

| | RINAR | HALL I | HOMES | s | | | | | | | | | | | | | | DATE: | Feb-19 | | | | WINTE | R NATURAL AIR C | HANGE RATE 0.227 | HEAT LOSS A | \T°F 81 | , | SA-F280-12 |
|--|-----------------|--------------|-------|------|------|------|-------------|---------|----------|-----------|-----------|------|-------|---------|----------|----------|----------|---------|----------|---------|----------|-----------|-------|-----------------|--|------------------------|---------|------|--------------------|
| BUILDER: GR | REENP | ARK H | OMES | ; | | | | TYPE: | : BREN | TWOOL | 0 2 | | | GFA: | 2793 | | | LO# | | | | | | | ANGERATE 0.063 | HEAT GAIN A | | | ERGYSTAR |
| ROOM USE | | | | MBR | | | ENS | | T | WIC | | | BED-2 | | | BED-3 | | | BED-4 | | T | BATH | | ENS-3 | 1 | ENS-4 | 41 11 | Liv | ENGISTAN |
| EXP. WALL | | | | 33 | | | 23 | | 1 | 7 | | 1 | 29 | | | 30 | | 1 | 15 | | | 11 | | 5 | | 9 | | | |
| CLG. HT. | | | | 9 | | | 9 | | 1 | 9 | | | 9 | | | 9 | | | 9 | | | 9 | | - | | · · | | | |
| | ACTOR | s | | ٠ | | | • | | 1. | • | | | 9 | | | , | | 1 | 9 | | | Э | | 9 | i | 9 | | | |
| | oss (| | | 297 | | | 207 | | 1 | 63 | | | 261 | | | 270 | | | 405 | | | | | | | | | | |
| GLAZING | .000 | JAII. | | | GAIN | | LOSS | GAIN | 1 | | GAIN | | | C 4 (5) | | 270 | | 1 | 135 | | | 99 | | 45 | | 81 | | | |
| I | 20.4 | | | | | | | | ١ | | | | | GAIN | | | GAIN | ı | | GAIN | | | GAIN | LOSS GAIN | | LOSS GAIN | | | |
| 1 | | 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 | - | | | | |
| | | 40.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 733 | 1466 | 42 | 855 | 1710 | 0 | 0 | 0 | 0 | 0 | 0 | 14 285 570 | | 0 0 0 | | | |
| 1 | | 24.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ~ | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 305 | 361 | 0 | 0 | 0 | 0 0 0 | I | 7 142 168 | | | |
| i i | | 40.7 | 30 | 611 | 1222 | 22 | 448 | 896 | 0 | 0 | 0 | 0 | 0 | . 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 0 | | 0 0 0 | | | |
| 1 | | 99.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | . 0 | 0 0 0 | l | | | | |
| 1 | | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 0 | | 0 0 0 | | | |
| 1 | | - 1 | 267 | 1030 | 139 | 185 | 714 | 96 | 63 | 243 | 33 | 225 | 868 | 117 | 228 | 880 | 119 | 120 | 463 | 63 | 99 | 382 | 52 | 31 120 16 | | 74 285 39 | | | |
| | | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 0 | | 0 0 0 | | | |
| 1 | | - 1 | 333 | 458 | 186 | 144 | 198 | 80 | 100 | 138 | 56 | 195 | 268 | 109 | 212 | 292 | 118 | 272 | 374 | 152 | 74 | 102 | 41 | 78 107 43 | | 60 83 33 | | | |
| | | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 88 | 36 | 30 | 88 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 0 | | 0 0 0 | | | |
| | 2.7 | 0.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 225 | 615 | 83 | 35 | 96 | 13 | 0 | 0 | 0 | 15 | 41 | 6 | 78 213 29 | | 0 0 0 | | | |
| BASEMENT/CRAWL HEAT LOSS | | 1 | | 0 | | | 0 | | I | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | 0 | | 0 | | | |
| SLAB ON GRADE HEAT LOSS | | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | 0 | | 0 | | 1 | |
| SUBTOTAL HT LOSS | | - 1 | | 2098 | | | 1359 | | | 381 | | | 2571 | | | 2210 | | | 1142 | | | 525 | | 725 | 1 | 510 | | | |
| SUB TOTAL HT GAIN | | | | | 1546 | | | 1073 | | | 89 | | | 1811 | | | 1996 | l | | 575 | l | | 98 | 658 | | 240 | | | |
| LEVEL FACTOR / MULTIPLIER | | | 0.20 | | | 0.20 | 0.22 | | 0.20 | 0.22 | | 0.20 | 0.22 | | 0.20 | 0.22 | | 0.20 | 0.22 | | 0.20 | 0.22 | | 0.20 0.22 | | 0.20 0.22 | | | 1 |
| AIR CHANGE HEAT LOSS | | | | 453 | | | 293 | | | 82 | | | 555 | | | 477 | | | 247 | | ŀ | 113 | | 156 | | 110 | 2 | 1 | 1 |
| AIR CHANGE HEAT GAIN | | | | | 78 | | | 54 | ļ | | 4 | | | 91 | | | 100 | | | 29 | | | 5 | 33 | | 12 | | l | |
| DUCT LOSS | | | | 0 | - 1 | | 0 | | 1 | 0 | | | 313 | | | 269 | | l | 0 | | l | 64 | | 88 | | 0 | | | |
| DUCT GAIN | | | | | 0 | | | 0 | | | 0 | | | 282 | | | 302 | | | 0 | | | 10 | 69 | | 0 | | | |
| | 240 | | 2 | | 480 | 0 | | 0 | 0 | | 0 | 1 | | 240 | 1 | | 240 | 1 | | 240 | 0 | | 0 | 0 0 | | 0 0 | | | 1 |
| HEAT GAIN APPLIANCES/LIGHTS | | | | | 682 | | | 0 | ŀ | | 0 | | | 682 | | | 682 | | | 682 | İ | | 0 | 0 | | 0 | | | |
| TOTAL HT LOSS BTU/H | | | | 2551 | | | 1653 | | | 463 | | | 3439 | | | 2955 | | | 1389 | | | 702 | | 969 | | 621 | | | |
| TOTAL HT GAIN x 1.3 BTU/H | | | | | 3622 | | | 1464 | <u> </u> | | 121 | | | 4038 | | | 4317 | | | 1984 | L | | 148 | 989 | | 328 | | | |
