

| SITE NAME: LAMBERT'S LANE PH.2 |  |  |  | LOT 17          |      |   |   | DATE: Aug-19 |   |   |   | WINTER NATURAL AIR CHANGE RATE 0.249 |   |   |   | HEAT LOSS AT °F. 74                  |   |   |   | CSA-F280-12         |   |   |   |            |   |   |   |      |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------|--|--|--|-----------------|------|---|---|--------------|---|---|---|--------------------------------------|---|---|---|--------------------------------------|---|---|---|---------------------|---|---|---|------------|---|---|---|------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|------|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BUILDER: GREENPARK HOMES       |  |  |  | TYPE: PRESTON 3 |      |   |   | GFA: 2920    |   |   |   | LO# 83491                            |   |   |   | SUMMER NATURAL AIR CHANGE RATE 0.081 |   |   |   | HEAT GAIN ΔT °F. 11 |   |   |   | ENERGYSTAR |   |   |   |      |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ROOM USE                       |  |  |  | MBR             |      |   |   | ENS          |   |   |   | WIC                                  |   |   |   | BED-2                                |   |   |   | BED-3               |   |   |   | BED-4      |   |   |   | BATH |   |   |   | WIC-3 |   |   |   | BED-5 |   |   |   | ENS-2 |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXP. WALL                      |  |  |  | 34              |      |   |   | 23           |   |   |   | 10                                   |   |   |   | 14                                   |   |   |   | 26                  |   |   |   | 12         |   |   |   | 7    |   |   |   | 30    |   |   |   | 11    |   |   |   | 7     |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| CLG. HT.                       |  |  |  | 9               |      |   |   | 9            |   |   |   | 9                                    |   |   |   | 9                                    |   |   |   | 9                   |   |   |   | 9          |   |   |   | 9    |   |   |   | 9     |   |   |   | 9     |   |   |   | 9     |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| FACTORS                        |  |  |  | LOSS            |      |   |   | GAIN         |   |   |   | LOSS                                 |   |   |   | GAIN                                 |   |   |   | LOSS                |   |   |   | GAIN       |   |   |   | LOSS |   |   |   | GAIN  |   |   |   | LOSS  |   |   |   | GAIN  |   |   |   | LOSS |   |   |   | GAIN |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| GRS.WALL AREA                  |  |  |  | 309             |      |   |   | 209          |   |   |   | 91                                   |   |   |   | 127                                  |   |   |   | 236                 |   |   |   | 109        |   |   |   | 64   |   |   |   | 272   |   |   |   | 100   |   |   |   | 64    |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| GLAZING                        |  |  |  | LOSS            |      |   |   | GAIN         |   |   |   | LOSS                                 |   |   |   | GAIN                                 |   |   |   | LOSS                |   |   |   | GAIN       |   |   |   | LOSS |   |   |   | GAIN  |   |   |   | LOSS  |   |   |   | GAIN  |   |   |   | LOSS |   |   |   | GAIN |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NORTH                          |  |  |  | 18.6            | 15.1 | 0 | 0 | 0            | 0 | 0 | 0 | 0                                    | 0 | 0 | 0 | 0                                    | 0 | 0 | 0 | 0                   | 0 | 0 | 0 | 0          | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

THIS STRUCTURE MUST BE  
CONSTRUCTED TO MEET OR  
EXCEED THE PROVISIONS OF  
THE ONTARIO BUILDING CODE

AUG 23 2019

TOWN OF CALEDON  
PLANNING SECTION

| ROOM USE      | EXP. WALL                      | CLG. HT. | LIBR      | LVDN | KIT       | FAM | LAUN | WR        | FOY | MUD  | WOD       | BAS |
|---------------|--------------------------------|----------|-----------|------|-----------|-----|------|-----------|-----|------|-----------|-----|
|               |                                |          | 10        | 18   | 36        | 36  | 0    | 9         | 46  | 24   | 19        | 180 |
|               |                                |          | 10        | 10   | 10        | 10  | 9    | 10        | 10  | 10   | 9         | 9   |
| FACTORS       |                                |          | LOSS GAIN |      | LOSS GAIN |     |      | LOSS GAIN |     |      | LOSS GAIN |     |
| GRS.WALL AREA | GLAZING                        | NORTH    | 18.6      | 15.1 | 20        | 371 | 303  | 0         | 0   | 0    | 12        | 223 |
|               | EAST                           | 18.6     | 40.7      | 0    | 0         | 0   | 0    | 0         | 0   | 0    | 0         | 0   |
|               | SOUTH                          | 18.6     | 24.1      | 0    | 0         | 0   | 40   | 742       | 963 | 0    | 0         | 0   |
|               | WEST                           | 18.6     | 40.7      | 0    | 0         | 0   | 0    | 0         | 0   | 0    | 0         | 0   |
|               | SKYLT.                         | 31.2     | 99.9      | 0    | 0         | 0   | 0    | 0         | 0   | 0    | 0         | 0   |
|               | DOORS                          | 24.7     | 3.7       | 0    | 0         | 0   | 0    | 0         | 0   | 0    | 0         | 0   |
|               | NET EXPOSED WALL               | 3.5      | 0.5       | 80   | 281       | 42  | 140  | 492       | 73  | 285  | 1002      | 149 |
|               | NET EXPOSED BSMT WALL ABOVE GR | 3.5      | 0.5       | 0    | 0         | 0   | 0    | 0         | 0   | 0    | 0         | 0   |
|               | EXPOSED CLG                    | 1.3      | 0.6       | 0    | 0         | 0   | 0    | 0         | 0   | 0    | 0         | 0   |
|               | NO ATTIC EXPOSED CLG           | 2.7      | 1.2       | 0    | 0         | 0   | 0    | 0         | 0   | 0    | 0         | 0   |
|               | EXPOSED FLOOR                  | 2.5      | 0.4       | 0    | 0         | 0   | 0    | 0         | 0   | 0    | 0         | 0   |
|               | BASEMENT/CRAWL HEAT LOSS       |          |           | 0    | 0         | 0   | 0    | 0         | 0   | 0    | 0         | 0   |
|               | SLAB ON GRADE HEAT LOSS        |          |           | 0    | 0         | 0   | 0    | 0         | 0   | 0    | 0         | 0   |
|               | SUBTOTAL HT LOSS               |          |           | 852  |           |     | 1234 |           |     | 2393 |           |     |
|               | SUB TOTAL HT GAIN              |          |           |      | 345       |     | 1036 |           |     | 2972 |           |     |
|               | LEVEL FACTOR / MULTIPLIER      | 0.30     | 0.34      |      |           |     | 0.30 | 0.34      |     | 0.30 | 0.34      |     |
|               | AIR CHANGE HEAT LOSS           |          |           | 224  |           |     | 424  |           |     | 822  |           |     |
|               | AIR CHANGE HEAT GAIN           |          |           |      | 20        |     | 60   |           |     | 172  |           |     |
|               | DUCT LOSS                      |          |           | 0    |           |     | 0    |           |     | 0    |           |     |
|               | DUCT GAIN                      |          |           | 0    |           |     | 0    |           |     | 0    |           |     |
|               | HEAT GAIN PEOPLE               | 240      |           | 0    |           | 0   | 0    |           | 0   | 0    |           | 0   |
|               | HEAT GAIN APPLIANCES/LIGHTS    |          |           |      | 448       |     | 448  |           | 448 |      | 448       |     |
|               | TOTAL HT LOSS BTU/H            |          |           | 876  |           |     | 1658 |           |     | 3215 |           |     |
|               | TOTAL HT GAIN x 1.3 BTU/H      |          |           |      | 1056      |     | 2007 |           |     | 4669 |           |     |

TOTAL HEAT GAIN BTU/H:

