

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                     |                                |                                                                                                               |                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------|
| <b>A. Project Information</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                     |                                |                                                                                                               |                                |
| Building number, street name<br><b>Barossa 17</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                     |                                | Lot:<br><b>S38-17 WOB</b>                                                                                     |                                |
| Municipality<br><b>Bradford</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                     |                                | Postal code                                                                                                   | Plan number/ other description |
| <b>B. Individual who reviews and takes responsibility for design activities</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                     |                                |                                                                                                               |                                |
| Name<br><b>David DaCosta</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                     | Firm<br><b>gtaDesigns Inc.</b> |                                                                                                               |                                |
| Street address<br><b>2985 Drew Road, Suite 202</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                     |                                | Unit no.                                                                                                      | Lot/con.                       |
| Municipality<br><b>Mississauga</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | Postal code<br><b>L4T 0A4</b>       | Province<br><b>Ontario</b>     | E-mail<br><a href="mailto:dave@gtadesigns.ca">dave@gtadesigns.ca</a>                                          |                                |
| Telephone number<br><b>(905) 671-9800</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | Fax number<br><b>(647) 494-9643</b> |                                | Cell number<br><b>(416) 268-6820</b>                                                                          |                                |
| <b>C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 of Division C]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                     |                                |                                                                                                               |                                |
| <input type="checkbox"/> House <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Structural<br><input type="checkbox"/> Small Buildings <input type="checkbox"/> Building Services <input type="checkbox"/> Plumbing – House<br><input type="checkbox"/> Large Buildings <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Plumbing – All Buildings<br><input type="checkbox"/> Complex Buildings <input type="checkbox"/> Fire Protection <input type="checkbox"/> On-site Sewage Systems |  |                                     |                                |                                                                                                               |                                |
| <b>Description of designer's work</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                     |                                | <b>Model Certification</b>                                                                                    |                                |
| Heating and Cooling Load Calculations<br>Air System Design<br>Residential mechanical ventilation Design Summary<br>Residential System Design per CAN/CSA-F280-12<br>Residential New Construction - Forced Air                                                                                                                                                                                                                                                                                                                                             |  |                                     |                                | Project #: <b>PJ-00204</b>                                                                                    |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                     |                                | Layout #: <b>JB-04549</b>                                                                                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                     |                                | Builder                                                                                                       | <b>Bayview Wellington</b>      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                     |                                | Project                                                                                                       | <b>Green Valley East</b>       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                     |                                | Model                                                                                                         | <b>Barossa 17</b>              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                     |                                |                                                                                                               | <b>S38-17 WOB</b>              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                     |                                | SB-12                                                                                                         | <b>Package A1</b>              |
| <b>D. Declaration of Designer</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                     |                                |                                                                                                               |                                |
| I, <u>David DaCosta</u> declare that (choose one as appropriate):<br>(print name)                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                     |                                |                                                                                                               |                                |
| <input type="checkbox"/> I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4 Division C of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories.<br>Individual BCIN: _____<br>Firm BCIN: _____                                                                                                                                                                                                                                                     |  |                                     |                                |                                                                                                               |                                |
| <input checked="" type="checkbox"/> I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5 of Division C, of the Building Code.<br>Individual BCIN: <u>32964</u><br>Basis for exemption from registration: <u>Division C 3.2.4.1. (4)</u>                                                                                                                                                                                                                             |  |                                     |                                |                                                                                                               |                                |
| <input type="checkbox"/> The design work is exempt from the registration and qualification requirements of the Building Code.<br>Basis for exemption from registration and qualification:                                                                                                                                                                                                                                                                                                                                                                 |  |                                     |                                |                                                                                                               |                                |
| I certify that:<br>1. The information contained in this schedule is true to the best of my knowledge.<br>2. I have submitted this application with the knowledge and consent of the firm.                                                                                                                                                                                                                                                                                                                                                                 |  |                                     |                                |                                                                                                               |                                |
| <u>March 12, 2018</u><br>Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                     |                                | <br>Signature of Designer |                                |

**NOTE:**

- 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.
- Schedule 1 does not require to be completed a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association 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.

| Heat loss and gain calculation summary sheet                                                                                |  |                                                                           |                                                                   | CSA-F280-M12<br>Standard Form No. 1 |                         |
|-----------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------|-------------------------|
| These documents issued for the use of <b>Bayview Wellington</b>                                                             |  |                                                                           |                                                                   | Layout No.                          |                         |
| and may not be used by any other persons without authorization. Documents for permit and/or construction are signed in red. |  |                                                                           |                                                                   | <b>JB-04549</b>                     |                         |
| Building Location                                                                                                           |  |                                                                           |                                                                   |                                     |                         |
| Address (Model): <b>S38-17 WOB</b>                                                                                          |  |                                                                           | Site: <b>Green Valley East</b>                                    |                                     |                         |
| Model: <b>Barossa 17</b>                                                                                                    |  |                                                                           | Lot:                                                              |                                     |                         |
| City and Province: <b>Bradford</b>                                                                                          |  |                                                                           | Postal code:                                                      |                                     |                         |
| Calculations based on                                                                                                       |  |                                                                           |                                                                   |                                     |                         |
| Dimensional information based on:                                                                                           |  |                                                                           | <b>VA3 Design Jan/2018</b>                                        |                                     |                         |
| Attachment: <b>Detached</b>                                                                                                 |  |                                                                           | Front facing: <b>East/West</b>                                    |                                     | Assumed? <b>Yes</b>     |
| No. of Levels: <b>3</b>                                                                                                     |  | Ventilated? <b>Included</b>                                               | Air tightness: <b>1961-Present (ACH=3.57)</b>                     |                                     | Assumed? <b>Yes</b>     |
| Weather location: <b>Bradford</b>                                                                                           |  |                                                                           | Wind exposure: <b>Sheltered</b>                                   |                                     |                         |
| HRV? <b>LifeBreath</b>                                                                                                      |  | <b>RNC155</b>                                                             | Internal shading: <b>Light-translucent</b>                        |                                     | Occupants: <b>5</b>     |
| Sensible Eff. at -25C <b>71%</b>                                                                                            |  | Apparent Effect. at -0C <b>84%</b>                                        | Units: <b>Imperial</b>                                            |                                     | Area Sq ft: <b>2511</b> |
| Sensible Eff. at -0C <b>75%</b>                                                                                             |  |                                                                           |                                                                   |                                     |                         |
| Heating design conditions                                                                                                   |  |                                                                           | Cooling design conditions                                         |                                     |                         |
| Outdoor temp <b>-9.4</b> Indoor temp: <b>72</b> Mean soil temp: <b>48</b>                                                   |  |                                                                           | Outdoor temp <b>86</b> Indoor temp: <b>75</b> Latitude: <b>44</b> |                                     |                         |
| Above grade walls                                                                                                           |  |                                                                           | Below grade walls                                                 |                                     |                         |
| Style A: <b>As per OBC SB12 Package A1 R 22</b>                                                                             |  |                                                                           | Style A: <b>As per OBC SB12 Package A1 R 20ci</b>                 |                                     |                         |
| Style B: <b>Existing Walls (When Applicable) R 12</b>                                                                       |  |                                                                           | Style B:                                                          |                                     |                         |
| Style C:                                                                                                                    |  |                                                                           | Style C:                                                          |                                     |                         |
| Style D:                                                                                                                    |  |                                                                           | Style D:                                                          |                                     |                         |
| Floors on soil                                                                                                              |  |                                                                           | Ceilings                                                          |                                     |                         |
| Style A: <b>As per Selected OBC SB12 Package A1</b>                                                                         |  |                                                                           | Style A: <b>As per Selected OBC SB12 Package A1 R 60</b>          |                                     |                         |
| Style B:                                                                                                                    |  |                                                                           | Style B: <b>As per Selected OBC SB12 Package A1 R 31</b>          |                                     |                         |
| Exposed floors                                                                                                              |  |                                                                           | Style C:                                                          |                                     |                         |
| Style A: <b>As per Selected OBC SB12 Package A1 R 31</b>                                                                    |  |                                                                           | Doors                                                             |                                     |                         |
| Style B:                                                                                                                    |  |                                                                           | Style A: <b>As per Selected OBC SB12 Package A1 R 4.00</b>        |                                     |                         |
| Windows                                                                                                                     |  |                                                                           | Style B:                                                          |                                     |                         |
| Style A: <b>As per Selected OBC SB12 Package A1 R 3.55</b>                                                                  |  |                                                                           | Style C:                                                          |                                     |                         |
| Style B: <b>Existing Windows (When Applicable) R 1.99</b>                                                                   |  |                                                                           | Skylights                                                         |                                     |                         |
| Style C:                                                                                                                    |  |                                                                           | Style A: <b>As per Selected OBC SB12 Package A1 R 2.03</b>        |                                     |                         |
| Style D:                                                                                                                    |  |                                                                           | Style B:                                                          |                                     |                         |
| Attached documents: <b>As per Shedule 1</b>                                                                                 |  | <b>Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values</b> |                                                                   |                                     |                         |
| Notes: <b>Residential New Construction - Forced Air</b>                                                                     |  |                                                                           |                                                                   |                                     |                         |
| Calculations performed by                                                                                                   |  |                                                                           |                                                                   |                                     |                         |
| Name: <b>David DaCosta</b>                                                                                                  |  |                                                                           | Postal code: <b>L4T 0A4</b>                                       |                                     |                         |
| Company: <b>gtaDesigns Inc.</b>                                                                                             |  |                                                                           | Telephone: <b>(905) 671-9800</b>                                  |                                     |                         |
| Address: <b>2985 Drew Road, Suite 202</b>                                                                                   |  |                                                                           | Fax: <b>(416) 268-6820</b>                                        |                                     |                         |
| City: <b>Mississauga</b>                                                                                                    |  |                                                                           | E-mail <b>dave@gtadesigns.ca</b>                                  |                                     |                         |

Builder: **Bayview Wellington**

Date: **March 12, 2018**

Project: **Green Valley East**

Model: **Barossa 17  
S38-17 WOB**

**System 1**

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: 32964

*David DaCosta*

David DaCosta

Project # **PJ-00204**  
Layout # **JB-04549**

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| DESIGN LOAD SPECIFICATIONS     |              | AIR DISTRIBUTION & PRESSURE            |                 | FURNACE/AIR HANDLER DATA: |               | BOILER/WATER HEATER DATA: |          | A/C UNIT DATA:                  |         |
|--------------------------------|--------------|----------------------------------------|-----------------|---------------------------|---------------|---------------------------|----------|---------------------------------|---------|
| Level 1 Net Load               | 17,270 btu/h | Equipment External Static Pressure     | 0.5 "w.c.       | Make                      | Amana         | Make                      | Type     | Amana                           | 2.5 Ton |
| Level 2 Net Load               | 16,347 btu/h | Additional Equipment Pressure Drop     | 0.225 "w.c.     | Model                     | AMEC960603BNA | Model                     |          | Cond.-----                      | 2.5     |
| Level 3 Net Load               | 15,656 btu/h | Available Design Pressure              | 0.275 "w.c.     | Input Btu/h               | 60000         | Input Btu/h               |          | Coil -----                      | 2.5     |
| Level 4 Net Load               | 0 btu/h      | Return Branch Longest Effective Length | 300 ft          | Output Btu/h              | 57600         | Output Btu/h              |          |                                 |         |
| Total Heat Loss                | 49,274 btu/h | R/A Plenum Pressure                    | 0.138 "w.c.     | E.s.p.                    | 0.50 " W.C.   | Min.Output Btu/h          | AWH      |                                 |         |
| Total Heat Gain                | 26,204 btu/h | S/A Plenum Pressure                    | 0.14 "w.c.      | Water Temp                | deg. F.       | Blower DATA:              |          |                                 |         |
| Combo System HL + 10%          | 54,202 Btu/h | Heating Air Flow Proportioning Factor  | 0.0237 cfm/btuh | AFUE                      | 96%           | Blower Speed Selected:    | W2       | Blower Type                     | ECM     |
| Building Volume Vb             | 28974 ft³    | Cooling Air Flow Proportioning Factor  | 0.0368 cfm/btuh | Aux. Heat                 |               |                           |          | (Brushless DC OBC 12.3.1.5.(2)) |         |
| Ventilation Load               | 1,118 Btu/h. | R/A Temp                               | 70 deg. F.      | SB-12 Package             | Package A1    | Heating Check             | 1170 cfm | Cooling Check                   | 963 cfm |
| Ventilation PVC                | 79.5 cfm     | S/A Temp                               | 116 deg. F.     |                           |               |                           |          |                                 |         |
| Supply Branch and Grill Sizing |              | Diffuser loss                          | 0.01 "w.c.      | Temp. Rise>>>             | 46 deg. F.    | Selected cfm>             | 1170 cfm | Cooling Air Flow Rate           | 963 cfm |

| S/A Outlet No.           | Level 1 |      |      |      |      |      |      |      |      |      |      |      |      |      | Level 2 |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------|------|------|------|------|------|------|------|------|------|------|------|
|                          | 1       | 2    | 3    | 4    | 23   |      |      |      |      |      |      |      |      |      | 5       | 6    | 7    | 8    | 9    | 10   | 11   | 12   |      |      |      |      |
| Room Use                 | BASE    | BASE | BASE | BASE | BASE |      |      |      |      |      |      |      |      |      | KIT     | KIT  | DIN  | MUD  | FOY  | PWD  | GRT  | GRT  |      |      |      |      |
| Btu/Outlet               | 3454    | 3454 | 3454 | 3454 | 3454 |      |      |      |      |      |      |      |      |      | 2026    | 2026 | 2622 | 1959 | 3173 | 912  | 1816 | 1816 |      |      |      |      |
| Heating Airflow Rate CFM | 82      | 82   | 82   | 82   | 82   |      |      |      |      |      |      |      |      |      | 48      | 48   | 62   | 47   | 75   | 22   | 43   | 43   |      |      |      |      |
| Cooling Airflow Rate CFM | 25      | 25   | 25   | 25   | 25   |      |      |      |      |      |      |      |      |      | 85      | 85   | 74   | 56   | 58   | 14   | 36   | 36   |      |      |      |      |
| Duct Design Pressure     | 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 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| Actual Duct Length       | 30      | 40   | 12   | 31   | 52   |      |      |      |      |      |      |      |      |      | 40      | 45   | 13   | 14   | 41   | 34   | 28   | 39   |      |      |      |      |
| Equivalent Length        | 110     | 130  | 80   | 120  | 160  | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 120     | 140  | 110  | 90   | 120  | 130  | 120  | 140  | 70   | 70   | 70   | 70   |
| Total Effective Length   | 140     | 170  | 92   | 151  | 212  | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 160     | 185  | 123  | 104  | 161  | 164  | 148  | 179  | 70   | 70   | 70   | 70   |
| Adjusted Pressure        | 0.09    | 0.08 | 0.14 | 0.09 | 0.06 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.08 | 0.07    | 0.11 | 0.13 | 0.08 | 0.08 | 0.09 | 0.07 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 |
| Duct Size Round          | 6       | 6    | 6    | 6    | 6    |      |      |      |      |      |      |      |      |      | 6       | 6    | 6    | 5    | 6    | 4    | 5    | 5    |      |      |      |      |
| Outlet Size              | 4x10    | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10    | 4x10 | 4x10 | 3x10 | 4x10 | 3x10 | 3x10 | 3x10 | 4x10 | 4x10 | 4x10 | 4x10 |
| Trunk                    | B       | C    | A    | D    | C    |      |      |      |      |      |      |      |      |      | B       | C    | A    | A    | D    | D    | B    | B    |      |      |      |      |

