

**NFRC U-FACTOR, SHGC, VT, &  
CONDENSATION RESISTANCE  
COMPUTER SIMULATION REPORT**

**Rendered to:**  
**UNITED STATES ALUMINUM**

**SERIES/MODEL:**  
**FT601 Curtain Wall (Bratton Corp)**

| <i>Baseline Product for Validation Testing</i>    |                                                |
|---------------------------------------------------|------------------------------------------------|
| <b>Simulated Thermal Transmittance (U-Factor)</b> |                                                |
|                                                   | <b>0.459</b>                                   |
| Unit Size:                                        | 78.75 inches wide by 78.75 inches high         |
| Glazing Layer 1:                                  | 0.25 in TiAC36 Lowe (e=0.034,#2)               |
| Gap 1:                                            | 0.500 inch Stainless Steel (SS-D) - Air Filled |
| Glazing Layer 2:                                  | 0.25 in Clear                                  |
| Gap 2:                                            |                                                |
| Glazing Layer 3:                                  |                                                |
| Notes:                                            |                                                |

**Report Number:** 93418.01-116-45  
**Report Date:** 07/30/09  
**Expiration Date:** 07/30/13

**NFRC U-FACTOR, SHGC, VT, & CONDENSATION RESISTANCE  
COMPUTER SIMULATION REPORT**

Rendered to:  
UNITED STATES ALUMINUM  
200 Singleton Drive  
Waxahachie, TX 75165

Report Number: 93418.01-116-45  
Simulation Date: 07/30/09  
Report Date: 07/30/09  
Expiration Date: 07/30/13

**Project Summary:**

Architectural Testing, Inc. was contracted to perform U-Factor, Solar Heat Gain Coefficient, Visible Transmittance, and Condensation Resistance\* computer simulations in accordance with the National Fenestration Rating Council (NFRC). The products were evaluated in full compliance with NFRC requirements to the standards listed below.

*\*NFRC's Condensation Resistance rating is NOT equivalent to a Condensation Resistance Factor (CRF) determined in accordance with AAMA 1503.*

**Standards:**

*NFRC 100-2004: Procedure for Determining Fenestration Product U-Factors*  
*NFRC 200-2004: Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence*  
*NFRC 500-2004: Procedure for Determining Fenestration Product Condensation Resistance Values*

**Software:**

**Frame and Edge Modeling:** THERM 5.2.14  
**Center-of-Glass Modeling:** WINDOW 5.2.17  
**Total Product Calculations:** WINDOW 5.2.17  
**Spectral Data Library:** 17.0

**Simulations Specimen Description:**

**Series/Model:** FT601 Curtain Wall (Bratton Corp)  
**Type:** Glazed Wall System , Curtain Wall  
**Frame Material:** AT Aluminum w/ Thermal Breaks - All Members  
**Sash Material:** NA Not Applicable  
**Standard Size:** 2000mm x 2000mm

**Technical Interpretations:**

None

**Modeling Assumptions:**

- 1) To prevent air infiltration, tape was applied to all interior sash crack locations.

**Specialty Products Table:**

The specialty products method allow the manufacturer to determine the overall product SHGC and VT for any glazing option. The center of glass SHGC and/or VT must be determined using WINDOW 5.2. The method gives overall product SHGC and VT indexed on center of glass properties. All values used in the calculations are truncated to six decimal place precision.

|       | No Dividers | Dividers < 1 | Dividers > 1 |
|-------|-------------|--------------|--------------|
| SHGC0 | 0.010965    | 0.014371     | 0.017563     |
| SHGC1 | 0.892188    | 0.791562     | 0.697255     |
| VT0   | 0.000000    | 0.000000     | 0.000000     |
| VT1   | 0.881223    | 0.777191     | 0.679691     |

$$SHGC = SHGC0 + SHGCc (SHGC1 - SHGC0)$$

$$VT = VT0 + VTc (VT1 - VT0)$$

**Validation Matrix:**

The following products are part of a validation matrix. Only one is required for validation

| <i>Product Line</i> | <i>Report Number</i> |
|---------------------|----------------------|
| None                | -                    |

### Spacer Option Description

| <i>Spacer Type</i>     | <i>Sealant</i> |                       |                  |
|------------------------|----------------|-----------------------|------------------|
|                        | <i>Primary</i> | <i>Secondary</i>      | <i>Desiccant</i> |
| Aluminum Spacer        | Butyl Rubber   | Butyl Rubber          | Yes              |
| Stainless Steel Spacer | PIB            | Urethane/Polyurethane | Yes              |
| Intercept Spacer       | PIB            | Polyurethane          | Yes              |
| Super Spacer           | Butyl Rubber   | Silicone Foam         | No               |

### Grid Option Description

| <i>Grid Size</i> | <i>Grid Type</i> | <i>Grid Pattern</i> |
|------------------|------------------|---------------------|
| None             | -                | -                   |

### Reinforcement Option Description

| <i>Location</i> | <i>Material</i> |
|-----------------|-----------------|
| None            | -               |

### Gas Filling Technique Description

| <i>Fill Type</i> | <i>Method</i>       |
|------------------|---------------------|
| 90% Argon        | Single probe, timed |

