   | Bayview  | Wellingto  | n  | _                             | Date:                               |  | Ju   | ne 25, 2021   |  |   |   |   | Weath                              | er Data    | Bradford                         | 44                                 | -9.4 8 | 6 22                               | 48.2  |                                    |        |                                    | Page 4               |
|--|--|--|--|--|--|--|-------------------------------|-------------------------------------|--|--|---|--|---|---|---|------------------------------------|------------|----------------------------------|------------------------------------|--------|------------------------------------|-------|------------------------------------|--------|------------------------------------|----------------------|
| Part   | 2012 OBC   |  | Project:   | Green \  | alley Eas  | t  | N                             | Model: _                            |  |  |   |  |   |   | System 1  | Heat                               | Loss ^T 81 | .4 deg. F                        | Ht gain ^T                         | 11 d   | eg. F                              | GTA:  | 2527                               |        |                                    | PJ-00041<br>JB-07271 |
| Part   |  | Level 1  |  |  |  | BASI   |                               |                                     |  |  |   |  |   | l l   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| The tense property of the control of | Runf   |  |  |  | 11   |  | _                             | Δ                                   | ١  |  | Δ   |  | Δ   |   | Δ   | Δ                                  |            | Δ                                | Δ                                  |        | Δ                                  |       | Δ                                  |        | Δ                                  |                      |
| Control proper   Figure   Fi   |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Fig. 19 10 10 10 10 10 10 10 10 10 10 10 10 10   | · · · · · ·  |  |  |  |  |  |                               |                                     |  |  | _   | 5  |   | 5   |   |                                    | 5          |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Suppose   Supp   |  |  |  |  |  |  |                               |                                     |  |  |   | ٥.                                       |   | J.  |   |                                    | ,          |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Proper College   Prop   | F  |  |  |  | 89   |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    | 1      |                                    | 1                    |
| Fig.      |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Section   Content   Cont   |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Consider   Ward   Section   Consider   Con   |  |  |  |  |  |  |                               | F                                   | ir .   |  | Fir   |  | Flr   |   | Flr   | Flr                                |            | Flr                              | Flr                                |        | Flr                                |       | Flr                                |        | Fir                                |                      |
| Marie   Mari   |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Month Shalle   1.55   2.23   1.26  |  |  |  |  | 33   |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Second    |  | Components I   | R-Values Lo  | oss Gain   |  | Loss   | Gain                          | L                                   | .oss Ga  | in   | Loss G  | ain                                      | Loss G  | ain   | Loss Gain   | Loss                               | Gain       | Loss Gain                        | Loss                               | Gain   | Loss                               | Gain  | Los                                | s Gain | Loss                               | s Gain               |
| South No.   150   222   223   230   34   35   37   37   37   37   37   37   37   |  | North Shaded   | 3.55   | 22.93 1  | .62  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| South No.   150   222   223   230   34   35   37   37   37   37   37   37   37   |  | East/West  | 3.55   | 22.93 2  | .56  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Month   1986     |  |  |  |  |  | 138  | 135                           |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Shelight   206   69,16   8923   275   697   595   275   697   595   275   697   595   275   697   595   295   697   595   697   69   |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Mercaper with A 17   13   15   15   15   15   15   15   15   |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| More register work in No. 2712   2.50   525   526   17   54   17   54   17   54   18   18   18   18   18   18   18   1   |  |  |  | 20.10  | 75 2   | 427  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Most proposed useful in   17:00   27   |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Exposed Cellings A 99.22 3.73 644  Reproduct Cellings A 99.22 3.73 644  Reproduct Cellings A 99.22 3.74 645  Reproduct Cellings A 99.22 3.75 645  Reproduct Cellings A 99.25 645  Reproduct Cellings A 9 |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Expose   Character   Charact   |  |  |  |  |  | 1221   | 165                           |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Equation   Continue   March   Continue   C   |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Control Control Professor   Control Professo   |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Total Conductive   Sheet Loss  |  |  | 29.80  | 2.73   | .17  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Mart Lossign   Mart Loss   M   | Foundation Condu   | uctive Heatloss  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Mart Lossign   Mart Loss   M   | Total Conductive   | Heat Loss  |  |  |  | 10401  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Mart Supposed Mart No.   Mart N   | Total Conductive   | Heat Gain  |  |  |  |  | 2791                          |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Case 2   4.05   1.05    | Air Leakage  |  |  | 0.9253 0.0   | 390  | 9624   |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Verificition   Case   1.45   1.18     |  |  |  |  |  |  | 100                           |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Heating Proping   1.00   1.0   | Ventilation  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Medical Composition   Control   Co   |  |  | v  |  |  | 220  | 161                           |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Age   Part   P   |  |  | ^  |  |  | 330  | 101                           |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Dust and Pipe loss   1970      |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Level HQ Total   A.539   Total HG per room x 13   A.539   Total HG per room x 13   A.539   Total HG per room x 14   A.539   Total HG per room x 15   A.539   Total HG per room x 14   A.539   Total HG per room x 15   A.539   Total    |  |  |  |  |  |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Level   2   Surfix exposed wall A   Surfix   S   | Α  | Appliances Loads   | 1 =.25 pe  |  |  | 5  | 508                           |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Lavel   2  | A<br>Du  | Appliances Loads<br>Ouct and Pipe loss   |  |  | 0%   |  |                               |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Figure 1   | A<br>Du<br>Level HL Total  | Appliances Loads Puct and Pipe loss 20,363 4,639   | Tota   | al HL for per re   | 0%<br>om   | 20363  | 4639                          |                                     |  |  |   |  |   |   |   |                                    |            |                                  |                                    |        |                                    |       |                                    |        |                                    |                      |
| Exposed Cellings A   | Level HL Total Level HG Total  Run ft  | Appliances Loads Duct and Pipe loss 20,363 4,639  Level 2 ft. exposed wall A ft. exposed wall B  | Tota   | al HL for per re   | 0%<br>om<br>1.3  | 20363<br>GRT<br>I A<br>B   | 4639                          | В                                   | ١.   |  | A<br>B  |  | 26 A<br>B   |   | 4 A<br>B  | В                                  |            | В                                | В                                  |        | В                                  |       | В                                  |        | В                                  |                      |
