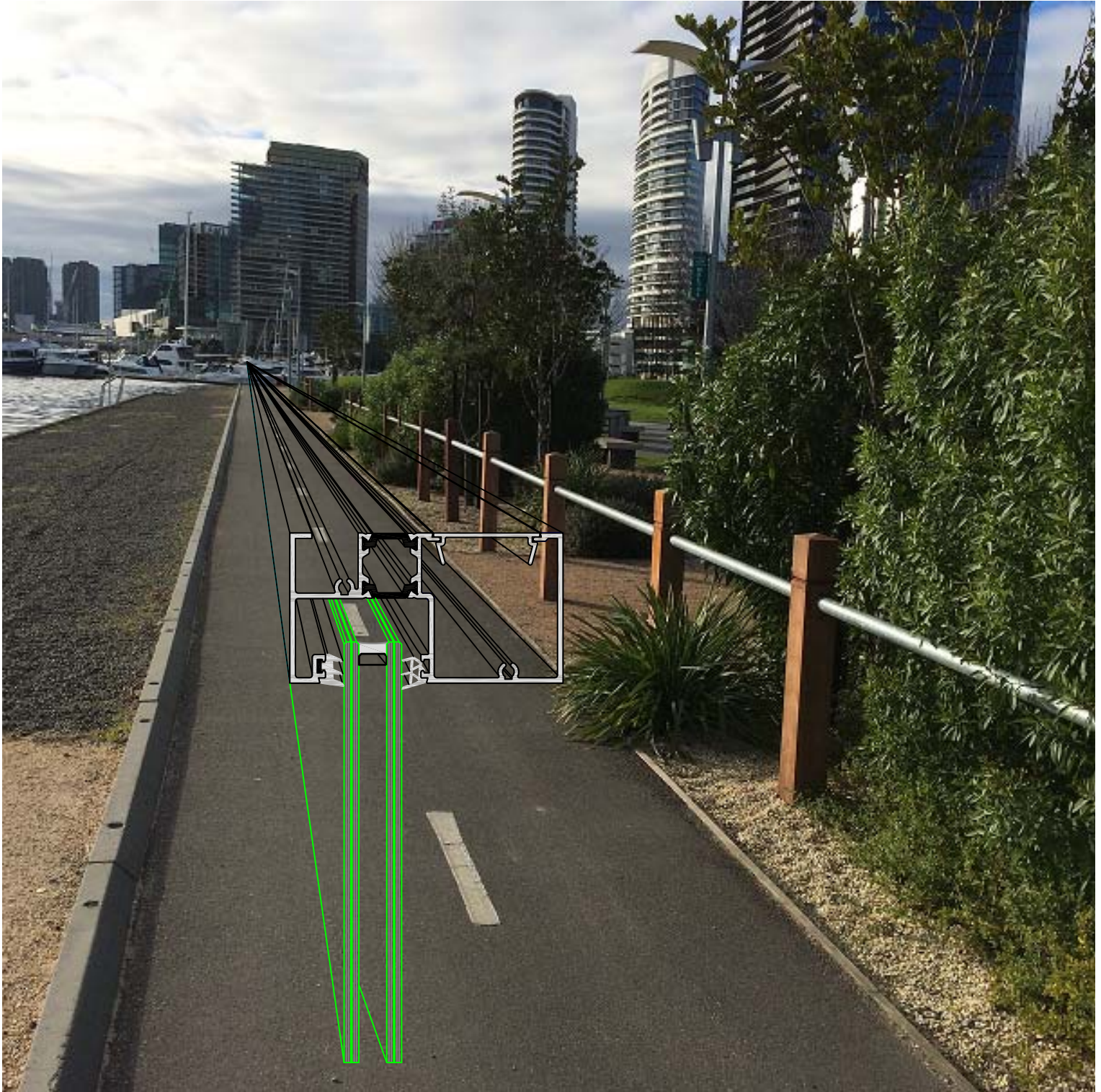


# path<sup>®</sup>

thermal  break window system



**rapid**  
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WINDOWS & DOORS

DATE ISSUED - JULY 2020



# SECTION: B

***Strength Charts - Computations -  
WERS Ratings - Test Reports***

**Pages: B01 to B31**

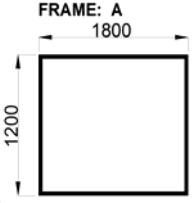
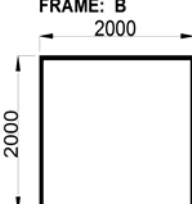
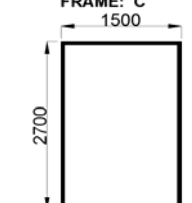
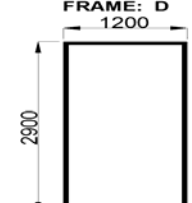
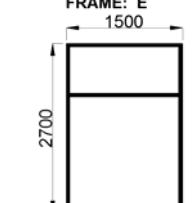
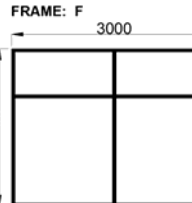
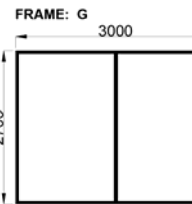
*path*

thermal  break window system

**PAGE - B**

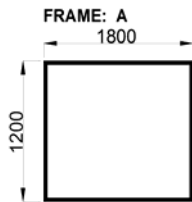
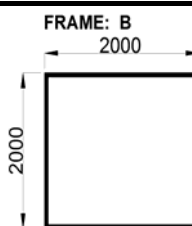
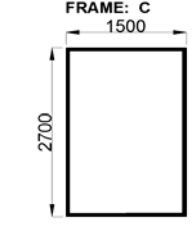
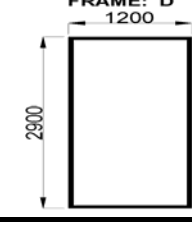
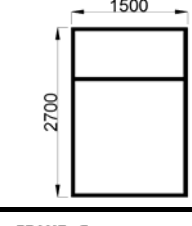
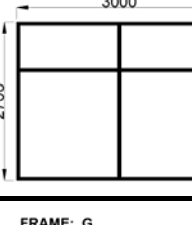
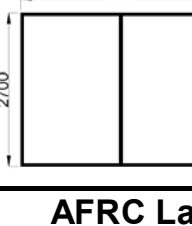
# PERFORMANCE TEST SPECIFICATIONS