| ROOM USE | | | | | | | LV/DN | | | KT/FM | | | | | | | | | | | | | | | | | | | |
| EXP. WALL | | - 1 | | | | | | | | | | | | | | LAUN | | | PWD | | | FOY | | | | - | | | BAS |
| CLG. HT. | | - 1 | | | | | 27 | | | 74 | | | | | | 27 | | | 8 | | | 30 | | | | 7 | | | 168 |
| 1 | ACTOR | , | | | | | 10 | | | 10 | | | | | | 10 | | | 10 | | | 10 | | | | | | | 9 |
| | ACTOR: DSS G | | | | - 1 | | | | i | | | | | | | | | | | | l | | | | | | | | l |
| GLAZING | J33 G | AIN | | | - 1 | | 270 LOSS | GAIN | | 740 | | | | | | 270 | | | 80 | | | 300 | | | | | | , | 800 |
| | 20.4 | 45.4 | | | - 1 | ^ | 0 | O O | | LOSS | GAIN 0 | | | | | LOSS | | | LOSS | GAIN | ١. | LOSS | | | | -1 | | | OSS GAIN |
| i i | | 15.1 40.7 | | | | 0 | 0 | 0 | 0 | 0 | - | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | 0 0 |
| | | 24.1 | | | | 26 | 529 | 626 | | 0 | 0 | | | | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | Town of | | | | 0 0 |
| 1 | | 40.7 | | | | 0 | 0 | 026 | 0 84 | 1709 | | | | | 0 | 0 | 0 | 7 | 142 | 168 | 0 | 0 | 0 | <u> </u> | East Gy | willimbury | | | 122 144 |
| 1 1 | | 99.9 | | | - 1 | 0 | 0 | 0 | 0 | 0 | 3420 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | rds Branch BCIN #16487 | | | 102 204 |
| 1 | | 3.7 | | | | 0 | 0 | 0 | 0 | 0 | 0 | | | | 20 | - | - | 0 | 0 | 0 | 0 | 0 | 0 | | Danishing Citation | as Branch Bont Wilder | | 0 | 0 0 |
| 1 1 | | 0.5 | | | | 244 | 941 | 127 | 656 | 2531 | 342 | | | | | 541 | 73 | - | _ | 0 | 40 | 1082 | 146 | | own, Our faller | | | | 541 73 |
| 1 1 | | 0.5 | | | 1 | 0 | 0 | 0 | 0 | 2031 | 0 | | | | 250 0 | 964 0 | 130 0 | 73 0 | 282 0 | 38 0 | 260 0 | 1003 0 | 136 | | e plans have been revi | | | | 0 0 |
| | | 0.6 | | | - 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | ections as noted. No | | | | 943 263 |
| l l | | 1.2 | | | | 0 | 0 | 0 | 10 | 29 | 12 | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | e without written appr dards Branch. All wo | | | | 0 0 |
| | | 0.4 | | | | 0 | 0 | 0 | 10 | 0 | 0 | | | | 0 | 0 | 0 | 0 | ۸ | 'n | ; | 0 | 0 | | ng By-Law 2018-043, | | | 0 | 0 0 |
| BASEMENT/CRAWL HEAT LOSS | | | | | | • | 0 | | ľ | 0 | | | | | • | 0 | J | | 0 | ۰ | ۱ " | 0 | ١ | Onta | rio Building Code, | as amended. These | | | 0 0 |
| SLAB ON GRADE HEAT LOSS | | | | | | | ņ | | l | 0 | | | | | | 0 | | | 0 | | | 0 | - 1 | | oved documents must | | l | 5 | 977 |
| SUBTOTAL HT LOSS | | | | | - | | 1470 | | | 4270 | | | | | | 1505 | | | • | | | 0 2085 | | time | s. The building perr ed on site at all times. | mi must be clearly | | | |
| 1 | | 1 | | | j | | 1-70 | 753 | 1 | 72/0 | 3774 | | | | | 1000 | 203 | | 424 | 207 | | 4000 | ا ہور | | | | | 8 | 684 |
| I SUB TOTAL HT GAIN! | | | | | | 0.30 | 0.38 | , 55 | 0.30 | 0.38 | 37.74 | | | | 0.30 | 0.38 | 200 | 0.30 | 0.38 | 207 | 0.30 | 0.38 | 282 | | cipline Reviewer | | | 0.50 | 684 |
| SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER | | - 1 | | | | ,.50 | 562 | | 5.50 | 1633 | | | | - 1 | 0.00 | 576 | | 0.00 | 162 | | 0.30 | 797 | | | ding Code H. Authier | 43236 2021-02-04 | | | 0.72 |
| 1 | | | | | | | | | 1 | | 400 | | | | | 5,0 | 10 | | .02 | 10 | l | 131 | 14 | | rage System | | | 6 | 218 |
| LEVEL FACTOR / MULTIPLIER | | | | | | | | 38 | | | | | | | | | | | | | | | | | | | | | |
| LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS | | | | | | | 0 | 38 | | 0 | 190 | | | | | 0 | | | 0 | | 1 | 0 | | Zon | ing | | | | 34 |
| LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN | | | | | | | 0 | 38 0 | | 0 | 190 | | | | | 0 | 0 | | 0 | ا | | 0 | | Zon | ing | | | | 0 34 |
| LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS | 240 | | | | | 0 | 0 | | | 0 | | | | | 0 | 0 | - 1 | 0 | 0 | 0 | ٥ | 0 | 0 | Zon | ing | | | | 0 0 |
| LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN | 240 | | | | | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | o | 0 | 0 | 0 | 0 | 0 | 0 | Zon | ing | | | 0 | 0 0 |
| LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE 24 | 240 | | | | | 0 | 0 2033 | 0 | 0 | 0 5903 | 0 | | | | 0 | • | - 1 | 0 | | 0 | 0 | | 0 | Zon | ing | | | 0 | 0 0 0 682 |
| LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS | 240 | | | | | 0 | · | 0 | 0 | • | 0 | | | | 0 | 2081 | o | 0 | 586 | 0 | 0 | 2882 | 0 | Zon | ing | | | 0 | 0 0 |

TOTAL HEAT GAIN BTU/H:

28856

TONS: 2.40

LOSS DUE TO VENTILATION LOAD BTU/H: 1747

STRUCTURAL HEAT LOSS: 43130

TOTAL COMBINED HEAT LOSS BTU/H: 44877

Muhal Kante.