| Exposed Cellings A   | Level HL Total Level HG Total  Run ft  | Appliances Loads Duct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A Celling height   | Tota   | al HL for per re   | 0%<br>om<br>1.3  | 20363<br>GRT<br>I A<br>B   | 4639                          | 11.0                                | 3  | 13.0   | A<br>B  | 12.                                      | 26 A<br>B<br>.0   | 11.   | 4 A<br>B<br>0   | B<br>11.0                          | 11         | .0                               | В                                  |        | B<br>11.0                          |       | В                                  |        | В                                  |                      |
| Exposed Cellings B   | Level HL Total Level HG Total  Run ft  | Appliances Loads Duct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A Celling height   | Tota   | al HL for per re   | 0%<br>om<br>1.3  | 20363<br>GRT<br>I A<br>B   | 4639                          | 11.0                                | 3  | 13.0   | A<br>B  | 12.                                      | 26 A<br>B<br>.0   | 11.   | 4 A<br>B<br>0   | B<br>11.0                          | 11         | .0                               | B<br>11.0                          |        | B<br>11.0                          |       | B<br>11.0                          |        | B<br>11.0                          | a                    |
| Fig. 1. Fig. 1 | AUDITION AND AUDITION AND AUDITION AND AUDITION AND AUDITION AUDITION AND AUDITION AND AUDITION AUDITI | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceilling height Floor area  | Tota   | al HL for per re   | 0%<br>om<br>1.3  | GRT A B ) 6 Area   | 4639                          | 11.0<br>225 A                       | k<br>B<br>Area                                 | 13.0<br>69   | A<br>B<br>Area  | 12.                                      | 26 A<br>B<br>.0<br>76 Area  | 11.   | 4 A<br>B<br>0<br>4 Area   | B<br>11.0<br>Area                  | 11         | B<br>.0<br>Area                  | B<br>11.0<br>Area                  |        | B<br>11.0<br>Area                  |       | B<br>11.0<br>Area                  | 1      | 11.0<br>Area                       | 1                    |
| Gross Exp Wall B   | AUDE NO PROPERTY OF THE PROPER | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A  | Tota   | al HL for per re   | 0%<br>om<br>1.3  | GRTI A B ) S Area A  | 4639                          | 11.0<br>225 A                       | k<br>B<br>Area                                 | 13.0<br>69   | A<br>B<br>Area<br>A   | 12.                                      | 26 A<br>B<br>.0<br>76 Area<br>A   | 11.   | 4 A<br>B<br>0<br>4 Area<br>A  | B<br>11.0<br>Area<br>A             | 11         | B<br>.0<br>Area<br>A             | B<br>11.0<br>Area<br>A             |        | B<br>11.0<br>Area<br>A             |       | B<br>11.0<br>Area<br>A             |        | B<br>11.0<br>Area<br>A             | a                    |
| Composing   Review   Loss   Gain   Loss      | A D DU Level HL Total Level HG Total Run ft Run ft Exx   | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A xposed Ceilings B   | Tota   | al HL for per re   | 0%<br>om<br>1.3  | GRTIA BOS Area A B   | 4639                          | 11.0<br>225 A<br>A<br>B             | A<br>Area<br>A                                 | 13.0<br>69   | A<br>B<br>Area<br>A<br>B  | 12.                                      | 26 A<br>B<br>.0<br>76 Area<br>A<br>B  | 11.   | 4 A<br>B<br>0<br>4 Area<br>A<br>B   | B<br>11.0<br>Area<br>A<br>B        | 11         | B<br>.0<br>Area<br>A<br>B        | B<br>11.0<br>Area<br>A<br>B        |        | B<br>11.0<br>Area<br>A<br>B        |       | B<br>11.0<br>Area<br>A<br>B        |        | B<br>11.0<br>Area<br>A<br>B        |                      |
| Properties   Pro   | AUDITION AND AUDITION AND AUDITION AND AUDITION AND AUDITION AUDITION AND AUDITION AND AUDITION AUDITI | Appliances Loads  uct and Pipe loss 20,363 4,639  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors   | Tota   | al HL for per r  | 0%<br>om<br>1.3  | GRTIABO  | 4639                          | 11.0<br>225 A<br>A<br>B             | A<br>Area<br>A                                 | 13.0<br>69   | A<br>B<br>Area<br>A<br>B  | 12.<br>7                                 | 26 A<br>B<br>.0<br>76 Area<br>A<br>B<br>Fir                                       | 11.<br>42   | 4 A<br>B<br>0<br>4 Area<br>A<br>B   | B<br>11.0<br>Area<br>A<br>B        | 11         | B<br>.0<br>Area<br>A<br>B        | B<br>11.0<br>Area<br>A<br>B        |        | B<br>11.0<br>Area<br>A<br>B        |       | B<br>11.0<br>Area<br>A<br>B        | a      | B<br>11.0<br>Area<br>A<br>B        | 3                    |
| EastWest   3.55   22.93   22.95   22   | A D D D D D D D D D D D D D D D D D D D  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A   | Tota   | al HL for per r  | 0%<br>om<br>1.3  | GRTIABO  | 4639                          | 11.0<br>225 A<br>A<br>B             | A<br>Area<br>A                                 | 13.0<br>69   | A<br>B<br>Area<br>A<br>B  | 12.<br>7                                 | 26 A<br>B<br>.0<br>76 Area<br>A<br>B<br>Fir                                       | 11.<br>42   | 4 A<br>B<br>0<br>4 Area<br>A<br>B   | B<br>11.0<br>Area<br>A<br>B        | 11         | B<br>.0<br>Area<br>A<br>B        | B<br>11.0<br>Area<br>A<br>B        |        | B<br>11.0<br>Area<br>A<br>B        |       | B<br>11.0<br>Area<br>A<br>B        | a      | B<br>11.0<br>Area<br>A<br>B        | 3                    |
| EastWest   3.55   22.93   2.95   48   105   1360   71   1628   20.99   4   43   386   1271   390   383   30   688   675   4   4   4   4   4   4   4   4   4  | A D D D D D D D D D D D D D D D D D D D  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Celling height Floor area xposed Cellings A xposed Cellings B Exposed Floors Gross Exp Wall B   | Total F  | al HL for per r<br>HG per room 2   | 0%<br>om<br>1.3  | GRT<br>I A<br>B<br>II A<br>A<br>A<br>B<br>Fir  | 4639                          | 11.0<br>225 A<br>A<br>B<br>F<br>363 | Area<br>Area<br>A<br>B<br>B                    | 13.0<br>69<br>234  | A<br>B<br>Area<br>A<br>B<br>Fir   | 12.<br>7                                 | 26 A<br>B<br>.0<br>76 Area<br>A<br>B<br>Fir                                       | 11.<br>42   | 4 A<br>B<br>0<br>4 Area<br>A<br>B<br>Fir  | B<br>11.0<br>Area<br>A<br>B<br>Fir |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Calin | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| South   3.55   2.293   22.50   | A D D D D D D D D D D D D D D D D D D D  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall B Components I  | Total H  | al HL for per r. HG per room 2   | 0%<br>om<br>1.3  | GRT<br>I A<br>B<br>II A<br>A<br>A<br>B<br>Fir  | 4639                          | 11.0<br>225 A<br>A<br>B<br>F<br>363 | Area<br>Area<br>A<br>B<br>B                    | 13.0<br>69<br>234<br>in  | A B Area A B Fir  | 12.<br>7<br>31<br>ain                    | 26 A<br>B<br>.0<br>76 Area<br>A<br>B<br>Fir                                       | 11.<br>42   | 4 A<br>B<br>0<br>4 Area<br>A<br>B<br>Fir  | B<br>11.0<br>Area<br>A<br>B<br>Fir |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Existing Windows 1.99 40.90 23.56 Skylight 2.03 40.10 88.23 Dors 4.00 20.35 2.75 Net exposed walls A 17.03 4.78 0.55 Exposed Cellings A 59.22 1.37 0.54 Exposed Cellings B 27.55 2.94 1.37 Exposed Floors 29.80 2.73 0.17 Foundation Conductive Heatloss Heat Gain Heat Gain 0.4477 0.0390 Air Leakage Heat Loss I 1550 288 189 736 12 287  Ventilation Case 1 0.03 0.06 Case 2 14.95 11.88 Case 1 0.03 0.06 Heat Gain People  | A D D D D D D D D D D D D D D D D D D D  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded   | Total H Total H  | al HL for per ridical per room 2   | 0%<br>om<br>1.3  | GRTI A B O Area A B Fir  | 4639<br>Gain                  | 11.0<br>225 A<br>A<br>B<br>F<br>363 | Area<br>Area<br>A<br>B<br>Fir                  | 13.0<br>69<br>234<br>iin 11  | A B Area A B Fir  | 12.<br>7<br>31<br><u>ain</u><br>128      | 26 A B .0 76 Area A B Fir 12 Loss G   | 11.<br>42<br>48<br>ain                                      | 4 A<br>B<br>0<br>4 Area<br>A<br>B<br>Fir  | B<br>11.0<br>Area<br>A<br>B<br>Fir |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Skylight 2.03 40.10 88.25  | A D D D D D D D D D D D D D D D D D D D  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components I North Shaded EastWest   | Total F Total F  R-Values L 3.55 3.55  | al HL for per ri<br>HG per room 2<br>2005 Gain<br>22.93 1<br>22.93 2   | 0%<br>om<br>1.3<br>3<br>11.<br>22<br>34  | GRTI A B O Area A B Fir  | 4639<br>Gain                  | 11.0<br>225 A<br>A<br>B<br>F<br>363 | Area<br>Area<br>A<br>B<br>Fir                  | 13.0<br>69<br>234<br>iin 11  | A B Area A B Fir  | 12.<br>7<br>31<br>ain<br>128             | 26 A B .0 76 Area A B Fir 12 Loss G   | 48<br>48<br>ain   | 4 A B 0 4 Area A B Fir 4 Loss Gain  | B 11.0 Area A B Fir                |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Met exposed walls A   70.3   4.78   6.65   7.5   | A D D D D D D D D D D D D D D D D D D D  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South  | Total I<br>Total I<br>R-Values Lo<br>3.55<br>3.55<br>3.55  | al HL for per room :  G per room :  G per room :  22.93 1 22.93 2 22.93 2 22.93 2  | 0%<br>om<br>1.3<br>3<br>11.