30993

TONS: 2.58

LOSS DUE TO VENTILATION LOAD BTU/H: 1911

STRUCTURAL HEAT LOSS: 44225

TOTAL COMBINED HEAT LOSS BTU/H: 46137

SITE NAME: LAMBERT'S LANE PH.2  
 BUILDER: GREENPARK HOMES

 LOT 17  
 TYPE: PRESTON 3

DATE: Aug-19

GFA: 2920 LO# 83491

 HEATING CFM 1131 COOLING CFM 1131  
 TOTAL HEAT LOSS 44,225 TOTAL HEAT GAIN 30,709  
 AIR FLOW RATE CFM 25.57 AIR FLOW RATE CFM 36.83

 furnace pressure 0.6  
 furnace filter 0.05  
 a/c coil pressure 0.2  
 available pressure for s/a & r/a 0.35

 #GOODMAN  
 GMEC960603BNA 60

 AFUE = 96 %  
 INPUT (BTU/H) = 60,000  
 OUTPUT (BTU/H) = 57,600

| RUN COUNT | 4th | 3rd | 2nd | 1st | Bas |
|-----------|-----|-----|-----|-----|-----|
| S/A       | 0   | 0   | 13  | 9   | 4   |
| R/A       | 0   | 0   | 4   | 3   | 1   |

 plenum pressure s/a 0.18 r/a pressure 0.17  
 max s/a dif press. loss 0.02 r/a grille press. loss 0.02  
 min adjusted pressure s/a 0.16 adjusted pressure r/a 0.15

 FAN SPEED LOW  
 MEDLOW  
 MEDIUM  
 MEDIUM HIGH  
 HIGH 1131

 DESIGN CFM = 1131  
 CFM @ .6" E.S.P.

 All S/A diffusers 4"x10" unless noted otherwise on layout.  
 All S/A runs 5"Ø unless noted otherwise on layout.

| RUN #                     | 1    | 2    | 3     | 4     | 5     | 6     | 7    | 8     | 9    | 10   | 11    | 12   | 13    | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   |
|---------------------------|------|------|-------|-------|-------|-------|------|-------|------|------|-------|------|-------|------|------|------|------|------|------|------|------|------|------|------|
| ROOM NAME                 | MBR  | ENS  | BED-5 | BED-2 | BED-3 | BED-4 | BATH | WIC-3 | WIC  | MBR  | ENS-2 | LIBR | LV/DN | KIT  | KIT  | FAM  | LAUN | W/R  | FOY  | MUD  | BAS  | BAS  | BAS  | BAS  |
| RM LOSS MBH               | 1.20 | 1.37 | 0.96  | 1.23  | 1.41  | 1.08  | 1.06 | 1.48  | 0.49 | 1.20 | 0.55  | 0.88 | 1.66  | 1.61 | 1.61 | 2.22 | 0.13 | 0.61 | 2.40 | 1.70 | 3.90 | 3.90 | 3.90 | 3.90 |
| CFM PER RUN HEAT          | 31   | 35   | 25    | 31    | 36    | 28    | 27   | 38    | 13   | 31   | 14    | 22   | 42    | 41   | 41   | 57   | 3    | 16   | 61   | 44   | 100  | 100  | 100  | 100  |
| RM GAIN MBH               | 1.71 | 1.06 | 1.59  | 1.49  | 1.64  | 1.64  | 0.37 | 0.27  | 0.11 | 1.71 | 0.34  | 1.06 | 2.01  | 2.33 | 2.33 | 2.18 | 0.65 | 0.36 | 1.92 | 0.84 | 0.38 | 0.38 | 0.38 | 0.38 |
| CFM PER RUN COOLING       | 63   | 39   | 59    | 55    | 61    | 60    | 14   | 10    | 4    | 63   | 13    | 39   | 74    | 86   | 86   | 80   | 24   | 13   | 71   | 31   | 14   | 14   | 14   | 14   |
| ADJUSTED PRESSURE         | 0.17 | 0.17 | 0.17  | 0.17  | 0.17  | 0.17  | 0.17 | 0.17  | 0.17 | 0.17 | 0.17  | 0.17 | 0.17  | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
| ACTUAL DUCT LGH.          | 55   | 54   | 42    | 43    | 38    | 36    | 35   | 38    | 52   | 71   | 41    | 38   | 33    | 41   | 52   | 44   | 45   | 26   | 31   | 26   | 50   | 40   | 23   | 32   |
| EQUIVALENT LENGTH         | 150  | 180  | 170   | 160   | 190   | 190   | 190  | 150   | 170  | 190  | 170   | 210  | 190   | 190  | 200  | 190  | 170  | 160  | 140  | 160  | 190  | 140  | 150  | 160  |
| TOTAL EFFECTIVE LENGTH    | 205  | 234  | 212   | 203   | 228   | 226   | 225  | 188   | 222  | 261  | 211   | 248  | 223   | 231  | 252  | 234  | 215  | 186  | 171  | 186  | 240  | 180  | 173  | 192  |
| ADJUSTED PRESSURE         | 0.08 | 0.07 | 0.08  | 0.08  | 0.08  | 0.08  | 0.08 | 0.09  | 0.08 | 0.07 | 0.08  | 0.07 | 0.08  | 0.07 | 0.06 | 0.07 | 0.08 | 0.09 | 0.1  | 0.09 | 0.07 | 0.09 | 0.09 | 0.08 |
| ROUND DUCT SIZE           | 5    | 5    | 5     | 5     | 5     | 5     | 4    | 4     | 4    | 5    | 4     | 5    | 5     | 6    | 6    | 6    | 4    | 4    | 5    | 4    | 6    | 6    | 6    | 6    |
| HEATING VELOCITY (ft/min) | 228  | 257  | 184   | 228   | 264   | 206   | 310  | 436   | 149  | 228  | 161   | 162  | 308   | 209  | 209  | 291  | 34   | 184  | 448  | 505  | 510  | 510  | 510  | 510  |
| COOLING VELOCITY (ft/min) | 463  | 286  | 433   | 404   | 448   | 441   | 161  | 115   | 46   | 463  | 149   | 286  | 543   | 438  | 438  | 408  | 275  | 149  | 521  | 356  | 71   | 71   | 71   | 71   |
| OUTLET GRILL SIZE         | 3X10 | 3X10 | 3X10  | 3X10  | 3X10  | 3X10  | 3X10 | 3X10  | 3X10 | 3X10 | 3X10  | 3X10 | 3X10  | 4X10 | 4X10 | 4X10 | 3X10 | 3X10 | 3X10 | 3X10 | 4X10 | 4X10 | 4X10 | 4X10 |
| TRUNK                     | A    | B    | B     | C     | E     | E     | E    | E     | B    | B    | E     | B    | C     | A    | A    | A    | B    | E    | D    | C    | A    | B    | C    | D    |

|                           |       |      |
|---------------------------|-------|------|
| RUN #                     | 26    | 27   |
| ROOM NAME                 | BED-3 | FOY  |
| RM LOSS MBH               | 1.41  | 2.40 |
| CFM PER RUN HEAT          | 36    | 61   |
| RM GAIN MBH               | 1.64  | 1.92 |
| CFM PER RUN COOLING       | 61    | 71   |
| ADJUSTED PRESSURE         | 0.17  | 0.17 |
| ACTUAL DUCT LGH.          | 44    | 21   |
| EQUIVALENT LENGTH         | 170   | 160  |
| TOTAL EFFECTIVE LENGTH    | 214   | 181  |
| ADJUSTED PRESSURE         | 0.08  | 0.1  |
| ROUND DUCT SIZE           | 5     | 5    |
| HEATING VELOCITY (ft/min) | 264   | 448  |
| COOLING VELOCITY (ft/min) | 448   | 521  |
| OUTLET GRILL SIZE         | 3X10  | 3X10 |
| TRUNK                     | E     | D    |