SITE NAME: TRINAR HALL HOMES

| BI | UILDER: | GREEN | PARK HO | DMES | | | | TYPE: | BRENTW | VOOD 2 | | | DATE: | Feb-19 | | | GFA: | 2793 | LO# | 81518 | | | | |
|-------------------------------|-----------|------------|------------|-----------|--------|-------|---------|------------|-------------|--------|-------|--------------|-----------|--------|-------|-------|---------|---------|-------|-------|------------------|-----------|------------|------|
| | | | | | | | | | pressure | 0.6 | | | | | | | | | | | | | | |
| HEATING CFM | 1131 | | | LING CFM | | | | furr | nace filter | 0.05 | | | | | | | | #0 | OODM/ | AN | | AFUE = | 96 % | |
| | , | | TOTAL F | HEAT GAIN | 28,620 | | | a/c coil | pressure | 0.2 | | | | | | | GMEC960 | 603BNA | 60 | | INPUT | (BTU/H) = | | |
| AIR FLOW RATE CFM | 26.22 | P | AIR FLOW | RATE CFM | 39.52 | | E | available | pressure | | | | | | | | FAN | SPEED | | | | (BTU/H) = | | |
| | , | | | | | _ | | for | s/a & r/a | 0.35 | | | | | | | | LOW | | | | | 0.,000 | |
| RUN COUNT | 4th | 3rd | 2nd | 1st | Bas | | | | | | | | | | | | M | EDLOW | | | DESI | GN CFM = | 1131 | |
| S/A | 0 | 0 | 13 | 7 | 4 | | ple | enum pre | ssure s/a | 0.18 | | r/a | pressure | 0.17 | | | | MEDIUM | | | | | 6 " E.S.P. | |
| R/A | 0 | 0 | 4 | 2 | 1 | | max | s/a dif pi | ess. loss | 0.02 | r/a | a grille pro | ess. Loss | 0.02 | | | MEDIL | JM HIGH | | | | _ | | |
| All S/A diffusers 4"x10" unle | ess noted | i otherwis | se on layo | out. | | | min adj | usted pre | ssure s/a | 0.16 | ad | justed pre | ssure r/a | 0.15 | | | | HIGH | 1131 | | TEMPERATI | URE RISE | 47 | °F |
| All S/A runs 5"Ø unless not | ted other | vise on la | ayout. | | | | | | | | | | | | | | | | | | | | | |
| 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 | | ENS | WIC | BED-2 | BED-3 | BED-4 | BATH | ENS-3 | BED-2 | MBR | ENS-4 | BED-3 | LV/DN | KT/FM | KT/FM | KT/FM | LAUN | PWD | FOY | ENS | BAS | BAS | BAS | BAS |
| RM LOSS MBH. | 1.28 | 0.83 | 0.46 | 1.72 | 1.48 | 1.39 | 0.70 | 0.97 | 1.72 | 1.28 | 0.62 | 1.48 | 2.03 | 1.97 | 1.97 | 1.97 | 2.08 | 0.59 | 2.88 | 0.83 | 3.73 | 3.73 | 3.73 | 3.73 |
| CFM PER RUN HEAT | 33 | 22 | 12 | 45 | 39 | 36 | 18 | 25 | 45 | 33 | 16 | 39 | 53 | 52 | 52 | 52 | 55 | 15 | 76 | 22 | 98 | 98 | 98 | 98 |
| RM GAIN MBH. | 1.81 | 0.73 | 0.12 | 2.02 | 2.16 | 1.98 | 0.15 | 0.99 | 2.02 | 1.81 | 0.33 | 2.16 | 1.92 | 2.01 | 2.01 | 2.01 | 1.16 | 0.28 | 0.38 | 0.73 | 0.46 | 0.46 | 0.46 | 0.46 |
| CFM PER RUN COOLING | 72 | 29 | 5 | 80 | 85 | 78 | 6 | 39 | 80 | 72 | 13 | 85 | 76 | 80 | 80 | 80 | 46 | 11 | 15 | 29 | 18 | 18 | 18 | 18 |
| ADJUSTED PRESSURE | 0.17 | 0.17 | 0.17 | 0.17 | 0.16 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.16 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
| ACTUAL DUCT LGH. | 39 | 49 | 56 | 59 | 64 | 34 | 47 | 55 | 60 | 47 | 33 | 58 | 21 | 35 | 26 | 37 | 31 | 36 | 41 | 25 | 30 | 31 | 24 | 45 |
| EQUIVALENT LENGTH | 140 | 200 | 210 | 160 | 200 | 180 | 190 | 140 | 150 | 160 | 190 | 200 | 160 | 160 | 150 | 150 | 170 | 180 | 120 | 160 | 100 | 100 | 120 | 130 |
| TOTAL EFFECTIVE LENGTH | 179 | 249 | 266 | 219 | 264 | 214 | 237 | 195 | 210 | 207 | 223 | 258 | 181 | 195 | 176 | 187 | 201 | 216 | 161 | 185 | 130 | 131 | 144 | 175 |
| ADJUSTED PRESSURE | | 0.07 | 0.06 | 0.08 | 0.06 | 0.08 | 0.07 | 0.09 | 0.08 | 0.08 | 0.08 | 0.06 | 0.1 | 0.09 | 0.1 | 0.09 | 0.09 | 80.0 | 0.11 | 0.09 | 0.12 | 0.12 | 0.11 | 0.09 |
| ROUND DUCT SIZE | - | 4 | 4 | 6 | 6 | 6 | 4 | 4 | 6 | 5 | 4 | 6 | 6 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 6 | 6 | 6 | 6 |
| HEATING VELOCITY (ft/min) | 242 | 252 | 138 | 229 | 199 | 184 | 207 | 287 | 229 | 242 | 184 | 199 | 270 | 382 | 382 | 382 | 404 | 172 | 558 | 252 | 500 | 500 | 500 | 500 |
| COOLING VELOCITY (ft/min) | 529 | 333 | 57 | 408 | 433 | 398 | 69 | 447 | 408 | 529 | 149 | 433 | 388 | 587 | 587 | 587 | 338 | 126 | 110 | 333 | 92 | 92 | 92 | 92 |
| OUTLET GRILL SIZE | 3X10 | 3X10 | 3X10 | 4X10 | 4X10 | 4X10 | 3X10 | 3X10 | 4X10 | 3X10 | 3X10 | 4X10 | 4X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 4X10 | 4X10 | 4X10 | 4X10 |
| TRUNK | A | <u>B</u> | D | D | C | В | D | D | D | A | В | C | D | Α | Α | Α | D | С | С | Α | В | В | D | С |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| RIIN# | | | | | | | | | | | | | | | | | | | | | | | | |