### Edge-of-Glass Construction

|                           |                                                   |
|---------------------------|---------------------------------------------------|
| <i>Interior Condition</i> | EPDM gasket between glazing and aluminum interior |
| <i>Exterior Condition</i> | EPDM gasket between glazing and aluminum exterior |

### Weatherstripping

| <i>Type</i> | <i>Quantity</i> | <i>Location</i> |
|-------------|-----------------|-----------------|
| None        | -               | -               |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1                       | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill | Low-e (Surface#)                                      | Tint | Spacer                     | Grid Type |
|----|----------------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|----------|-------------------------------------------------------|------|----------------------------|-----------|
|    | U-Factor                               |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  |          | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |      | Condensation<br>Resistance |           |
| 1  | Clear / air / Clear                    |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                                  | 0.500       | 0.225            |                                                               |                  |             |                  | AIR      |                                                       | CL   | A1-D                       | N         |
|    | 0.61                                   |             |                  | SHGC (N) 0.63                                                 |                  |             |                  |          | VT (N) 0.69                                           |      | CR 39                      |           |
| 2  | Clear / arg / Clear                    |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                                  | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90    |                                                       | CL   | A1-D                       | N         |
|    | 0.59                                   |             |                  | SHGC (N) 0.63                                                 |                  |             |                  |          | VT (N) 0.69                                           |      | CR 40                      |           |
| 3  | Solarban 60 / air / Clear              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#2)                                             | CL   | A1-D                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.35                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR 47                      |           |
| 4  | Clear / air / Solarban 60              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#3)                                             | CL   | A1-D                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR 47                      |           |
|    | Solarban 60 / arg / Clear              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.035(#2)                                             | CL   | A1-D                       | N         |
|    | 0.43                                   |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR 47                      |           |
| 5  | Clear / arg / Solarban 60              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.035(#3)                                             | CL   | A1-D                       | N         |
|    | 0.43                                   |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR 47                      |           |
|    | Solarban 60 on Atlantica / air / Clear |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#2)                                             | GR   | A1-D                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  |          | VT (N) 0.47                                           |      | CR 47                      |           |
| 6  | Atlantica / air / Solarban 60          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#3)                                             | GR   | A1-D                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.28                                                 |                  |             |                  |          | VT (N) 0.47                                           |      | CR 47                      |           |
|    | Solarban 70XL / air / Clear            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.018(#2)                                             | CL   | A1-D                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR 47                      |           |
| 6  | Clear / air / Solarban 70XL            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.018(#3)                                             | CL   | A1-D                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR 47                      |           |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1            | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill | Low-e (Surface#)                                      | Tint | Spacer                     | Grid Type |
|----|-----------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|----------|-------------------------------------------------------|------|----------------------------|-----------|
|    | U-Factor                    |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  |          | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |      | Condensation<br>Resistance |           |
| 7  | Solarban 70XL / arg / Clear |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                       | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.018(#2)                                             | CL   | A1-D                       | N         |
|    | 0.42                        |             |                  | SHGC (N) 0.25                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 48        |
|    | Clear / arg / Solarban 70XL |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                       | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.018(#3)                                             | CL   | A1-D                       | N         |
|    | 0.42                        |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 48        |
| 8  | VE185 / air / Clear         |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                       | 0.500       | 0.225            |                                                               |                  |             |                  | AIR      | 0.088(#2)                                             | CL   | A1-D                       | N         |
|    | 0.48                        |             |                  | SHGC (N) 0.49                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 46        |
|    | Clear / air / VE185         |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                       | 0.500       | 0.222            |                                                               |                  |             |                  | AIR      | 0.088(#3)                                             | CL   | A1-D                       | N         |
|    | 0.48                        |             |                  | SHGC (N) 0.52                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 46        |
| 9  | VE185 / arg / Clear         |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                       | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90    | 0.088(#2)                                             | CL   | A1-D                       | N         |
|    | 0.44                        |             |                  | SHGC (N) 0.49                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 47        |
|    | Clear / arg / VE185         |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                       | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90    | 0.088(#3)                                             | CL   | A1-D                       | N         |
|    | 0.44                        |             |                  | SHGC (N) 0.52                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 47        |
| 10 | VE12M / air / Clear         |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                       | 0.500       | 0.225            |                                                               |                  |             |                  | AIR      | 0.040(#2)                                             | CL   | A1-D                       | N         |
|    | 0.47                        |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 47        |
|    | Clear / air / VE12M         |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                       | 0.500       | 0.222            |                                                               |                  |             |                  | AIR      | 0.040(#3)                                             | CL   | A1-D                       | N         |
|    | 0.47                        |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 47        |
| 11 | VE12M / arg / Clear         |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                       | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90    | 0.040(#2)                                             | CL   | A1-D                       | N         |
|    | 0.43                        |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 47        |
|    | Clear / arg / VE12M         |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                       | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90    | 0.040(#3)                                             | CL   | A1-D                       | N         |
|    | 0.43                        |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 47        |