 THIS STRUCTURE MUST BE  
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| SUPPLY AIR TRUNK SIZE |              |                  |               |              |      |      |                      |         |              |                  |               |              |       | RETURN AIR TRUNK SIZE |                      |         |              |                  |               |              |       |         |                      |       |      |    |   |   |     |
|-----------------------|--------------|------------------|---------------|--------------|------|------|----------------------|---------|--------------|------------------|---------------|--------------|-------|-----------------------|----------------------|---------|--------------|------------------|---------------|--------------|-------|---------|----------------------|-------|------|----|---|---|-----|
|                       | TRUNK<br>CFM | STATIC<br>PRESS. | ROUND<br>DUCT | RECT<br>DUCT |      |      | VELOCITY<br>(ft/min) |         | TRUNK<br>CFM | STATIC<br>PRESS. | ROUND<br>DUCT | RECT<br>DUCT |       |                       | VELOCITY<br>(ft/min) |         | TRUNK<br>CFM | STATIC<br>PRESS. | ROUND<br>DUCT | RECT<br>DUCT |       |         | VELOCITY<br>(ft/min) |       |      |    |   |   |     |
| TRUNK A               | 270          | 0.06             | 9.2           | 12           | x    | 8    | 405                  | TRUNK G | 0            | 0.00             | 0             | 0            | x     | 8                     | 0                    | TRUNK O | 0            | 0.05             | 0             | 0            | x     | 8       | 0                    |       |      |    |   |   |     |
| TRUNK B               | 499          | 0.06             | 11.6          | 18           | x    | 8    | 499                  | TRUNK H | 0            | 0.00             | 0             | 0            | x     | 8                     | 0                    | TRUNK P | 0            | 0.05             | 0             | 0            | x     | 8       | 0                    |       |      |    |   |   |     |
| TRUNK C               | 716          | 0.06             | 13.3          | 22           | x    | 8    | 586                  | TRUNK I | 0            | 0.00             | 0             | 0            | x     | 8                     | 0                    | TRUNK Q | 0            | 0.05             | 0             | 0            | x     | 8       | 0                    |       |      |    |   |   |     |
| TRUNK D               | 222          | 0.08             | 8             | 8            | x    | 8    | 500                  | TRUNK J | 0            | 0.00             | 0             | 0            | x     | 8                     | 0                    | TRUNK R | 0            | 0.05             | 0             | 0            | x     | 8       | 0                    |       |      |    |   |   |     |
| TRUNK E               | 417          | 0.08             | 10.1          | 12           | x    | 8    | 626                  | TRUNK K | 0            | 0.00             | 0             | 0            | x     | 8                     | 0                    | TRUNK S | 0            | 0.05             | 0             | 0            | x     | 8       | 0                    |       |      |    |   |   |     |
| TRUNK F               | 1133         | 0.06             | 15.8          | 28           | x    | 8    | 728                  | TRUNK L | 0            | 0.00             | 0             | 0            | x     | 8                     | 0                    | TRUNK T | 0            | 0.05             | 0             | 0            | x     | 8       | 0                    |       |      |    |   |   |     |
|                       |              |                  |               |              |      |      |                      |         |              |                  |               |              |       | TRUNK U               | 0                    | 0.05    | 0            | 0                | x             | 8            | 0     | TRUNK V | 0                    | 0.05  | 0    | 0  | x | 8 | 0   |
|                       |              |                  |               |              |      |      |                      |         |              |                  |               |              |       | TRUNK W               | 0                    | 0.05    | 0            | 0                | x             | 8            | 0     | TRUNK X | 1131                 | 0.05  | 16.5 | 32 | x | 8 | 636 |
|                       |              |                  |               |              |      |      |                      |         |              |                  |               |              |       | TRUNK Y               | 560                  | 0.05    | 12.7         | 18               | x             | 8            | 560   | TRUNK Z | 0                    | 0.05  | 0    | 0  | x | 8 | 0   |
|                       |              |                  |               |              |      |      |                      |         |              |                  |               |              |       | DROP                  | 1131                 | 0.05    | 16.5         | 24               | x             | 10           | 679   |         |                      |       |      |    |   |   |     |
| RETURN AIR #          | 1            | 2                | 3             | 4            | 5    | 6    | 7                    | 8       | 9            | 10               | 11            | 12           | 13    | 14                    | 15                   | 16      | 17           | 18               | 19            | 20           | 21    | 22      | 23                   | 24    |      |    |   |   |     |
| AIR VOLUME            | 115          | 155              | 95            | 125          | 135  | 155  | 155                  | 0       | 0            | 0                | 0             | 0            | 0     | 0                     | 0                    | 0       | 0            | 0                | 0             | 0            | 0     | 0       | 0                    | 0     |      |    |   |   |     |
| PLENUM PRESSURE       | 0.15         | 0.15             | 0.15          | 0.15         | 0.15 | 0.15 | 0.15                 | 0.15    | 0.15         | 0.15             | 0.15          | 0.15         | 0.15  | 0.15                  | 0.15                 | 0.15    | 0.15         | 0.15             | 0.15          | 0.15         | 0.15  | 0.15    | 0.15                 | 0.15  |      |    |   |   |     |
| ACTUAL DUCT LGH.      | 76           | 45               | 44            | 52           | 40   | 43   | 18                   | 1       | 1            | 1                | 1             | 1            | 1     | 1                     | 1                    | 1       | 1            | 1                | 1             | 1            | 1     | 1       | 1                    | 1     |      |    |   |   |     |
| EQUIVALENT LENGTH     | 245          | 185              | 135           | 175          | 250  | 225  | 180                  | 0       | 0            | 0                | 0             | 0            | 0     | 0                     | 0                    | 0       | 0            | 0                | 0             | 0            | 0     | 0       | 0                    | 0     |      |    |   |   |     |
| TOTAL EFFECTIVE LH    | 321          | 230              | 179           | 227          | 290  | 268  | 198                  | 1       | 1            | 1                | 1             | 1            | 1     | 1                     | 1                    | 1       | 1            | 1                | 1             | 1            | 1     | 1       | 1                    | 1     |      |    |   |   |     |
| ADJUSTED PRESSURE     | 0.05         | 0.06             | 0.08          | 0.07         | 0.05 | 0.06 | 0.07                 | 14.80   | 14.80        | 14.80            | 14.80         | 14.80        | 14.80 | 14.80                 | 14.80                | 14.80   | 14.80        | 14.80            | 14.80         | 14.80        | 14.80 | 14.80   | 14.80                | 14.80 |      |    |   |   |     |
| ROUND DUCT SIZE       | 7            | 7.5              | 5.8           | 6.7          | 7.5  | 7.5  | 7.2                  | 0       | 0            | 0                | 0             | 0            | 0     | 0                     | 0                    | 0       | 0            | 0                | 0             | 0            | 0     | 0       | 0                    | 0     |      |    |   |   |     |
| INLET GRILL SIZE      | 8            | 8                | 8             | 8            | 8    | 8    | 8                    | 0       | 0            | 0                | 0             | 0            | 0     | 0                     | 0                    | 0       | 0            | 0                | 0             | 0            | 0     | 0       | 0                    | 0     |      |    |   |   |     |
|                       | X            | X                | X             | X            | X    | X    | X                    | X       | X            | X                | X             | X            | X     | X                     | X                    | X       | X            | X                | X             | X            | X     | X       | X                    | X     |      |    |   |   |     |
| INLET GRILL SIZE      | 14           | 14               | 14            | 14           | 14   | 14   | 14                   | 0       | 0            | 0                | 0             | 0            | 0     | 0                     | 0                    | 0       | 0            | 0                | 0             | 0            | 0     | 0       | 0                    | 0     |      |    |   |   |     |