| S/A Outlet No.           | Level 3 |      |       |       |       |      |       |       |      |      |      | Level 4 |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|---------|------|-------|-------|-------|------|-------|-------|------|------|------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                          | 13      | 14   | 15    | 16    | 17    | 18   | 19    | 20    | 21   | 22   |      |         |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Room Use                 | MAST    | MAST | ENS 2 | BED 2 | BED 3 | BATH | BED 4 | BED 4 | LAUN | ENS  |      |         |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Btu/Outlet               | 1800    | 1800 | 558   | 1323  | 2871  | 943  | 1850  | 1850  | 1112 | 1551 |      |         |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Heating Airflow Rate CFM | 43      | 43   | 13    | 31    | 68    | 22   | 44    | 44    | 26   | 37   |      |         |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Cooling Airflow Rate CFM | 46      | 46   | 8     | 30    | 65    | 16   | 54    | 54    | 47   | 28   |      |         |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Duct Design Pressure     | 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 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| Actual Duct Length       | 55      | 68   | 58    | 65    | 54    | 46   | 50    | 61    | 36   | 59   |      |         |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Equivalent Length        | 95      | 145  | 120   | 135   | 180   | 170  | 120   | 130   | 170  | 155  | 70   | 70      | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   |
| Total Effective Length   | 150     | 213  | 178   | 200   | 234   | 216  | 170   | 191   | 206  | 214  | 70   | 70      | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   |
| Adjusted Pressure        | 0.09    | 0.06 | 0.07  | 0.07  | 0.06  | 0.06 | 0.08  | 0.07  | 0.06 | 0.06 | 0.19 | 0.19    | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 |
| Duct Size Round          | 5       | 5    | 3     | 4     | 6     | 4    | 5     | 5     | 5    | 5    |      |         |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Outlet Size              | 3x10    | 3x10 | 3x10  | 3x10  | 4x10  | 3x10 | 3x10  | 3x10  | 3x10 | 3x10 | 4x10 | 4x10    | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 | 4x10 |
| Trunk                    | B       | C    | C     | C     | D     | D    | D     | D     | B    | B    |      |         |      |      |      |      |      |      |      |      |      |      |      |      |      |

| Return Branch And Grill Sizing |      | Grill Pressure Loss 0.02 "w.c. |      |      |      |      |      |      |      |      |      |
|--------------------------------|------|--------------------------------|------|------|------|------|------|------|------|------|------|
| R/A Inlet No.                  | 1R   | 2R                             | 3R   | 4R   | 5R   | 6R   | 7R   | 8R   | 9R   | 10R  | 11R  |
| Inlet Air Volume CFM           | 205  | 460                            | 145  | 90   | 90   | 90   | 90   |      |      |      |      |
| Duct Design Pressure           | 0.12 | 0.12                           | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
| Actual Duct Length             | 8    | 22                             | 41   | 41   | 55   | 53   | 45   |      |      |      |      |
| Equivalent Length              | 110  | 125                            | 195  | 200  | 115  | 215  | 225  | 50   | 50   | 50   | 50   |
| Total Effective Length         | 118  | 147                            | 236  | 241  | 170  | 268  | 270  | 50   | 50   | 50   | 50   |
| Adjusted Pressure              | 0.10 | 0.08                           | 0.05 | 0.05 | 0.07 | 0.04 | 0.04 | 0.24 | 0.24 | 0.24 | 0.24 |
| Duct Size Round                | 8.0  | 11.0                           | 8.0  | 6.0  | 6.0  | 6.0  | 6.0  |      |      |      |      |
| Inlet Size                     | FLC  | 8                              | 8    | 8    | 8    | 8    | 8    |      |      |      |      |
| " "                            | x    | x                              | x    | x    | x    | x    | x    | x    | x    | x    | x    |
| Inlet Size                     | 9x6  | 30                             | 14   | 14   | 14   | 14   | 14   |      |      |      |      |
| Trunk                          | Y    | Z                              | Z    | Y    | Z    | Y    | Z    |      |      |      |      |

| Return Trunk Duct Sizing |      |        |       |             |
|--------------------------|------|--------|-------|-------------|
| Trunk                    | CFM  | Press. | Round | Rect. Size  |
| Drop                     | 1170 | 0.04   | 18.0  | 24x12       |
| Z                        | 1170 | 0.04   | 18.0  | 30x10 24x12 |
| Y                        | 385  | 0.04   | 12.0  | 16x8 12x10  |
| X                        |      |        |       |             |
| W                        |      |        |       |             |
| V                        |      |        |       |             |
| U                        |      |        |       |             |
| T                        |      |        |       |             |
| S                        |      |        |       |             |
| R                        |      |        |       |             |
| Q                        |      |        |       |             |

| Supply Trunk Duct Sizing |      |        |       |            |
|--------------------------|------|--------|-------|------------|
| Trunk                    | CFM  | Press. | Round | Rect. Size |
| A                        | 1170 | 0.06   | 16.5  | 32x8 24x10 |
| B                        | 622  | 0.06   | 13.0  | 18x8 14x10 |
| C                        | 300  | 0.06   | 10.0  | 12x8 10x10 |
| D                        | 357  | 0.06   | 10.5  | 12x8 10x10 |
| E                        |      |        |       |            |
| F                        |      |        |       |            |
| G                        |      |        |       |            |
| H                        |      |        |       |            |
| I                        |      |        |       |            |
| J                        |      |        |       |            |
| K                        |      |        |       |            |

|          |                             |                                 |          |              |             |            |           |           |                       |          |      |        |
|----------|-----------------------------|---------------------------------|----------|--------------|-------------|------------|-----------|-----------|-----------------------|----------|------|--------|
| 2012 OBC | Builder: Bayview Wellington | Date: March 12, 2018            | System 1 | Weather Data |             | Bradford   | 44        | -9.4      | 86                    | 22       | 48.2 | Page 4 |
|          | Project: Green Valley East  | Model: Barossa 17<br>S38-17 WOB |          | Heat Loss ^T | 81.4 deg. F | Ht gain ^T | 11 deg. F | GTA: 2511 | Project #<br>JB-04549 | PJ-00204 |      |        |

| Level 1                        |                |      |  | BASE                      |        |        |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------------|----------------|------|--|---------------------------|--------|--------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Run ft. exposed wall A         | 107            | A    |  | A                         |        | A      |       | A    |      | A    |      | A    |      | A    |      | A    |      | A    |      |      |
| Run ft. exposed wall B         | 50             | B    |  | B                         |        | B      |       | B    |      | B    |      | B    |      | B    |      | B    |      | B    |      |      |
| Ceiling height                 | 4.3            | AG   |  | 4.3                       | AG     |        | 4.3   | AG   |      | 4.3  | AG   |      | 4.3  | AG   |      | 4.3  | AG   |      | 4.3  | AG   |
| Floor area                     | 746            | Area |  | Area                      |        | Area   |       | Area |      | Area |      | Area |      | Area |      | Area |      | Area |      |      |
| Exposed Ceilings A             | A              |      |  | A                         |        | A      |       | A    |      | A    |      | A    |      | A    |      | A    |      | A    |      |      |
| Exposed Ceilings B             | B              |      |  | B                         |        | B      |       | B    |      | B    |      | B    |      | B    |      | B    |      | B    |      |      |
| Exposed Floors                 | Flr            |      |  | Flr                       |        | Flr    |       | Flr  |      | Flr  |      | Flr  |      | Flr  |      | Flr  |      | Flr  |      |      |
| Gross Exp Wall A               | 458            |      |  |                           |        |        |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Gross Exp Wall B               | 450            |      |  |                           |        |        |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Components                     |                |      |  | R-Values                  | Loss   | Gain   | Loss  | Gain | Loss | Gain | Loss | Gain | Loss | Gain | Loss | Gain | Loss | Gain | Loss | Gain |
| North Shaded                   |                |      |  | 3.55                      | 22.93  | 10.91  | 3     | 69   | 33   |      |      |      |      |      |      |      |      |      |      |      |
| East/West                      |                |      |  | 3.55                      | 22.93  | 27.35  |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| South                          |                |      |  | 3.55                      | 22.93  | 20.89  |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| WOB Windows                    |                |      |  | 3.55                      | 22.93  | 27.35  | 64    | 1467 | 1751 |      |      |      |      |      |      |      |      |      |      |      |
| Skylight                       |                |      |  | 2.03                      | 40.10  | 88.23  |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Doors                          |                |      |  | 4.00                      | 20.35  | 2.75   | 21    | 427  | 58   |      |      |      |      |      |      |      |      |      |      |      |
| Net exposed walls A            |                |      |  | 21.12                     | 3.85   | 0.52   | 434   |      | 226  |      |      |      |      |      |      |      |      |      |      |      |
| Net exposed walls B            |                |      |  | 14.49                     | 5.62   | 0.76   | 386   |      | 293  |      |      |      |      |      |      |      |      |      |      |      |
| Exposed Ceilings A             |                |      |  | 59.22                     | 1.37   | 0.64   |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Exposed Ceilings B             |                |      |  | 22.86                     | 3.56   | 1.66   |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Exposed Floors                 |                |      |  | 29.80                     | 2.73   | 0.17   |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Foundation Conductive Heatloss |                |      |  | On Grade ( ) or Above ( ) |        |        | 5916  |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Total Conductive               | Heat Loss      |      |  |                           |        |        | 10048 |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                                | Heat Gain      |      |  |                           |        |        |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Air Leakage                    | Heat Loss/Gain |      |  |                           | 0.6859 | 0.0340 | 6892  |      | 80   |      |      |      |      |      |      |      |      |      |      |      |
| Ventilation                    | Case 1         |      |  |                           | 0.06   | 0.07   |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                                | Case 2         |      |  |                           | 14.07  | 11.88  |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                                | Case 3         |      |  | x                         | 0.03   | 0.07   | 330   |      | 164  |      |      |      |      |      |      |      |      |      |      |      |
| Heat Gain People               |                |      |  |                           |        | 239    |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Appliances Loads               |                |      |  | 1 = .25 percent           |        | 3810   |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Duct and Pipe loss             |                |      |  |                           |        | 10%    |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Level 1 HL Total               | 17,270         |      |  | Total HL for per room     |        |        | 17270 |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Level 1 HG Total               | 3,385          |      |  | Total HG per room x 1.3   |        |        |       | 3385 |      |      |      |      |      |      |      |      |      |      |      |      |

| Level 2                        |  |  |  | KIT                       |  | DIN      |  | MUD                     |  | FOY     |  | PWD     |  | GRT      |  | A    |  | A    |  | A    |  | A    |  | A    |  |
|--------------------------------|--|--|--|---------------------------|--|----------|--|-------------------------|--|---------|--|---------|--|----------|--|------|--|------|--|------|--|------|--|------|--|
| Run ft. exposed wall A         |  |  |  | 37 A                      |  | 26 A     |  | 19 A                    |  | 25 A    |  | 10 A    |  | 39 A     |  | A    |  | A    |  | A    |  | A    |  | A    |  |
| Run ft. exposed wall B         |  |  |  | B                         |  | B        |  | B                       |  | B       |  | B       |  | B        |  | B    |  | B    |  | B    |  | B    |  | B    |  |
| Ceiling height                 |  |  |  | 10.0                      |  | 10.0     |  | 12.0                    |  | 11.0    |  | 10.0    |  | 10.0     |  | 10.0 |  | 10.0 |  | 10.0 |  | 10.0 |  | 10.0 |  |
| Floor area                     |  |  |  | 239 Area                  |  | 238 Area |  | 80 Area                 |  | 75 Area |  | 60 Area |  | 297 Area |  | Area |  | Area |  | Area |  | Area |  | Area |  |
| Exposed Ceilings A             |  |  |  | A                         |  | A        |  | A                       |  | A       |  | A       |  | A        |  | A    |  | A    |  | A    |  | A    |  | A    |  |
| Exposed Ceilings B             |  |  |  | B                         |  | B        |  | B                       |  | B       |  | B       |  | B        |  | B    |  | B    |  | B    |  | B    |  | B    |  |
| Exposed Floors                 |  |  |  | Flr                       |  | Flr      |  | Flr                     |  | Flr     |  | Flr     |  | Flr      |  | Flr  |  | Flr  |  | Flr  |  | Flr  |  | Flr  |  |
| Gross Exp Wall A               |  |  |  | 370                       |  | 260      |  | 228                     |  | 275     |  | 100     |  | 390      |  |      |  |      |  |      |  |      |  |      |  |
| Gross Exp Wall B               |  |  |  |                           |  |          |  |                         |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Components                     |  |  |  | R-Values                  |  | Loss     |  | Gain                    |  | Loss    |  | Gain    |  | Loss     |  | Gain |  | Loss |  | Gain |  | Loss |  | Gain |  |
| North Shaded                   |  |  |  | 3.55                      |  | 22.93    |  | 10.91                   |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| East/West                      |  |  |  | 3.55                      |  | 22.93    |  | 27.35                   |  | 64      |  | 1467    |  | 1751     |  |      |  |      |  |      |  |      |  |      |  |
| South                          |  |  |  | 3.55                      |  | 22.93    |  | 20.89                   |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Existing Windows               |  |  |  | 1.99                      |  | 40.90    |  | 22.15                   |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Skylight                       |  |  |  | 2.03                      |  | 40.10    |  | 88.23                   |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Doors                          |  |  |  | 4.00                      |  | 20.35    |  | 2.75                    |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Net exposed walls A            |  |  |  | 17.03                     |  | 4.78     |  | 0.65                    |  | 306     |  | 1463    |  | 198      |  | 224  |  | 1071 |  | 145  |  | 207  |  | 989  |  |
| Net exposed walls B            |  |  |  | 8.50                      |  | 9.58     |  | 1.29                    |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Exposed Ceilings A             |  |  |  | 59.22                     |  | 1.37     |  | 0.64                    |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Exposed Ceilings B             |  |  |  | 22.86                     |  | 3.56     |  | 1.66                    |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Exposed Floors                 |  |  |  | 29.80                     |  | 2.73     |  | 0.17                    |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Foundation Conductive Heatloss |  |  |  | On Grade ( ) or Above ( ) |  | x        |  |                         |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Total Conductive               |  |  |  | Heat Loss                 |  |          |  |                         |  | 2930    |  |         |  |          |  |      |  | 1896 |  |      |  | 1417 |  |      |  |
|                                |  |  |  | Heat Gain                 |  |          |  |                         |  |         |  | 1948    |  | 538      |  | 191  |  |      |  | 538  |  | 191  |  | 1106 |  |
| Air Leakage                    |  |  |  | Heat Loss/Gain            |  | 0.3497   |  | 0.0340                  |  | 1025    |  | 66      |  | 663      |  | 18   |  | 495  |  | 6    |  | 803  |  | 38   |  |
| Ventilation                    |  |  |  | Case 1                    |  | 0.03     |  | 0.07                    |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
|                                |  |  |  | Case 2                    |  | 14.07    |  | 11.88                   |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
|                                |  |  |  | Case 3                    |  | x        |  | 0.03                    |  | 0.07    |  | 96      |  | 135      |  | 62   |  | 37   |  | 47   |  | 13   |  | 75   |  |
| Heat Gain People               |  |  |  |                           |  |          |  | 239                     |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Appliances Loads               |  |  |  | 1 = .25 percent           |  | 3810     |  | 1.5                     |  |         |  | 1429    |  | 1.0      |  |      |  | 953  |  | 1.0  |  | 953  |  |      |  |
| Duct and Pipe loss             |  |  |  |                           |  | 10%      |  |                         |  |         |  |         |  |          |  |      |  |      |  |      |  |      |  |      |  |
| Level 2 HL Total               |  |  |  | 16,347                    |  |          |  | Total HL for per room   |  | 4051    |  |         |  | 2622     |  |      |  | 1959 |  |      |  | 3173 |  | 1586 |  |
| Level 2 HG Total               |  |  |  | 12,114                    |  |          |  | Total HG per room x 1.3 |  |         |  | 4652    |  | 2009     |  |      |  | 1513 |  |      |  | 1586 |  | 1586 |  |