## THERMAL ASSESSMENT

| PATH Thermal Break                                                                  |                                                                                   | GLASS SELECTION CHART - B15        |                                     |                                   |                                    |                                             |                                            |                                               |                                              |       |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------------------------------|---------------------------------------------|--------------------------------------------|-----------------------------------------------|----------------------------------------------|-------|
|                                                                                     |                                                                                   | 6mm Clear<br>12mm Air<br>6mm Clear | 10mm Clear<br>12mm Air<br>6mm Clear | 6mm Grey<br>12mm Air<br>6mm Clear | 10mm Grey<br>12mm Air<br>6mm Clear | 6mm Evantage Clear<br>12mm Air<br>6mm Clear | 6mm Evantage Grey<br>12mm Air<br>6mm Clear | 6mm Evantage S/Green<br>12mm Air<br>6mm Clear | 6mm Evantage S/Blue<br>12mm Air<br>6mm Clear |       |
| Fixed Light<br><br>100 x 55 Frame<br>Double Glazing<br><br>All Fixed Panels         |  | UW                                 | 2.960                               | 2.956                             | 2.960                              | 2.956                                       | 2.354                                      | 2.354                                         | 2.362                                        | 2.354 |
|                                                                                     |                                                                                   | SHGC                               | 0.625                               | 0.563                             | 0.404                              | 0.321                                       | 0.494                                      | 0.300                                         | 0.267                                        | 0.260 |
|                                                                                     |                                                                                   | TVW                                | 0.682                               | 0.660                             | 0.321                              | 0.215                                       | 0.534                                      | 0.251                                         | 0.386                                        | 0.304 |
|    | UW                                                                                | 2.912                              | 2.905                               | 2.912                             | 2.905                              | 2.286                                       | 2.285                                      | 2.294                                         | 2.285                                        |       |
|                                                                                     | SHGC                                                                              | 0.640                              | 0.576                               | 0.414                             | 0.328                              | 0.506                                       | 0.307                                      | 0.273                                         | 0.265                                        |       |
|                                                                                     | TVW                                                                               | 0.700                              | 0.677                               | 0.330                             | 0.220                              | 0.548                                       | 0.258                                      | 0.396                                         | 0.313                                        |       |
|   | UW                                                                                | 2.917                              | 2.910                               | 2.917                             | 2.910                              | 2.294                                       | 2.294                                      | 2.303                                         | 2.294                                        |       |
|                                                                                     | SHGC                                                                              | 0.637                              | 0.574                               | 0.412                             | 0.327                              | 0.504                                       | 0.305                                      | 0.272                                         | 0.264                                        |       |
|                                                                                     | TVW                                                                               | 0.697                              | 0.674                               | 0.328                             | 0.219                              | 0.546                                       | 0.257                                      | 0.394                                         | 0.311                                        |       |
|  | UW                                                                                | 2.944                              | 2.940                               | 2.944                             | 2.940                              | 2.336                                       | 2.336                                      | 2.344                                         | 2.336                                        |       |
|                                                                                     | SHGC                                                                              | 0.627                              | 0.565                               | 0.406                             | 0.322                              | 0.496                                       | 0.301                                      | 0.268                                         | 0.261                                        |       |
|                                                                                     | TVW                                                                               | 0.685                              | 0.663                               | 0.323                             | 0.216                              | 0.537                                       | 0.252                                      | 0.387                                         | 0.306                                        |       |
|  | UW                                                                                | 2.990                              | 2.991                               | 2.990                             | 2.991                              | 2.387                                       | 2.387                                      | 2.396                                         | 2.387                                        |       |
|                                                                                     | SHGC                                                                              | 0.625                              | 0.562                               | 0.404                             | 0.321                              | 0.494                                       | 0.300                                      | 0.267                                         | 0.260                                        |       |
|                                                                                     | TVW                                                                               | 0.682                              | 0.659                               | 0.321                             | 0.215                              | 0.534                                       | 0.251                                      | 0.386                                         | 0.304                                        |       |
|  | UW                                                                                | 2.994                              | 2.997                               | 2.994                             | 2.997                              | 2.382                                       | 2.382                                      | 2.391                                         | 2.382                                        |       |
|                                                                                     | SHGC                                                                              | 0.633                              | 0.570                               | 0.409                             | 0.325                              | 0.500                                       | 0.304                                      | 0.270                                         | 0.263                                        |       |
|                                                                                     | TVW                                                                               | 0.692                              | 0.669                               | 0.326                             | 0.218                              | 0.542                                       | 0.255                                      | 0.391                                         | 0.309                                        |       |
|  | UW                                                                                | 2.920                              | 2.915                               | 2.920                             | 2.915                              | 2.288                                       | 2.287                                      | 2.296                                         | 2.287                                        |       |
|                                                                                     | SHGC                                                                              | 0.646                              | 0.581                               | 0.417                             | 0.331                              | 0.510                                       | 0.309                                      | 0.275                                         | 0.268                                        |       |
|                                                                                     | TVW                                                                               | 0.707                              | 0.684                               | 0.333                             | 0.223                              | 0.554                                       | 0.261                                      | 0.400                                         | 0.316                                        |       |
| <b>AFRC Lab Fenestration Performance Report</b>                                     |                                                                                   |                                    |                                     |                                   |                                    | <b>1/02/2018</b>                            |                                            | <b>B-15</b>                                   |                                              |       |

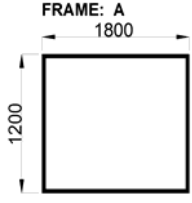
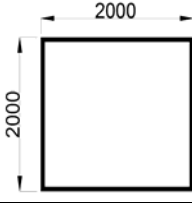
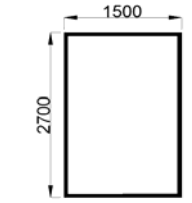
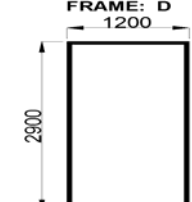
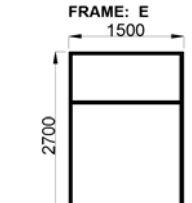
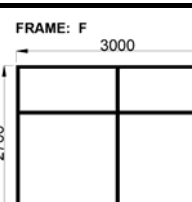
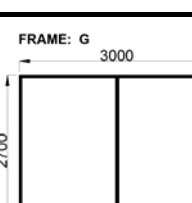
# PERFORMANCE TEST SPECIFICATIONS