<br>22<br>34<br>.62<br>.56<br>4.50  | GRTI A B O Area A B Fir  | 4639<br>Gain                  | 11.0<br>225 A<br>A<br>B<br>F<br>363 | Area<br>Area<br>A<br>B<br>Fir                  | 13.0<br>69<br>234<br>iin 11  | A B Area A B Fir  | 12.<br>7<br>31<br>ain<br>128             | 26 A B .0 76 Area A B Fir 12 Loss G   | 48<br>48<br>ain   | 4 A B 0 4 Area A B Fir 4 Loss Gain  | B 11.0 Area A B Fir                |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Net exposed walls A 17.03  | A D D D D D D D D D D D D D D D D D D D  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows   | R-Values Lc<br>3.55<br>3.55<br>3.55  | al HL for per room :  1G per room :  22.93 1 22.93 2 22.93 2 22.93 2 40.90 2   | 0%<br>om<br>1.3<br>3<br>11.<br>22<br>34<br>  | GRTI A B O Area A B Fir  | 4639<br>Gain                  | 11.0<br>225 A<br>A<br>B<br>F<br>363 | Area<br>Area<br>A<br>B<br>Fir                  | 13.0<br>69<br>234<br>iin 11  | A B Area A B Fir  | 12.<br>7<br>31<br>ain<br>128             | 26 A B .0 76 Area A B Fir 12 Loss G   | 48<br>48<br>ain   | 4 A B 0 4 Area A B Fir 4 Loss Gain  | B 11.0 Area A B Fir                |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Net exposed walls B  | A D D D D D D D D D D D D D D D D D D D  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall 8 ft. exposed wall 8 Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight  | Total II Tot | al HL for per room :  Al HL for per room :  Base   | 0%<br>om<br>1.3<br>3<br>11.<br>22<br>34<br>.62<br>.55<br>.66<br>.23  | GRTI A B O Area A B Fir  | 4639<br>Gain                  | 11.0<br>225 A<br>A<br>B<br>F<br>363 | Area<br>Area<br>A<br>B<br>Fir                  | 13.0<br>69<br>234<br>iin<br>11<br>2099                                       | A B Area A B B Fir Loss G 252   | 12. 7 31 ain 128 4 1                     | 26 A B .0 76 Area A B Fir 12 Loss G   | 48  48  41  48  48  48  383  383                            | 4 A B 0 4 Area A B Fir 4 Loss Gain  | B 11.0 Area A B Fir                |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Exposed Ceilings A 59.22 1.37 0.64  Exposed Floris 27.65 2.94 1.37  Exposed Floris 27.65 2.94 1.37  Foundation Conductive Heatloss   | A D D D Level HL Total Level HG Total  Run ft Run ft Ex Ex   | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components I North Shaded East/West South Existing Windows Skylight Doors  | R-Values Lt. 3.55 3.55 1.99 2.03 4.00  | oss Gain 22.93 1 22.93 2 22.93 2 40.90 2 40.10 8 20.35   | 34<br>11. 22<br>34<br>.62 .56 4<br>.50 .66 .66 .63 .75   | GRTI A B O GATE A B Fir Loss   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | A A A A A A A A A A A A A A A A A A A          | 13.0<br>69<br>234<br>iin<br>11<br>2099                                       | A B Area A B Fir Loss G 252   | 12. 7 31 ain 128 4 1                     | 26 A B B  | 48 48 48 48 48 48 48 48 48 48 48 48 48 4                    | 4 A B 0 0 44 Area A B Fir 4 Loss Gain 688 67  | B 11.0 Area A B Fir Loss           |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Exposed Ceilings B   | A D D D Level HL Total Level HG Total  Run ft Run ft Ex Ex   | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components I North Shaded East/West South Existing Windows Skylight Doors  | R-Values Lt. 3.55 3.55 1.99 2.03 4.00  | oss Gain 22.93 1 22.93 2 22.93 2 40.90 2 40.10 8 20.35   | 34<br>11. 22<br>34<br>.62 .56 4<br>.50 .66 .66 .63 .75   | GRTI A B O GATE A B Fir Loss   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | A A A A A A A A A A A A A A A A A A A          | 13.0<br>69<br>234<br>iin<br>11<br>2099                                       | A B Area A B Fir Loss G 252   | 12. 7 31 ain 128 4 1                     | 26 A B B  | 48 48 48 48 48 48 48 48 48 48 48 48 48 4                    | 4 A B 0 0 44 Area A B Fir 4 Loss Gain 688 67  | B 11.0 Area A B Fir Loss           |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Exposed Cellings B 27.65 2.94 1.37   Foundation Conductive Heatloss   Total Conductive Heat Loss   Heat Gain   Loss   Los | A  D  Level HL Total  Level HG Total  Run ft  Run ft  Ex  G  G  Net  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall 8 Ceiling height Floor area xposed Ceilings A Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded EastWest South Existing Windows Skylight Doors t exposed walls B  | R-Values Lc<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03   | al HL for per room :  1G per room :  22.93 1 22.93 2 22.93 2 240.90 2 40.90 8 20.35 4.78 9.58  | 34<br>-62<br>-56<br>-66<br>-23<br>-75<br>-65<br>-29  | GRTI A B O GATE A B Fir Loss   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | A A A A A A A A A A A A A A A A A A A          | 13.0<br>69<br>234<br>iin<br>11<br>2099                                       | A B Area A B Fir Loss G 252   | 12. 7 31 ain 128 4 1                     | 26 A B B  | 48 48 48 48 48 48 48 48 48 48 48 48 48 4                    | 4 A B 0 0 44 Area A B Fir 4 Loss Gain 688 67  | B 11.0 Area A B Fir Loss           |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Exposed Floors   29.80   2.73   0.17   | A  D  Level HL Total  Level HG Total  Run ft  Run ft  Ex  G  G  Net  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall 8 Ceiling height Floor area xposed Ceilings A Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded EastWest South Existing Windows Skylight Doors t exposed walls B  | R-Values Lc<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03   | al HL for per ridical HL for per room :  G per room :  Galantical HL for per ridical HL for per room :  22.93  | 0% om 1.3 3 11. 22 34 4 5.50 4.66 2.23 3.75 6.65 2.99 6.64   | GRTI A B O GATE A B Fir Loss   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | A A A A A A A A A A A A A A A A A A A          | 13.0<br>69<br>234<br>iin<br>11<br>2099                                       | A B Area A B Fir Loss G 252   | 12. 7 31 ain 128 4 1                     | 26 A B B  | 48 48 48 48 48 48 48 48 48 48 48 48 48 4                    | 4 A B 0 0 44 Area A B Fir 4 Loss Gain 688 67  | B 11.0 Area A B Fir Loss           |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Foundation Conductive Heatloss   X   X   2465   3024   1550   3024   2287   316      | A D D Level HL Total  Level HG Total  Run fi Run fi Run fi Ex; Ex C G R Net Net Ex   | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components I North Shaded East/West South Existing Windows Skylight Doors tt exposed walls A texposed walls A texposed walls A texposed walls A texposed walls A   | R-Values Lt. 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22  | al HL for per ridical HL for per room :  G per room :  Galantical HL for per ridical HL for per room :  22.93  | 0% om 1.3 3 11. 22 34 4 5.50 4.66 2.23 3.75 6.65 2.99 6.64   | GRTI A B O GATE A B Fir Loss   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | A A A A A A A A A A A A A A A A A A A          | 13.0<br>69<br>234<br>iin<br>11<br>2099                                       | A B Area A B Fir Loss G 252   | 12. 7 31 ain 128 4 1                     | 26 A B B  | 48 48 48 48 48 48 48 48 48 48 48 48 48 4                    | 4 A B 0 0 44 Area A B Fir 4 Loss Gain 688 67  | B 11.0 Area A B Fir Loss           |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Total Conductive   Heat Loss   | A D D D Level HL Total  Level HG Total  Run fi Run ft  Ext  C G  Net Net Ext Ext  Ext  Run ft  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall B Components I North Shaded East/West South Existing Windows Skylight Doors tt exposed walls B tt exposed walls B xposed Ceilings B   | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>3.55<br>3.50<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65  | al HL for per rid<br>G per room :<br>1G per room :<br>22.93 1<br>22.93 2<br>22.93 2<br>24.0.90 2<br>40.10 8<br>20.35 4.78 9.58 1.37 2.94   | 0% om 1.3 3 3 11. 22 3 34 34 5.56 4 4 5.56 5.56 5.29 2.29 3.37   | GRTI A B O GATE A B Fir Loss   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | A A A A A A A A A A A A A A A A A A A          | 13.0<br>69<br>234<br>iin<br>11<br>2099                                       | A B Area A B Fir Loss G 252   | 12. 7 31 ain 128 4 1                     | 26 A B B  | 48 48 48 48 48 48 48 48 48 48 48 48 48 4                    | 4 A B 0 0 44 Area A B Fir 4 Loss Gain 688 67  | B 11.0 Area A B Fir Loss           |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Heat Gain  | A D D Level HL Total Level HG Total  Run ft Run ft Ex Ex C G  Net Net Ex   | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A xposed Ceilings A  | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>3.55<br>3.50<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65  | DOSS Gain 22,93 1 22,93 2 22,93 2 22,93 2 40,90 2 40,10 8 20,35 4,78 1,37 2,94   | 0% om 1.3 3 3 11. 