TYPE: PRESTON 3  
SITE NAME: LAMBERT'S LANE PH.2

LO # 83491  
LOT 17

**RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY**

| COMBUSTION APPLIANCES |                                                                               | 9.32.3.1(1) |
|-----------------------|-------------------------------------------------------------------------------|-------------|
| a)                    | <input checked="" type="checkbox"/> Direct vent (sealed combustion) only      |             |
| b)                    | <input type="checkbox"/> Positive venting induced draft (except fireplaces)   |             |
| c)                    | <input type="checkbox"/> Natural draft, B-vent or induced draft gas fireplace |             |
| d)                    | <input type="checkbox"/> Solid Fuel (including fireplaces)                    |             |
| e)                    | <input type="checkbox"/> No Combustion Appliances                             |             |

| HEATING SYSTEM                                 |                                         |
|------------------------------------------------|-----------------------------------------|
| <input checked="" type="checkbox"/> Forced Air | <input type="checkbox"/> Non Forced Air |
| <input type="checkbox"/> Electric Space Heat   |                                         |

| HOUSE TYPE                            |                                                      | 9.32.1(2) |
|---------------------------------------|------------------------------------------------------|-----------|
| <input checked="" type="checkbox"/> I | Type a) or b) appliance only, no solid fuel          |           |
| <input type="checkbox"/> II           | Type I except with solid fuel (including fireplaces) |           |
| <input type="checkbox"/> III          | Any Type c) appliance                                |           |
| <input type="checkbox"/> IV           | Type I, or II with electric space heat               |           |
| <input type="checkbox"/>              | Other: Type I, II or IV no forced air                |           |

| SYSTEM DESIGN OPTIONS                 |                                               | O.N.H.W.P. |
|---------------------------------------|-----------------------------------------------|------------|
| <input type="checkbox"/> 1            | Exhaust only/Forced Air System                |            |
| <input type="checkbox"/> 2            | HRV with Ducting/Forced Air System            |            |
| <input checked="" type="checkbox"/> 3 | HRV Simplified/connected to forced air system |            |
| <input type="checkbox"/> 4            | HRV with Ducting/non forced air system        |            |
| <input type="checkbox"/>              | Part 6 Design                                 |            |

| TOTAL VENTILATION CAPACITY |              | 9.32.3.3(1) |
|----------------------------|--------------|-------------|
| Basement + Master Bedroom  | 2 @ 21.2 cfm | 42.4 cfm    |
| Other Bedrooms             | 4 @ 10.6 cfm | 42.4 cfm    |
| Kitchen & Bathrooms        | 5 @ 10.6 cfm | 53 cfm      |
| Other Rooms                | 7 @ 10.6 cfm | 74.2 cfm    |
| Table 9.32.3.A.            | TOTAL        | 212.0 cfm   |

| PRINCIPAL VENTILATION CAPACITY REQUIRED |      | 9.32.3.4.(1) |
|-----------------------------------------|------|--------------|
| 1 Bedroom                               | 31.8 | cfm          |
| 2 Bedroom                               | 47.7 | cfm          |
| 3 Bedroom                               | 63.6 | cfm          |
| 4 Bedroom                               | 79.5 | cfm          |
| 5 Bedroom                               | 95.4 | cfm          |
| TOTAL                                   | 95.4 | cfm          |

| SUPPLEMENTAL VENTILATION CAPACITY |       | 9.32.3.5. |
|-----------------------------------|-------|-----------|
| Total Ventilation Capacity        | 212   | cfm       |
| Less Principal Ventill. Capacity  | 95.4  | cfm       |
| Required Supplemental Capacity    | 116.6 | cfm       |

| PRINCIPAL EXHAUST FAN CAPACITY                   |           |
|--------------------------------------------------|-----------|
| Model:                                           | VANEE 65H |
| Location:                                        | BSMT      |
| 95.4 cfm                                         | 3.0 sonos |
| <input checked="" type="checkbox"/> HVI Approved |           |

| PRINCIPAL EXHAUST HEAT LOSS CALCULATION |        |        |        |
|-----------------------------------------|--------|--------|--------|
| CFM                                     | AT °F  | FACTOR | % LOSS |
| 95.4 CFM                                | X 74 F | X 1.08 | X 0.25 |

| SUPPLEMENTAL FANS |             | PANASONIC |                                     |
|-------------------|-------------|-----------|-------------------------------------|
| Location          | Model       | cfm       | HVI                                 |
| ENS               | FV-05-11VK1 | 50        | <input checked="" type="checkbox"/> |
| BATH              | FV-05-11VK1 | 50        | <input checked="" type="checkbox"/> |
| ENS-2             | FV-05-11VK1 | 50        | <input checked="" type="checkbox"/> |
| W/R               | FV-05-11VK1 | 50        | <input checked="" type="checkbox"/> |

| HEAT RECOVERY VENTILATOR |                       | 9.32.3.11.                                       |
|--------------------------|-----------------------|--------------------------------------------------|
| Model:                   | VANEE 65H             |                                                  |
| 155                      | cfm high              | 64 cfm low                                       |
| 75                       | % Sensible Efficiency | <input checked="" type="checkbox"/> HVI Approved |
| @ 32 deg F (0 deg C)     |                       |                                                  |

| LOCATION OF INSTALLATION |                   |
|--------------------------|-------------------|
| Lot:                     | Concession        |
| Township:                | Plan:             |
| Address:                 |                   |
| Roll #                   | Building Permit # |

| BUILDER: GREENPARK HOMES |        |
|--------------------------|--------|
| Name:                    |        |
| Address:                 |        |
| City:                    |        |
| Telephone #:             | Fax #: |

| INSTALLING CONTRACTOR |        |
|-----------------------|--------|
| Name:                 |        |
| Address:              |        |
| City:                 |        |
| Telephone #:          | Fax #: |

| DESIGNER CERTIFICATION                                                                                        |                         |
|---------------------------------------------------------------------------------------------------------------|-------------------------|
| I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code. |                         |
| Name:                                                                                                         | HVAC Designs Ltd.       |
| Signature:                                                                                                    | <i>Michael O'Rourke</i> |
| HRAI #                                                                                                        | 001820                  |
| Date:                                                                                                         | August-19               |

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.  
INDIVIDUAL BCIN: 19869 *Michael O'Rourke* MICHAEL O'ROURKE

THIS STRUCTURE MUST BE  
CONSTRUCTED TO MEET OR  
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THE ONTARIO BUILDING CODE

**CSA F280-12 Residential Heat Loss and Heat Gain Calculations**
**Formula Sheet (For Air Leakage / Ventilation Calculation)**

LO#: 83491

Model: PRESTON 3

Builder: GREENPARK HOMES

Date: 8/16/2019

**Volume Calculation**
**House Volume**

| Level  | Floor Area (ft²) | Floor Height (ft) | Volume (ft³) |
|--------|------------------|-------------------|--------------|
| Bsmt   | 1314             | 9                 | 11169        |
| First  | 1314             | 10                | 13140        |
| Second | 1606             | 9                 | 14587.298    |
| Third  | 0                | 9                 | 0            |
| Fourth | 0                | 9                 | 0            |
| Total: |                  |                   | 38,896.3 ft³ |
| Total: |                  |                   | 1101.4 m³    |

**Air Change & Delta T Data**

|                                |       |
|--------------------------------|-------|
| WINTER NATURAL AIR CHANGE RATE | 0.249 |
| SUMMER NATURAL AIR CHANGE RATE | 0.081 |

| Design Temperature Difference |        |         |       |       |
|-------------------------------|--------|---------|-------|-------|
|                               | Tin °C | Tout °C | ΔT °C | ΔT °F |
| Winter DTDh                   | 22     | -19     | 41    | 74    |
| Summer DTDc                   | 24     | 30      | 6     | 11    |