ROUND

DUCT

0

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0

0

0

RECT

DUCT

0

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0

0

0

x

х

Х

TRUNK

CFM

0

0

0

0

0

TRUNK G

TRUNK H

TRUNK I

TRUNK J

TRUNK K

TRUNK L

STATIC

PRESS.

0.00

0.00

0.00

0.00

0.00

0.00

RUN# ROOM NAME RM LOSS MBH. CFM PER RUN HEAT RM GAIN MBH. CFM PER RUN COOLING ADJUSTED PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LENGTH ADJUSTED PRESSURE ROUND DUCT SIZE HEATING VELOCITY (ft/min) COOLING VELOCITY (ft/min) **OUTLET GRILL SIZE**

SUPPLY AIR TRUNK SIZE

TRUNK

CFM

244

514

267

618

0

TRUNK A

TRUNK B

TRUNK C

TRUNK D

TRUNK F

TRUNK E 1131

STATIC

PRESS.

0.08

0.07

0.06

0.06

0.06

0.00

ROUND

DUCT

8.3

11.3

9.2

12.6

15.8

0

RECT

DUCT

12

16

10

18

28

х

X

Х

Х



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

Building Code H. Authier 43236 2021-02-04

| | Zoning | | | | | |
|-------|--------|---|---|------|--------|--|
| | | | | | | |
| ROUND | NEOI | | | V C. | .00117 | |
| DUCT | DUCT | | | (fi | /min) | |
| 0 | 0 | Х | 8 | | 0 | |
| 0 | 0 | Х | 8 | | 0 | |
| 0 | 0 | Х | 8 | | 0 | |
| 0 | 0 | Х | 8 | | 0 | |
| 0 | 0 | х | 8 | | 0 | |
| 0 | 0 | Х | 8 | | 0 | |
| 0 | 0 | Х | 8 | | 0 | |
| 0 | 0 | х | 8 | | 0 | |
| 0 | 0 | X | 8 | | 0 | |
| 16.5 | 32 | Х | 8 | ε | 36 | |
| | | | | | | |

8

8

10

523

0

679

Sewage System

| RETURN AIR # | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | BR |
|--------------------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| | 0 | 0 | 0 | 0 | 0 | Ò | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| AIR VOLUME | 200 | 75 | 85 | 75 | 200 | 305 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 191 |
| 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 |
| ACTUAL DUCT LGH. | 38 | 54 | 50 | 81 | 21 | 41 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 |
| EQUIVALENT LENGTH | 135 | 225 | 215 | 225 | 140 | 210 | 0 | 0 | Ó | 0 | 0 | Ó | 0 | Ó | Ó | 135 |
| TOTAL EFFECTIVE LH | 173 | 279 | 265 | 306 | 161 | 251 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 149 |
| ADJUSTED PRESSURE | 0.09 | 0.05 | 0.06 | 0.05 | 0.09 | 0.06 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 0.10 |
| ROUND DUCT SIZE | 7.5 | 6 | 6 | 6 | 7.5 | 9.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7.1 |
| INLET GRILL SIZE | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 0 | Ó | Ö | Ō | Ō | ō | ō | Ō | 8 |
| | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | X | X | X | X | X |
| INLET GRILL SIZE | 14 | 14 | 14 | 14 | 14 | 30 | 0 | 0 | 0 | 0 | n | 0 | Ô | Ô | ñ | 14 |

VELOCITY

(ft/min)

366

578

481

618

727

0

8

8

8

8

RETURN AIR TRUNK SIZE

TRUNK O

TRUNK P

TRUNK Q

TRUNK R

TRUNK S

TRUNK T

TRUNK U

TRUNK V

TRUNK W

TRUNK X

TRUNK Y

TRUNK Z

DROP

TRUNK

CFM

0

0

0

0

0

0

0

0

0

1131

465

0

1131

STATIC

PRESS.

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

11.8

0

16.5

16

0

24

VELOCITY

(ft/min)