## THERMAL ASSESSMENT

| PATH Thermal Break                                                                            |                                                                                   | GLASS SELECTION CHART - B16                    |                                                                 |                                                         |                                                               |                                                              |                                                          |                                                    |       |  |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|-------|--|
|                                                                                               |                                                                                   | 6mm Energy Tech Clear<br>12mm Air<br>6mm Clear | 6mm SolTech (#2) Neutral<br>12mm Air<br>6mm Clear PerformatechE | 6mm SolTech Grey<br>12mm Air<br>6mm Clear PerformatechE | 8.76mm Clear Laminated<br>12mm Argon<br>6mm Clear Performance | 8.76mm Grey Laminated<br>12mm Argon<br>6mm Clear Performance | 8.38mm Comfort+ Neutral<br>59<br>12mm Argon<br>6mm Clear | 8.38mm Comfort+ Blue 44<br>12mm Argon<br>6mm Clear |       |  |
| <b>Fixed Light</b><br><br><b>100 x 55 Frame Double Glazing</b><br><br><b>All Fixed Panels</b> |  | UW                                             | 2.275                                                           | 2.089                                                   | 2.087                                                         | 1.840                                                        | 1.837                                                    | 2.284                                              | 2.281 |  |
|                                                                                               |                                                                                   | SHGC                                           | 0.542                                                           | 0.313                                                   | 0.234                                                         | 0.397                                                        | 0.286                                                    | 0.372                                              | 0.275 |  |
|                                                                                               |                                                                                   | TVW                                            | 0.631                                                           | 0.420                                                   | 0.316                                                         | 0.577                                                        | 0.359                                                    | 0.452                                              | 0.368 |  |
|              | UW                                                                                | 2.204                                          | 2.011                                                           | 2.006                                                   | 1.753                                                         | 1.751                                                        | 2.213                                                    | 2.207                                              |       |  |
|                                                                                               | SHGC                                                                              | 0.555                                          | 0.319                                                           | 0.239                                                   | 0.406                                                         | 0.292                                                        | 0.381                                                    | 0.281                                              |       |  |
|                                                                                               | TVW                                                                               | 0.648                                          | 0.431                                                           | 0.324                                                   | 0.593                                                         | 0.368                                                        | 0.464                                                    | 0.377                                              |       |  |
|             | UW                                                                                | 2.213                                          | 2.022                                                           | 2.017                                                   | 1.765                                                         | 1.762                                                        | 2.222                                                    | 2.217                                              |       |  |
|                                                                                               | SHGC                                                                              | 0.553                                          | 0.318                                                           | 0.238                                                   | 0.404                                                         | 0.291                                                        | 0.379                                                    | 0.279                                              |       |  |
|                                                                                               | TVW                                                                               | 0.645                                          | 0.429                                                           | 0.323                                                   | 0.590                                                         | 0.366                                                        | 0.462                                                    | 0.376                                              |       |  |
|            | UW                                                                                | 2.256                                          | 2.070                                                           | 2.067                                                   | 1.819                                                         | 1.815                                                        | 2.266                                                    | 2.262                                              |       |  |
|                                                                                               | SHGC                                                                              | 0.544                                          | 0.314                                                           | 0.235                                                   | 0.398                                                         | 0.287                                                        | 0.454                                                    | 0.276                                              |       |  |
|                                                                                               | TVW                                                                               | 0.634                                          | 0.422                                                           | 0.317                                                   | 0.580                                                         | 0.360                                                        | 0.000                                                    | 0.369                                              |       |  |
|            | UW                                                                                | 2.309                                          | 2.124                                                           | 2.126                                                   | 1.879                                                         | 1.876                                                        | 2.321                                                    | 2.319                                              |       |  |
|                                                                                               | SHGC                                                                              | 0.542                                          | 0.312                                                           | 0.234                                                   | 0.397                                                         | 0.286                                                        | 0.372                                                    | 0.275                                              |       |  |
|                                                                                               | TVW                                                                               | 0.631                                          | 0.420                                                           | 0.316                                                   | 0.577                                                         | 0.358                                                        | 0.451                                                    | 0.367                                              |       |  |
|            | UW                                                                                | 2.302                                          | 2.115                                                           | 2.120                                                   | 1.876                                                         | 1.868                                                        | 2.316                                                    | 2.315                                              |       |  |
|                                                                                               | SHGC                                                                              | 0.549                                          | 0.316                                                           | 0.237                                                   | 0.402                                                         | 0.289                                                        | 0.377                                                    | 0.278                                              |       |  |
|                                                                                               | TVW                                                                               | 0.640                                          | 0.426                                                           | 0.320                                                   | 0.585                                                         | 0.363                                                        | 0.458                                                    | 0.373                                              |       |  |
|            | UW                                                                                | 2.205                                          | 2.011                                                           | 2.009                                                   | 1.760                                                         | 1.752                                                        | 2.216                                                    | 2.212                                              |       |  |
|                                                                                               | SHGC                                                                              | 0.560                                          | 0.322                                                           | 0.241                                                   | 0.410                                                         | 0.295                                                        | 0.384                                                    | 0.283                                              |       |  |
|                                                                                               | TVW                                                                               | 0.654                                          | 0.435                                                           | 0.327                                                   | 0.598                                                         | 0.372                                                        | 0.468                                                    | 0.381                                              |       |  |
| <b>AFRC Lab Fenestration Performance Report</b>                                               |                                                                                   |                                                |                                                                 |                                                         | <b>1/02/2018</b>                                              |                                                              |                                                          | <b>B-16</b>                                        |       |  |

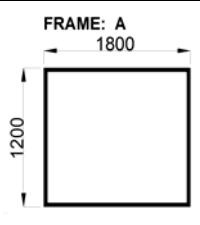
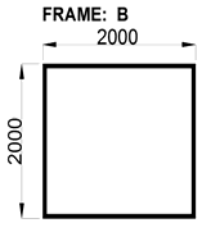
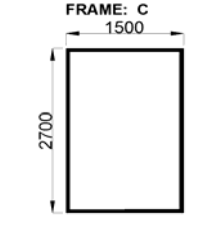
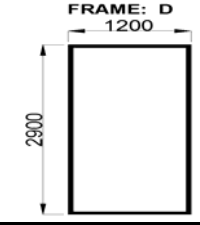
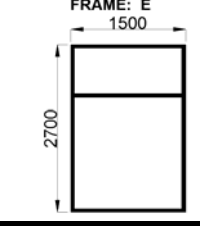
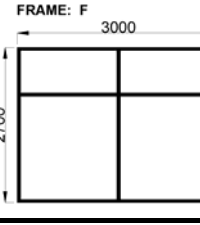
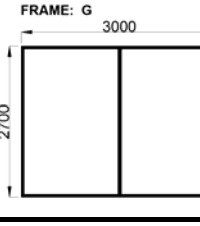
# PERFORMANCE TEST SPECIFICATIONS