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:

32964

*Dave DaCosta*

Dave DaCosta

SB-12 Package

Package A1

|                 |        |       |
|-----------------|--------|-------|
| Total Heat Loss | 49,274 | btu/h |
| Total Heat Gain | 26,204 | btu/h |



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: 32964



David DaCosta

**Package:** Package A1  
**Project:** Bradford  
**Model:** S38-17 WOB

## RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

*For systems serving one dwelling unit & conforming to the Ontario Building Code, O.reg 332/12*

| Location of Installation |          |
|--------------------------|----------|
| Lot #                    | Plan #   |
| Township                 | Bradford |
| Roll #                   | Permit # |
| Address                  |          |

| Builder |                    |
|---------|--------------------|
| Name    | Bayview Wellington |
| Address |                    |
| City    |                    |
| Tel     | Fax                |

| Installing Contractor |     |
|-----------------------|-----|
| Name                  |     |
| Address               |     |
| City                  |     |
| Tel                   | Fax |

| Combustion Appliances 9.32.3.1(1) |   |                                                    |
|-----------------------------------|---|----------------------------------------------------|
| a)                                | x | Direct vent (sealed combustion) only               |
| b)                                |   | Positive venting induced draft (except fireplaces) |
| c)                                |   | Natural draft, B-vent or induced draft fireplaces  |
| d)                                |   | Solid fuel (including fireplaces)                  |
| e)                                |   | No combustion Appliances                           |

| Heating System |            |                                                |
|----------------|------------|------------------------------------------------|
| x              | Forced air | Non forced air                                 |
|                |            | Electric space heat (if over 10% of heat load) |

| House Type 9.32.3.1(2) |   |                                                     |
|------------------------|---|-----------------------------------------------------|
| I                      | x | Type a) or b) appliances only, no solid fuel        |
| II                     |   | Type I except with solid fuel (including fireplace) |
| III                    |   | Any type c) appliance                               |
| IV                     |   | Type I or II either electric space heat             |
| Other                  |   | Type I, II or IV no forced air                      |

| System Design Option |                                                   |  |
|----------------------|---------------------------------------------------|--|
| 1                    | Exhaust only / forced air system                  |  |
| 2                    | HRV WITH DUCTING / forced air system              |  |
| 3                    | HRV simplified connection to forced air system    |  |
| 4                    | HRV full ducting/not coupled to forced air system |  |
|                      | Part 6 design                                     |  |

| Total Ventilation Capacity 9.32.3.3(1) |     |          |          |  |
|----------------------------------------|-----|----------|----------|--|
| Bsmt & Master Bdrm                     | 2 @ | 21.2 cfm | 42.4 cfm |  |
| Other Bedrooms                         | 3 @ | 10.6 cfm | 31.8 cfm |  |
| Bathrooms & Kitchen                    | 5 @ | 10.6 cfm | 53 cfm   |  |
| Other rooms                            | 4 @ | 10.6 cfm | 42.4 cfm |  |
| Total                                  |     |          | 169.6    |  |

| Principal Ventilation Capacity 9.32.3.4(1) |     |          |          |  |
|--------------------------------------------|-----|----------|----------|--|
| Master bedroom                             | 1 @ | 31.8 cfm | 31.8 cfm |  |
| Other bedrooms                             | 3 @ | 15.9 cfm | 47.7 cfm |  |
| Total                                      |     |          | 79.5     |  |

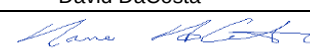
| Principal Exhaust Fan Capacity |        |          |           |  |
|--------------------------------|--------|----------|-----------|--|
| Make                           | Model  | Location |           |  |
| LifeBreath                     | RNC155 | Base     |           |  |
| 132 cfm                        |        | Sones    | or Equiv. |  |

| Heat Recovery Ventilator        |              |  |            |  |
|---------------------------------|--------------|--|------------|--|
| Make                            | LifeBreath   |  |            |  |
| Model                           | RNC155       |  |            |  |
|                                 | 132 cfm high |  | 80 cfm low |  |
| Sensible efficiency @ -25 deg C |              |  | 71%        |  |
| Sensible efficiency @ 0 deg C   |              |  | 75%        |  |

Note: Installer to balance HRV/ERV to within 10 percent of PVC

| Supplemental Ventilation Capacity    |  |  |          |  |
|--------------------------------------|--|--|----------|--|
| Total ventilation capacity           |  |  | 169.6    |  |
| Less principal exhaust capacity      |  |  | 79.5     |  |
| REQUIRED supplemental vent. Capacity |  |  | 90.1 cfm |  |

| Supplemental Fans 9.32.3.5. |      |       |           |  |
|-----------------------------|------|-------|-----------|--|
| Location                    | cfm  | Model | Sones     |  |
| Ens                         | 50   | XB50  | 0.3       |  |
| Bath                        | 50   | XB50  | 0.3       |  |
| all fans HVI listed         |      |       |           |  |
|                             | Make | Broan | or Equiv. |  |

| Designer Certification                                                                                        |                                                                                       |        |       |
|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------|-------|
| I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code. |                                                                                       |        |       |
| Name                                                                                                          | David DaCosta                                                                         |        |       |
| Signature                                                                                                     |  |        |       |
| HRAI #                                                                                                        | 5190                                                                                  | BCIN # | 32964 |
| Date                                                                                                          | March 12, 2018                                                                        |        |       |



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

## Energy Efficiency Design Summary: Prescriptive Method (Building Code Part 9, Residential)

Page 7  
 Project # PJ-00204  
 Layout # JB-04549

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 Principal Authority

Application No:

Model/Certification Number

### A. Project Information

|                              |                                  |             |                                      |
|------------------------------|----------------------------------|-------------|--------------------------------------|
| Building number, street name | <b>Barossa 17<br/>S38-17 WOB</b> | Unit number | Lot/Con                              |
| Municipality                 | <b>Bradford</b>                  | Postal code | Reg. Plan number / other description |

### B. Prescriptive Compliance [indicate the building code compliance package being employed in the house design]

SB-12 Prescriptive (input design package):

Package A1

Table: 3.1.1.2.A

### C. Project Design Conditions

| Climatic Zone (SB-1):                                                                                                   | Heat. Equip. Efficiency                                                                      | Space Heating Fuel Source                                                                                                                                                                                                                                     |                                                                                                                                         |                                                                              |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Zone 1 (< 5000 degree days)<br><input type="checkbox"/> Zone 2 (≥ 5000 degree days) | <input checked="" type="checkbox"/> ≥ 92% AFUE<br><input type="checkbox"/> ≥ 84% < 92% AFUE  | <input checked="" type="checkbox"/> Gas<br><input type="checkbox"/> Oil                                                                                                                                                                                       | <input type="checkbox"/> Propane<br><input type="checkbox"/> Electric                                                                   | <input type="checkbox"/> Solid Fuel<br><input type="checkbox"/> Earth Energy |
| Ratio of Windows, Skylights & Glass (W, S & G) to Wall Area                                                             |                                                                                              | Other Building Characteristics                                                                                                                                                                                                                                |                                                                                                                                         |                                                                              |
| Area of Walls = <u>360.91</u> m <sup>2</sup> or <u>3884.9</u> ft <sup>2</sup>                                           | W, S & G % = <u>11%</u>                                                                      | <input type="checkbox"/> Log/Post&Beam<br><input type="checkbox"/> Slab-on-ground<br><input checked="" type="checkbox"/> Air Conditioning<br><input type="checkbox"/> Air Sourced Heat Pump (ASHP)<br><input type="checkbox"/> Ground Source Heat Pump (GSHP) | <input type="checkbox"/> ICF Above Grade<br><input checked="" type="checkbox"/> Walkout Basement<br><input type="checkbox"/> Combo Unit | <input type="checkbox"/> ICF Basement                                        |
| Area of W, S & G = <u>40.04</u> m <sup>2</sup> or <u>431.0</u> ft <sup>2</sup>                                          | Utilize Window Averaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |                                                                                                                                                                                                                                                               |                                                                                                                                         |                                                                              |

### D. Building Specifications [provide values and ratings of the energy efficiency components proposed]

| Energy Efficiency Substitutions                                                                                                                                                 |                                                      |           |                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------|------------------------------------------------------------------------|
| <input type="checkbox"/> ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5))<br><input type="checkbox"/> Combined space heating and domestic water heating systems (3.1.1.2(7) / 3.1.1.3.(7)) |                                                      |           |                                                                        |
| <input type="checkbox"/> Airtightness substitution(s)<br>Airtightness test required<br>(Refer to Design Guide Attached)                                                         | <input type="checkbox"/> Table 3.1.1.4.B             | Required: | Permitted Substitution:                                                |
|                                                                                                                                                                                 | <input type="checkbox"/> Table 3.1.1.4.C             | Required: | Permitted Substitution:                                                |
| Building Component                                                                                                                                                              | Minimum RSI/R-Values or Maximum U-Value <sup>1</sup> |           | Building Component                                                     |
| <b>Thermal Insulation</b>                                                                                                                                                       | Nominal                                              | Effective | <b>Windows &amp; Doors</b> Provide U-Value <sup>(1)</sup> or ER rating |
| Ceiling with Attic Space                                                                                                                                                        | 60                                                   |           | Windows/Sliding Glass Doors                                            |
| Ceiling without Attic Space                                                                                                                                                     | 31                                                   |           | Skylights                                                              |
| Exposed Floor                                                                                                                                                                   | 31                                                   |           | <b>Mechanicals</b>                                                     |
| Walls Above Grade                                                                                                                                                               | 22                                                   |           | Heating Equip.(AFUE)                                                   |
| Basement Walls                                                                                                                                                                  | 20.0ci                                               |           | HRV Efficiency (SRE% at 0°C)                                           |
| Slab (all >600mm below grade)                                                                                                                                                   | x                                                    |           | DHW Heater (EF)                                                        |
| Slab (edge only ≤600mm below grade)                                                                                                                                             | 10                                                   |           | DWHR (CSA B55.1 (min. 42% efficiency))                                 |
| Slab (all ≤600mm below grade, or heated)                                                                                                                                        | 10                                                   |           | Combined Heating System                                                |

(1) U value to be provided in either W/(m<sup>2</sup>·K) or Btu/(h·ft<sup>2</sup>·°F) but not both.

### E. Designer(s) [name(s) & BCIN(s), if applicable, of person(s) providing information herein to substantiate that design meets building code]

|                      |              |           |
|----------------------|--------------|-----------|
| Name                 | BCIN         | Signature |
| <b>David DaCosta</b> | <b>32964</b> |           |

Package: Package A1 System: System 1  
Project: Bradford Model: S38-17 WOB

## Air Leakage Calculations

| Building Air Leakage Heat Loss |        |       |                   |                    |
|--------------------------------|--------|-------|-------------------|--------------------|
| B                              | LRairh | Vb    | HL <sup>Δ</sup> T | HL <sub>leak</sub> |
| 0.018                          | 0.325  | 28974 | 81.4              | 13784              |

| Building Air Leakage Heat Gain |        |       |                   |                    |
|--------------------------------|--------|-------|-------------------|--------------------|
| B                              | LRairh | Vb    | HG <sup>Δ</sup> T | HG <sub>Leak</sub> |
| 0.018                          | 0.080  | 28974 | 11                | 462                |

| Air Leakage Heat Loss/Gain Multiplier Table (Section 11) |                   |              |                            |                                  |
|----------------------------------------------------------|-------------------|--------------|----------------------------|----------------------------------|
| Level                                                    | Level Factor (LF) | Building Air | Level Conductive Heat Loss | Air Leakage Heat Loss Multiplier |
| Level 1                                                  | 0.5               | 13784        | 10048                      | 0.6859                           |
| Level 2                                                  | 0.3               |              | 11824                      | 0.3497                           |
| Level 3                                                  | 0.2               |              | 12162                      | 0.2267                           |
| Level 4                                                  | 0                 |              | 0                          | 0.0000                           |

| Levels |      |      |      |
|--------|------|------|------|
| 1      | 2    | 3    | 4    |
| (LF)   | (LF) | (LF) | (LF) |
| 1.0    | 0.6  | 0.5  | 0.4  |
|        | 0.4  | 0.3  | 0.3  |
|        |      | 0.2  | 0.2  |
|        |      |      | 0.1  |

| HG LEAK                       |     | Air Leakage Heat Gain |        |
|-------------------------------|-----|-----------------------|--------|
|                               | 462 |                       | 0.0340 |
| BUILDING CONDUCTIVE HEAT GAIN |     | 13603                 |        |

| Levels this Dwelling |  |
|----------------------|--|
| 3                    |  |

## Ventilation Calculations

### Ventilation Heat Loss

| Ventilation Heat Loss |      |                   |           |                     |
|-----------------------|------|-------------------|-----------|---------------------|
| C                     | PVC  | HL <sup>Δ</sup> T | (1-E) HRV | HL <sub>bvent</sub> |
| 1.08                  | 79.5 | 81.4              | 0.16      | 1118                |

### Ventilation Heat Gain

| Ventilation Heat Gain |      |                   |                     |
|-----------------------|------|-------------------|---------------------|
| C                     | PVC  | HG <sup>Δ</sup> T | HG <sub>bvent</sub> |
| 1.1                   | 79.5 | 11                | 944                 |

### Case 1

#### Ventilation Heat Loss (Exhaust only Systems)

| Case 1 - Exhaust Only |     |                     |              |            |
|-----------------------|-----|---------------------|--------------|------------|
| Level                 | LF  | HL <sub>bvent</sub> | LVL Cond. HL | Multiplier |
| Level 1               | 0.5 | 1118                | 10048        | 0.06       |
| Level 2               | 0.3 |                     | 11824        | 0.03       |
| Level 3               | 0.2 |                     | 12162        | 0.02       |
| Level 4               | 0   |                     | 0            | 0.00       |