22 3 34 5.50 4.66 2.23 7.75 2.9 6.64 2.3 3.7 1.17  | GRTI A B O GATE A B Fir Loss   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | A A A A A A A A A A A A A A A A A A A          | 13.0<br>69<br>234<br>iin<br>11<br>2099                                       | A B Area A B Fir Loss G 252   | 12. 7 31 ain 128 4 1                     | 26 A B B  | 48 48 48 48 48 48 48 48 48 48 48 48 48 4                    | 4 A B 0 0 44 Area A B Fir 4 Loss Gain 688 67  | B 11.0 Area A B Fir Loss           |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Air Leakage Heat Loss/Gain 0.4477 0.0390 1103 60 1354 89 736 12 1302 72 1279 38  | A D D Level HL Total Level HG Total  Run ft Run ft Exp G G  Net Net Exp Exp Exp Foundation Conduction  | Appliances Loads Juct and Pipe loss 20,363 4,639  It. exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall B Components I North Shaded East/West South Existing Windows Skylight Doors at exposed walls A t exposed walls A t exposed walls A xposed Ceilings A xposed Floors Luctive Heatloss   | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>3.55<br>3.50<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65  | DOSS Gain 22,93 1 22,93 2 22,93 2 22,93 2 40,90 2 40,10 8 20,35 4,78 1,37 2,94   | 0% om 1.3 3 3 11. 22 3 34 5.50 4.66 2.23 7.75 2.9 6.64 2.3 3.7 1.17  | 20363  GRT A B B 6 Area A B Fir Loss 1055  | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | A A A A A A A A A A A A A A A A A A A          | 13.0<br>69<br>234<br>iin<br>11<br>2099                                       | A B Area A B B Fir Loss G 252 427 966                                     | 12. 7 31 ain 128 4 1                     | 26 A B B Flr 12 Loss G 986 17 390 21 427 11 1104                                  | 48 48 48 48 48 48 48 48 48 48 48 48 48 4                    | 4 A B 0 0 4 Area A B Fir 4 Loss Gain 0 688 67   | B 11.0 Area A B Fir Loss           |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Case 1   | A D D Level HL Total Level HG Total  Run ft Run ft Exp G G  Net Net Exp Exp Exp Foundation Conduction  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Celling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall B Components I North Shaded EastWest South Existing Windows Skylight Doors at exposed Walls A t exposed Walls B xposed Ceilings B Exposed Floors ut exposed Walls B xposed Ceilings B Exposed Floors ut exposed walls B xposed Ceilings B Exposed Floors uctive Heatloss Heat Loss  | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>3.55<br>3.50<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65  | DOSS Gain 22,93 1 22,93 2 22,93 2 22,93 2 40,90 2 40,10 8 20,35 4,78 1,37 2,94   | 0% om 1.3 3 3 11. 22 3 34 5.50 4.66 2.23 7.75 2.9 6.64 2.3 3.7 1.17  | 20363  GRT A B B 6 Area A B Fir Loss 1055  | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | Area A. B. | 13.0<br>69<br>234<br>iin 11<br>2099 11<br>189 202                            | A B Area A B B Fir Loss G 252 427 966                                     | 12. 7 31 ain 128 4 1 58 2 130 23         | 26 A B B Flr 12 Loss G 986 17 390 21 427 11 1104                                  | 48 48 48 1271 383 3 58 149 45                               | 4 A B 0 0 4 Area A B B Fir 4 Loss Gain 0 688 67 4 2170 29                               | B 11.0 Area A B Fir Loss           |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Ventilation Case 2 14.95 11.88   | A D D Level HL Total Level HG Total  Run ft Run ft Run ft Ex Ex Ex Foundation Conductive   | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A xposed Ceilings B Components North Shaded EastWest South Existing Windows Skylight Doors tt exposed walls A tt exposed walls B xposed Ceilings A xposed Ceilings B Exposed Floors Skylight Existing Windows Skylight Doors tt exposed walls A xposed Ceilings B xposed Ceilings A xposed Ceilings A xposed Ceilings A xposed Ceilings A xposed Floors uctive Heatloss Heat Loss Heat Cain   | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>3.55<br>3.50<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65  | oss Gain 22,93 1 22,93 2 22,93 2 22,93 2 22,93 2 20,93 | 0% om 1.3 3 3 11. 22 3 34 4 5.56 4 5.56 4 5.56 5.65 5.65 5.65 5.   | 20365 GRT A B B A A B Fir Loss 1056 1410   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | 1628 : 1396                                    | 13.0<br>69<br>234<br>iin 11<br>2099 202                                      | A B Area A B B Fir Loss G 252 427 966                                     | 12. 7 31 ain 128 4 1 58 2 130 23         | 26 A B B 76 Area A B FIr 12 Loss G G 17 390 11 1104 1104 1104 1104 1104 1104 1104 | 11. 42  48  ain  1271 383 3 58 149 45                       | 4 A B 0 0 44 Area A B Fir 44 Loss Gain 6 6 8 8 6 7 4 2 1 7 0 2 9 2 8 5 8 9 6            | B 11.0 Area A B Fir  Loss          |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Case 3 x   0.03   0.06   80   89   98   132   54   18   95   107   93   56   | A D D D Level HL Total  Level HG Total  Run ft Run ft Run ft Ex Ex Ex Foundation Conductive  A D D D D D D D D D D D D D D D D D D   | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors at exposed walls A t exposed walls A t exposed walls A t exposed walls A xposed Ceilings B Exposed Floors Skylight Existing Windows Action Skylight Exposed walls B Exposed Floors uctive Heatloss Heat Loss Heat Loss Heat Loss Heat Loss Heat Gain  | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>3.55<br>3.50<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65  | al HL for per ridio per room :  G per room :  G per room :  Gain  22.93 1  22.93 2  22.93 2  40.90 2  40.10 8  9.58  4.78  9.58  1.37  2.94  2.73  | 0% om 1.3 3 11. 22 34 34 3.4 3.7 5 6.65 29 6.64 3.37 1.17  | 20365 GRT A B B A A B Fir Loss 1056 1410   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | 1628 : 1396                                    | 13.0<br>69<br>234<br>iin 11<br>2099 202                                      | A B Area A B B Fir Loss G 252 427 966                                     | 12. 7 31 ain 128 4 1 58 2 130 23         | 26 A B B 76 Area A B FIr 12 Loss G G 17 390 11 1104 1104 1104 1104 1104 1104 1104 | 11. 42  48  ain  1271 383 3 58 149 45                       | 4 A B 0 0 44 Area A B Fir 44 Loss Gain 6 6 8 8 6 7 4 2 1 7 0 2 9 2 8 5 8 9 6            | B 11.0 Area A B Fir  Loss          |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Heat Gain People   239   239   239   239   240   | Level HL Total Level HG Total  Run fit Run fit Exp Co Co Co  Net Net Exp Exp Toundation Conductive Air Leakage   | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Celling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall B Components I North Shaded EastWest South Existing Windows Skylight Doors at exposed walls A t exposed walls B txposed Ceilings B Exposed Floors ut exposed walls B txposed Ceilings B Exposed Floors ut exposed walls B txposed Ceilings B Exposed Floors ut wheat Loss Heat Casin Heat Loss/Gain Case 1  | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>3.55<br>3.50<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65  | al HL for per ridid per room :  13 Sess Gain 22.93 1 22.93 2 22.93 2 22.93 2 22.93 2 40.90 2 40.90 2 40.10 8 20.35 4.78 9.58 1.37 2.94 2.73 3 0.4477 0.4   | 0% 34 11. 22 34 5.56 4 5.50 5.65 29 6.64 3.37 1.17 1.17 1.17 1.17 1.17 1.17 1.17                                 | 20365 GRT A B B A A B Fir Loss 1056 1410   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | 1628 : 1396                                    | 13.0<br>69<br>234<br>iin 11<br>2099 202                                      | A B Area A B B Fir Loss G 252 427 966                                     | 12. 7 31 ain 128 4 1 130 23              | 26 A B B 76 Area A B FIr 12 Loss G G 17 390 11 1104 1104 1104 1104 1104 1104 1104 | 11. 42  48  ain  1271 383 3 58 149 45                       | 4 A B 0 0 44 Area A B Fir 44 Loss Gain 6 6 8 8 6 7 4 2 1 7 0 2 9 2 8 5 8 9 6            | B 11.0 Area A B Fir  Loss          |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Appliances Loads 1 = .25 percent 4067 0.5 508 1.5 1525 0.5 508 1.0 107   | Level HL Total Level HG Total  Run fit Run fit Exp Co Co Co  Net Net Exp Exp Toundation Conductive Air Leakage   | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A Exposed Ceilings B Components North Shaded EastWest South Existing Windows Skylight Doors te xposed walls A te xposed delings B Exposed Ceilings A youth Existing Windows Skylight Doors te xposed walls A te xposed Ceilings B Exposed Ceilings B Exposed Ceilings B Exposed Floors uctive Heatloss Heat Loss Heat Cain Heat Loss/Gain Case 1 Case 2   | R-Values Lc<br>3.55<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80  | oss Gain 22,93 1 22,93 2 22,93 2 22,93 2 22,93 2 20,93 | 0% om 1.3 3 3 11. 22 3 34 3.6 2 23 .7.5 29 .6.4 3.7 7.17 390 0.6 6.88  | 20365 GRT I A B B B A A B Fir Loss 1056 1410   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | 1628 : 1396                                    | 13.0<br>69<br>234<br>iin 11<br>2099 202<br>2287<br>89                        | A B B Area A B B Fir Loss G 252 427 966 1645 736                          | 12. 