## THERMAL ASSESSMENT

| PATH Thermal Break                                                                                     | GLASS SELECTION CHART - B17 |                                    |                                     |                                   |                                    |                                             |                                            |                                               |                                              |
|--------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------------------------------|---------------------------------------------|--------------------------------------------|-----------------------------------------------|----------------------------------------------|
|                                                                                                        | Fixed Light                 | 6mm Clear<br>12mm Air<br>6mm Clear | 10mm Clear<br>12mm Air<br>6mm Clear | 6mm Grey<br>12mm Air<br>6mm Clear | 10mm Grey<br>12mm Air<br>6mm Clear | 6mm Evantage Clear<br>12mm Air<br>6mm Clear | 6mm Evantage Grey<br>12mm Air<br>6mm Clear | 6mm Evantage S/Green<br>12mm Air<br>6mm Clear | 6mm Evantage S/Blue<br>12mm Air<br>6mm Clear |
| 150 x 55 Frame<br>Double Glazing                                                                       |                             |                                    |                                     |                                   |                                    |                                             |                                            |                                               |                                              |
| All Fixed Panels                                                                                       |                             |                                    |                                     |                                   |                                    |                                             |                                            |                                               |                                              |
| <b>FRAME: A</b><br>   | UW                          | 3.0                                | 3.0                                 | 3.0                               | 3.0                                | 2.4                                         | 2.4                                        | 2.4                                           | 2.4                                          |
|                                                                                                        | SHGC                        | 0.61                               | 0.55                                | 0.40                              | 0.32                               | 0.48                                        | 0.29                                       | 0.26                                          | 0.26                                         |
|                                                                                                        | TVW                         | 0.67                               | 0.65                                | 0.31                              | 0.21                               | 0.52                                        | 0.25                                       | 0.38                                          | 0.30                                         |
| <b>FRAME: B</b><br>   | UW                          | 2.8                                | 2.8                                 | 2.8                               | 2.8                                | 2.2                                         | 2.2                                        | 2.2                                           | 2.2                                          |
|                                                                                                        | SHGC                        | 0.64                               | 0.57                                | 0.41                              | 0.33                               | 0.50                                        | 0.31                                       | 0.27                                          | 0.26                                         |
|                                                                                                        | TVW                         | 0.70                               | 0.68                                | 0.33                              | 0.22                               | 0.55                                        | 0.26                                       | 0.40                                          | 0.31                                         |
| <b>FRAME: C</b><br> | UW                          | 2.8                                | 2.8                                 | 2.8                               | 2.8                                | 2.2                                         | 2.2                                        | 2.2                                           | 2.2                                          |
|                                                                                                        | SHGC                        | 0.63                               | 0.57                                | 0.41                              | 0.32                               | 0.50                                        | 0.30                                       | 0.27                                          | 0.26                                         |
|                                                                                                        | TVW                         | 0.70                               | 0.67                                | 0.33                              | 0.22                               | 0.55                                        | 0.26                                       | 0.39                                          | 0.31                                         |
| <b>FRAME: D</b><br> | UW                          | 2.8                                | 2.8                                 | 2.8                               | 2.8                                | 2.2                                         | 2.2                                        | 2.2                                           | 2.2                                          |
|                                                                                                        | SHGC                        | 0.62                               | 0.56                                | 0.40                              | 0.32                               | 0.49                                        | 0.30                                       | 0.27                                          | 0.26                                         |
|                                                                                                        | TVW                         | 0.68                               | 0.66                                | 0.32                              | 0.22                               | 0.54                                        | 0.25                                       | 0.39                                          | 0.31                                         |
| <b>FRAME: E</b><br> | UW                          | 2.9                                | 2.9                                 | 2.9                               | 2.9                                | 2.3                                         | 2.3                                        | 2.3                                           | 2.3                                          |
|                                                                                                        | SHGC                        | 0.62                               | 0.56                                | 0.40                              | 0.32                               | 0.49                                        | 0.30                                       | 0.26                                          | 0.26                                         |
|                                                                                                        | TVW                         | 0.68                               | 0.66                                | 0.32                              | 0.21                               | 0.53                                        | 0.25                                       | 0.39                                          | 0.30                                         |
| <b>FRAME: F</b><br> | UW                          | 2.9                                | 2.9                                 | 2.9                               | 2.9                                | 2.3                                         | 2.3                                        | 2.3                                           | 2.3                                          |
|                                                                                                        | SHGC                        | 0.63                               | 0.57                                | 0.41                              | 0.32                               | 0.50                                        | 0.30                                       | 0.27                                          | 0.26                                         |
|                                                                                                        | TVW                         | 0.69                               | 0.67                                | 0.33                              | 0.22                               | 0.54                                        | 0.26                                       | 0.39                                          | 0.31                                         |
| <b>FRAME: G</b><br> | UW                          | 2.8                                | 2.8                                 | 2.8                               | 2.8                                | 2.2                                         | 2.2                                        | 2.2                                           | 2.2                                          |
|                                                                                                        | SHGC                        | 0.65                               | 0.58                                | 0.42                              | 0.33                               | 0.51                                        | 0.31                                       | 0.27                                          | 0.27                                         |
|                                                                                                        | TVW                         | 0.71                               | 0.69                                | 0.33                              | 0.22                               | 0.56                                        | 0.26                                       | 0.40                                          | 0.32                                         |
| <b>AFRC Lab Fenestration Performance Report</b>                                                        |                             |                                    |                                     |                                   |                                    | <b>20/05/2020</b>                           | <b>B-17</b>                                |                                               |                                              |


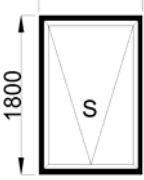
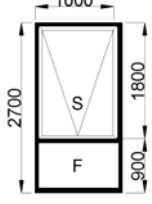
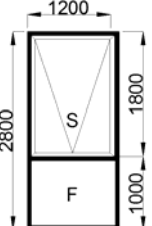
# PERFORMANCE TEST SPECIFICATIONS