### Case 1

#### Ventilation Heat Gain (Exhaust Only Systems)

| Case 1 - Exhaust Only |       | Multiplier |  |
|-----------------------|-------|------------|--|
| HG <sub>bvent</sub>   | 944   | 0.07       |  |
| Building              | 13603 |            |  |

### Case 2

#### Ventilation Heat Loss (Direct Ducted Systems)

| C    | HL <sup>Δ</sup> T | (1-E) HRV | Multiplier |
|------|-------------------|-----------|------------|
| 1.08 | 81.4              | 0.16      | 14.07      |

#### Ventilation Heat Gain (Direct Ducted Systems)

| C    | HG <sup>Δ</sup> T | Multiplier |
|------|-------------------|------------|
| 1.08 | 11                | 11.88      |

### Case 3

#### Ventilation Heat Loss (Forced Air Systems)

| HL <sub>bvent</sub>    |      | Multiplier |  |
|------------------------|------|------------|--|
| Total Ventilation Load | 1118 | 0.03       |  |

#### Ventilation Heat Gain (Forced Air Systems)

| Vent Heat Gain      |                     | Multiplier |  |
|---------------------|---------------------|------------|--|
| HG <sub>bvent</sub> | HG <sup>Δ</sup> 1.3 | 944        |  |
| 944                 | 1                   |            |  |

Foundation Conductive Heatloss Level 1

1734 Watts 5916 Btu/h

Foundation Conductive Heatloss Level 2

Watts Btu/h



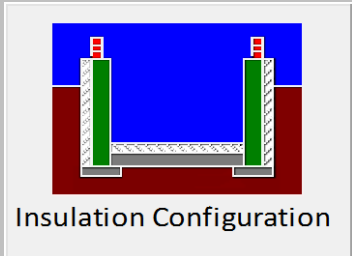
# Envelope Air Leakage Calculator

Supplemental tool for CAN/CSA-F280

| Weather Station Description       |                                       |       |                |    |
|-----------------------------------|---------------------------------------|-------|----------------|----|
| Province:                         | Ontario ▼                             |       |                |    |
| 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):       | 6.79                                  |       |                |    |
| Building Configuration            |                                       |       |                |    |
| Type:                             | Detached                              |       |                |    |
| Number of Stories:                | Two                                   |       |                |    |
| Foundation:                       | Full                                  |       |                |    |
| House Volume (m <sup>3</sup> ):   | 820.54                                |       |                |    |
| Air Leakage/Ventilation           |                                       |       |                |    |
| Air Tightness Type:               | Present (1961-) (ACH=3.57)            |       |                |    |
| Custom BDT Data:                  | ELA @ 10 Pa. ▼ 322.44 cm <sup>2</sup> |       |                |    |
|                                   | 3.57 ACH @ 50 Pa                      |       |                |    |
| Mechanical Ventilation (L/s):     | Total Supply:                         |       | Total Exhaust: |    |
|                                   | 39.75                                 |       | 39.75          |    |
|                                   |                                       |       |                |    |
| Flue #:                           | #1                                    | #2    | #3             | #4 |
| Diameter (mm):                    | 0                                     | 0     | 0              | 0  |
|                                   |                                       |       |                |    |
| Heating Air Leakage Rate (ACH/H): |                                       | 0.325 |                |    |
| Cooling Air Leakage Rate (ACH/H): |                                       | 0.080 |                |    |

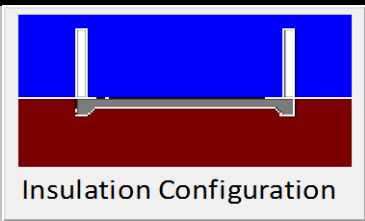
# Residential Foundation Thermal Load Calculator

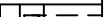
Supplemental tool for CAN/CSA-F280

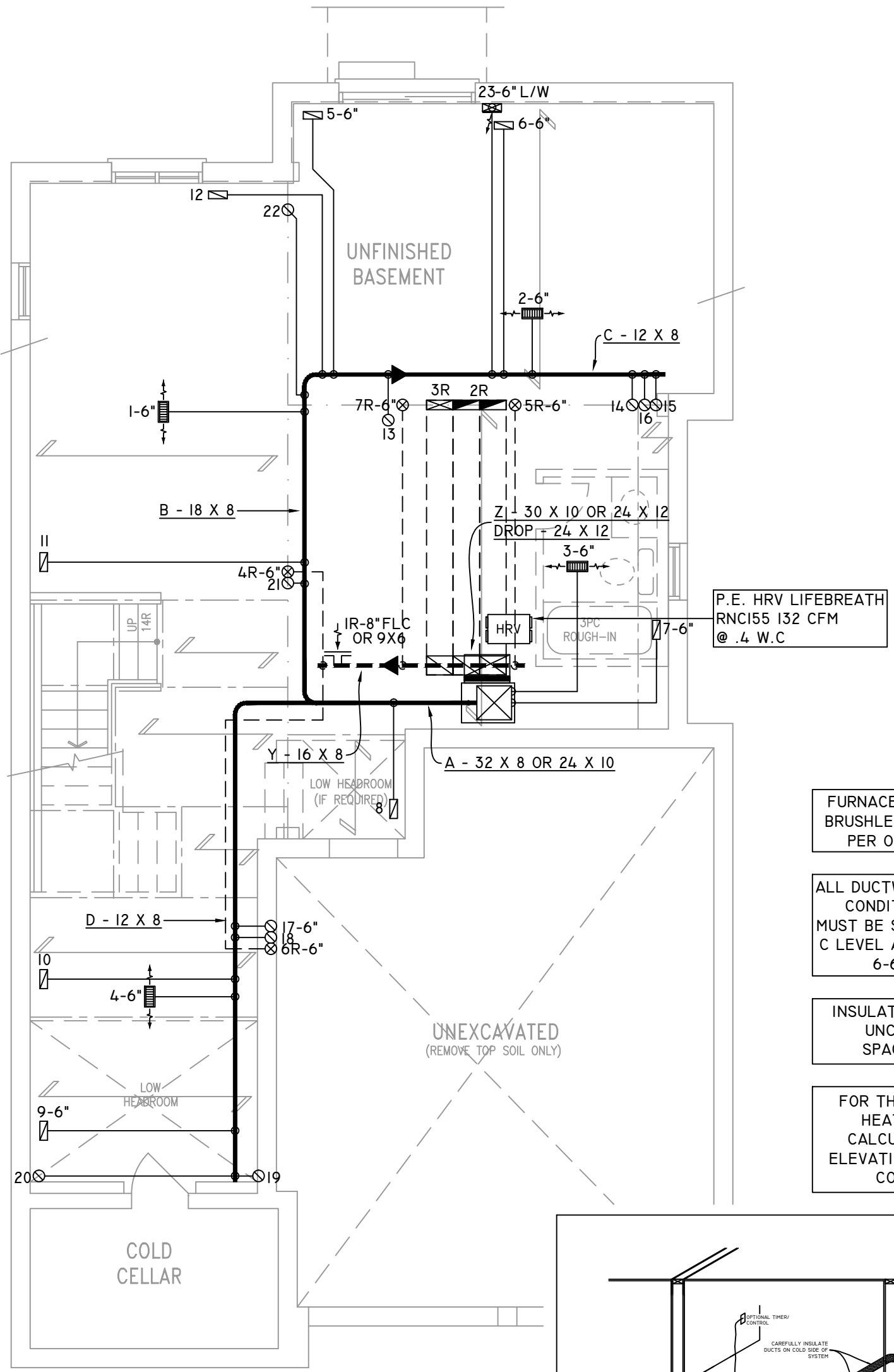
| Weather Station Description    |                               |                                                                                                                     |
|--------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Province:                      | Ontario                       | ▼                                                                                                                   |
| Region:                        | Bradford                      | ▼                                                                                                                   |
| Site Description               |                               |                                                                                                                     |
| Soil Conductivity:             | High conductivity: moist soil | ▼                                                                                                                   |
| Water Table:                   | Normal (7-10 m, 23-33 Ft)     | ▼                                                                                                                   |
| Foundation Dimensions          |                               |                                                                                                                     |
| Floor Length (m):              | 16.74                         |  <p>Insulation Configuration</p> |
| Floor Width (m):               | 4.14                          |                                                                                                                     |
| Exposed Perimeter (m):         | 32.61                         |                                                                                                                     |
| Wall Height (m):               | 2.74                          |                                                                                                                     |
| Depth Below Grade (m):         | 1.44                          |                                                                                                                     |
| Window Area (m <sup>2</sup> ): | 0.28                          |                                                                                                                     |
| Door Area (m <sup>2</sup> ):   | 1.95                          |                                                                                                                     |
| Radiant Slab                   |                               |                                                                                                                     |
| Heated Fraction of the Slab:   | 0                             |                                                                                                                     |
| Fluid Temperature (°C):        | 33                            |                                                                                                                     |
| Design Months                  |                               |                                                                                                                     |
| Heating Month                  | 1                             |                                                                                                                     |
| Foundation Loads               |                               |                                                                                                                     |
| Heating Load (Watts):          |                               | 1498                                                                                                                |

# Residential Slab on Grade Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

| Weather Station Description  |                               |                                                                                                                |
|------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------|
| Province:                    | Ontario                       | ▼                                                                                                              |
| Region:                      | Bradford                      | ▼                                                                                                              |
| Site Description             |                               |                                                                                                                |
| Soil Conductivity:           | High conductivity: moist soil | ▼                                                                                                              |
| Water Table:                 | Normal (7-10 m, 23-33 Ft)     | ▼                                                                                                              |
| Floor Dimensions             |                               |                                                                                                                |
| Length (m):                  | 9.83                          | <br>Insulation Configuration |
| Width (m):                   | 2.36                          |                                                                                                                |
| Exposed Perimeter (m):       | 15.24                         |                                                                                                                |
| Radiant Slab                 |                               |                                                                                                                |
| Heated Fraction of the Slab: | 0                             |                                                                                                                |
| Fluid Temperature (°C):      | 33                            |                                                                                                                |
| Design Months                |                               |                                                                                                                |
| Heating Month                | 1                             |                                                                                                                |
| Foundation Loads             |                               |                                                                                                                |
| Heating Load (Watts):        |                               | 236                                                                                                            |

|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |                                                                                     |                                               |                                                                                     |                              |
|----------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|------------------------------|
|    | FLEX DUCT        |    | LOW/HIGH WALL/KICK SUPPLY DIFFUSER |    | DUCT CONNECTION TO JOIST LINING |    | RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) | S.A.                                                                                | SUPPLY AIR                   |
|   | RIGID ROUND DUCT |   | HRV EXHAUST GRILLE                 |   | RETURN AIR PIPE RISER           |   | RETURN AIR RISER UP TO FLOOR ABOVE            | R.A.                                                                                | RETURN AIR                   |
|  | SUPPLY DIFFUSER  |  | SUPPLY AIR PIPE RISER              |  | RETURN ROUND DUCT               |  | RETURN AIR FROM BASEMENT SECOND FLOOR         |   | THERMOSTAT                   |
|                                                                                  |                  |  | VOLUME DAMPER                      |                                                                                   |                                 |                                                                                     |                                               |  | PRINCIPAL EXHAUST FAN SWITCH |
|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |                                                                                     |                                               |  | W/R & PRINCIPAL EXHAUST FAN  |

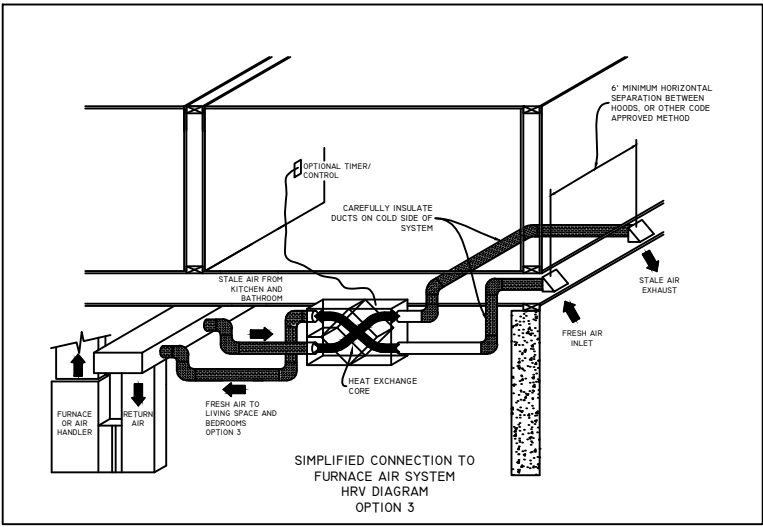


FURNACE EQUIPPED WITH  
BRUSHLESS DC MOTOR AS  
PER OBC 12.3.1.5 (2)

ALL DUCTWORK LOCATED IN  
CONDITIONED AREAS  
MUST BE SEALED TO CLASS  
C LEVEL AS PER OBC PART  
6-6.2.4.3.(12)

INSULATE ALL DUCTS IN  
UNCONDITIONED  
SPACES MIN. R12

FOR THE PURPOSE OF  
HEATLOSS/GAIN  
CALCULATIONS ALL  
ELEVATIONS HAVE BEEN  
CONSIDERED



THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER

**QUALIFICATION INFORMATION**

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIVISION C 3.2.5.1 OF THE ONTARIO BUILDING CODE

DAVID DA COSTA



B.C.I.N. 32964

SIGNATURE OF DESIGNER

BASEMENT PLAN 'A' –  
W.O.B. CONDITION

OBC 2012

ZONE I COMPLIANCE  
PACKAGE "A1" REF. TABLE 3.1.1.2.A

**NOTES**

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.

ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE SPECIFIED.

PROVIDE BALANCING DAMPERS ON ALL BRANCHES.

ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)

INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.

CONTRACTOR MUST WORK FROM APPROVED PLANS.

ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE RESPONSIBILITY OF GTA DESIGNS.

GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHAUST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING.