7 31 31 128 4 1 130 23 316 12        | 26 A B B .0.0 76 Area A B Fir 12  Loss G 986 17 390 21 427 11 1104 2907 1302      | 11. 42  48  48  ain  1271  383  3  58  149  45              | 4 A B 0 0 44 Area A B Fir 44 Loss Gain 0 688 67 4 2170 29 2858 96 1279 3                | B 11.0 Area A B Fir  Loss          |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Duct and Pipe loss         10%           Level HL Total         19,093         Total HL for per room         3648         4476         2435         4303         4230  | DU Level HL Total Level HG Total  Run ft Run ft Run ft Ex Ex Ex C C C C C C C C C C C C C C C  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area axposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors at exposed walls A t exposed walls A t exposed walls B Exposed Floors at exposed floors texposed floors texposed floors uctive Heatloss Heat Loss Heat Loss Heat Loss Heat Loss Heat Loss Gain Heat Loss/Gain Case 1 Case 2 Case 3  | R-Values Lc<br>3.55<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80  | al HL for per rid<br>G per room :<br>1G per room :<br>22.93 1<br>22.93 2<br>22.93 2<br>24.01 2<br>40.90 2<br>40.10 8<br>9.58 1.37 2.73 3<br>9.58 1.37 2.73 3<br>9.58 1.37 2.73 3   | 0% 34 11. 22 34 34 34 34 35 556 4 550 66 2.23 7.75 2.29 6.34 7.17 3990 6.06 8.88 8.06                            | 20365 GRT I A B B B A A B Fir Loss 1056 1410   | Gain 1360                     | 11.0<br>225 A<br>B<br>F<br>363<br>L | 1628 : 1396                                    | 13.0<br>69<br>234<br>iin 11<br>2099 202<br>2287<br>89                        | A B B Area A B B Fir Loss G 252 427 966 1645 736                          | 12. 7 31 31 128 4 1 130 23 316 12        | 26 A B B .0.0 76 Area A B Fir 12  Loss G 986 17 390 21 427 11 1104 2907 1302      | 11. 42  48  48  ain  1271  383  3  58  149  45              | 4 A B 0 0 44 Area A B Fir 44 Loss Gain 0 688 67 4 2170 29 2858 96 1279 3                | B 11.0 Area A B Fir  Loss          |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Level HL Total         19,093         Total HL for per room         3648         4476         2435         4303         4230   | Level HL Total Level HG Total  Run fit Run fit Exp Co  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall A Gross Exp Wall B Components I North Shaded East/West South Existing Windows Skylight Doors te exposed walls A te exposed walls B xposed Ceilings B Exposed Floors ut exposed walls B Exposed Floors ut exposed walls B Exposed Floors ut exposed walls B Heat Loss/Gain Heat Loss/Gain Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People  | R-Values Lo<br>3.55<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80  | DSS Gain 22.93 1 22.93 2 22.93 2 240.90 2 40.10 8 20.35 4.78 2.94 2.73 2.94 2.73 2.94 2.73 2.94 2.73 2.94 2.95 2.73 2.94 2.97 2.97 2.97 2.97 2.97 2.97 2.97 2.97   | 09% 01.3 3 3 11. 22 3 3 4 5 5 6 5 29 6 6 6 8.8 8 6 0 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6                             | 20365  GRT A B B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B B A B B B B | Gain 1360 1550 60 89          | 11.0<br>225 A A B B S F T 1363      | 1028 :: 1396 :: 1354 :: 98                     | 13.0<br>69<br>234<br>iin 11<br>2099 21<br>189 202                            | A B B Area A B B Fir    Loss G 252    427   966    1645   736   54        | 12. 7 31 31 128 4 1 130 23 316 12 18     | 26 A B B .0.0 76 Area A B Fir 12  Loss G 986 17 390 21 427 11 1104 2907 1302      | 11. 42  48  ain  1271 383 3 58 149 45  1861 72              | 4 A B 0 0 4 Area A B Fir 4 Loss Gain 0 688 67 4 2170 29 2858 96 1279 3 93 5             | B 11.0 Area A B Fir  Loss          |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
|  | A D D Level HL Total Level HG Total  Run fi Run fi Run fi Ex Ex Ex  G G G  Net Net Ex Ex Ex Ventilation  Ventilation   | Appliances Loads Juct and Pipe loss 20,363 4,639  It exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall B Components I North Shaded EastWest South Existing Windows Skylight Doors at exposed walls A t exposed walls A t exposed walls A t exposed walls A t exposed ceilings A xposed Ceilings A xposed Ceilings B Exposed Floors uctive Heatloss Heat Loss Heat Gain Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People Appliances Loads  | R-Values Lo<br>3.55<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80  | oss Gain 22.93 1 22.93 2 22.93 2 22.93 2 40.90 2 40.10 8 2.73 3 4.78 9.58 1.37 2.94 2.73 3 0.4477 0.4 0.0 3 1.4.95 1 0.0 3 1.4.95 1 0.0 3  | 0% om 1.3 3 3 11. 22 3 3 4 3 4 3 4 3 5 6 6 6 6 6 6 6 6 6 6 4 3.7 7 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6           | 20365  GRT A B B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B B A B B B B | Gain 1360 1550 60 89          | 11.0<br>225 A A B B S F T 1363      | 1028 :: 1396 :: 1354 :: 98                     | 13.0<br>69<br>234<br>iin 11<br>2099 21<br>189 202                            | A B B Area A B B Fir    Loss G 252    427   966    1645   736   54        | 12. 7 31 31 128 4 1 130 23 316 12 18     | 26 A B B .0.0 76 Area A B Fir 12  Loss G 986 17 390 21 427 11 1104 2907 1302      | 11. 42  48  ain  1271 383 3 58 149 45  1861 72              | 4 A B 0 0 4 Area A B Fir 4 Loss Gain 0 688 67 4 2170 29 2858 96 1279 3 93 5             | B 11.0 Area A B Fir  Loss          |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
| Level HG Total   14,579   Total HG per room x 1.3   2871   5243   1111   2652   2702   | Level HL Total Level HG Total  Run fit Run fit Run fit Ext Ext CG G  Net Net Ext Ext Total Conductive Air Leakage Ventilation D D  | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area Axposed Ceilings B Exposed Floors Gross Exp Wall B Components I Components I South Existing Windows Skylight Doors at exposed walls A t exposed wall B Endings B Exposed Floors South Existing Windows Skylight Doors at exposed walls A t exposed walls A t exposed felings B Exposed Floors uctive Heatloss Heat Casin Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People Appliances Loads Voted and People Appliances Loads Jent Case Case S Loca Case S L | R-Values Lo 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80   | al HL for per ridical per room :  22.93 1 22.93 2 22.93 2 22.93 2 22.93 2 22.93 2 22.93 2 22.93 2 240.90 2 40.90 2 40.90 3 40.91 3 3 0.035 4.78 0.03 14.95 1 0.03 1 0.03 1 0.03 1 0.03 1 0.03 1 0.03 1 0.03 1 0.03 1 0.03 1  | 0% 34 11. 22 34 34 34 34 34 34 34 34 34 34 34 34 34  | 20365  GRT A B  ) A A B  Fir  Loss  1055  1410  2465   | Gain 1360 1911 1550 60 89 508 | 11.0<br>225 A A B B S F T 1363      | 3 Area   | 13.0<br>69<br>234<br>iin 11<br>2099 21<br>189 202                            | A B Area A B B Fir    Loss G 252    427   966    1645   736   54          | 12. 7 31 31 128 4 1 130 23 316 12 18     | 26 A B B 76 Area A B Fir 12 Loss G 13 986 17 390 21 427 11 1104                   | 11. 42  48  ain  1271 383 3 58 149 45  1861 72              | 4 A B 0 0 4 Area A B B Fir 4 4 Loss Gain 0 688 67 4 2170 29 2858 96 1279 3 93 5 5 0 101 | B 11.0 Area A B Fir  Loss          |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |
|  | Level HL Total Level HG Total  Run fit Run fit Run fit Exp G G G  Net Net Exp Total Conductive Air Leakage Ventilation Level HL Total Level HL Total   | Appliances Loads Juct and Pipe loss 20,363 4,639  Level 2  ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall A Gross Exp Wall B Components I North Shaded East/West South Existing Windows Skylight Doors at exposed walls A t exposed Vallings B Exposed Floors ut exposed walls B Exposed Floors ut exposed Ceilings B Exposed Floors ut exposed Walls B Exposed Ceilings B Exposed Floors ut exposed Walls B Exposed Ceilings B Exposed Ceili | R-Values Lo<br>3.55<br>3.55<br>3.55<br>3.55<br>3.55<br>3.92<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80<br>x   | al HL for per r. (16) per room : 3  Doss Gain 22,93 1 22,93 2 22,93 2 40,90 2 40,10 8 20,35 4.78 2.93 2,273 2,94 40,10 8,58 1,37 2,94 40,10 8,03 14,95 1 0,03 14,95 1 0,03 14,95 1 0,03 14,95 1 1 0,03 14,95 1 1 0,03 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  | 0% 1.3 34 11. 22 34 34 34 35 36 36 36 37 37 37 37 37 39 06 6 8.88 8.06 9.06 6.88 8.06 6.06 6.06 6.06 6.06 6.06 6 | 20365  GRT A B  ) A A B  Fir  Loss  1055  1410  2465   | Gain 1360 1550 60 89 508      | 11.0<br>225 A A B B S F T 1363      | 1628 : 1396 : 3024 : 1354 : 98 : 4476          | 13.0<br>69<br>234<br>iin 11<br>2099 21<br>189 202<br>2287<br>89 132 1525 0.5 | A B B Area A B B Fir    Loss G 252    427   966    1645   736   54   2435 | 12. 7 31 31 128 4 1 130 23 316 12 18 508 | 26 A B B  | 11. 42  48  ain  1271  383  383  58  149  45  1861  72  107 | 4 A B 0 0 4 Area A B Fir 4 Loss Gain 0 688 67 4 2170 29 2858 96 1279 3 93 5 0 101 4230  | B 11.0 Area A B B Fir  Loss        |            | B<br>.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain  | B<br>11.0<br>Area<br>A<br>B<br>Fir |        | B<br>11.0<br>Area<br>A<br>B<br>Fir |                      |