0

0

0

0

0

8

8

8

8



TYPE: SITE NAME: BRENTWOOD 2

TRINAR HALL HOMES

LO# 81518

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

| COMBUSTION APPLIANCES | 9.32.3.1(1) | SUPPLEMENTAL V | ENTILATION CAPACITY | | | 9.32.3.5. | ĺ |
|---|--------------|---------------------------------|--|------------------------|--|--------------------|--------------------|
| a) Direct vent (sealed combustion) only | | Total Ventilation Cap | pacity | 180.2 | | cfm | |
| b) Positive venting induced draft (except fireplaces) | | Less Principal Ventil | . Capacity | 79.5 | | cfm | |
| c) Natural draft, B-vent or induced draft gas fireplace | | Required Supplemer | ntal Capacity | 100.7 | | cfm | |
| d) Solid Fuel (including fireplaces) | | | | | | | |
| e) No Combustion Appliances | | PRINCIPAL EXHAU | ST FAN CAPACITY | | | | |
| | | Model: | VANEE 65H | Location: | BSM | T | |
| HEATING SYSTEM | | 79.5 | cfm 3.0 | sones | ✓ HVI | Approved | |
| Forced Air Non Forced Air | | PRINCIPAL EXHAU | ST HEAT LOSS CALCULA | | | % LOSS | |
| Electric Space Heat | | 79.5 CFM | X 81 F | X 1.08 | X | 0.25 | |
| Electric Space Real | | SUPPLEMENTAL F | ANS | PANASONI | С | | |
| HOUSE TYPE | 9.32.1(2) | Location ENS | Model FV-05-11VK1 | cfm 50 | HVI : | Sones 0.3 | |
| | 0.02.1(2) | BATH | FV-05-11VK1 | 50 | +;- | 0.3 | |
| ✓ I Type a) or b) appliance only, no solid fuel | 1 | ENS-4 | FV-05-11VK1 | 50 | 1 | 0.3 | |
| II Type I except with colid five! (including fives! | | PWD | FV-05-11VK1 | 50 | 1 | 0.3 | |
| Type I except with solid fuel (including fireplaces) | | HEAT RECOVERY | /ENTIL ATOR | | | 9.32.3,11. | |
| III Any Type c) appliance | | Model: | VANEE 65H | | | 9.32.3.11. | |
| | | 155 | cfm high | 64 | | fm low | |
| IV Type I, or II with electric space heat | ļ | 75 | Or Constitute Effects | | | | |
| Other: Type I, II or IV no forced air | İ | 75 | _ % Sensible Efficienc @ 32 deg F (0 deg (| | _ → HVI | Approved | |
| | | LOCATION OF INST | TALL ATION | | | | |
| SYSTEM DESIGN OPTIONS | O.N.H.W.P. | | | | | | |
| 1 Exhaust only/Forced Air System | | Lot: | | Concession | | | |
| 2 HRV with Ducting/Forced Air System | | Township | | Plan: | | | |
| 3 HRV Simplified/connected to forced air system | | Address | - | | | | |
| | | Roll# | | Building Pen | nit # | | |
| | | BUILDER: | GREENPARK HOM | ES | ± | | |
| Part 6 Design | | Name: | | | E E | ast Gw | illimbu |
| TOTAL VENTILATION CAPACITY | 9.32.3.3(1) | Address: | | | Our town, Our facure | Building Standards | Branch BCIN #16487 |
| Basement + Master Bedroom 2 @ 21.2 cfm 42.4 | cfm | | | | These plans hav | | |
| | | City: | | • | made without v Standards Brand | vritten approv | val of the Bui |
| Other Bedrooms <u>3</u> @ 10.6 cfm <u>31.8</u> | cfm | Telephone #: | | | Zoning By-Law Ontario Buildi | ng Code, as | s amended. T |
| Kitchen & Bathrooms 6 @ 10.6 cfm 63.6 | cfm | INSTALLING CONTE | RACTOR | | approved docun times. The bu posted on site at | ilding permi | t must be cl |
| Other Rooms <u>4</u> @ 10.6 cfm <u>42.4</u> | cfm | Name: | · | | Discipline Building Code | | BCIN Date |
| Table 9.32.3.A. TOTAL <u>180.2</u> | cfm | Address: | 4 | | Sewage System | H. Authier | 43236 2021-0 |
| | | City: | | | Zoning | | |
| PRINCIPAL VENTILATION CAPACITY REQUIRED | 9.32.3.4.(1) | Telephone #: | | F#- | | | |
| 1 Bedroom 31.8 | cfm | | | Fax #: | | | |
| 2 Bedroom 47.7 | cfm | | nis ventilation system has be | en designed | | | |
| 3 Bedroom 63.6 | cfm | in accordance with the Name: | e Ontario Building Code. HVAC Designs Ltd. | | | | |
| 4 Bedroom 79.5 | cfm | Signature: | IM | School Offende | | | |
| 5 Bedroom 95.4 | cfm | HRAI# | | 001820 | | | |
| TOTAL 79.5 cfm | | Date: | | February-19 | | | |
| I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUAL | | PROPRIATE CATEGORY AS AN | OTHER DESIGNER" UNDER DIVIS | ON C, 3.2.5 OF THE BUI | LDING CODE. | | |
| Maked Office. Wilchael OR | OINE | | | | | | |



| | | | CSA F28 | 80-12 Residential Heat | Loss and Heat Gair | n Calculations | | | | |
|-----------------|--------------------------|---|--------------------------|--|-----------------------|--------------------------------|--------------------------------|---------------------------------------|------------|-----------|
| | | | Form | ula Sheet (For Air Leak | age / Ventiliation (| Calculation) | | | | |
| LO#: | 81518 | Model: BRENTWOOD | 02 | Builder: | GREENPARK HOMES | | | | Date: 1 | 2/21/2019 |
| | | Volume Calculation | n | | | | Air Change & Del | ta T Data | | |
| louse Volume | | | | 1 | | WINTER NA | TURAL AIR CHANG | SE RATE | 0.227 | |
| Level Bsmt | Floor Area (ft²) 1251 | Floor Height (ft) | Volume (ft³) 11259 | | | SUMMER NA | TURAL AIR CHAN | GE RATE | 0.063 | |
| First | 1251 | 10 | 12510 | | | | | | | |
| Second | 1542 | 9 | 13878 | | | | | emperature Diffe | | |
| Third Fourth | 0 | 9 | · 0 | | * | Winter DTDh | Tin °C | Tout °C | ΔT °C | ΔT°F |
| Touren | <u> </u> | Total: | 37,647.0 ft ³ | | | Summer DTDc | 22 24 | -23 30 | 45 6 | 81 11 |
| | | Total: | 1066.0 m³ | | | | | | | |
| | 5.2.3 | .1 Heat Loss due to Air | r Leakage | | | 6.2.6 9 | Sensible Gain due | to Air Leakage | | · |
| | $HL_{airb} =$ | $LR_{airh} \times \frac{V_b}{3.6} \times D$ | $TD_h \times 1.2$ | | F | $HG_{salb} = LR_{airc} \times$ | $\frac{V_b}{3.6} \times DTD_c$ | × 1.2 | | |
| 0.227 | x <u>296.12</u> | x <u>45 °C</u> | x <u>1.2</u> | = 3645 W | = 0.063 | x <u>296.12</u> | x <u>6°C</u> | x1.2 | . = [| 137 W |
| | | | | = 12437 Btu/h | | | | | , , , = | 467 Btu/h |
| | 5.2.3.2 Hea | t Loss due to Mechani | ical Ventilation | | | 6.2.7 Ser | nsible heat Gain d | ue to Ventilatio | n | |
| | $HL_{vairb} =$ | $PVC \times DTD_h \times 1$ | $.08 \times (1-E)$ | | HL | $_{vairb} = PVC \times DT$ | $TD_h \times 1.08 \times$ | (1-E) | | |
| 80 CFM | x <u>81</u> °F | x <u>1.08</u> | x <u>0.25</u> | = 1747 Btu/h | 80 CFM | x <u>11 °F</u> | x <u>1.08</u> | x <u>0.25</u> | = [| 236 Btu/h |
| | | | 5.2.3.3 Calcula | tion of Air Change Heat Lo | ss for Each Room (Flo | or Multiplier Section) | | , june dyn jelen er en en | · | |
| | | HL_{ain} | | $pr \times HL_{airbv} \times \{(HL_{c})\}$ | | | gclevel)} | · . | | |