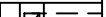
2985 DREW ROAD  
SUITE 202,  
MISSISSAUGA, ONT.  
L4T 0A4 TEL: 905-671-9800  
EMAIL: DAVE@GTADESIGNS.CA  
WEB: WWW.GTADESIGNS.CA

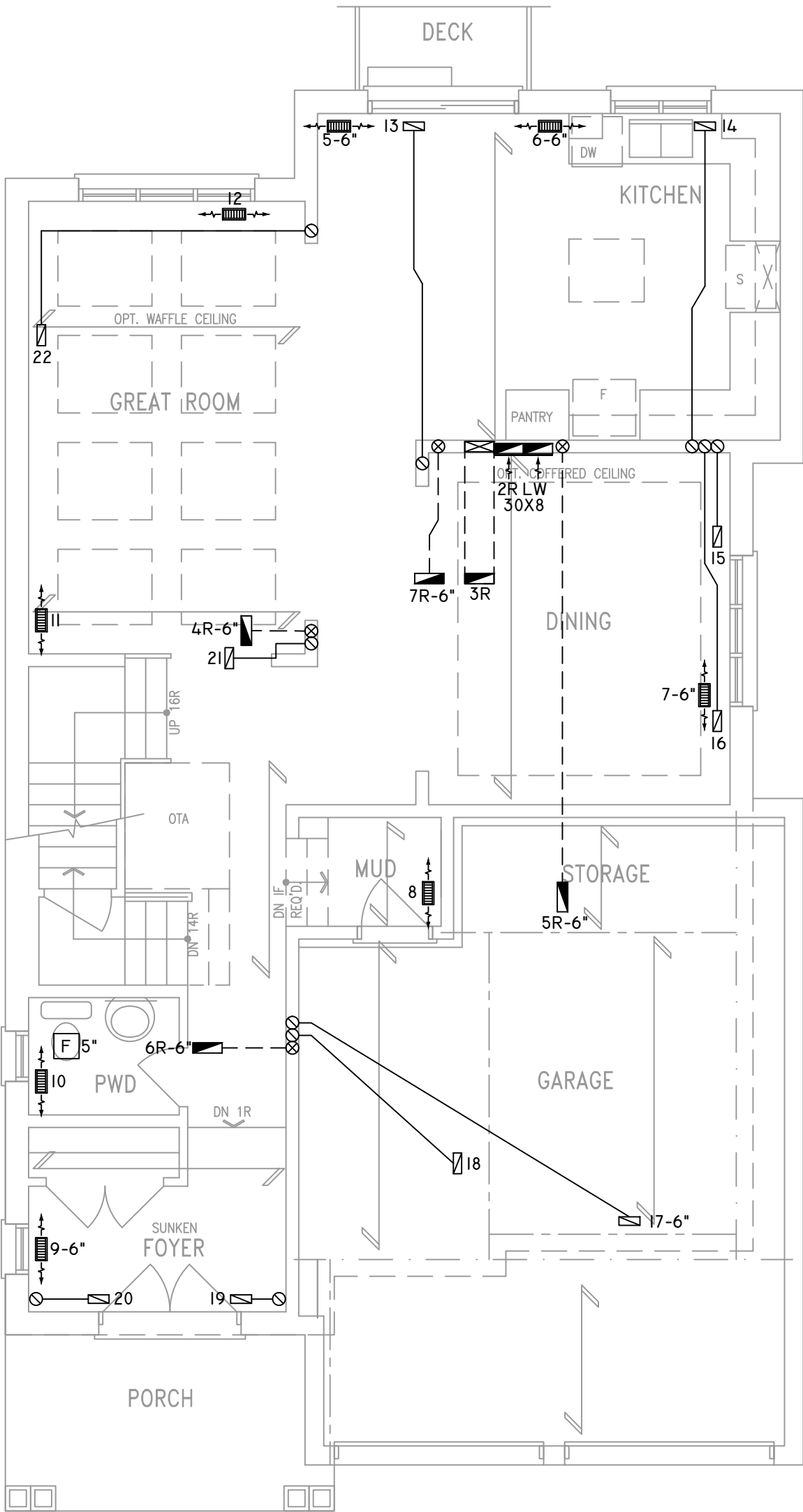
|                      |               |           |
|----------------------|---------------|-----------|
| HEAT-LOSS            | 49,274        | BTU/HR.   |
| UNIT MAKE            | AMANA         | OR EQUAL. |
| UNIT MODEL           | AMEC960603BNA | OR EQUAL. |
| UNIT HEATING INPUT   | 60,000        | BTU/HR.   |
| UNIT HEATING OUTPUT  | 57,600        | BTU/HR.   |
| A/C COOLING CAPACITY | 2.5           | TONS.     |
| FAN SPEED            | 1170          | CFM       |

| # OF RUNS | S/A | R/A | FANS |
|-----------|-----|-----|------|
| 3RD FLOOR |     |     |      |
| 2ND FLOOR | 10  | 4   | 3    |
| 1ST FLOOR | 8   | 1   | 2    |
| BASEMENT  | 5   | 1   |      |

|             |          |
|-------------|----------|
| FLOOR PLAN: | BASEMENT |
| DRAWN BY:   | AM       |
| CHECKED:    | DD       |
| LAYOUT NO.  | JB-04549 |
| SQFT        | 2511     |
| DRAWING NO. | MI       |

|          |                                    |
|----------|------------------------------------|
| DATE:    | MARCH 12, 2018                     |
| CLIENT:  | BAYVIEW WELLINGTON                 |
| MODEL:   | S38-17 WOB<br>BAROSSA 17           |
| PROJECT: | GREEN VALLEY EAST<br>BRADFORD,ONT. |
| SCALE:   | 3/16" = 1'-0"                      |

|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |                                                                                     |                                               |                                                                                     |                              |
|----------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|------------------------------|
|    | FLEX DUCT        |    | LOW/HIGH WALL/KICK SUPPLY DIFFUSER |    | DUCT CONNECTION TO JOIST LINING |    | RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) | S.A.                                                                                | SUPPLY AIR                   |
|   | RIGID ROUND DUCT |   | HRV EXHAUST GRILLE                 |   | RETURN AIR PIPE RISER           |   | RETURN AIR RISER UP TO FLOOR ABOVE            | R.A.                                                                                | RETURN AIR                   |
|  | SUPPLY DIFFUSER  |  | SUPPLY AIR PIPE RISER              |  | RETURN ROUND DUCT               |  | RETURN AIR FROM BASEMENT SECOND FLOOR         |   | THERMOSTAT                   |
|                                                                                  |                  |  | VOLUME DAMPER                      |                                                                                   |                                 |                                                                                     |                                               |  | PRINCIPAL EXHAUST FAN SWITCH |
|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |                                                                                     |                                               |  | W/R & PRINCIPAL EXHAUST FAN  |



KITCHEN EXHAUST  
100 CFM MIN. 6"

CIRCULATION PRINCIPAL  
FAN SWITCH  
TO BE CENTRALLY  
LOCATED

ALL DUCTWORK LOCATED IN  
CONDITIONED AREAS  
MUST BE SEALED TO CLASS  
C LEVEL AS PER OBC PART  
6-6.2.4.3.(12)

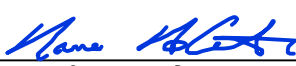
INSULATE ALL DUCTS IN  
UNCONDITIONED  
SPACES MIN. R12

FOR THE PURPOSE OF  
HEATLOSS/GAIN  
CALCULATIONS ALL  
ELEVATIONS HAVE BEEN  
CONSIDERED

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QUALIFICATION INFORMATION

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIVISION C 3.2.5.1 OF THE ONTARIO BUILDING CODE

DAVID DA COSTA  B.C.I.N. 32964

SIGNATURE OF DESIGNER

GROUND FLOOR PLAN 'A'  
W.O.B. CONDITION

OBC 2012

ZONE I COMPLIANCE  
PACKAGE "AI" REF. TABLE 3.1.1.2.A

**NOTES**  
INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.  
ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE SPECIFIED.  
PROVIDE BALANCING DAMPERS ON ALL BRANCHES.  
ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)  
INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.  
CONTRACTOR MUST WORK FROM APPROVED PLANS.  
ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE RESPONSIBILITY OF GTA DESIGNS.  
GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHAUST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING.



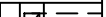
2985 DREW ROAD  
SUITE 202,  
MISSISSAUGA, ONT.  
L4T 0A4 TEL: 905-671-9800  
EMAIL: DAVE@GTADESIGNS.CA  
WEB: WWW.GTADESIGNS.CA

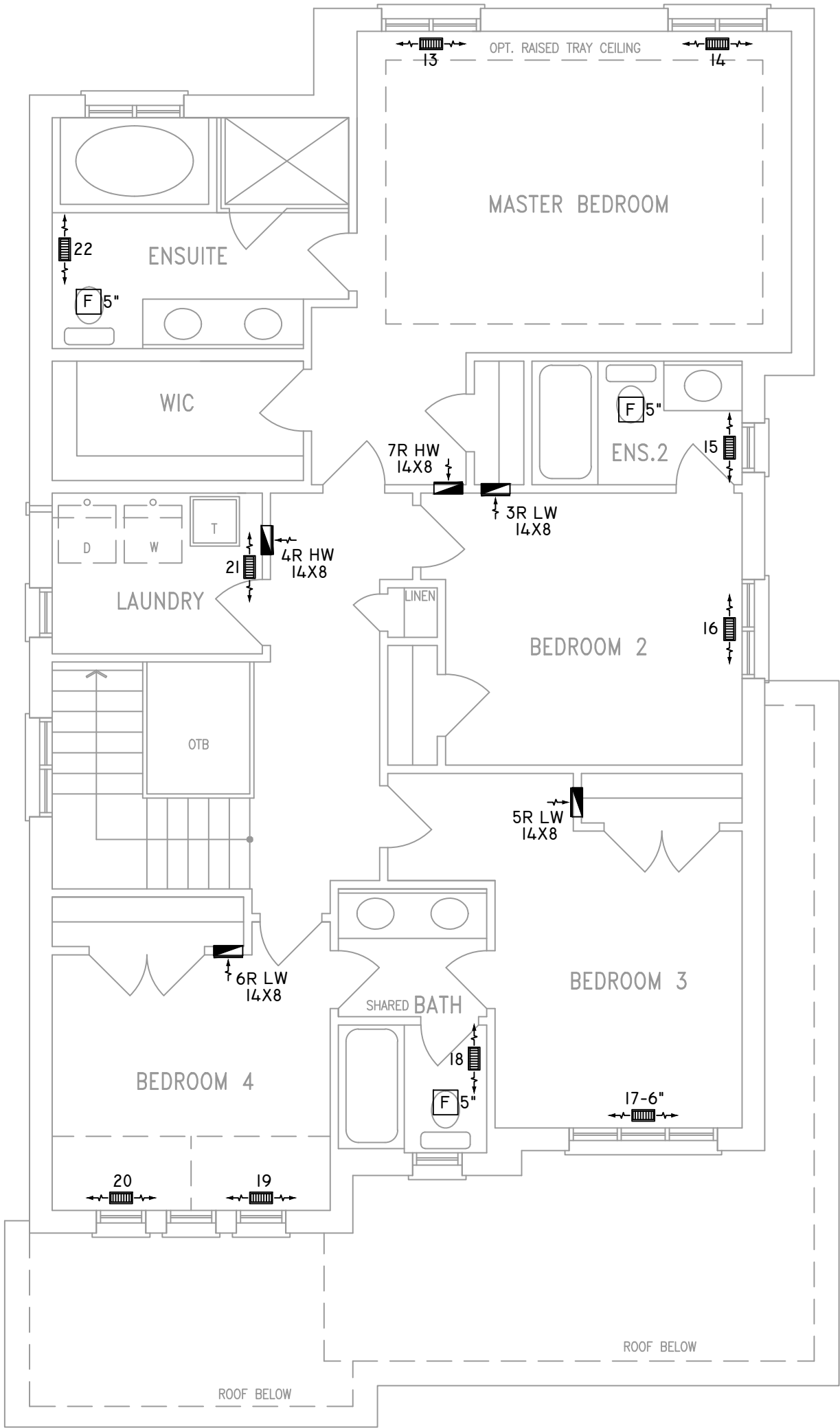
|                      |               |           |
|----------------------|---------------|-----------|
| HEAT-LOSS            | 49,274        | BTU/HR.   |
| UNIT MAKE            | AMANA         | OR EQUAL. |
| UNIT MODEL           | AMEC960603BNA | OR EQUAL. |
| UNIT HEATING INPUT   | 60,000        | BTU/HR.   |
| UNIT HEATING OUTPUT  | 57,600        | BTU/HR.   |
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| FAN SPEED            | 1170          | CFM       |

| # OF RUNS | S/A | R/A | FANS |
|-----------|-----|-----|------|
| 3RD FLOOR |     |     |      |
| 2ND FLOOR | 10  | 4   | 3    |
| 1ST FLOOR | 8   | 1   | 2    |
| BASEMENT  | 5   | 1   |      |

|                             |                   |
|-----------------------------|-------------------|
| FLOOR PLAN:<br>GROUND FLOOR |                   |
| DRAWN BY:<br>AM             | CHECKED:<br>DD    |
| LAYOUT NO.<br>JB-04549      | SGFT<br>2511      |
|                             | DRAWING NO.<br>M2 |

|          |                                    |
|----------|------------------------------------|
| DATE:    | MARCH 12, 2018                     |
| CLIENT:  | BAYVIEW WELLINGTON                 |
| MODEL:   | S38-I7 WOB<br>BAROSSA 17           |
| PROJECT: | GREEN VALLEY EAST<br>BRADFORD,ONT. |
| SCALE:   | 3/16" = 1'-0"                      |

|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |                                                                                     |                                               |                                                                                     |                              |
|----------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|------------------------------|
|    | FLEX DUCT        |    | LOW/HIGH WALL/KICK SUPPLY DIFFUSER |    | DUCT CONNECTION TO JOIST LINING |    | RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) | S.A.                                                                                | SUPPLY AIR                   |
|   | RIGID ROUND DUCT |   | HRV EXHAUST GRILLE                 |   | RETURN AIR PIPE RISER           |   | RETURN AIR RISER UP TO FLOOR ABOVE            | R.A.                                                                                | RETURN AIR                   |
|  | SUPPLY DIFFUSER  |  | SUPPLY AIR PIPE RISER              |  | RETURN ROUND DUCT               |  | RETURN AIR FROM BASEMENT SECOND FLOOR         |   | THERMOSTAT                   |
|                                                                                  |                  |  | VOLUME DAMPER                      |                                                                                   |                                 |                                                                                     |                                               |  | PRINCIPAL EXHAUST FAN SWITCH |
|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |                                                                                     |                                               |  | W/R & PRINCIPAL EXHAUST FAN  |



ALL DUCTWORK LOCATED IN  
CONDITIONED AREAS  
MUST BE SEALED TO CLASS  
C LEVEL AS PER OBC PART  
6-6.2.4.3.(12)

INSULATE ALL DUCTS IN  
UNCONDITIONED  
SPACES MIN. R12

FOR THE PURPOSE OF  
HEATLOSS/GAIN  
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ELEVATIONS HAVE BEEN  
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**QUALIFICATION INFORMATION**

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIVISION C 3.2.5.1 OF THE ONTARIO BUILDING CODE

DAVID DA COSTA



B.C.I.N. 32964

SIGNATURE OF DESIGNER

SECOND FLOOR PLAN 'A'

OBC 2012

ZONE I COMPLIANCE  
PACKAGE "A1" REF. TABLE 3.1.1.2.A

**NOTES**  
INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.  
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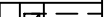
2985 DREW ROAD  
SUITE 202,  
MISSISSAUGA, ONT.  
L4T 0A4 TEL: 905-671-9800  
EMAIL: DAVE@GTADESIGNS.CA  
WEB: WWW.GTADESIGNS.CA