## THERMAL ASSESSMENT

| PATH Thermal Break                                                                                      |                                                                                   | GLASS SELECTION CHART - B18                    |                                                                 |                                                         |                                                               |                                                              |                                                          |                                                    |                                           |      |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|-------------------------------------------|------|
|                                                                                                         |                                                                                   | 6mm Energy Tech Clear<br>12mm Air<br>6mm Clear | 6mm SolTech (#2) Neutral<br>12mm Air<br>6mm Clear PerformatechE | 6mm SolTech Grey<br>12mm Air<br>6mm Clear PerformatechE | 8.76mm Clear Laminated<br>12mm Argon<br>6mm Clear Performance | 8.76mm Grey Laminated<br>12mm Argon<br>6mm Clear Performance | 8.38mm Comfort+ Neutral<br>59<br>12mm Argon<br>6mm Clear | 8.38mm Comfort+ Blue 44<br>12mm Argon<br>6mm Clear | 6mm LoE 366-6 CIG 12mm<br>Argon 6mm Clear |      |
| <b>Fixed Light</b><br><br><b>150 x 55 Frame</b><br><b>Double Glazing</b><br><br><b>All Fixed Panels</b> |  | UW                                             | 2.3                                                             | 2.1                                                     | 2.1                                                           | 1.9                                                          | 1.9                                                      | 2.3                                                | 2.3                                       | 1.9  |
|                                                                                                         |                                                                                   | SHGC                                           | 0.53                                                            | 0.31                                                    | 0.23                                                          | 0.39                                                         | 0.28                                                     | 0.37                                               | 0.27                                      | 0.24 |
|                                                                                                         |                                                                                   | TVW                                            | 0.61                                                            | 0.41                                                    | 0.31                                                          | 0.57                                                         | 0.35                                                     | 0.44                                               | 0.36                                      | 0.53 |
|                        | UW                                                                                | 2.2                                            | 2.0                                                             | 2.0                                                     | 1.7                                                           | 1.7                                                          | 2.2                                                      | 2.1                                                | 1.7                                       |      |
|                                                                                                         | SHGC                                                                              | 0.55                                           | 0.32                                                            | 0.24                                                    | 0.40                                                          | 0.29                                                         | 0.38                                                     | 0.28                                               | 0.25                                      |      |
|                                                                                                         | TVW                                                                               | 0.65                                           | 0.43                                                            | 0.32                                                    | 0.59                                                          | 0.37                                                         | 0.46                                                     | 0.38                                               | 0.56                                      |      |
|                       | UW                                                                                | 2.1                                            | 1.9                                                             | 1.9                                                     | 1.7                                                           | 1.7                                                          | 2.1                                                      | 2.1                                                | 1.7                                       |      |
|                                                                                                         | SHGC                                                                              | 0.55                                           | 0.32                                                            | 0.24                                                    | 0.40                                                          | 0.29                                                         | 0.38                                                     | 0.28                                               | 0.25                                      |      |
|                                                                                                         | TVW                                                                               | 0.64                                           | 0.43                                                            | 0.32                                                    | 0.59                                                          | 0.37                                                         | 0.46                                                     | 0.38                                               | 0.55                                      |      |
|                      | UW                                                                                | 2.2                                            | 2.0                                                             | 2.0                                                     | 1.7                                                           | 1.7                                                          | 2.2                                                      | 2.2                                                | 1.7                                       |      |
|                                                                                                         | SHGC                                                                              | 0.54                                           | 0.31                                                            | 0.23                                                    | 0.40                                                          | 0.29                                                         | 0.37                                                     | 0.27                                               | 0.24                                      |      |
|                                                                                                         | TVW                                                                               | 0.63                                           | 0.42                                                            | 0.32                                                    | 0.58                                                          | 0.36                                                         | 0.45                                                     | 0.37                                               | 0.54                                      |      |
|                      | UW                                                                                | 2.2                                            | 2.1                                                             | 2.1                                                     | 1.8                                                           | 1.8                                                          | 2.2                                                      | 2.2                                                | 1.8                                       |      |
|                                                                                                         | SHGC                                                                              | 0.54                                           | 0.31                                                            | 0.23                                                    | 0.39                                                          | 0.28                                                         | 0.37                                                     | 0.27                                               | 0.24                                      |      |
|                                                                                                         | TVW                                                                               | 0.63                                           | 0.42                                                            | 0.32                                                    | 0.58                                                          | 0.36                                                         | 0.45                                                     | 0.37                                               | 0.54                                      |      |
|                      | UW                                                                                | 2.3                                            | 2.1                                                             | 2.1                                                     | 1.8                                                           | 1.8                                                          | 2.3                                                      | 2.3                                                | 1.8                                       |      |
|                                                                                                         | SHGC                                                                              | 0.55                                           | 0.32                                                            | 0.24                                                    | 0.40                                                          | 0.29                                                         | 0.38                                                     | 0.28                                               | 0.25                                      |      |
|                                                                                                         | TVW                                                                               | 0.64                                           | 0.43                                                            | 0.32                                                    | 0.59                                                          | 0.37                                                         | 0.46                                                     | 0.37                                               | 0.55                                      |      |
|                      | UW                                                                                | 2.2                                            | 2.0                                                             | 2.0                                                     | 1.7                                                           | 1.7                                                          | 2.2                                                      | 2.2                                                | 1.7                                       |      |
|                                                                                                         | SHGC                                                                              | 0.56                                           | 0.32                                                            | 0.24                                                    | 0.41                                                          | 0.29                                                         | 0.38                                                     | 0.28                                               | 0.25                                      |      |
|                                                                                                         | TVW                                                                               | 0.66                                           | 0.44                                                            | 0.33                                                    | 0.60                                                          | 0.37                                                         | 0.47                                                     | 0.38                                               | 0.56                                      |      |
| <b>AFRC Lab Fenestration Performance Report</b>                                                         |                                                                                   |                                                |                                                                 |                                                         | <b>20/05/2020</b>                                             |                                                              |                                                          | <b>B-18</b>                                        |                                           |      |

# PERFORMANCE TEST SPECIFICATIONS

## THERMAL ASSESSMENT

| PATH Thermal Break<br>Awning Sash<br>100 x 55 Frame<br>Double Glazing<br>50mm Sash                     | GLASS SELECTION CHART - B19 |                                    |                                     |                                   |                                    |                                             |                                            |                                               |                                              |
|--------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------------------------------|---------------------------------------------|--------------------------------------------|-----------------------------------------------|----------------------------------------------|
|                                                                                                        |                             | 6mm Clear<br>12mm Air<br>6mm Clear | 10mm Clear<br>12mm Air<br>6mm Clear | 6mm Grey<br>12mm Air<br>6mm Clear | 10mm Grey<br>12mm Air<br>6mm Clear | 6mm Evantage Clear<br>12mm Air<br>6mm Clear | 6mm Evantage Grey<br>12mm Air<br>6mm Clear | 6mm Evantage S/Green<br>12mm Air<br>6mm Clear | 6mm Evantage S/Blue<br>12mm Air<br>6mm Clear |
| <b>FRAME: H</b><br>   | UW                          | 3.425                              | 3.421                               | 3.425                             | 3.421                              | 3.094                                       | 3.093                                      | 3.098                                         | 3.093                                        |
|                                                                                                        | SHGC                        | 0.391                              | 0.354                               | 0.261                             | 0.212                              | 0.314                                       | 0.199                                      | 0.180                                         | 0.176                                        |
|                                                                                                        | TVW                         | 0.401                              | 0.388                               | 0.189                             | 0.126                              | 0.314                                       | 0.148                                      | 0.227                                         | 0.179                                        |
| <b>FRAME: I</b><br>   | UW                          | 3.279                              | 3.270                               | 3.279                             | 3.270                              | 2.859                                       | 2.859                                      | 2.865                                         | 2.859                                        |
|                                                                                                        | SHGC                        | 0.463                              | 0.419                               | 0.305                             | 0.246                              | 0.370                                       | 0.231                                      | 0.207                                         | 0.202                                        |
|                                                                                                        | TVW                         | 0.487                              | 0.471                               | 0.230                             | 0.153                              | 0.382                                       | 0.180                                      | 0.276                                         | 0.218                                        |
| <b>FRAME: J</b><br> | UW                          | 3.175                              | 3.175                               | 3.175                             | 3.175                              | 2.678                                       | 2.678                                      | 2.685                                         | 2.678                                        |
|                                                                                                        | SHGC                        | 0.535                              | 0.482                               | 0.349                             | 0.279                              | 0.425                                       | 0.261                                      | 0.234                                         | 0.228                                        |
|                                                                                                        | TVW                         | 0.574                              | 0.555                               | 0.270                             | 0.181                              | 0.449                                       | 0.211                                      | 0.324                                         | 0.256                                        |
| <b>FRAME: K</b><br> | UW                          | 3.126                              | 3.122                               | 3.126                             | 3.122                              | 2.603                                       | 2.603                                      | 2.610                                         | 2.603                                        |
|                                                                                                        | SHGC                        | 0.555                              | 0.500                               | 0.361                             | 0.289                              | 0.440                                       | 0.270                                      | 0.241                                         | 0.235                                        |
|                                                                                                        | TVW                         | 0.597                              | 0.578                               | 0.281                             | 0.188                              | 0.468                                       | 0.220                                      | 0.338                                         | 0.267                                        |
| <b>AFRC Lab Fenestration Performance Report</b>                                                        |                             |                                    |                                     |                                   |                                    | <b>1/02/2018</b>                            | <b>B-19</b>                                |                                               |                                              |