**5.2.3.1 Heat Loss due to Air Leakage**

$$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$$

0.249 x 305.95 x 41°C x 1.2 = 3763 W

= 12839 Btu/h

**6.2.6 Sensible Gain due to Air Leakage**

$$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$$

0.081 x 305.95 x 6°C x 1.2 = 181 W

= 619 Btu/h

**5.2.3.2 Heat Loss due to Mechanical Ventilation**

$$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

95 CFM x 74°F x 1.08 x 0.25 = 1911 Btu/h

**6.2.7 Sensible heat Gain due to Ventilation**

$$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

95 CFM x 11°F x 1.08 x 0.25 = 283 Btu/h

**5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)**

$$HL_{airr} = \text{Level Factor} \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$$

| Level | Level Factor (LF) | HLairbv Air Leakage + Ventilation Heat Loss (Btu/h) | Level Conductive Heat Loss: (HL <sub>clevel</sub> ) | Air Leakage Heat Loss Multiplier (LF x HLairbv / HL <sub>clevel</sub> ) |
|-------|-------------------|-----------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------|
| 1     | 0.5               | 12,839                                              | 9,174                                               | 0.700                                                                   |
| 2     | 0.3               |                                                     | 11,218                                              | 0.343                                                                   |
| 3     | 0.2               |                                                     | 10,507                                              | 0.244                                                                   |
| 4     | 0                 |                                                     | 0                                                   | 0.000                                                                   |
| 5     | 0                 |                                                     | 0                                                   | 0.000                                                                   |

\*HLairbv = Air leakage heat loss + ventilation heat loss

\*For a balanced or supply only ventilation system HLairve = 0

THIS STRUCTURE MUST BE  
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### HEAT LOSS AND GAIN SUMMARY SHEET

|                         |                  |                                  |
|-------------------------|------------------|----------------------------------|
| <b>MODEL:</b> PRESTON 3 | <b>LOT 17</b>    | <b>BUILDER:</b> GREENPARK HOMES  |
| <b>SFQT:</b> 2920       | <b>LO#</b> 83491 | <b>SITE:</b> LAMBERT'S LANE PH.2 |

#### DESIGN ASSUMPTIONS

|                      |           |                                |           |
|----------------------|-----------|--------------------------------|-----------|
| <b>HEATING</b>       | <b>°F</b> | <b>COOLING</b>                 | <b>°F</b> |
| OUTDOOR DESIGN TEMP. | -2        | OUTDOOR DESIGN TEMP.           | 86        |
| INDOOR DESIGN TEMP.  | 72        | INDOOR DESIGN TEMP. (MAX 75°F) | 75        |

#### BUILDING DATA

|                                            |                       |                                  |          |
|--------------------------------------------|-----------------------|----------------------------------|----------|
| <b>ATTACHMENT:</b>                         | DETACHED              | <b># OF STORIES (+BASEMENT):</b> | 3        |
| <b>FRONT FACES:</b>                        | EAST                  | <b>ASSUMED (Y/N):</b>            | Y        |
| <b>AIR CHANGES PER HOUR:</b>               | 2.50                  | <b>ASSUMED (Y/N):</b>            | Y        |
| <b>AIR TIGHTNESS CATEGORY:</b>             | TIGHT                 | <b>ASSUMED (Y/N):</b>            | Y        |
| <b>WIND EXPOSURE:</b>                      | SHELTERED             | <b>ASSUMED (Y/N):</b>            | Y        |
| <b>HOUSE VOLUME (ft³):</b>                 | 38896.3               | <b>ASSUMED (Y/N):</b>            | Y        |
| <b>INTERNAL SHADING:</b>                   | BLINDS/CURTAINS       | <b>ASSUMED OCCUPANTS:</b>        | 6        |
| <b>INTERIOR LIGHTING LOAD (Btu/h/ft²):</b> | 1.27                  | <b>DC BRUSHLESS MOTOR (Y/N):</b> | Y        |
| <b>FOUNDATION CONFIGURATION</b>            | BCIN_1                | <b>DEPTH BELOW GRADE:</b>        | 5.5 ft   |
| <b>LENGTH:</b> 60.0 ft                     | <b>WIDTH:</b> 30.0 ft | <b>EXPOSED PERIMETER:</b>        | 180.0 ft |

#### 2012 OBC - COMPLIANCE PACKAGE

##### Component

##### Compliance Package ENERGYSTAR

##### Nominal Min. Eff.

|                                                                            |        |       |
|----------------------------------------------------------------------------|--------|-------|
| Ceiling with Attic Space Minimum RSI (R)-Value                             | 60     | 59.20 |
| Ceiling Without Attic Space Minimum RSI (R)-Value                          | 31     | 27.70 |
| Exposed Floor Minimum RSI (R)-Value                                        | 31     | 29.80 |
| Walls Above Grade Minimum RSI (R)-Value                                    | R22+R5 | 21.10 |
| Basement Walls Minimum RSI (R)-Value                                       | 20     | 21.12 |
| Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value | -      | -     |
| Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value        | 10     | 10    |
| Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value             | 10     | 11.13 |
| Windows and Sliding Glass Doors Maximum U-Value                            | ZONE 2 | -     |
| Skylights Maximum U-Value                                                  | ZONE 2 | -     |
| Space Heating Equipment Minimum AFUE                                       | 0.96   | -     |
| HRV Minimum Efficiency                                                     | 75%    | -     |
| Domestic Hot Water Heater Minimum EF                                       | 0.9    | -     |

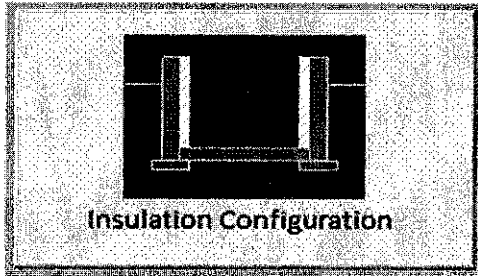
INDIVIDUAL BCIN: 19669  
MICHAEL O'ROURKE

*Michael O'Rourke*

CONSTRUCTED TO EXCEED THE REQUIREMENTS OF THE ONTARIO BUILDING CODE

## Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

| Weather Station Description    |                                           |                                                                                                                 |
|--------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Province:                      | Ontario                                   |                                                                                                                 |
| Region:                        | Brampton                                  |                                                                                                                 |
| Site Description               |                                           |                                                                                                                 |
| Soil Conductivity:             | Normal conductivity: dry sand, loam, clay |                                                                                                                 |
| Water Table:                   | Normal (7-10 m, 23-33 ft)                 |                                                                                                                 |
| Foundation Dimensions          |                                           |                                                                                                                 |
| Floor Length (m):              | 18.3                                      | <br>Insulation Configuration |
| Floor Width (m):               | 9.1                                       |                                                                                                                 |
| Exposed Perimeter (m):         | 0.0                                       |                                                                                                                 |
| Wall Height (m):               | 2.6                                       |                                                                                                                 |
| Depth Below Grade (m):         | 1.68                                      |                                                                                                                 |
| Window Area (m <sup>2</sup> ): | 1.9                                       |                                                                                                                 |
| Door Area (m <sup>2</sup> ):   | 1.9                                       |                                                                                                                 |
| Radiant Slab                   |                                           |                                                                                                                 |
| Heated Fraction of the Slab:   | 0                                         |                                                                                                                 |
| Fluid Temperature (°C):        | 33                                        |                                                                                                                 |
| Design Months                  |                                           |                                                                                                                 |
| Heating Month                  | 1                                         |                                                                                                                 |
| Foundation Loads               |                                           |                                                                                                                 |
| Heating Load (Watts):          | 1833                                      |                                                                                                                 |

THIS STRUCTURE MUST BE  
CONSTRUCTED TO MEET OR  
EXCEED THE PROVISIONS OF  
THE ONTARIO BUILDING CODETYPE: PRESTON 3  
LO# 83491