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under

Division C subsection 3.2.5. of the Building Code. Individual BCIN:

Name Alexa

David DaCosta

SB-12 Package Package A1



57,425

30,486

btu/h

Total Heat Loss

Total Heat Gain

#### Heatloss/Gain Calculations CSA-F280-12

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800

SB-12 Package

Package A1

e-mail hvac@gtadesigns.ca

|                               |  |                |                                       |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           | -         | gtauesigns     |      |                 |       |             |           |            |        |           |                    |
|-------------------------------|--|----------------|---------------------------------------|-----------------|-------------|--------------|-------------|-----|-------------------------|----------|-------------|------|---------------|--------|------|--------------|-----------|-----------|----------------|------|-----------------|-------|-------------|-----------|------------|--------|-----------|--------------------|
|                               |  | Builder:       | Bayview W                             | ellington       | _           | Date:        |             |     | ne 25, 202<br>Barossa 3 |          |             | -    |               |        |      |              | Weathe    | r Data    | Brad           | ford | 44              | -9.4  | 86 22       | 48.2      |            | D      | oject#    | Page 5<br>PJ-00041 |
| 2012 OBC                      |  | Project:       | Green Val                             | ey East         |             | /lodel:      |             |     | 8-3 Lot 14              |          |             | _    | S             | ystem  | 1    |              | Heat L    | .oss ^T 8 | 1.4 deg. F     |      | Ht gain ^T      | 11 (  | deg. F      | GTA:      | 2527       |        | yout #    | JB-07271           |
| •                             | 110                                      |                |                                       |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| Run                           | Level 3<br>ft. exposed wall A            |                |                                       | М<br>30 А       | AST         | 18 A         | BED 2       | 15  | BATH<br>A               | 2        | BED:        | 3    | 32 A          | LOFT   |      | 13 /         | BED 4     |           | ENS 2<br>6 A   |      | ENS<br>22 A     | •     | Α           |           | Α          |        | Α         |                    |
|                               | ft. exposed wall B                       |                |                                       | В               |             | В            |             |     | В                       |          | В           |      | E             |        |      |              | 3         |           | В              |      | В               |       | В           |           | В          |        | В         |                    |
|                               | Ceiling height<br>Floor area             |                |                                       | 11.0<br>295 Are | •           | 9.0<br>166 A | ·02         | 9.0 | Area                    | 9.<br>17 | 0<br>2 Area |      | 11.0<br>266 A | lros   |      | 9.0<br>129 / | Aros      |           | 9.0<br>69 Area |      | 9.0<br>113 Area |       | 9.0<br>Area |           | 9.0<br>Are | a      | 9.0<br>Ar | -03                |
| E                             | xposed Ceilings A                        |                |                                       | 295 A           |             | 166 A        |             | 74  |                         |          | 2 A         |      | 266 A         |        |      | 129          |           |           | 69 A           |      | 113 A           |       | A           |           | A          | •      | A         | cu                 |
| E                             | xposed Ceilings B<br>Exposed Floors      |                |                                       | B<br>Fir        |             | 9 F          |             | 74  | B<br>El-                | 47       | B<br>2 Flr  |      | 12 F          |        |      |              | 3<br>Flr  |           | B<br>Flr       |      | B<br>Fir        |       | B<br>Flr    |           | B<br>Flr   |        | B<br>Fli  | _                  |
|                               | Gross Exp Wall A                         |                |                                       | 330             |             | 162          |             | 135 |                         | 20       |             |      | 352           | 11     |      | 117          | -11       |           | 54             |      | 198             |       | rii         |           | FII        |        | FII       | !                  |
|                               | Gross Exp Wall B<br>Components           | D Values I a   | ss Gain                               | Los             | s Gain      |              | oss Gain    |     | Loss C                  | Gain     | Loss        | Gain |               | .oss   | Gain |              | oss (     | Gain      | Loss           | Gain | Loss            | Gain  | Lana        | s Gain    | Los        | s Gain |           | oss Gain           |
|                               | North Shaded                             | 3.55           | 22.93 11.6                            |                 | S Gaiii     | 16           | 367 186     |     | LUSS C                  | Jain     | LUSS        | Gain | Ī             | .055   | Jain | ſ            | -055      | Gain      | LUSS           | Gain | LUSS            | Gain  | LUSS        | Gain      | LOS        | 3 Gain | 1         | JSS Gaill          |
|                               | East/West<br>South                       | 3.55           | 22.93 29.5                            |                 | 734 946     |              |             | 11  | 252                     | 325 3    | 9 894       | 1153 | 39            | 894    | 1153 |              |           |           |                | 450  | 13 298          | 384   |             |           |            |        |           |                    |
|                               | Existing Windows                         | 3.55<br>1.99   | 22.93 22.5<br>40.90 23.6              |                 |             |              |             |     |                         |          |             |      | 9             | 206    | 203  | 16           | 367       | 360       | 7 161          | 158  |                 |       |             |           |            |        |           |                    |
|                               | Skylight                                 | 2.03           | 40.10 88.2                            |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| Ne                            | Doors<br>et exposed walls A              | 4.00<br>17.03  | 20.35 2.7<br>4.78 0.6                 |                 | 424 192     | 146          | 698 94      | 124 | 593                     | 80 16    | 8 803       | 109  | 304           | 1453   | 196  | 101          | 483       | 65        | 47 225         | 30   | 185 884         | 1 119 |             |           |            |        |           |                    |
| Ne                            | et exposed walls B                       | 8.50           | 9.58 1.2                              | 9               |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| E                             | xposed Ceilings A<br>xposed Ceilings B   | 59.22<br>27.65 | 1.37 0.6<br>2.94 1.3                  |                 | 405 189     | 166          | 228 107     | 74  | 102                     | 47 17    | 2 236       | 110  | 266           | 366    | 171  | 129          | 177       | 83        | 69 95          | 44   | 113 155         | 73    |             |           |            |        |           |                    |
|                               | Exposed Floors                           | 29.80          | 2.73 0.1                              |                 |             | 9            | 25 2        | 74  | 202                     | 12 17    | 2 470       | 29   | 12            | 33     | 2    |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| Foundation Cond               |  |                |                                       | ┥               | 564         |              | 1317        |     | 1149                    |          | 2404        |      |               | 2952   |      |              | 1027      |           | 480            |      | 1338            | ,     |             |           |            |        |           |                    |
| Total Conductive              | Heat Loss<br>Heat Gain                   |                |                                       |                 | 1328        |              | 388         |     | 1149                    | 465      | 2404        | 1401 |               | 2932   | 1724 |              | 1027      | 508       | 400            | 232  | 1330            | 576   |             |           |            |        |           |                    |
| Air Leakage                   | Heat Loss/Gain                           |                | 0.2910 0.039                          |                 | 746 52      |              | 383 15      |     | 334                     | 18       | 699         | 55   |               | 859    | 67   |              | 299       | 20        | 140            | 9    | 389             | 22    |             |           |            |        |           |                    |
| Ventilation                   | Case 1                                   |                | 0.02 0.0<br>14.95 11.8                |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | Case 3                                   | х              | 0.03 0.0                              | 6               | 83 76       |              | 43 22       |     | 37                      | 27       | 78          |      |               | 96     | 99   |              | 33        | 29        | 16             | 13   | 44              | 33    |             |           |            |        |           |                    |
|                               | Heat Gain People Appliances Loads        | 1 =.25 per     | 23<br>cent 406                        |                 | 478         | 1            | 239         |     |                         |          | 1           | 239  |               |        |      | 1            |           | 239       |                |      |                 |       |             |           |            |        |           |                    |
|                               | Duct and Pipe loss                       |                | 10                                    | <b>%</b>        |             |              |             | 1   | 148                     | 47       | 1 310       |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| Level HL Total Level HG Total | 17,969<br>11,268                         |                | I HL for per rooi                     |                 | 393<br>2514 |              | 1744<br>864 |     | 1669                    | 724      | 3491        | 2520 |               | 3907   | 2458 |              | 1359      | 1035      | 635            | 331  | 1770            | 821   |             |           |            |        |           |                    |
| LCVCI IIO Iotai               | 11,200                                   | rotarr         | o per room x r.                       |                 | 2014        | l L          | 00-         | J [ |                         | 724      |             | 2020 | 1 ∟           |        | 2400 | L            |           | 1000      |                | 551  |                 | 02.1  |             |           |            |        | L         |                    |
| -                             |  |                |                                       |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | Level 4                                  |                |                                       |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | ft. exposed wall A<br>ft. exposed wall B |                |                                       | A<br>B          |             | A<br>R       |             |     | A<br>B                  |          | A<br>R      |      | A<br>E        | \<br>} |      | ,            |           |           | A<br>B         |      | A<br>R          |       | A<br>B      |           | A<br>B     |        | A<br>B    |                    |
| Kuii                          | Ceiling height                           |                |                                       |                 |             | _            |             |     |                         |          | -           |      |               |        |      |              |           |           |                |      | _               |       | _           |           |            |        | _         |                    |
| _                             | Floor area<br>exposed Ceilings A         |                |                                       | Are:            | a           | A            | rea         |     | Area<br>A               |          | Area<br>A   |      | 4             | Area   |      |              | Area<br>A |           | Area<br>A      |      | Area<br>A       |       | Area<br>A   | 1         | Are:       | a      | Ar<br>A   | rea                |
|                               | xposed Ceilings B                        |                |                                       | В               |             | В            |             |     | В                       |          | В           |      | É             |        |      | ,            |           |           | В              |      | В               |       | В           |           | В          |        | В         |                    |
|                               | Exposed Floors                           |                |                                       | Flr             |             | F            | r           |     | Flr                     |          | Flr         |      | F             | lr .   |      | F            | -Ir       |           | Flr            |      | Flr             |       | Flr         |           | Flr        |        | Fli       | r                  |
|                               | Gross Exp Wall A<br>Gross Exp Wall B     |                |                                       |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | Components                               |                |                                       | Los             | s Gain      | L            | oss Gain    | п г | Loss C                  | Gain     | Loss        | Gain | L             | .oss   | Gain | Ţ            | oss (     | Gain      | Loss           | Gain | Loss            | Gain  | Loss        | Gain Gain | Los        | s Gain | Lc        | oss Gain           |
|                               | North Shaded<br>East/West                | 3.55<br>3.55   | 22.93 11.6<br>22.93 29.5              |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | South                                    | 3.55           | 22.93 22.5                            | 0               |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | Existing Windows<br>Skylight             | 1.99<br>2.03   | 40.90 23.6<br>40.10 88.2              |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | Doors                                    | 4.00           | 20.35 2.7                             | 5               |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | et exposed walls A                       | 17.03<br>8.50  | 4.78 0.6<br>9.58 1.2                  |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | et exposed walls B<br>exposed Ceilings A | 59.22          | 9.58 1.2<br>1.37 0.6                  |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| E                             | xposed Ceilings B                        | 27.65<br>29.80 | 2.94 1.3<br>2.73 0.1                  |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| Foundation Cond               | Exposed Floors<br>uctive Heatloss        | 29.80          | 2.73 0.1                              | /               |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| Total Conductive              | Heat Loss                                |                |                                       |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| Air Leakage                   | Heat Gain<br>Heat Loss/Gain              |                | 0.0000 0.039                          | 0               |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | Case 1                                   |                | 0.00 0.0                              | 6               |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| Ventilation                   | Case 2<br>Case 3                         | x              | 14.95 11.8<br>0.03 0.0                |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | Heat Gain People                         |                | 23                                    | 9               |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
|                               | Appliances Loads                         | 1 =.25 per     |                                       |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| Level HL Total                | Ouct and Pipe loss<br>0                  | Tota           | 10 <sup>o</sup><br>al HL for per rooi | n e             |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        |           |                    |
| Level HG Total                | 0  |                | IG per room x 1.                      |                 |             |              |             | J   |                         |          |             |      | l L           |        |      |              |           |           |                |      |                 |       |             |           | l L        |        |           |                    |
|                               |  |                |                                       |                 |             |              |             |     |                         |          |             |      |               |        |      |              |           |           |                |      |                 |       |             |           |            |        | D 40 D-   |                    |

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under

Name Met

David DaCosta

Division C subsection 3.2.5. of the Building Code. Individual BCIN:



2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

> System Design Option Exhaust only / forced air system

HRV WITH DUCTING / forced air system

Part 6 design

HRV simplified connection to forced air system

HRV full ducting/not coupled to forced air system

2

3 Х

4

Project # Layout #

Page 6 PJ-00041 JB-07271

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under Mane Africate

Division C subsection 3.2.5. of the Building Code. Individual BCIN: 32964

David DaCosta

| Package:<br>Project:                       | Package A1<br>Bradford   | Model:   | S38-3 Lot 14  | 1                          |
|--|--|--|---|----------------------------|
| 1 10,000                                   |  |  |   | •                          |
|  | RESIDENTIAL MECHANICAL  For systems serving one dwelling unit & con  |  |   |                            |
|  | r or systems serving one awening unit & con  | orning to the Orlano Building t  | Code, 0.1eg 332/12                                  |                            |
|  | Location of Installation   | Total Ver  | ntilation Capacity 9.32.3.3                         | 3(1)                       |
| Lot #                                      | Plan #   | Bsmt & Master Bdrm   | 2 @ 21.2 cfm  | n 42.4 cfm                 |
| Township                                   | Bradford   | Other Bedrooms Bathrooms & Kitchen   | 3 @ 10.6 cfm<br>5 @ 10.6 cfm                        |                            |
| Roll #                                     | Permit #   | Other rooms  | 5 @ 10.6 cfm<br>Total                               | 53 cfm<br>180.2            |
| Address                                    |  |  |   |                            |
|  | Builder  | Principal V  | entilation Capacity 9.32.3                          | 3.4(1)                     |
| Name                                       | Bayview Wellington   | Master bedroom Other bedrooms  | 1 @ 31.8 cfm<br>3 @ 15.9 cfm                        |                            |
| Address                                    | Daywow Weilington  |  | Total   | 79.5                       |
| City                                       |  | Duimain  | nal Exhaust Fan Canasitu                            |                            |
| Tel  | Fax  | Make   | pal Exhaust Fan Capacity<br>Model                   | Location                   |
|  |  | VanEE  | 65H HRV   | Base                       |
|  | Installing Contractor  |  |   |                            |
| Name                                       |  | 129 cfm  |   | Sones or Equiv.            |
| Address                                    |  | Hea  | at Recovery Ventilator                              |                            |
|  |  | Make   | VanEE   |                            |
| City                                       |  | Model  | 65H HRV<br>29 cfm high                              | 80 cfm low                 |
| Tel  | Fax  | Sensible efficiency @ -2<br>Sensible efficiency @ 0                            | 25 deg C  | 60%<br>75%                 |
|  |  |  | nce HRV/ERV to within 10                            |                            |
| ->   | Combustion Appliances 9.32.3.1(1)  | Supplen  | nental Ventilation Capaci                           | ty                         |
| a) x<br>b)<br>c)<br>d)<br>e)               | Direct vent (sealed combustion) only Positive venting induced draft (except fireplaces) Natural draft, B-vent or induced draft fireplaces Solid fuel (including fireplaces) No combustion Appliances | Total ventilation capacity<br>Less principal exhaust of<br>REQUIRED supplement | capacity  | 180.2<br>79.5<br>100.7 cfm |
|  |  | Supr   | olemental Fans 9.32.3.5.                            |                            |
|  | Heating System   | Location   | cfm Model   | Sones                      |
| x  | Forced air Non forced air Electric space heat (if over 10% of heat load)   | Ens 2<br>Bath  | 50 XB50<br>50 XB50<br>50 XB50<br>50 XB50            | 0.3<br>0.3<br>0.3          |
|  | House Type 9.32.3.1(2)   |  |   |                            |
| l x  | Type a) or b) appliances only, no solid fuel   | all fans HVI listed  | Make Broan  | or Equiv.                  |
| <u>                                   </u> | Type I except with solid fuel (including fireplace)  |  |   |                            |
| III  | Any type c) appliance Type I or II either electric space heat  |  | esigner Certification<br>ventilation system has bee | n designed                 |
| Other                                      | Type I, II or IV no forced air   | in accordance with the C   |   | n uesigned                 |

|                    | Designer (  | Certification |       |  |  |  |  |  |  |  |
|--------------------|---|---------------|-------|--|--|--|--|--|--|--|
| I hereby certify t | I hereby certify that this ventilation system has been designed |               |       |  |  |  |  |  |  |  |
| in accordance w    | rith the Ontario B  | uilding Code. | •     |  |  |  |  |  |  |  |
|                    |   |               |       |  |  |  |  |  |  |  |
|                    |   | _             |       |  |  |  |  |  |  |  |
| Name               | David D   | aCosta        |       |  |  |  |  |  |  |  |
|                    | 47  | 16000         |       |  |  |  |  |  |  |  |
| Signature          | - cane  | - ace o       |       |  |  |  |  |  |  |  |
|                    |   |               |       |  |  |  |  |  |  |  |
| HRAI#              | 5190  | BCIN #        | 32964 |  |  |  |  |  |  |  |
|                    | •   |               |       |  |  |  |  |  |  |  |
| Date               | June 25   | 5, 2021       |       |  |  |  |  |  |  |  |
|                    |   |               |       |  |  |  |  |  |  |  |

# ♦GTA\DESIGNS

### **Energy Efficiency Design Summary: Prescriptive Method**

(Building Code Part 9, Residential)

Page 7

Project # PJ-00041 Layout # JB-07271

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 Fax: 647-494-9643 e-mail dave@gtadesigns.ca

This form is used by a designer to demonstrate that the energy efficiency design of a house complies with the building code using the prescriptive method described in Subsection 3.1.1. of SB-12. This form is applicable where the ratio of gross area of windows/sidelights/skylights/glazing in doors and sliding glass doors to the gross area of peripheral walls is not more than 22%.

|             |  |              |            | For use by Prince            | cipal Authori                  | ity             |                  |                             |              |                    |  |  |  |
|-------------|--|--------------|------------|------------------------------|--------------------------------|-----------------|------------------|-----------------------------|--------------|--------------------|--|--|--|
| Application | n No:  |              |            |                              |                                | rtification Nur | mber             |                             |              |                    |  |  |  |
|             |  |              |            |                              |                                |                 |                  |                             |              |                    |  |  |  |
| Α.          | Project Information  |              |            |                              |                                |                 |                  |                             |              |                    |  |  |  |
| Building no | umber, street name   |              |            | Barossa 3                    |                                |                 | Unit num         | ber                         | Lot/Con      |                    |  |  |  |
|             |  |              | S          | 38-3 Lot 141                 |                                |                 |                  |                             |              |                    |  |  |  |
| Municipalit | ty Bradford  |              |            | Postal code                  | Reg. Plan                      | number / oth    | ner descri       | ption                       | •            |                    |  |  |  |
|             |  |              |            |                              |                                |                 |                  |                             |              |                    |  |  |  |
| В.          | Prescriptive Compliance [indica  | te the buil  | lding cod  | e compliance pacl            | age being e                    | employed in     | the hous         | e design]                   |              |                    |  |  |  |
|             | SB-12 Prescriptive (input design pa  | ckage):      |            | <u>Pac</u>                   | kage A1                        |                 |                  | Table:                      | 3.1.1.2./    | <u>A</u>           |  |  |  |
| C.          | Project Design Conditions  |              |            |                              |                                |                 |                  |                             |              |                    |  |  |  |
|             | Climatic Zone (SB-1):  |              | Heat. E    | quip. Efficiency             | ,                              |                 | Spa              | ce Heating F                | uel Sourc    | e                  |  |  |  |
| <b>✓</b>    | Zone 1 (< 5000 degree days)  |              | √ ≥ 92     | 2% AFUE                      | <b>✓</b>                       | Gas             |                  | Propane                     |              | Solid Fuel         |  |  |  |
|             | Zone 2 (≥ 5000 degree days)  |              | _ ≥ 8      | 4% < 92% AFUE                |                                | Oil             |                  | Electric                    |              | Earth Energy       |  |  |  |
| F           | Ratio of Windows, Skylights & Glas   | s (W, S      | & G) to \  | Wall Area                    |                                |                 | Other            | Building Ch                 | aracterist   | ics                |  |  |  |
|             | ( ) Malla 205 4 4050 0   | 412          |            |                              | ☐ Log/F                        | Post&Beam       |                  | ICF Above                   | Grade        | ☐ ICF Basement     |  |  |  |
| Area o      | $f \text{ Walls} = \underline{395.1} \text{ m}^2 \text{ or } \underline{4252.9}$ | ft²          | W,S &      | G % = <u>11.3%</u>           | ☐ Slab                         | on-ground       | -                | Walkout Ba                  | sement       |                    |  |  |  |
|             |  |              |            |                              | ☑ Air C                        | onditioning     |                  | Combo Unit                  | t            |                    |  |  |  |
| Area of \   | W, S & G = $44.778$ m <sup>2</sup> or $482.0$                                    | ft²          | Utilize V  | Vindow 🗆 Ye                  | S Air Sourced Heat Pump (ASHP) |                 |                  |                             |              |                    |  |  |  |
|             |  |              | Avera      | aging 🗹 No                   | ☐ Grou                         | ind Source F    | Heat Pun         | np (GSHP)                   |              |                    |  |  |  |
| D.          | Building Specifications [provide   | values ar    | nd ratings | of the energy effi           | ciency comp                    | onents prop     | oosed]           |                             |              |                    |  |  |  |
|             | <b>Energy Efficiency Substitutions</b>   |              |            |                              |                                |                 |                  |                             |              |                    |  |  |  |
|             | ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5))  |              |            |                              |                                |                 |                  |                             |              |                    |  |  |  |
|             | Combined space heating and domestic  | water hea    | ating syst | ems (3.1.1.2(7) / 3          | 3.1.1.3.(7))                   |                 |                  |                             |              |                    |  |  |  |
|             | Airtightness substitution(s)   |              | Table 3.1  | .1.4.B Required              | d:                             |                 |                  | Permitted S                 | Substitution | :                  |  |  |  |
|             | Airtightness test required   |              | Table 3.1  | .1.4.C Required              | d:                             |                 |                  | Permitted S                 | Substitution | i .                |  |  |  |
| (F          | Refer to Design Guide Attached)  |              | - 45.0 01. | Require                      | d:                             |                 |                  | Permitted S                 | Substitution | :                  |  |  |  |
|             | Building Component   |              |            | il/R-Values or<br>n U-Value¹ |                                | Build           | ding Co          | mponent                     |              | Efficiency Ratings |  |  |  |
| Therma      | l Insulation   | Nom          | inal       | Effective                    | Windov                         | vs & Dooi       | <b>rs</b> Provid | de U-Value <sup>(1)</sup> o | r ER rating  |                    |  |  |  |
| Ceiling w   | vith Attic Space   | 60           | 0          | 59.22                        | Window                         | s/Sliding Gl    | lass Do          | ors                         |              | 1.6                |  |  |  |
| Ceiling w   | vithout Attic Space  | 3′           | 1          | 27.65                        | Skylights                      | 3               |                  |                             |              | 2.8                |  |  |  |
| Exposed     | Floor  | 3′           | 1          | 29.80                        | Mechar                         | nicals          |                  |                             |              |                    |  |  |  |
| Walls Ab    | pove Grade   | 22           |            | 17.03                        |                                | Equip.(AFL      |                  |                             |              | 96%                |  |  |  |
| Baseme      | nt Walls   |              | 20.0ci     | 21.12                        | HRV Eff                        | iciency (SR     | E% at 0°         | °C)                         |              | 75%                |  |  |  |
| Slab (all   | >600mm below grade)  | х            | :          | x                            | DHW He                         | eater (EF)      |                  |                             |              | 0.80               |  |  |  |
| Slab (ed    | ge only ≤600mm below grade)  | 10           | )          | 11.13                        | DWHR (                         | CSA B55.1       | (min. 42%        | 6 efficiency))              |              | #Showers 2         |  |  |  |
| Slab (all   | ≤600mm below grade, or heated)   | 10           | )          | 11.13                        | Combine                        | ed Heating      | System           |                             |              |                    |  |  |  |
| (1) U valu  | ie to be provided in either W/(m²·K) or Bt                                       | u/(h·ft·F) b | ut not bot | h.                           |                                |                 |                  |                             |              |                    |  |  |  |
| E.          | Designer(s) [name(s) & BCIN(s), if   | applicable   | , of perso |                              | rmation her                    |                 |                  | nat design mee              | ts building  | code]              |  |  |  |
| Name        | -  |              |            | BCIN                         |                                | Signature       |                  | 11                          | .10          | ,                  |  |  |  |
|             | David DaCosta  |              |            | 32                           | 964                            |                 |                  | Mane                        | 14C=         | ₹ 7                |  |  |  |