Windows are assessed for performance in four different ways.

U - value , Solar Heat Gain Coefficient , Visible Transmittance , Air Infiltration

**Uw** U-value measures how well a product prevents heat from escaping the building in winter and entering the building in summer. The lower the U-value (Uw), the better the thermal efficiency.


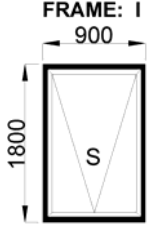
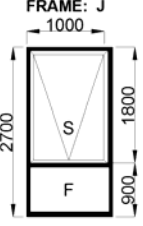
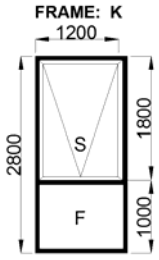
**SHGC** Solar Heat Gain Coefficient, measures how well a product blocks heat from the sun's rays. SHGC is expressed as a number between 0 and 1. The lower the SHGC, the better a product is at blocking unwanted heat gain.

**Tw** Visible Transmittance (Tw) measures how much light comes through a window. Tw is expressed as a number between 0 and 1. The higher the number the more daylight will enter a room.

**AI** Air Infiltration (AI) measures how much outside air leaks into the building through the window. The lower the AI the better. An AI of 0 is only possible with fixed windows.

# PERFORMANCE TEST SPECIFICATIONS

## THERMAL ASSESSMENT

| PATH Thermal Break                                                                                     | GLASS SELECTION CHART - B20 |                                                |                                                                |                                                        |                                                               |                                                              |                                                          |                                                    |  |
|--------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|--|
|                                                                                                        | Awning Sash                 | 6mm Energy Tech Clear<br>12mm Air<br>6mm Clear | 6mm SolTech (#2) Neutral<br>12mm Air<br>6mm Clear PerformanceE | 6mm SolTech Grey<br>12mm Air<br>6mm Clear PerformanceE | 8.76mm Clear Laminated<br>12mm Argon<br>6mm Clear Performance | 8.76mm Grey Laminated<br>12mm Argon<br>6mm Clear Performance | 8.38mm Comfort+ Neutral<br>59<br>12mm Argon<br>6mm Clear | 8.38mm Comfort+ Blue 44<br>12mm Argon<br>6mm Clear |  |
| 100 x 55 Frame<br>Double Glazing                                                                       |                             |                                                |                                                                |                                                        |                                                               |                                                              |                                                          |                                                    |  |
| 50mm Sash                                                                                              |                             |                                                |                                                                |                                                        |                                                               |                                                              |                                                          |                                                    |  |
| <b>FRAME: H</b><br>   | UW                          | 3.051                                          | 2.950                                                          | 2.941                                                  | 2.803                                                         | 2.803                                                        | 3.051                                                    | 3.047                                              |  |
|                                                                                                        | SHGC                        | 0.342                                          | 0.207                                                          | 0.160                                                  | 0.257                                                         | 0.191                                                        | 0.242                                                    | 0.184                                              |  |
|                                                                                                        | TVW                         | 0.371                                          | 0.247                                                          | 0.186                                                  | 0.340                                                         | 0.211                                                        | 0.266                                                    | 0.216                                              |  |
| <b>FRAME: I</b><br>   | UW                          | 2.804                                          | 2.676                                                          | 2.665                                                  | 2.495                                                         | 2.495                                                        | 2.807                                                    | 2.799                                              |  |
|                                                                                                        | SHGC                        | 0.404                                          | 0.240                                                          | 0.183                                                  | 0.300                                                         | 0.221                                                        | 0.282                                                    | 0.213                                              |  |
|                                                                                                        | TVW                         | 0.451                                          | 0.300                                                          | 0.226                                                  | 0.412                                                         | 0.256                                                        | 0.323                                                    | 0.263                                              |  |
| <b>FRAME: J</b><br> | UW                          | 2.614                                          | 2.462                                                          | 1.459                                                  | 2.253                                                         | 2.251                                                        | 2.620                                                    | 2.618                                              |  |
|                                                                                                        | SHGC                        | 0.465                                          | 0.272                                                          | 0.206                                                  | 0.343                                                         | 0.250                                                        | 0.322                                                    | 0.240                                              |  |
|                                                                                                        | TVW                         | 0.530                                          | 0.353                                                          | 0.266                                                  | 0.485                                                         | 0.301                                                        | 0.380                                                    | 0.309                                              |  |
| <b>FRAME: K</b><br> | UW                          | 2.535                                          | 2.375                                                          | 2.371                                                  | 2.157                                                         | 2.155                                                        | 2.542                                                    | 2.538                                              |  |
|                                                                                                        | SHGC                        | 0.482                                          | 0.281                                                          | 0.212                                                  | 0.355                                                         | 0.258                                                        | 0.333                                                    | 0.248                                              |  |
|                                                                                                        | TVW                         | 0.553                                          | 0.368                                                          | 0.277                                                  | 0.506                                                         | 0.314                                                        | 0.396                                                    | 0.322                                              |  |
| <b>AFRC Lab Fenestration Performance Report</b>                                                        |                             |                                                |                                                                |                                                        |                                                               | <b>1/02/2018</b>                                             |                                                          | <b>B-20</b>                                        |  |

Windows are assessed for performance in four different ways.