| Level | Level Factor (LF) | HLairve Air Leakage + Ventilation Heat Loss (Btu/h) | Level Conductive Heat Loss: (HL _{clevel}) | Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel) |
|-------|-------------------|---|--|--|
| 1 | 0.5 | | 8,684 | 0.716 |
| 2 | 0.3 | | 9,754 | 0.383 |
| 3 | 0.2 | 12,437 | 11,521 | 0.216 |
| 4 | 0 | 1 | 0 | 0.000 |
| 5 | 0 | 1 | 0 | 0.000 |

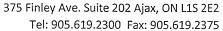
^{*}HLairbv = Air leakage heat loss + ventilation heat loss

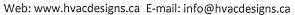


These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly-posted on site at all times.

| Discipline | Reviewer | BCIN | Date |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-04 |
| Sewage System | | | |
| Zoning | | | |
| | | | |

^{*}For a balanced or supply only ventilation system HLairve = 0







HEAT LOSS AND GAIN SUMMARY SHEET

| MODEL: | BRENTWOOD 2 | | | BUILDER: GREENPARK HOMES | |
|-----------|---------------------|---------|-----------|--------------------------------|----------|
| SFQT: | 2793 | LO# | 81518 | SITE: TRINAR HALL HOMES | 5 |
| DESIGN A | SSUMPTIONS | | | | |
| HEATING | | | · °F | COOLING | °F |
| OUTDOO | R DESIGN TEMP. | | -9 | OUTDOOR DESIGN TEMP. | 86 |
| INDOOR I | DESIGN TEMP. | | 72 | INDOOR DESIGN TEMP. (MAX 75°F) | 75 |
| BUILDING | B DATA | | | | - |
| ATTACHM | 1ENT: | | DETACHED | # OF STORIES (+BASEMENT): | 3 |
| FRONT FA | ACES: | | EAST | ASSUMED (Y/N): | Υ |
| AIR CHAN | IGES PER HOUR: | | 2.50 | ASSUMED (Y/N): | Υ |
| AIR TIGHT | TNESS CATEGORY: | | TIGHT | ASSUMED (Y/N): | Υ |
| WIND EXP | POSURE: | | SHELTERED | ASSUMED (Y/N): | Υ |
| HOUSE VO | OLUME (ft³): | | 37647.0 | ASSUMED (Y/N): | Y |
| INTERNAL | _ SHADING: | BLINDS | /CURTAINS | ASSUMED OCCUPANTS: | 5 |
| INTERIOR | LIGHTING LOAD (Btu/ | h/ft²): | 1.35 | DC BRUSHLESS MOTOR (Y/N): | Υ |
| FOUNDAT | TION CONFIGURATION | | BCIN_1 | DEPTH BELOW GRADE: | 6.0 ft |
| LENGTH: | 54.0 ft | WIDTH: | 30.0 ft | EXPOSED PERIMETER: | 168.0 ft |

| 2012 OBC - COMPLIANCE PACKAGE | | | |
|---|---|------------|-----------|
| | | Compliance | • |
| Component | • | ENERG | SYSTAR |
| | | 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 gr | ade Minimum RSI (R)-Value | - | - |
| Edge of Below Grade Slab ≤ 600 mm Below Grade N | 1inimum RSI (R)-Value | 10 | 10 |
| Heated Slab or Slab ≤ 600 mm below grade Minimu | m RSI (R)-Value | 10 | 11.13 |
| Windows and Sliding Glass Doors Maximum U-Value | e | ZONE 2 | - |
| Skylights Maximum U-Value | East Gwillimbury | ZONE 2 | - |
| Space Heating Equipment Minimum AFUE | Building Standards Branch BCIN #16487 | 0.96 | - |
| HRV Minimum Efficiency | Our seems, Our fames | 75% | - |
| Domestic Hot Water Heater Minimum EF | These plans have been reviewed for use with the corrections as noted. No other changes may be | 0.9 | _ |

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE corrections as noted. No other changes may be made without written approval of the Building—Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amehded. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

| Discipline | Reviewer | BCIN | Date |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-04 |
| Sewage System | | | |
| Zoning | | | |





Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

| Heating Load (Watts): | | 1751 | | | | |
|------------------------------|---------|------------------------------------|--|------------------------------------|--------------------------------|------------------------------------|
| | Founda | ation Loads | | | | |
| Heating Month | 1 | | | | | |
| | Desig | n Months | | - | 1 | |
| Fluid Temperature (°C): | 33 | | Sewage System Zoning | n. Audiler | 40200 | |
| Heated Fraction of the Slab: | 0 | | approved docum times. The bui posted on site at Discipline Building Code | lding perr | BCIN 43236 | Date 2021-02-0 |
| | Radi | iant Slab | Standards Brand Zoning By-Law Ontario Buildin | h. All wo 2018-043, ng Code, | rk must o as amen as ame | comply w ded, and a ded. The |
| Door Area (m²): | 1.9 | | These plans hav corrections as no made without w | oted. No o | ther char | nges may |
| Window Area (m²): | 1.0 | | E | ast GV | Willin | nbury :1N #16487 |
| Depth Below Grade (m): | 1.83 | Insulation Configuration | | | | |
| Wall Height (m): | 2.7 | | | | | |
| Exposed Perimeter (m): | 0.0 | | | | | |
| Floor Width (m): | 9.1 | | | | | |
| Floor Length (m): | 16.5 | | | | | |
| For | undatio | on Dimensions | | | | |
| Water Table: | | (7-10 m, 23-33 ft) | | | | |
| Soil Conductivity: | | conductivity: dry sand, loam, clay | \dashv | | | |
| Region: | Site D | Description | | | | |
| Province: | Ontario | | | | | |
| Weat | her Sta | tion Description | | | | |