LOT 17

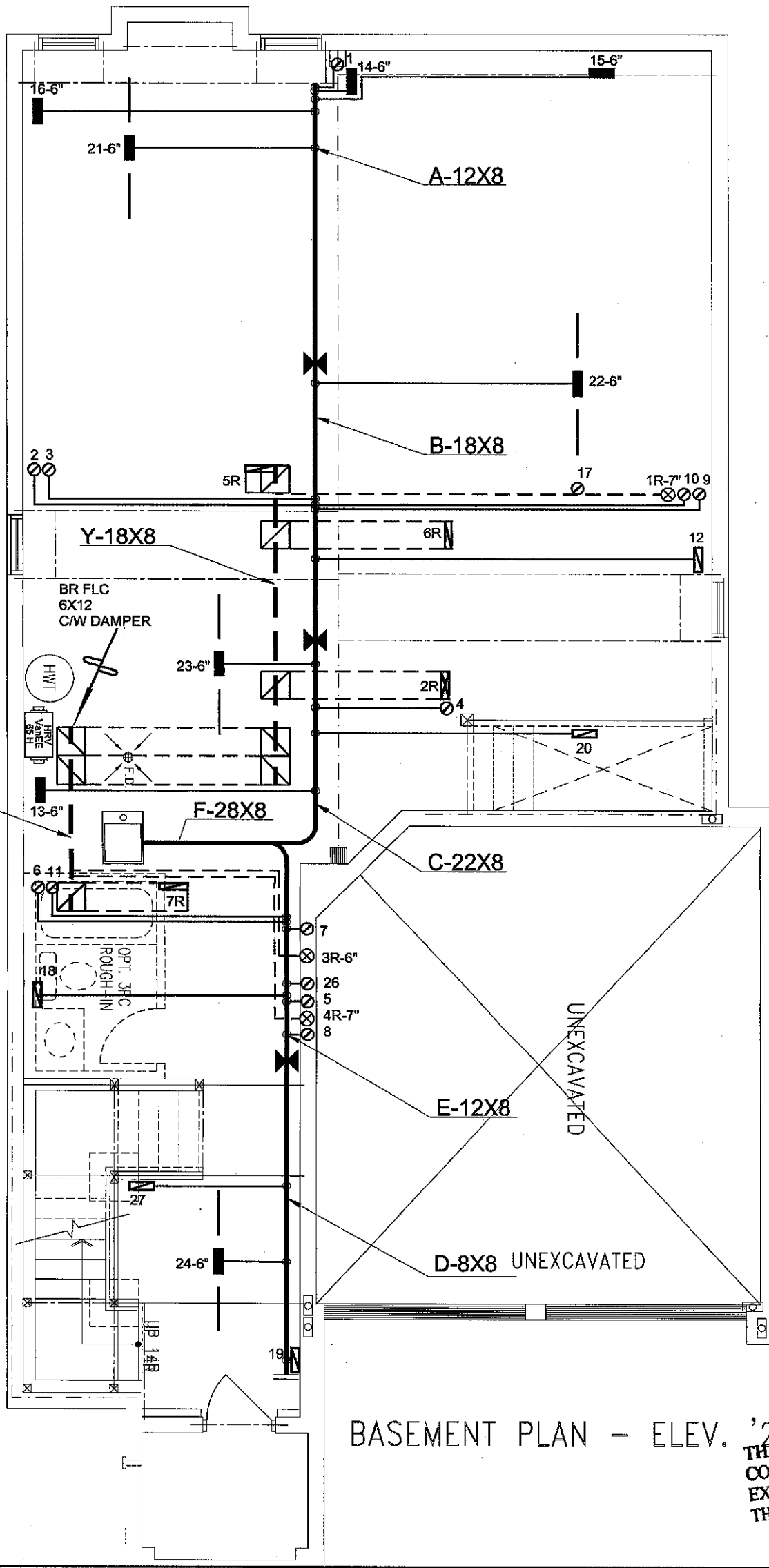
## Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

| Weather Station Description       |                                |                                       |    |    |
|-----------------------------------|--------------------------------|---------------------------------------|----|----|
| Province:                         | Ontario                        |                                       |    |    |
| Region:                           | Brampton                       |                                       |    |    |
| 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):       | 7.65                           |                                       |    |    |
| Building Configuration            |                                |                                       |    |    |
| Type:                             | Detached                       |                                       |    |    |
| Number of Stories:                | Two                            |                                       |    |    |
| Foundation:                       | Full                           |                                       |    |    |
| House Volume (m <sup>3</sup> ):   | 1101.4                         |                                       |    |    |
| Air Leakage/Ventilation           |                                |                                       |    |    |
| Air Tightness Type:               | Energy Star Detached (2.5 ACH) |                                       |    |    |
| Custom BDT Data:                  | ELA @ 10 Pa.<br>2.50           | 1028.2 cm <sup>2</sup><br>ACH @ 50 Pa |    |    |
| Mechanical Ventilation (L/s):     | Total Supply<br>45.0           | Total Exhaust<br>45.0                 |    |    |
| Flue Size                         |                                |                                       |    |    |
| Flue #:                           | #1                             | #2                                    | #3 | #4 |
| Diameter (mm):                    | 0                              | 0                                     | 0  | 0  |
| Natural Infiltration Rates        |                                |                                       |    |    |
| Heating Air Leakage Rate (ACH/H): |                                | 0.249                                 |    |    |
| Cooling Air Leakage Rate (ACH/H): |                                | 0.081                                 |    |    |

THIS STRUCTURE MUST BE  
CONSTRUCTED TO MEET OR  
EXCEED THE PROVISIONS OF  
THE ONTARIO BUILDING CODETYPE: PRESTON 3  
LO# 83491

LOT 17



APPROVED  
For construction as per the  
Ontario Building Code  
Town of Caledon Building Department  
Initial: SA  
Date: 30/04/2019  
File #: BA11910563

MINIMUM CEILING HEIGHT SHALL BE 2100 MM  
OVER AT LEAST 75% OF BASEMENT  
AREA EXCEPT THAT UNDER BEAMS AND  
DUCTS THE CLEARANCE IS PERMITTED TO  
BE REDUCED 1950 MM

RECEIVED  
AUG 23 2019  
TOWN OF CALEDON  
BUILDING SECTION  
FILED

LOT 17  
CSA-F280-12  
ENERGY STAR

BASEMENT PLAN - ELEV. '2'