U - value , Solar Heat Gain Coefficient , Visible Transmittance , Air Infiltration

**Uw** U-value measures how well a product prevents heat from escaping the building in winter and entering the building in summer.  
The lower the U-value (Uw), the better the thermal efficiency.

**SHGC** Solar Heat Gain Coefficient, measures how well a product blocks heat from the sun's rays. SHGC is expressed as a number between 0 and 1.  
The lower the SHGC, the better a product is at blocking unwanted heat gain.

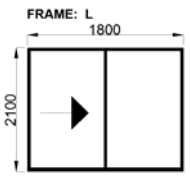
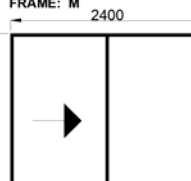
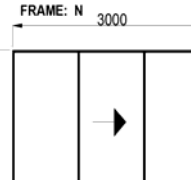
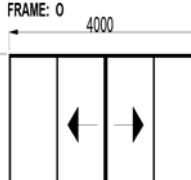
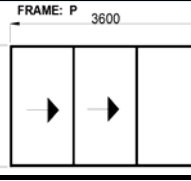
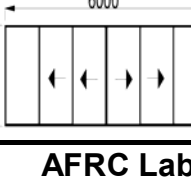
**TVw** Visible Transmittance (TVw) measures how much light comes through a window. TVw is expressed as a number between 0 and 1.  
The higher the number the more daylight will enter a room.

**AI** Air Infiltration (AI) measures how much outside air leaks into the building through the window. The Lower the AI the better.  
An AI of 0 is only possible with fixed windows.



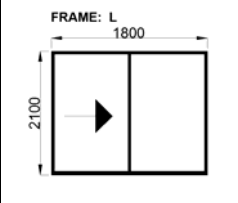
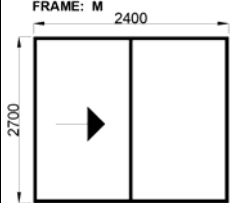
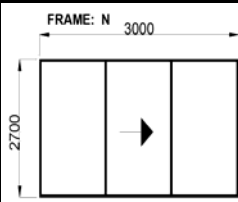
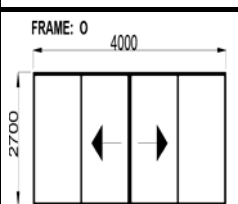
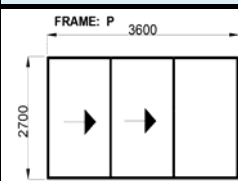
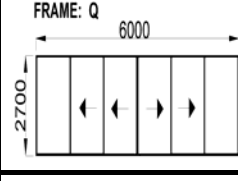
# PERFORMANCE TEST SPECIFICATIONS

## THERMAL ASSESSMENT

| PATH Thermal Break                                                                              |                                                                                     | GLASS SELECTION CHART - B21        |                                     |                                   |                                    |                                             |                                            |                                               |                                              |       |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------------------------------|---------------------------------------------|--------------------------------------------|-----------------------------------------------|----------------------------------------------|-------|
|                                                                                                 |                                                                                     | 6mm Clear<br>12mm Air<br>6mm Clear | 10mm Clear<br>12mm Air<br>6mm Clear | 6mm Grey<br>12mm Air<br>6mm Clear | 10mm Grey<br>12mm Air<br>6mm Clear | 6mm Evantage Clear<br>12mm Air<br>6mm Clear | 6mm Evantage Grey<br>12mm Air<br>6mm Clear | 6mm Evantage S/Green<br>12mm Air<br>6mm Clear | 6mm Evantage S/Blue<br>12mm Air<br>6mm Clear |       |
| <b>Sliding Door</b><br><br><b>100 x 55 Frame</b><br><b>Double Glazing</b><br><br><b>2 Track</b> |    | UW                                 | 3.265                               | 3.241                             | 3.265                              | 3.241                                       | 2.762                                      | 2.762                                         | 2.769                                        | 2.762 |
|                                                                                                 |                                                                                     | SHGC                               | 0.531                               | 0.478                             | 0.345                              | 0.274                                       | 0.420                                      | 0.257                                         | 0.229                                        | 0.223 |
|                                                                                                 |                                                                                     | TVW                                | 0.575                               | 0.556                             | 0.271                              | 0.181                                       | 0.450                                      | 0.212                                         | 0.325                                        | 0.257 |
|                | UW                                                                                  | 3.140                              | 3.115                               | 3.140                             | 3.115                              | 2.587                                       | 2.586                                      | 2.594                                         | 2.586                                        |       |
|                                                                                                 | SHGC                                                                                | 0.572                              | 0.514                               | 0.370                             | 0.294                              | 0.452                                       | 0.275                                      | 0.245                                         | 0.239                                        |       |
|                                                                                                 | TVW                                                                                 | 0.623                              | 0.602                               | 0.293                             | 0.196                              | 0.488                                       | 0.229                                      | 0.352                                         | 0.278                                        |       |
|               | UW                                                                                  | 3.207                              | 3.181                               | 3.207                             | 3.181                              | 2.659                                       | 2.659                                      | 2.667                                         | 2.659                                        |       |
|                                                                                                 | SHGC                                                                                | 0.570                              | 0.513                               | 0.370                             | 0.294                              | 0.451                                       | 0.275                                      | 0.245                                         | 0.238                                        |       |
|                                                                                                 | TVW                                                                                 | 0.620                              | 0.600                               | 0.292                             | 0.195                              | 0.486                                       | 0.229                                      | 0.351                                         | 0.277                                        |       |
|              | UW                                                                                  | 3.170                              | 3.145                               | 3.170                             | 3.145                              | 2.627                                       | 2.627                                      | 2.635                                         | 2.627                                        |       |
|                                                                                                 | SHGC                                                                                | 0.564                              | 0.507                               | 0.365                             | 0.290                              | 0.446                                       | 0.272                                      | 0.242                                         | 0.236                                        |       |
|                                                                                                 | TVW                                                                                 | 0.614                              | 0.593                               | 0.289                             | 0.193                              | 0.481                                       | 0.226                                      | 0.347                                         | 0.274                                        |       |
| PATH Thermal Break                                                                              |                                                                                     | GLASS SELECTION CHART - B23        |                                     |                                   |                                    |                                             |                                            |                                               |                                              |       |
| <b>Sliding Door</b><br><br><b>150 x 55 Frame</b><br><b>Double Glazing</b><br><br><b>3 Track</b> |  | UW                                 | 3.257                               | 3.232                             | 3.257                              | 3.232                                       | 2.715                                      | 2.714                                         | 2.722                                        | 2.714 |
|                                                                                                 |                                                                                     | SHGC                               | 0.568                               | 0.511                             | 0.369                              | 0.294                                       | 0.450                                      | 0.275                                         | 0.245                                        | 0.239 |
|                                                                                                 |                                                                                     | TVW                                | 0.616                               | 0.595                             | 0.290                              | 0.194                                       | 0.482                                      | 0.227                                         | 0.348                                        | 0.275 |
|              | UW                                                                                  | 3.303                              | 3.275                               | 3.303                             | 3.275                              | 2.753                                       | 2.752                                      | 2.760                                         | 2.752                                        |       |
|                                                                                                 | SHGC                                                                                | 0.577                              | 0.520                               | 0.375                             | 0.298                              | 0.457                                       | 0.279                                      | 0.249                                         | 0.243                                        |       |
|                                                                                                 | TVW                                                                                 | 0.625                              | 0.605                               | 0.294                             | 0.197                              | 0.490                                       | 0.230                                      | 0.354                                         | 0.279                                        |       |
| <b>AFRC Lab Fenestration Performance Report</b>                                                 |                                                                                     |                                    |                                     |                                   |                                    | <b>1/02/2018</b>                            |                                            | <b>B-21-23</b>                                |                                              |       |