TYPE: BRENTWOOD 2

LO# 81518



Air Infiltration Residential Load Calculator

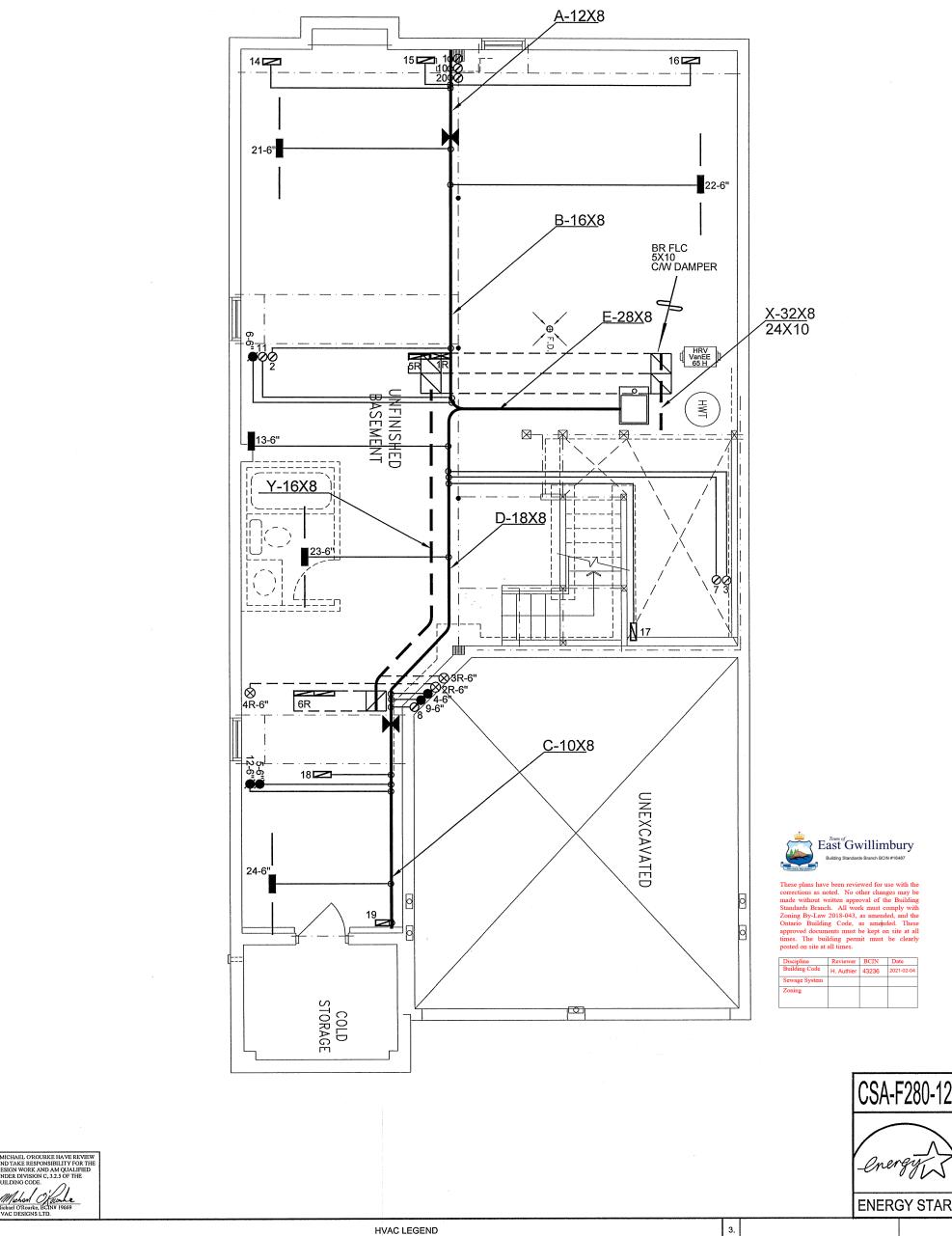
Supplemental tool for CAN/CSA-F280

| Weath | er Station Description | | | | | | | |
|---|--------------------------|---------------|--|--|--|--|--|--|
| Province: | Ontario | | | | | | | |
| Region: | Bradford | | | | | | | |
| Weather Station Location: | Open flat terrain, grass | | | | | | | |
| Anemometer height (m): | 10 | | | | | | | |
| | Local Shielding | | | | | | | |
| Building Site: Suburban, forest | | | | | | | | |
| Walls: | Heavy | | | | | | | |
| Flue: | Heavy | | | | | | | |
| Highest Ceiling Height (m): | 6.71 | | | | | | | |
| Buil | ding Configuration | | | | | | | |
| Type: | Detached | | | | | | | |
| Number of Stories: | Two | | | | | | | |
| Foundation: | Full | | | | | | | |
| House Volume (m³): | 1066.0 | | | | | | | |
| Air L | eakage/Ventilation | | | | | | | |
| ir Tightness Type: Energy Star Detached (2.5 ACH) | | | | | | | | |
| Custom BDT Data: | ELA @ 10 Pa. | 995.1 cm² | | | | | | |
| | 2.50 | ACH @ 50 Pa | | | | | | |
| Mechanical Ventilation (L/s): | Total Supply | Total Exhaust | | | | | | |
| | 37.5 | 37.5 | | | | | | |
| | Flue Size | | | | | | | |
| Flue #: | #1 #2 #3 # | ‡4 | | | | | | |
| Diameter (mm): | 0 0 0 | 0 | | | | | | |
| Natu | ral Infiltration Rates | | | | | | | |
| Heating Air Leakage Rate (A | ACH/H): 0.227 | dia Tamah | | | | | | |
| Cooling Air Leakage Rate (A | CH/H): 0.063 | East Gwillin | | | | | | |