THIS STRUCTURE MUST BE  
CONSTRUCTED TO MEET OR  
EXCEED THE PROVISIONS OF  
THE ONTARIO BUILDING CODE

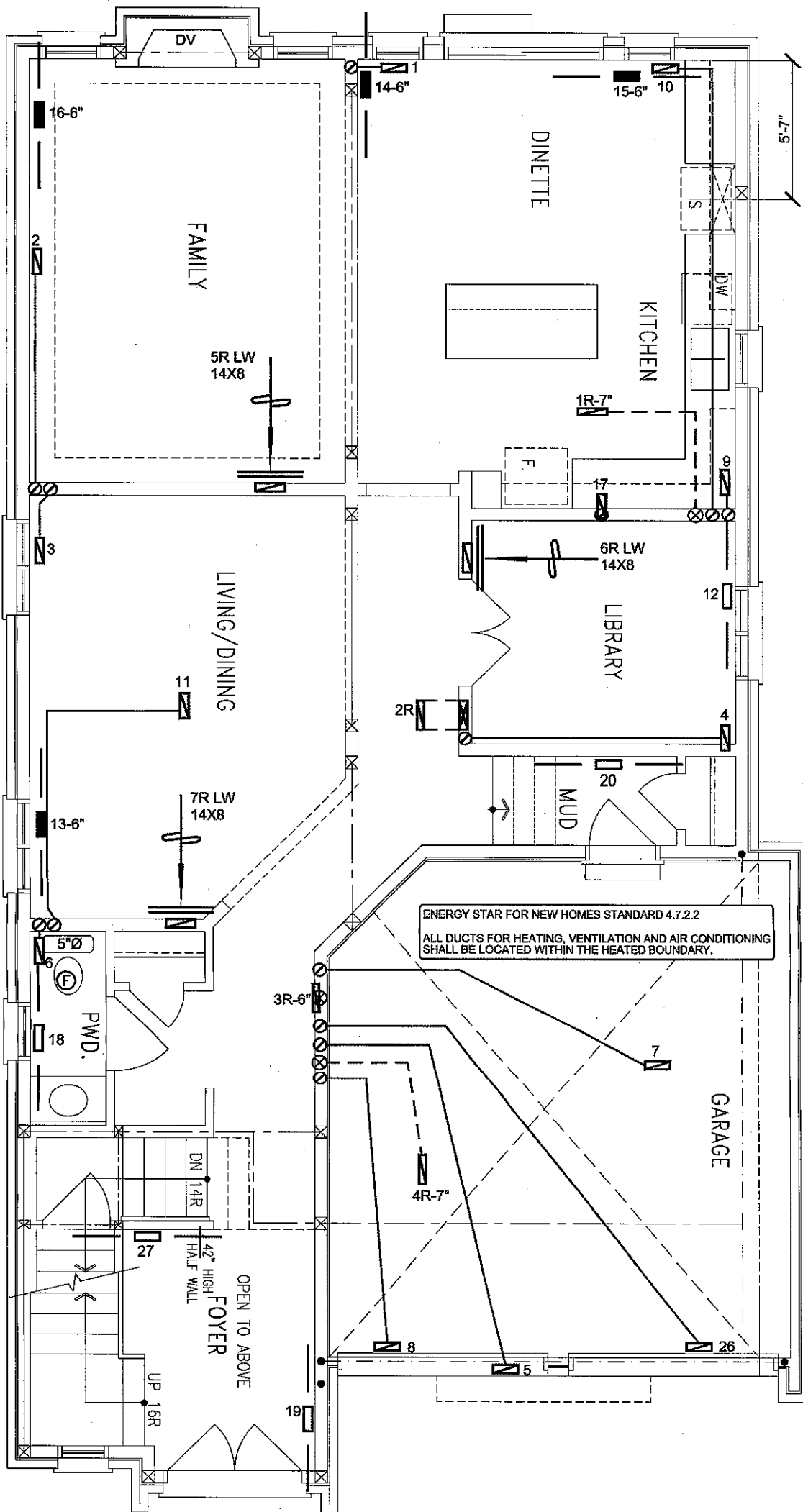
1. MICHAEL O'Rourke HAS REVIEWED  
AND TAKE RESPONSIBILITY FOR THE  
DESIGN WORK AND AM QUALIFIED  
UNDER DIVISION C, 1.2.5 OF THE  
BUILDING CODE.  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

| HVAC LEGEND |                           |        |                                 |        |                              |        |                            | 3.        |             |
|-------------|---------------------------|--------|---------------------------------|--------|------------------------------|--------|----------------------------|-----------|-------------|
| SYMBOL      | DESCRIPTION               | SYMBOL | DESCRIPTION                     | SYMBOL | DESCRIPTION                  | SYMBOL | DESCRIPTION                | 2.        |             |
|             | SUPPLY AIR GRILLE         |        | 6" SUPPLY AIR BOOT ABOVE        |        | 14"x8" RETURN AIR GRILLE     |        | RETURN AIR STACK ABOVE     | 1.        |             |
|             | SUPPLY AIR GRILLE 6" BOOT |        | SUPPLY AIR STACK FROM 2nd FLOOR |        | 30"x8" RETURN AIR GRILLE     |        | RETURN AIR STACK 2nd FLOOR | No.       | Description |
|             | SUPPLY AIR BOOT ABOVE     |        | 8" SUPPLY AIR STACK 2nd FLOOR   |        | FRA- FLOOR RETURN AIR GRILLE |        | REDUCER                    | Date      |             |
|             |                           |        |                                 |        |                              |        |                            | REVISIONS |             |

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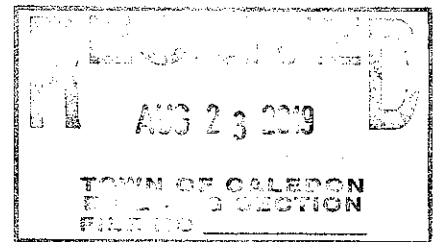
|                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |                           |                        |                       |                     |                                   |                                                                                                                                                              |           |           |          |                               |   |                        |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------|------------------------|-----------------------|---------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|----------|-------------------------------|---|------------------------|--|
| Client<br><br><b>GREENPARK HOMES</b><br><br>Project Name<br><b>LAMBERTS LANE HOME CORP PH 2<br/>CALEDON, ONTARIO</b><br><br><br><b>LOT 17<br/>PRESTON 3</b><br><br><b>2920 sqft</b> | <div><b>HVAC</b>DESIGNS<b>LTD.</b></div> <div>375 Finley Ave. Suite 202 - Ajax, Ontario<br/>L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375<br/>Email: info@hvacdesigns.ca<br/>Web: www.hvacdesigns.ca<br/>Specializing in Residential Mechanical Design Services</div> <div>Installation to comply with the latest Ontario Building Code. All supply<br/>branch outlets shall be equipped with a manual balancing damper.<br/>Ductwork which passes through the garage or unheated spaces shall be<br/>adequately insulated and be gas-proofed.</div> | HEAT LOSS 46137 BTU/H<br>UNIT DATA |                           | # OF RUNS S/A R/A FANS |                       |                     |                                   | Sheet Title                                                                                                                                                  |           |           |          |                               |   |                        |  |
|                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MAKE<br>GOODMAN                    | MODEL<br>GMEC960603BNA-60 | INPUT<br>60 MBTU/H     | OUTPUT<br>57.6 MBTU/H | COOLING<br>2.5 TONS | FAN SPEED<br>1131 cfm @ 0.8" w.c. | 3RD FLOOR                                                                                                                                                    | 2ND FLOOR | 1ST FLOOR | BASEMENT | BASEMENT<br>HEATING<br>LAYOUT |   |                        |  |
|                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |                           |                        |                       |                     |                                   | 13                                                                                                                                                           | 4         | 4         | 9        | 3                             | 2 | Date<br>AUG/2019       |  |
|                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |                           |                        |                       |                     |                                   | 4                                                                                                                                                            | 1         | 0         | 4        | 1                             | 0 | Scale<br>3/16" = 1'-0" |  |
|                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |                           |                        |                       |                     |                                   | ALL S/A DIFFUSERS 4 "x10"<br>UNLESS NOTED OTHERWISE<br>ON LAYOUT. ALL S/A RUNS 5"Ø<br>UNLESS NOTED OTHERWISE<br>ON LAYOUT. UNDERCUT<br>DOORS 1" min. FOR R/A |           |           |          |                               |   | BCIN# 19669            |  |
|                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |                           |                        |                       |                     |                                   |                                                                                                                                                              |           |           |          |                               |   | LO# 83491              |  |
|                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |                           |                        |                       |                     |                                   |                                                                                                                                                              |           |           |          |                               |   |                        |  |

GROUND FLOOR PLAN - ELEV. '1'



GROUND FLOOR PLAN - ELEV. '2'

I MICHAEL O'Rourke HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.  
*Michael O'Rourke*  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