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Project # PJ-00041
Layout # JB-07271

Package:Package A1System:System 1Project:BradfordModel:\$38-3 Lot 141

#### Air Leakage Calculations **Building Air Leakage Heat Loss Building Air Leakage Heat Gain** HL^T В LRairh Vb HLleak В LRairh Vb HG^T **HG** Leak 0.018 0.417 31489 81.4 19248 0.102 31489 Levels Air Leakage Heat Loss/Gain Multiplier Table (Section 11) 1 2 3 4 Level Building Level Conductive Air Leakage Heat Loss Level (LF) (LF) (LF) (LF) **Heat Loss** Multiplier Factor (LF) Level 1 0.5 10401 0.9253 1.0 0.6 0.5 0.4 Level 2 0.4477 12899 0.3 0.3 0.3 0.4 19248 0.2910 Level 3 0.2 13230 0.2 0.2 Level 4 0 0.0000 Air Leakage Heat Gain Levels this Dwelling **HG LEAK** 639 0.0390 3 **BUILDING CONDUCTIVE HEAT GAIN** 16396 Ventilation Calculations **Ventilation Heat Loss Ventilation Heat Gain** Vent Vent **Ventilation Heat Loss** Ventilation Heat Gain **PVC** (1-E) HRV HLbvent PVC HG^T **HGbvent** 1.08 81.4 0.17 1188 79.5 79.5 11 Case 1 Case 1 **Ventilation Heat Loss (Exhaust only Systems) Ventilation Heat Gain (Exhaust Only Systems)** Case 1 - Exhaust Only Case 1 - Exhaust Only Multiplier Case Case LVL Cond. HL HGbvent 944 Level LF HLbvent Multiplier 0.06 Level 1 0.5 10401 0.06 Building 16396 Level 2 12899 0.3 0.03 1188 13230 Level 3 0.2 0.02 Level 4 0 0 0.00 Case 2 Case 2 **Ventilation Heat Loss (Direct Ducted Systems)** Ventilation Heat Gain (Direct Ducted Systems) Case Multiplier Multiplier C HL^T (1-E) HRV С HG^T 14.95 11.88 1.08 81.4 0.17 1.08 11 Case 3 Case 3 Ventilation Heat Loss (Forced Air Systems) **Ventilation Heat Gain (Forced Air Systems)** Case Vent Heat Gain **HLbvent** Multiplier Multiplier HGbvent HG\*1.3 Total Ventilation Load 1188 0.03 944 0.06 944 Foundation Conductive Heatloss Level 1 Level 1 1833 Watts 6255 Btu/h **Foundation Conductive Heatloss Level 2** Level 2 Watts Btu/h Slab on Grade Foundation Conductive Heatloss Watts Btu/h Walk Out Basement Foundation Conductive Heatloss Watts 181 617 Btu/h

# **Envelope Air Leakage Calculator**

Supplemental tool for CAN/CSA-F280

| Weather Sta                     | tion Description                    |
|---------------------------------|-------------------------------------|
| Province:                       | Ontario <b>V</b>                    |
| Region:                         | Bradford ▼                          |
| Weather Station Location:       | Open flat terrain, grass            |
| Anemometer height (m):          | 10                                  |
| Local                           | Shielding                           |
| Building Site:                  | Suburban, forest ▼                  |
| Walls:                          | Heavy ▼                             |
| Flue:                           | Heavy ▼                             |
| Highest Ceiling Height (m):     | 9.30                                |
| Building (                      | Configuration                       |
| Type:                           | Detached                            |
| Number of Stories:              | Two                                 |
| Foundation:                     | Shallow                             |
| House Volume (m <sup>3</sup> ): | 891.75                              |
| Air Leakag                      | e/Ventilation                       |
| Air Tightness Type:             | Present (1961-) (ACH=3.57)          |
| 0 / 207.0 /                     | ELA @ 10 Pa. 322,44 cm <sup>2</sup> |
| Custom BDT Data:                | 3.57 ACH @ 50 Pa                    |
| Mechanical Ventilation (L/s):   | Total Supply: Total Exhaust:        |
|                                 | 39.75                               |
|                                 |                                     |
| Flue #:                         | #1 #2 #3 #4                         |
| Diameter (mm):                  | 0 0 0 0                             |
|                                 |                                     |
| Heating Air Leakage Rate (ACH/H | H): 0.417                           |
| Cooling Air Leakage Rate (ACH/F | i): 0.102                           |

## **Residential Foundation Thermal Load Calculator**

Supplemental tool for CAN/CSA-F280

| Weather Station Description  |         |                                 |  |  |  |  |  |  |  |
|------------------------------|---------|---------------------------------|--|--|--|--|--|--|--|
| Province:                    |         | Ontario                         |  |  |  |  |  |  |  |
| Region:                      |         | Bradford ▼                      |  |  |  |  |  |  |  |
|                              | Site D  | escription                      |  |  |  |  |  |  |  |
| Soil Conductivity:           |         | High conductivity: moist soil ▼ |  |  |  |  |  |  |  |
| Water Table:                 |         | Normal (7-10 m, 23-33 Ft)       |  |  |  |  |  |  |  |
| Fou                          | ındatio | on Dimensions                   |  |  |  |  |  |  |  |
| Floor Length (m):            | 17.27   |                                 |  |  |  |  |  |  |  |
| Floor Width (m):             | 4.83    |                                 |  |  |  |  |  |  |  |
| Exposed Perimeter (m):       | 35.05   |                                 |  |  |  |  |  |  |  |
| Wall Height (m):             | 2.59    | annun                           |  |  |  |  |  |  |  |
| Depth Below Grade (m):       | 0.91    | Insulation Configuration        |  |  |  |  |  |  |  |
| Window Area (m²):            | 0.56    |                                 |  |  |  |  |  |  |  |
| Door Area (m²):              | 1.95    |                                 |  |  |  |  |  |  |  |
|                              | Radi    | ant Slab                        |  |  |  |  |  |  |  |
| Heated Fraction of the Slab: | 0       |                                 |  |  |  |  |  |  |  |
| Fluid Temperature (°C):      | 33      |                                 |  |  |  |  |  |  |  |
|                              | Desig   | n Months                        |  |  |  |  |  |  |  |
| Heating Month                | 1       |                                 |  |  |  |  |  |  |  |
|                              | Founda  | ation Loads                     |  |  |  |  |  |  |  |
| Heating Load (Watts):        |         | 1833                            |  |  |  |  |  |  |  |

## **Residential Slab on Grade Thermal Load Calculator**

Supplemental tool for CAN/CSA-F280

| Weat   | her Sta | tion Description          |  |  |  |  |  |  |  |
|--|---------|---------------------------|--|--|--|--|--|--|--|
| Province:  |         | Ontario                   |  |  |  |  |  |  |  |
| Region:  |         | Bradford ▼                |  |  |  |  |  |  |  |
|  | Site D  | escription                |  |  |  |  |  |  |  |
| Soil Conductivity: High conductivity: moist soil       ▼ |         |                           |  |  |  |  |  |  |  |
| Water Table:   |         | Normal (7-10 m, 23-33 Ft) |  |  |  |  |  |  |  |
|  | Floor D | Dimensions                |  |  |  |  |  |  |  |
| Length (m):  | 9.24    |                           |  |  |  |  |  |  |  |
| Width (m):   | 1.28    | <del></del>               |  |  |  |  |  |  |  |
| Exposed Perimeter (m):                                   | 11.89   | Insulation Configuration  |  |  |  |  |  |  |  |
|  | Radi    | iant Slab                 |  |  |  |  |  |  |  |
| Heated Fraction of the Slab:                             | 0       |                           |  |  |  |  |  |  |  |
| Fluid Temperature (°C):                                  | 33      |                           |  |  |  |  |  |  |  |
|  | Desig   | n Months                  |  |  |  |  |  |  |  |
| Heating Month 1  |         |                           |  |  |  |  |  |  |  |
|  | Founda  | ation Loads               |  |  |  |  |  |  |  |
| Heating Load (Watts):                                    |         | 181                       |  |  |  |  |  |  |  |