# PERFORMANCE TEST SPECIFICATIONS

## THERMAL ASSESSMENT

| PATH Thermal Break<br>Sliding Door<br>100 x 55 Frame<br>Double Glazing<br>2 Track   |      | GLASS SELECTION CHART - B22                    |                                                                 |                                                         |                                                               |                                                              |                                                          |                                                    |  |
|-------------------------------------------------------------------------------------|------|------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|--|
|                                                                                     |      | 6mm Energy Tech Clear<br>12mm Air<br>6mm Clear | 6mm SolTech (#2) Neutral<br>12mm Air<br>6mm Clear PerformatechE | 6mm SolTech Grey<br>12mm Air<br>6mm Clear PerformatechE | 8.76mm Clear Laminated<br>12mm Argon<br>6mm Clear Performance | 8.76mm Grey Laminated<br>12mm Argon<br>6mm Clear Performance | 8.38mm Comfort+ Neutral<br>59<br>12mm Argon<br>6mm Clear | 8.38mm Comfort+ Blue 44<br>12mm Argon<br>6mm Clear |  |
|    | UW   | 2.697                                          | 2.542                                                           | 2.520                                                   | 2.322                                                         | 2.322                                                        | 2.694                                                    | 2.680                                              |  |
|                                                                                     | SHGC | 0.461                                          | 0.267                                                           | 0.201                                                   | 0.338                                                         | 0.245                                                        | 0.318                                                    | 0.235                                              |  |
|                                                                                     | TVW  | 0.532                                          | 0.354                                                           | 0.266                                                   | 0.487                                                         | 0.302                                                        | 0.381                                                    | 0.310                                              |  |
|    | UW   | 2.514                                          | 2.344                                                           | 2.323                                                   | 2.107                                                         | 2.107                                                        | 2.515                                                    | 2.500                                              |  |
|                                                                                     | SHGC | 0.496                                          | 0.287                                                           | 0.214                                                   | 0.363                                                         | 0.262                                                        | 0.341                                                    | 0.252                                              |  |
|                                                                                     | TVW  | 0.576                                          | 0.333                                                           | 0.288                                                   | 0.527                                                         | 0.327                                                        | 0.412                                                    | 0.336                                              |  |
|   | UW   | 2.587                                          | 2.419                                                           | 2.397                                                   | 2.182                                                         | 2.182                                                        | 2.587                                                    | 2.572                                              |  |
|                                                                                     | SHGC | 0.495                                          | 0.286                                                           | 0.214                                                   | 0.363                                                         | 0.262                                                        | 0.340                                                    | 0.251                                              |  |
|                                                                                     | TVW  | 0.574                                          | 0.382                                                           | 0.287                                                   | 0.525                                                         | 0.326                                                        | 0.411                                                    | 0.334                                              |  |
|  | UW   | 2.556                                          | 2.390                                                           | 2.368                                                   | 2.155                                                         | 2.155                                                        | 2.556                                                    | 2.542                                              |  |
|                                                                                     | SHGC | 0.489                                          | 0.283                                                           | 0.212                                                   | 0.359                                                         | 0.259                                                        | 0.337                                                    | 0.249                                              |  |
|                                                                                     | TVW  | 0.568                                          | 0.378                                                           | 0.284                                                   | 0.519                                                         | 0.322                                                        | 0.406                                                    | 0.331                                              |  |
| PATH Thermal Break<br>Sliding Door<br>150 x 55 Frame<br>Double Glazing<br>3 Track   |      | GLASS SELECTION CHART - B24                    |                                                                 |                                                         |                                                               |                                                              |                                                          |                                                    |  |
|                                                                                     |      | 6mm Energy Tech Clear<br>12mm Air<br>6mm Clear | 6mm SolTech (#2) Neutral<br>12mm Air<br>6mm Clear PerformatechE | 6mm SolTech Grey<br>12mm Air<br>6mm Clear PerformatechE | 8.76mm Clear Laminated<br>12mm Argon<br>6mm Clear Performance | 8.76mm Grey Laminated<br>12mm Argon<br>6mm Clear Performance | 8.38mm Comfort+ Neutral<br>59<br>12mm Argon<br>6mm Clear | 8.38mm Comfort+ Blue 44<br>12mm Argon<br>6mm Clear |  |
|  | UW   | 2.501                                          | 2.477                                                           | 2.455                                                   | 2.243                                                         | 2.243                                                        | 2.639                                                    | 2.629                                              |  |
|                                                                                     | SHGC | 0.286                                          | 0.286                                                           | 0.215                                                   | 0.362                                                         | 0.262                                                        | 0.340                                                    | 0.252                                              |  |
|                                                                                     | TVW  | 0.379                                          | 0.379                                                           | 0.285                                                   | 0.521                                                         | 0.324                                                        | 0.408                                                    | 0.332                                              |  |
|  | UW   | 2.681                                          | 2.512                                                           | 2.487                                                   | 2.272                                                         | 2.272                                                        | 2.671                                                    | 2.663                                              |  |
|                                                                                     | SHGC | 0.501                                          | 0.291                                                           | 0.218                                                   | 0.368                                                         | 0.266                                                        | 0.346                                                    | 0.256                                              |  |
|                                                                                     | TVW  | 0.578                                          | 0.385                                                           | 0.289                                                   | 0.529                                                         | 0.329                                                        | 0.414                                                    | 0.337                                              |  |
| <b>AFRC Lab Fenestration Performance Report</b>                                     |      |                                                |                                                                 |                                                         | <b>1/02/2018</b>                                              |                                                              | <b>B-22-24</b>                                           |                                                    |  |