TYPE: BRENTWOOD 2 LO# 81518



| Discipline | Reviewer | BCIN | Date |
|---------------|------------|------|------------|
| Building Code | H. Authier | | 2021-02-04 |
| Sewage System | | | |
| Zoning | | | |
| | | | |



ENERGY STAR

2. SYMBOL DESCRIPTION SYMBOL DESCRIPTION SYMBOL DESCRIPTION 14"x8" RETURN AIR GRILLE SUPPLY AIR GRILLE 6" SUPPLY AIR BOOT ABOVE RETURN AIR STACK ABOVE - = -30"x8" RETURN AIR GRILLE SUPPLY AIR GRILLE 6" BOOT 0 SUPPLY AIR STACK FROM 2nd FLOOR × No. Description Date RETURN AIR STACK 2nd FLOOR FRA- FLOOR RETURN AIR GRILLE REDUCER SUPPLY AIR BOOT ABOVE **REVISIONS** ø 6" SUPPLY AIR STACK 2nd FLOOR

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GREENPARK HOMES

TRINAR HALL HOMES EAST GWILLIMBURY, ONT.

DESIGNS LTD.

375 Finley Ave. Suite 202 - Ajax, Ontario Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca

Specializing in Residential Mechanical Design Services 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.

| | HEAT L | OSS 44877 | BTU/H | # OF RUNS | S/A | R/A | FANS | Sheet |
|---|---------|------------|---------------------------|--|-----|-------|------|-------|
| | MAKE | UNIT DATA | | 3RD FLOOR | | | | |
| | MAKE (| GOODMAN | | 2ND FLOOR | 13 | 4 | 4 | |
| | | EC960603BN | 1ST FLOOR | 7 | 2 | 3 | | |
| | INPUT | 60 | мвти/н | BASEMENT | 4 | 1 | 0 | Date |
| - | OUTPUT | | ALL S/A DIFFUSERS 4 "x10" | | | Scale | | |
| | COOLING | 57.6 | TONS | UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5" | | | | |

cfm @ 0.6" w.c.

UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT

DOORS 1" min. FOR R/A

2.5

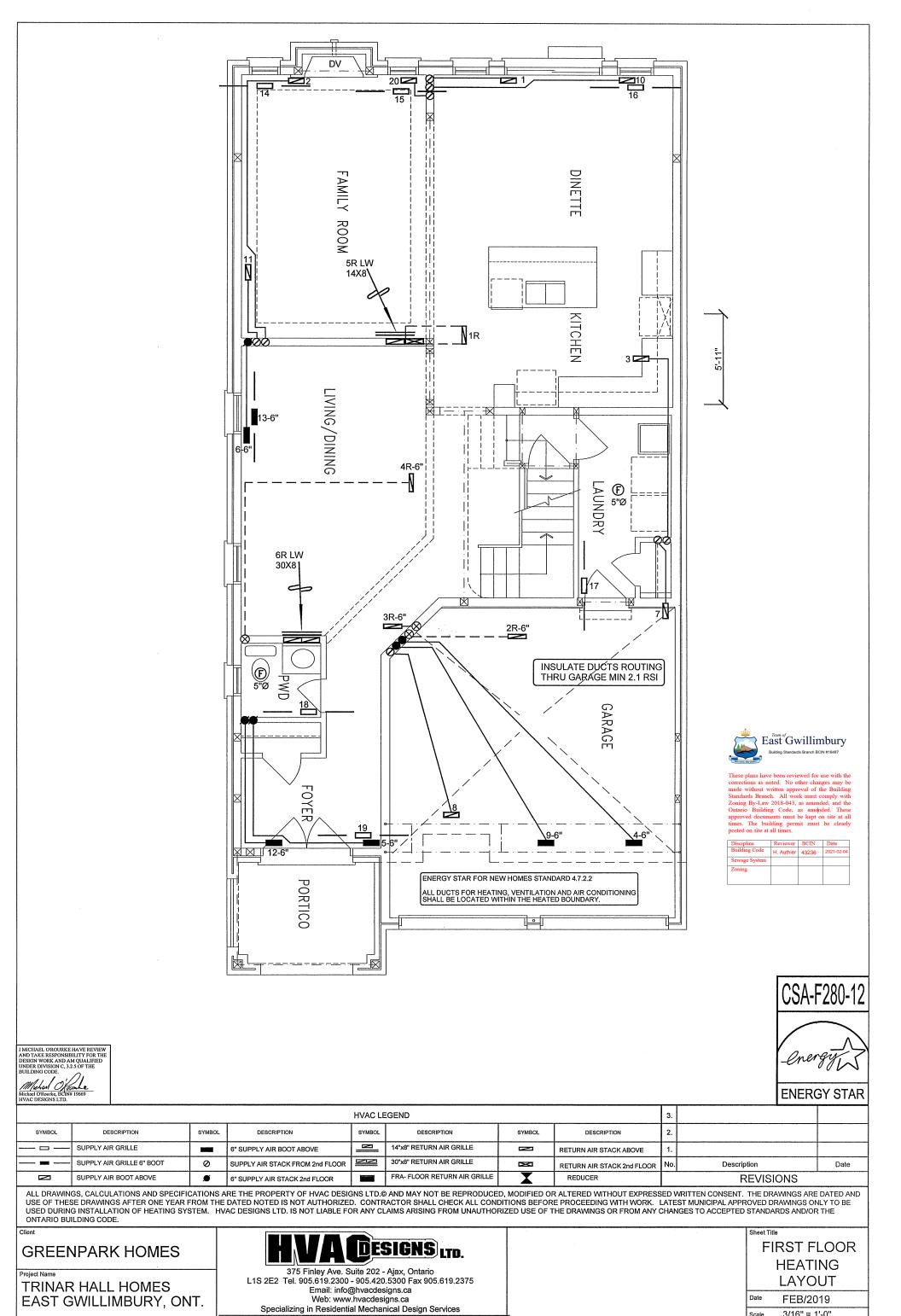
1131

FAN SPEED

BASEMENT **HEATING** LAYOUT FEB/2019 3/16" = 1'-0" BCIN# 19669

LO# 81518

2793 sqft **BRENTWOOD 2**



Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper.

3/16" = 1'-0"

BCIN# 19669

81518

LO#

Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed. **BRENTWOOD 2** 2793 sqft