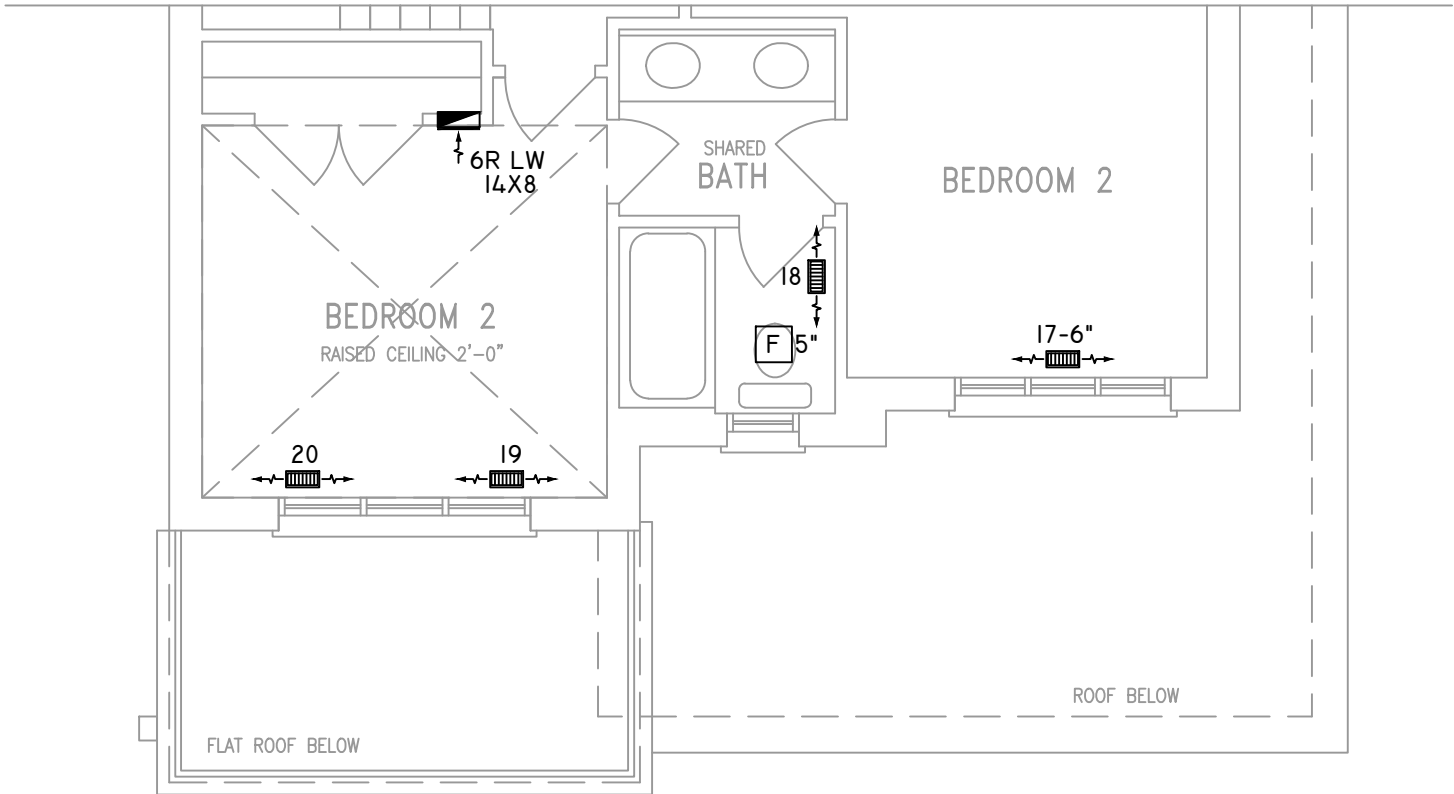
|                      |               |           |
|----------------------|---------------|-----------|
| HEAT-LOSS            | 49,274        | BTU/HR.   |
| UNIT MAKE            | AMANA         | OR EQUAL. |
| UNIT MODEL           | AMEC960603BNA | OR EQUAL. |
| UNIT HEATING INPUT   | 60,000        | BTU/HR.   |
| UNIT HEATING OUTPUT  | 57,600        | BTU/HR.   |
| A/C COOLING CAPACITY | 2.5           | TONS.     |
| FAN SPEED            | 1170          | CFM       |

| # OF RUNS | S/A | R/A | FANS |
|-----------|-----|-----|------|
| 3RD FLOOR |     |     |      |
| 2ND FLOOR | 10  | 4   | 3    |
| 1ST FLOOR | 8   | 1   | 2    |
| BASEMENT  | 5   | 1   |      |

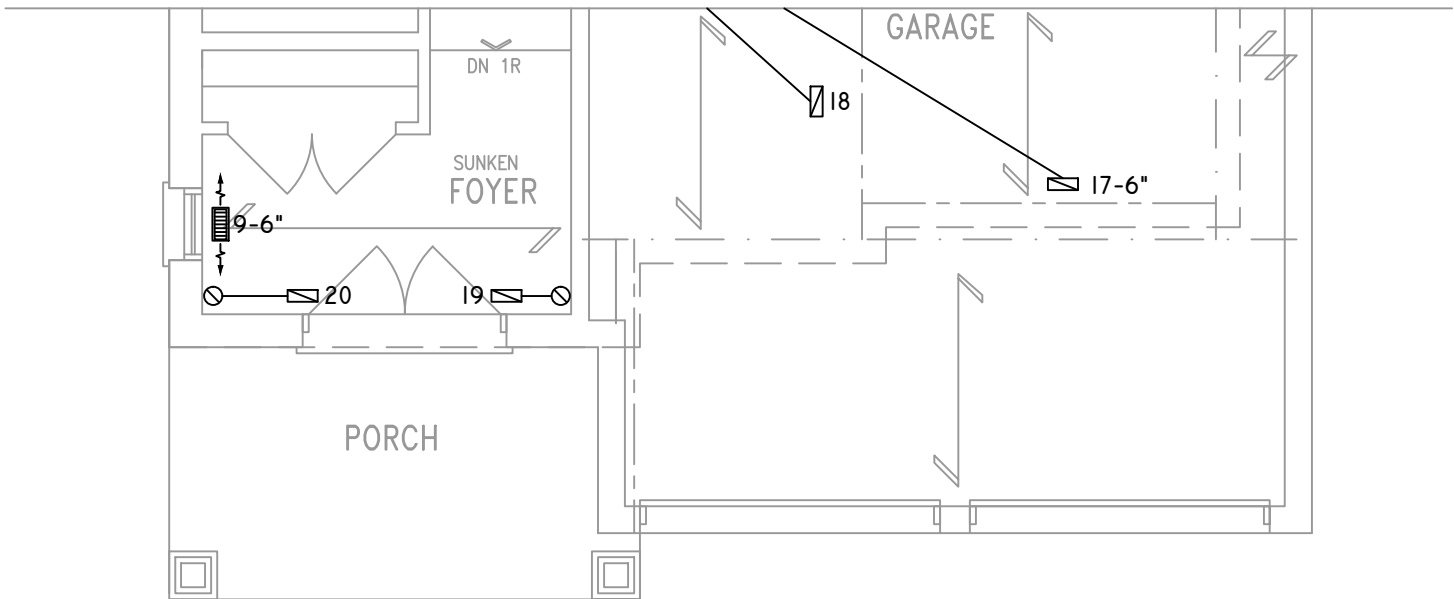
| FLOOR PLAN: SECOND FLOOR |                |           |
|--------------------------|----------------|-----------|
| DRAWN BY: AM             | CHECKED: DD    | SQFT 2511 |
| LAYOUT NO. JB-04549      | DRAWING NO. M3 |           |

|          |                                    |
|----------|------------------------------------|
| DATE:    | MARCH 12, 2018                     |
| CLIENT:  | BAYVIEW WELLINGTON                 |
| MODEL:   | S38-I7 WOB<br>BAROSSA 17           |
| PROJECT: | GREEN VALLEY EAST<br>BRADFORD,ONT. |
| SCALE:   | 3/16" = 1'-0"                      |

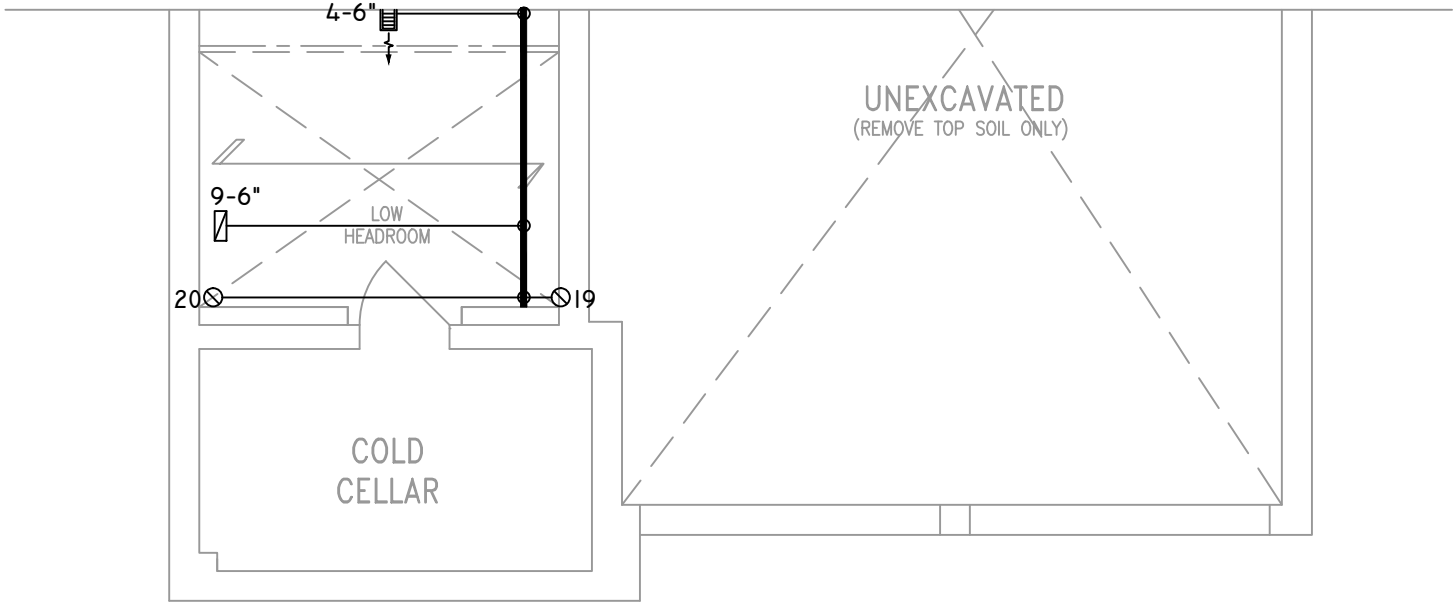
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|----------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|------------------------------|
|    | FLEX DUCT        |    | LOW/HIGH WALL/KICK SUPPLY DIFFUSER |    | DUCT CONNECTION TO JOIST LINING |    | RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) | S.A.                                                                                | SUPPLY AIR                   |
|   | RIGID ROUND DUCT |   | HRV EXHAUST GRILLE                 |   | RETURN AIR PIPE RISER           |   | RETURN AIR RISER UP TO FLOOR ABOVE            | R.A.                                                                                | RETURN AIR                   |
|  | SUPPLY DIFFUSER  |  | SUPPLY AIR PIPE RISER              |  | RETURN ROUND DUCT               |  | RETURN AIR FROM BASEMENT SECOND FLOOR         |   | THERMOSTAT                   |
|                                                                                  |                  |  | VOLUME DAMPER                      |                                                                                   |                                 |                                                                                     |                                               |  | PRINCIPAL EXHAUST FAN SWITCH |
|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |                                                                                     |                                               |  | W/R & PRINCIPAL EXHAUST FAN  |



PART. SECOND FLOOR PLAN 'B'



PART. GROUND FLOOR PLAN 'B'



PART. BASEMENT PLAN 'B'

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER

QUALIFICATION INFORMATION

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIVISION C 3.2.5.1 OF THE ONTARIO BUILDING CODE

DAVID DA COSTA  B.C.I.N. 32964

SIGNATURE OF DESIGNER

OBC 2012

ZONE I COMPLIANCE  
PACKAGE "A1" REF. TABLE 3.1.1.2.A

**NOTES**  
INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.  
ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE SPECIFIED.  
PROVIDE BALANCING DAMPERS ON ALL BRANCHES.  
ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)  
INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.  
CONTRACTOR MUST WORK FROM APPROVED PLANS.  
ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE RESPONSIBILITY OF GTA DESIGNS.  
GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHAUST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING.



2985 DREW ROAD  
SUITE 202,  
MISSISSAUGA, ONT.  
L4T 0A4 TEL: 905-671-9800  
EMAIL: DAVE@GTADESIGNS.CA  
WEB: WWW.GTADESIGNS.CA

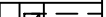
|                      |               |           |
|----------------------|---------------|-----------|
| HEAT-LOSS            | 49,274        | BTU/HR.   |
| UNIT MAKE            | AMANA         | OR EQUAL. |
| UNIT MODEL           | AMEC960603BNA | OR EQUAL. |
| UNIT HEATING INPUT   | 60,000        | BTU/HR.   |
| UNIT HEATING OUTPUT  | 57,600        | BTU/HR.   |
| A/C COOLING CAPACITY | 2.5           | TONS.     |
| FAN SPEED            | 1170          | CFM       |

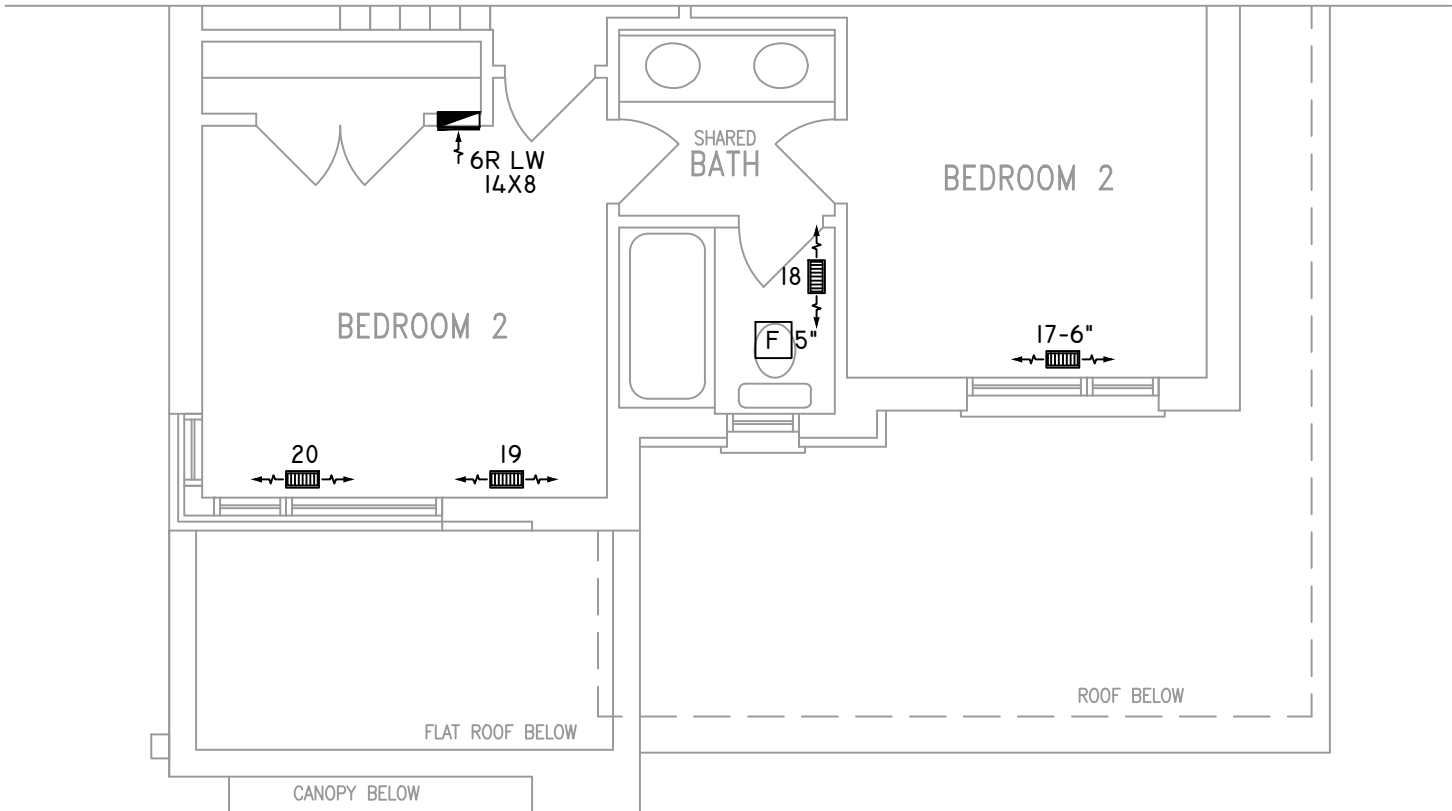
| # OF RUNS | S/A | R/A | FANS |
|-----------|-----|-----|------|
| 3RD FLOOR |     |     |      |
| 2ND FLOOR | 10  | 4   | 3    |
| 1ST FLOOR | 8   | 1   | 2    |
| BASEMENT  | 5   | 1   |      |

|                                |                |
|--------------------------------|----------------|
| FLOOR PLAN:<br>PARTIAL PLAN(S) |                |
| DRAWN BY:<br>AM                | CHECKED:<br>DD |
| LAYOUT NO:<br>JB-04549         | SQFT<br>2511   |
| DRAWING NO:<br>M4              |                |