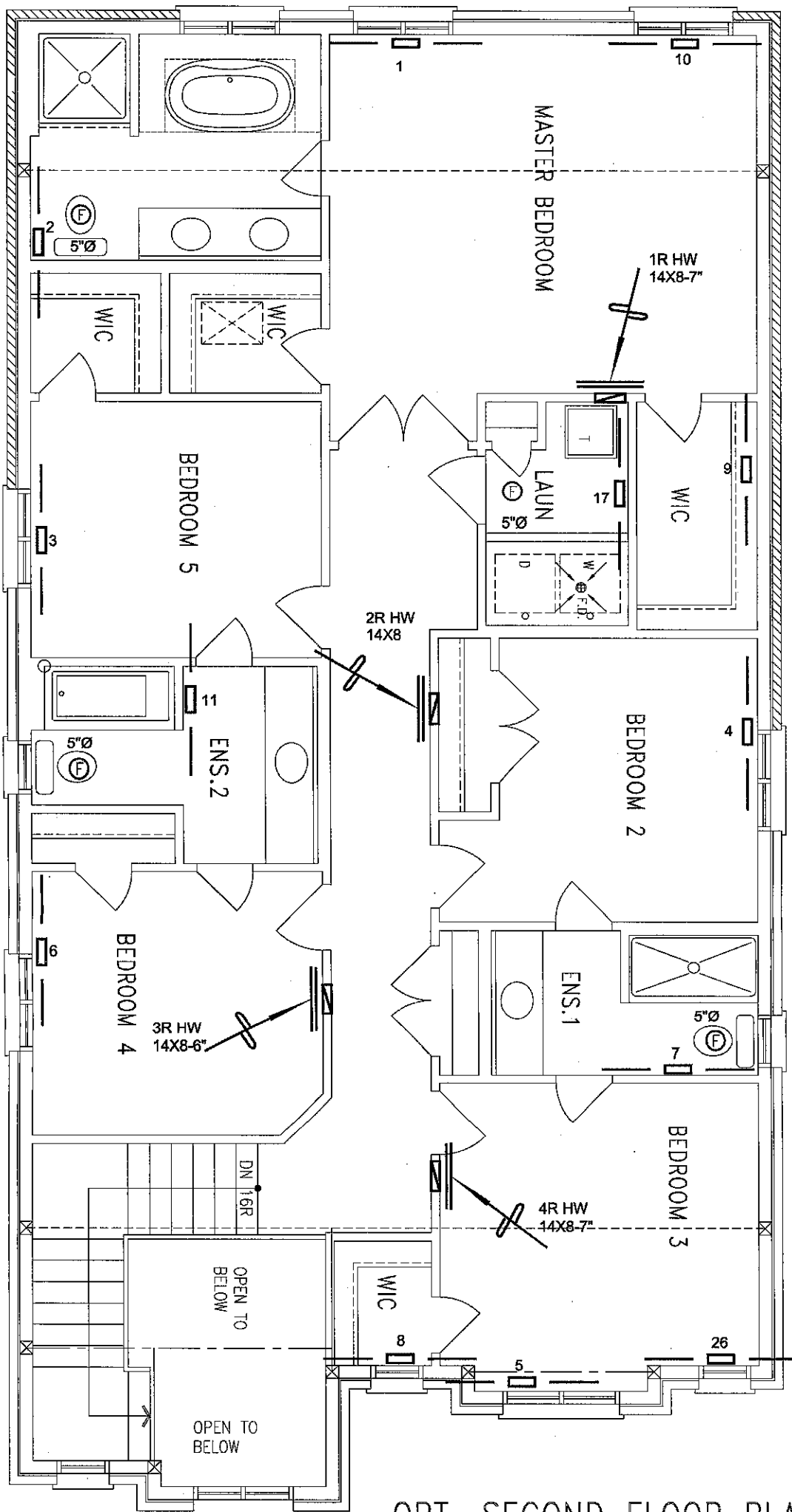


LOT 17  
CSA-F280-12  
ENERGY STAR

| HVAC LEGEND |                           |          |                                 |          |                              |          |                            | REVISIONS |             |
|-------------|---------------------------|----------|---------------------------------|----------|------------------------------|----------|----------------------------|-----------|-------------|
| SYMBOL      | DESCRIPTION               | SYMBOL   | DESCRIPTION                     | SYMBOL   | DESCRIPTION                  | SYMBOL   | DESCRIPTION                | No.       | Description |
| [Symbol]    | SUPPLY AIR GRILLE         | [Symbol] | 6" SUPPLY AIR BOOT ABOVE        | [Symbol] | 14"x8" RETURN AIR GRILLE     | [Symbol] | RETURN AIR STACK ABOVE     | 3.        |             |
| [Symbol]    | SUPPLY AIR GRILLE 6" BOOT | [Symbol] | SUPPLY AIR STACK FROM 2nd FLOOR | [Symbol] | 30"x8" RETURN AIR GRILLE     | [Symbol] | RETURN AIR STACK 2nd FLOOR | 2.        |             |
| [Symbol]    | SUPPLY AIR BOOT ABOVE     | [Symbol] | 6" SUPPLY AIR STACK 2nd FLOOR   | [Symbol] | FRA- FLOOR RETURN AIR GRILLE | [Symbol] | REDUCER                    | 1.        |             |
|             |                           |          |                                 |          |                              |          |                            | No.       | Description |
|             |                           |          |                                 |          |                              |          |                            | Date      |             |

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|                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                   |                                                  |                               |  |
|----------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------|--|
| Client<br><b>GREENPARK HOMES</b>                                     |  | <b>HVAC DESIGNS LTD.</b><br>375 Finley Ave. Suite 202 - Ajax, Ontario<br>L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375<br>Email: info@hvacdsgns.ca<br>Web: www.hvacdesigns.ca<br>Specializing in Residential Mechanical Design Services<br>Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed. | THIS STRUCTURE MUST BE CONSTRUCTED TO MEET OR EXCEED THE PROVISIONS OF THE ONTARIO BUILDING CODE. | Sheet Title<br><b>FIRST FLOOR HEATING LAYOUT</b> |                               |  |
| Project Name<br><b>LAMBERTS LANE HOME CORP PH 2 CALEDON, ONTARIO</b> |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                   | Date<br><b>AUG/2019</b>                          | Scale<br><b>3/16" = 1'-0"</b> |  |
| LOT 17<br>PRESTON 3      2920 sqft                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                   | BCIN# 19669<br>LO# 83491                         |                               |  |



OPT. SECOND FLOOR PLAN (5 BED)  
- ELEV. '2'

LOT 17

CSA-F280-12

ENERGY STAR

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.  
  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

| HVAC LEGEND |                           |        |                                 |        |                              |        |                            | 3.        |             |      |
|-------------|---------------------------|--------|---------------------------------|--------|------------------------------|--------|----------------------------|-----------|-------------|------|
| SYMBOL      | DESCRIPTION               | SYMBOL | DESCRIPTION                     | SYMBOL | DESCRIPTION                  | SYMBOL | DESCRIPTION                | 2.        |             |      |
|             | SUPPLY AIR GRILLE         |        | 6" SUPPLY AIR BOOT ABOVE        |        | 14"x8" RETURN AIR GRILLE     |        | RETURN AIR STACK ABOVE     | 1.        |             |      |
|             | SUPPLY AIR GRILLE 8" BOOT |        | SUPPLY AIR STACK FROM 2nd FLOOR |        | 30"x8" RETURN AIR GRILLE     |        | RETURN AIR STACK 2nd FLOOR | No.       | Description | Date |
|             | SUPPLY AIR BOOT ABOVE     |        | 6" SUPPLY AIR STACK 2nd FLOOR   |        | FRA- FLOOR RETURN AIR GRILLE |        | REDUCER                    | REVISIONS |             |      |

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|                                                                          |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                           |                                                           |                               |
|--------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------|
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| Project Name<br><b>LAMBERTS LANE HOME CORP PH 2<br/>CALEDON, ONTARIO</b> | <b>LOT 17<br/>PRESTON 3</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                           | Date<br><b>AUG/2019</b>                                   | Scale<br><b>3/16" = 1'-0"</b> |
| <b>2920 sqft</b>                                                         |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                           | BCIN# 19669                                               | LO# <b>83491</b>              |