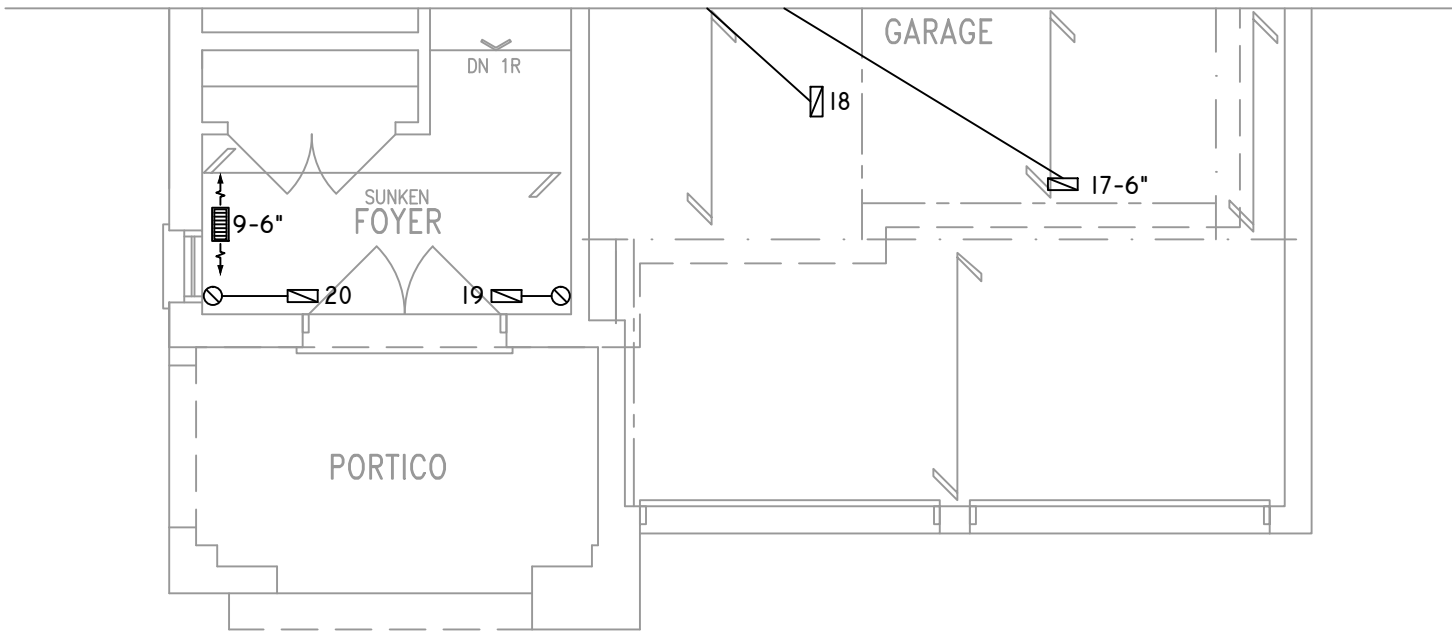
|          |                                    |
|----------|------------------------------------|
| DATE:    | MARCH 12, 2018                     |
| CLIENT:  | BAYVIEW WELLINGTON                 |
| MODEL:   | S38-17 WOB<br>BAROSSA 17           |
| PROJECT: | GREEN VALLEY EAST<br>BRADFORD,ONT. |
| SCALE:   | 3/16" = 1'-0"                      |



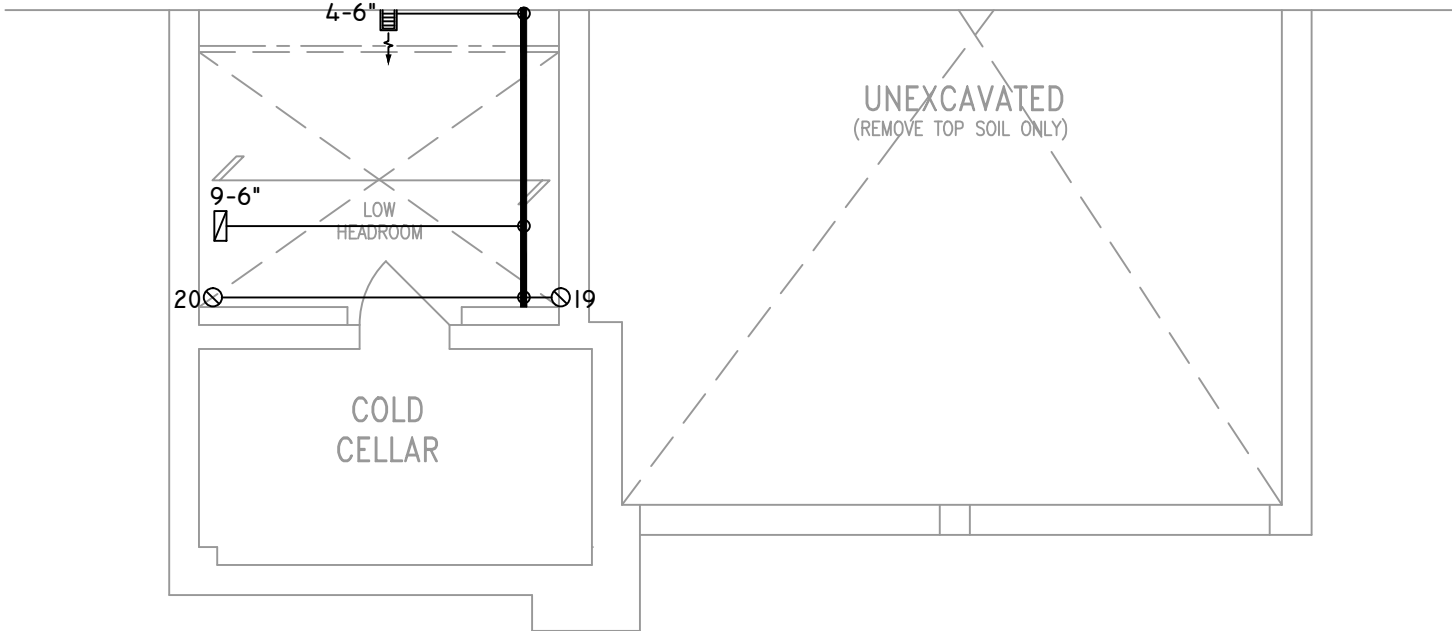
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|----------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|------------------------------|
|    | FLEX DUCT        |    | LOW/HIGH WALL/KICK SUPPLY DIFFUSER |    | DUCT CONNECTION TO JOIST LINING |    | RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) | S.A.                                                                                | SUPPLY AIR                   |
|   | RIGID ROUND DUCT |   | HRV EXHAUST GRILLE                 |   | RETURN AIR PIPE RISER           |   | RETURN AIR RISER UP TO FLOOR ABOVE            | R.A.                                                                                | RETURN AIR                   |
|  | SUPPLY DIFFUSER  |  | SUPPLY AIR PIPE RISER              |  | RETURN ROUND DUCT               |  | RETURN AIR FROM BASEMENT SECOND FLOOR         |  | THERMOSTAT                   |
|                                                                                  |                  |  | VOLUME DAMPER                      |                                                                                   |                                 |                                                                                     |                                               |  | PRINCIPAL EXHAUST FAN SWITCH |
|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |                                                                                     |                                               |  | W/R & PRINCIPAL EXHAUST FAN  |



PART. SECOND FLOOR PLAN 'C'



PART. GROUND FLOOR PLAN 'C'



PART. BASEMENT PLAN 'C'

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER

**QUALIFICATION INFORMATION**

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIVISION C 3.2.5.1 OF THE ONTARIO BUILDING CODE

DAVID DA COSTA  B.C.I.N. 32964

SIGNATURE OF DESIGNER

OBC 2012

ZONE I COMPLIANCE  
PACKAGE "A1" REF. TABLE 3.1.1.2.A

**NOTES**

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.

ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE SPECIFIED.

PROVIDE BALANCING DAMPERS ON ALL BRANCHES.

ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)

INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.

CONTRACTOR MUST WORK FROM APPROVED PLANS.

ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE RESPONSIBILITY OF GTA DESIGNS.

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L4T 0A4 TEL: 905-671-9800  
EMAIL: DAVE@GTADISIGNS.CA  
WEB: WWW.GTADISIGNS.CA

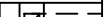
|                      |               |           |
|----------------------|---------------|-----------|
| HEAT-LOSS            | 49,274        | BTU/HR.   |
| UNIT MAKE            | AMANA         | OR EQUAL. |
| UNIT MODEL           | AMEC960603BNA | OR EQUAL. |
| UNIT HEATING INPUT   | 60,000        | BTU/HR.   |
| UNIT HEATING OUTPUT  | 57,600        | BTU/HR.   |
| A/C COOLING CAPACITY | 2.5           | TONS.     |
| FAN SPEED            | 1170          | CFM       |

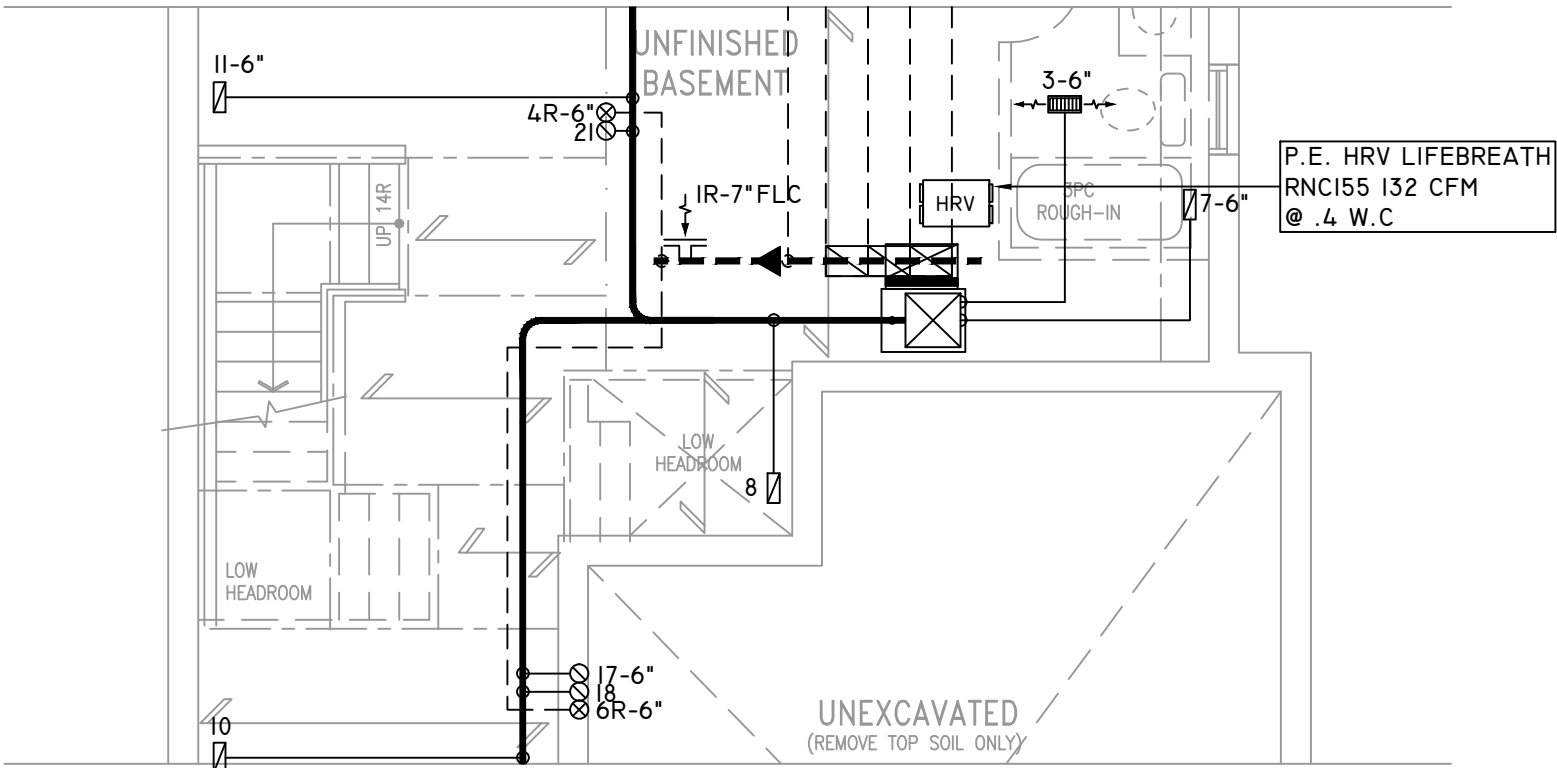
| # OF RUNS | S/A | R/A | FANS |
|-----------|-----|-----|------|
| 3RD FLOOR |     |     |      |
| 2ND FLOOR | 10  | 4   | 3    |
| 1ST FLOOR | 8   | 1   | 2    |
| BASEMENT  | 5   | 1   |      |

|                     |                |
|---------------------|----------------|
| FLOOR PLAN:         |                |
| PARTIAL PLAN(S)     |                |
| DRAWN BY: AM        | CHECKED: DD    |
| LAYOUT NO. JB-04549 | DRAWING NO. M5 |

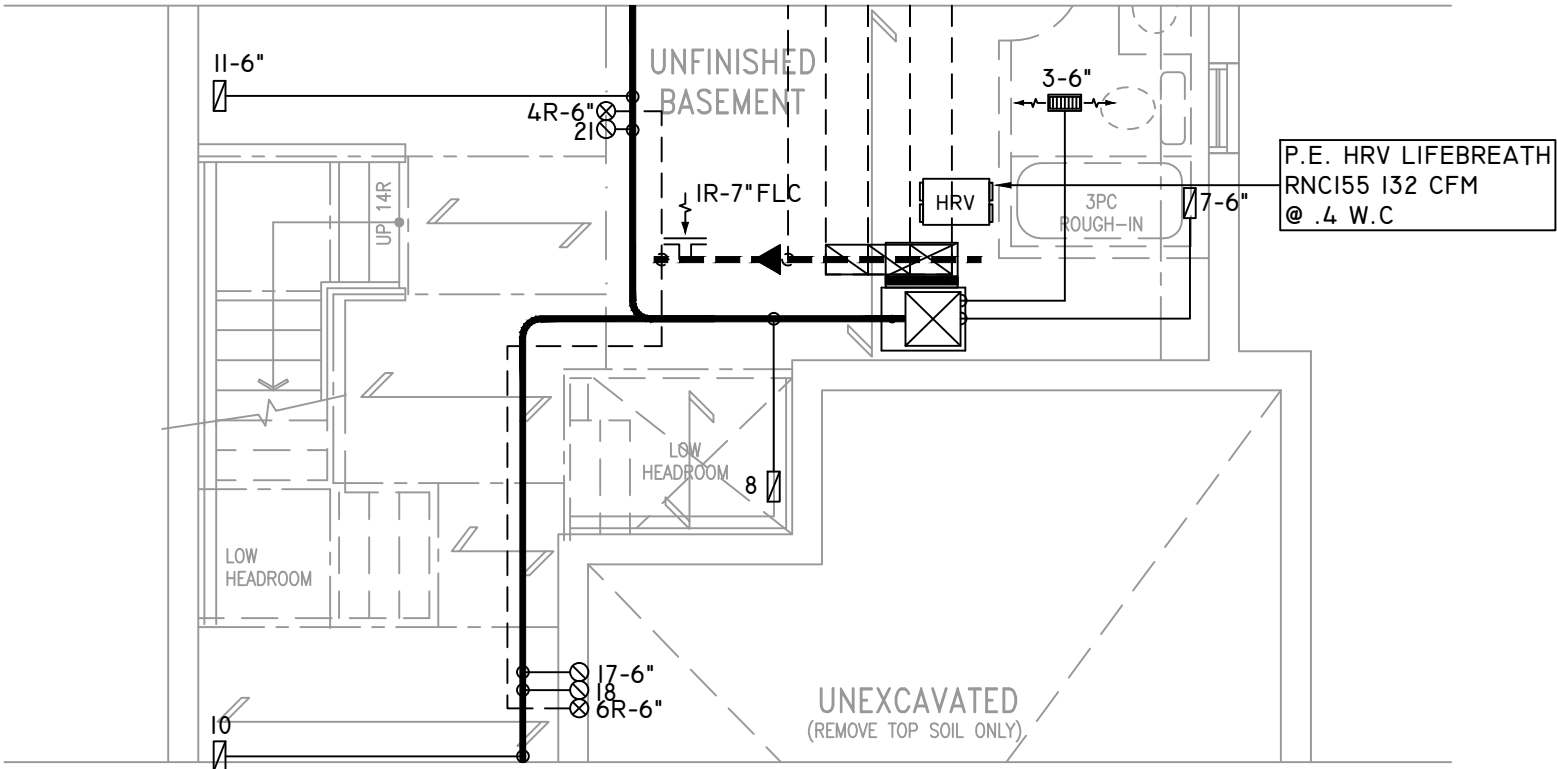
|          |                                    |
|----------|------------------------------------|
| DATE:    | MARCH 12, 2018                     |
| CLIENT:  | BAYVIEW WELLINGTON                 |
| MODEL:   | S38-I7 WOB<br>BAROSSA 17           |
| PROJECT: | GREEN VALLEY EAST<br>BRADFORD,ONT. |
| SCALE:   | 3/16" = 1'-0"                      |



|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |                                                                                     |                                               |                                                                                     |                              |
|----------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|------------------------------|
|    | FLEX DUCT        |    | LOW/HIGH WALL/KICK SUPPLY DIFFUSER |    | DUCT CONNECTION TO JOIST LINING |    | RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) | S.A.                                                                                | SUPPLY AIR                   |
|   | RIGID ROUND DUCT |   | HRV EXHAUST GRILLE                 |   | RETURN AIR PIPE RISER           |   | RETURN AIR RISER UP TO FLOOR ABOVE            | R.A.                                                                                | RETURN AIR                   |
|  | SUPPLY DIFFUSER  |  | SUPPLY AIR PIPE RISER              |  | RETURN ROUND DUCT               |  | RETURN AIR FROM BASEMENT SECOND FLOOR         |   | THERMOSTAT                   |
|                                                                                  |                  |  | VOLUME DAMPER                      |                                                                                   |                                 |                                                                                     |                                               |  | PRINCIPAL EXHAUST FAN SWITCH |
|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |                                                                                     |                                               |  | W/R & PRINCIPAL EXHAUST FAN  |



PART. BASEMENT PLAN FOR SUNKEN MUD COND.



PART. BASEMENT PLAN FOR -2R OR MORE SUNKEN MUD COND.

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER

QUALIFICATION INFORMATION

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIVISION C 3.2.5.1 OF THE ONTARIO BUILDING CODE

DAVID DA COSTA  B.C.I.N. 32964

SIGNATURE OF DESIGNER

OBC 2012

ZONE I COMPLIANCE  
PACKAGE "A1" REF. TABLE 3.1.1.2.A

**NOTES**  
INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.  
ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE SPECIFIED.  
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INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.  
CONTRACTOR MUST WORK FROM APPROVED PLANS.  
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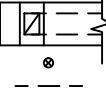
2985 DREW ROAD  
SUITE 202,  
MISSISSAUGA, ONT.  
L4T 0A4 TEL: 905-671-9800  
EMAIL: DAVE@GTADESIGNS.CA  
WEB: WWW.GTADESIGNS.CA

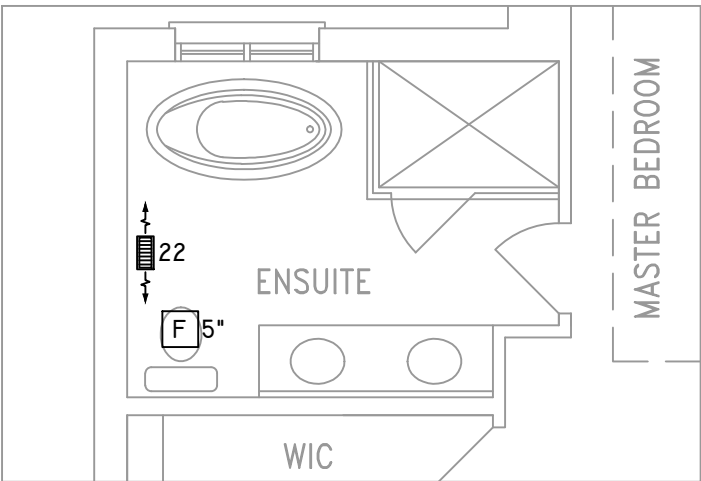
|                      |               |           |
|----------------------|---------------|-----------|
| HEAT-LOSS            | 49,274        | BTU/HR.   |
| UNIT MAKE            | AMANA         | OR EQUAL. |
| UNIT MODEL           | AMEC960603BNA | OR EQUAL. |
| UNIT HEATING INPUT   | 60,000        | BTU/HR.   |
| UNIT HEATING OUTPUT  | 57,600        | BTU/HR.   |
| A/C COOLING CAPACITY | 2.5           | TONS.     |
| FAN SPEED            | 1170          | CFM       |

| # OF RUNS | S/A | R/A | FANS |
|-----------|-----|-----|------|
| 3RD FLOOR |     |     |      |
| 2ND FLOOR | 10  | 4   | 3    |
| 1ST FLOOR | 8   | 1   | 2    |
| BASEMENT  | 5   | 1   |      |

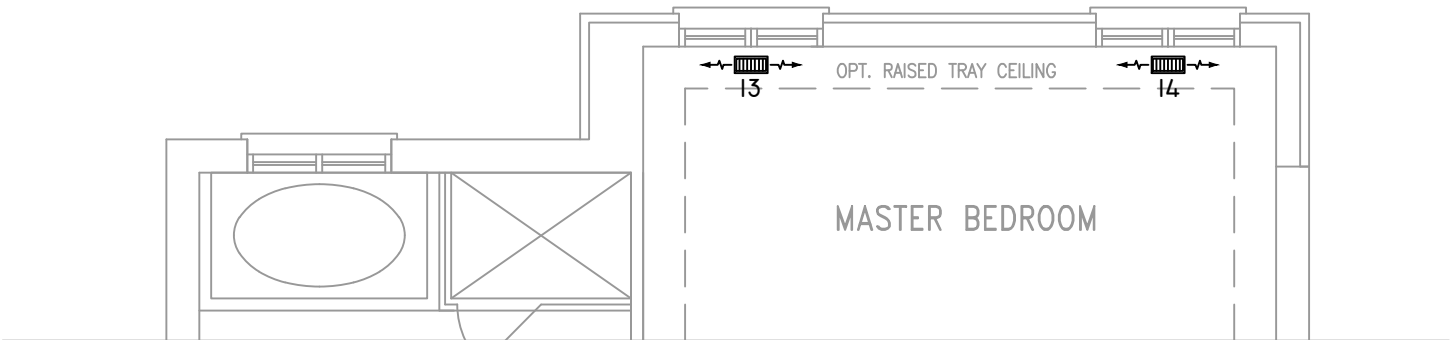
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|---------------------|---------------------|
| FLOOR PLAN:         |                     |
| PARTIAL PLAN(S)     |                     |
| DRAWN BY: AM        | CHECKED: DD         |
| LAYOUT NO. JB-04549 | DRAWING NO. 2511 M6 |

|          |                                    |
|----------|------------------------------------|
| DATE:    | MARCH 12, 2018                     |
| CLIENT:  | BAYVIEW WELLINGTON                 |
| MODEL:   | S38-17 WOB<br>BAROSSA 17           |
| PROJECT: | GREEN VALLEY EAST<br>BRADFORD,ONT. |
| SCALE:   | 3/16" = 1'-0"                      |

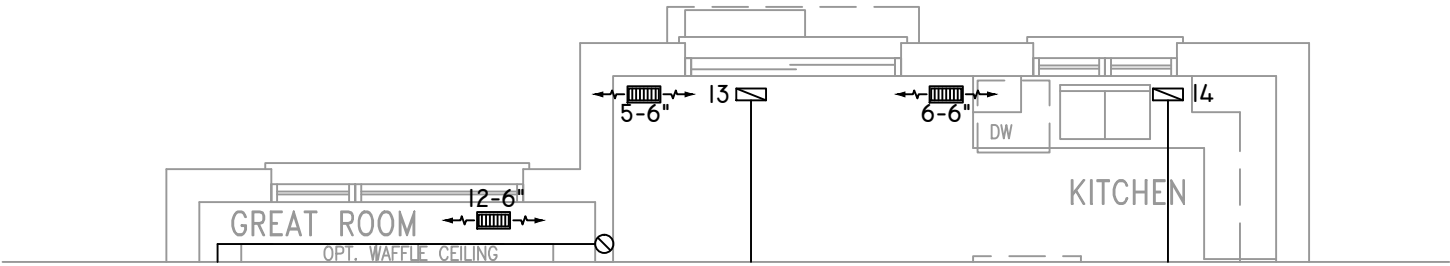
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|----------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|------------------------------|
|    | FLEX DUCT        |    | LOW/HIGH WALL/KICK SUPPLY DIFFUSER |   | DUCT CONNECTION TO JOIST LINING |    | RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) | S.A.                                                                                | SUPPLY AIR                   |
|  | RIGID ROUND DUCT |  | HRV EXHAUST GRILLE                 |  | RETURN AIR PIPE RISER           |  | RETURN AIR RISER UP TO FLOOR ABOVE            | R.A.                                                                                | RETURN AIR                   |
|  | SUPPLY DIFFUSER  |  | SUPPLY AIR PIPE RISER              |  | RETURN ROUND DUCT               |  | RETURN AIR FROM BASEMENT SECOND FLOOR         |  | THERMOSTAT                   |
|                                                                                  |                  |  | VOLUME DAMPER                      |                                                                                   |                                 |  |                                               |  | PRINCIPAL EXHAUST FAN SWITCH |
|                                                                                  |                  |                                                                                   |                                    |                                                                                   |                                 |  |                                               |  | W/R & PRINCIPAL EXHAUST FAN  |



OPT. SECOND FLOOR W/  
ALT. ENSUITE LAYOUT



PARTIAL SECOND FLOOR PLAN ELEVATION 'C' REAR UPGRADE



PARTIAL GROUND FLOOR PLAN ELEVATION 'C' REAR UPGRADE

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER

**QUALIFICATION INFORMATION**

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DAVID DA COSTA



B.C.I.N. 32964

SIGNATURE OF DESIGNER

OBC 2012

ZONE I COMPLIANCE  
PACKAGE "A1" REF. TABLE 3.1.1.2.A

**NOTES**  
INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.  
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EMAIL: DAVE@GTADESIGNS.CA  
WEB: WWW.GTADESIGNS.CA

|                      |           |
|----------------------|-----------|
| HEAT-LOSS            | BTU/HR.   |
| 49,274               |           |
| UNIT MAKE            | OR EQUAL. |
| AMANA                |           |
| UNIT MODEL           | OR EQUAL. |
| AMEC960603BNA        |           |
| UNIT HEATING INPUT   | BTU/HR.   |
| 60,000               |           |
| UNIT HEATING OUTPUT  | BTU/HR.   |
| 57,600               |           |
| A/C COOLING CAPACITY | TONS.     |
| 2.5                  |           |
| FAN SPEED            | CFM       |
| 1170                 |           |

| # OF RUNS | S/A | R/A | FANS |
|-----------|-----|-----|------|
| 3RD FLOOR |     |     |      |
| 2ND FLOOR | 10  | 4   | 3    |
| 1ST FLOOR | 8   | 1   | 2    |
| BASEMENT  | 5   | 1   |      |

|                     |             |
|---------------------|-------------|
| FLOOR PLAN:         |             |
| PARTIAL PLAN(S)     |             |
| DRAWN BY: AM        | CHECKED: DD |
| LAYOUT NO. JB-04549 | SQFT 2511   |
| DRAWING NO. M7      |             |

|          |                                    |
|----------|------------------------------------|
| DATE:    | MARCH 12, 2018                     |
| CLIENT:  | BAYVIEW WELLINGTON                 |
| MODEL:   | S38-I7 WOB<br>BAROSSA 17           |
| PROJECT: | GREEN VALLEY EAST<br>BRADFORD,ONT. |
| SCALE:   | 3/16" = 1'-0"                      |