# NFRC 100/200/500 Summary Sheet

## FT601 Curtain Wall (Bratton Corp)

| ID   | Pane Thickness 1               | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill                                              | Low-e (Surface#) | Tint  | Spacer                     | Grid Type |
|------|--------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|-------------------------------------------------------|------------------|-------|----------------------------|-----------|
|      | U-Factor                       |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |                  |       | Condensation<br>Resistance |           |
| 12   | Comfort TiAC36 / air / Clear   |             |                  |                                                               |                  |             |                  |                                                       |                  |       |                            |           |
|      | 0.222                          | 0.500       | 0.225            |                                                               |                  |             |                  | AIR                                                   | 0.034(#2)        | CL    | A1-D                       | N         |
|      | 0.46                           |             |                  | SHGC (N) 0.33                                                 |                  |             |                  | VT (N) 0.57                                           |                  |       | CR 47                      |           |
|      | Clear / air / Comfort TiAC36   |             |                  |                                                               |                  |             |                  |                                                       |                  |       |                            |           |
|      | 0.225                          | 0.500       | 0.222            |                                                               |                  |             |                  | AIR                                                   | 0.034(#3)        | CL    | A1-D                       | N         |
|      | 0.46                           |             |                  | SHGC (N) 0.41                                                 |                  |             |                  | VT (N) 0.57                                           |                  |       | CR 47                      |           |
| 13   | Comfort TiAC36 / arg / Clear   |             |                  |                                                               |                  |             |                  |                                                       |                  |       |                            |           |
|      | 0.222                          | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90                                                 | 0.034(#2)        | CL    | A1-D                       | N         |
|      | 0.43                           |             |                  | SHGC (N) 0.32                                                 |                  |             |                  | VT (N) 0.57                                           |                  |       | CR 47                      |           |
|      | Clear / arg / Comfort TiAC36   |             |                  |                                                               |                  |             |                  |                                                       |                  |       |                            |           |
|      | 0.225                          | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90                                                 | 0.034(#3)        | CL    | A1-D                       | N         |
|      | 0.43                           |             |                  | SHGC (N) 0.41                                                 |                  |             |                  | VT (N) 0.57                                           |                  |       | CR 47                      |           |
| 14   | Comfort TiAC23 / air / Clear   |             |                  |                                                               |                  |             |                  |                                                       |                  |       |                            |           |
|      | 0.228                          | 0.500       | 0.225            |                                                               |                  |             |                  | AIR                                                   | 0.041(#2)        | CL    | A1-D                       | N         |
|      | 0.47                           |             |                  | SHGC (N) 0.22                                                 |                  |             |                  | VT (N) 0.34                                           |                  |       | CR 47                      |           |
|      | Clear / air / Comfort TiAC23   |             |                  |                                                               |                  |             |                  |                                                       |                  |       |                            |           |
|      | 0.225                          | 0.500       | 0.228            |                                                               |                  |             |                  | AIR                                                   | 0.041(#3)        | CL    | A1-D                       | N         |
|      | 0.47                           |             |                  | SHGC (N) 0.42                                                 |                  |             |                  | VT (N) 0.34                                           |                  |       | CR 47                      |           |
| 15   | Comfort TiAC23 / arg / Clear   |             |                  |                                                               |                  |             |                  |                                                       |                  |       |                            |           |
|      | 0.228                          | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90                                                 | 0.041(#2)        | CL    | A1-D                       | N         |
|      | 0.43                           |             |                  | SHGC (N) 0.21                                                 |                  |             |                  | VT (N) 0.34                                           |                  |       | CR 47                      |           |
|      | Clear / arg / Comfort TiAC23   |             |                  |                                                               |                  |             |                  |                                                       |                  |       |                            |           |
|      | 0.225                          | 0.500       | 0.228            |                                                               |                  |             |                  | ARG90                                                 | 0.041(#3)        | CL    | A1-D                       | N         |
|      | 0.43                           |             |                  | SHGC (N) 0.42                                                 |                  |             |                  | VT (N) 0.34                                           |                  |       | CR 47                      |           |
| 16   | Energy Advantage / air / Clear |             |                  |                                                               |                  |             |                  |                                                       |                  |       |                            |           |
|      | 0.222                          | 0.500       | 0.223            |                                                               |                  |             |                  | AIR                                                   | 0.157(#2)        | CL    | A1-D                       | N         |
|      | 0.50                           |             |                  | SHGC (N) 0.56                                                 |                  |             |                  | VT (N) 0.64                                           |                  |       | CR 45                      |           |
|      | Clear / air / Energy Advantage |             |                  |                                                               |                  |             |                  |                                                       |                  |       |                            |           |
|      | 0.223                          | 0.500       | 0.222            |                                                               |                  |             |                  | AIR                                                   | 0.157(#3)        | CL    | A1-D                       | N         |
| 0.50 |                                |             | SHGC (N) 0.60    |                                                               |                  |             | VT (N) 0.64      |                                                       |                  | CR 45 |                            |           |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1               | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill | Low-e (Surface#)                                      | Tint | Spacer                     | Grid Type |
|----|--------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|----------|-------------------------------------------------------|------|----------------------------|-----------|
|    | U-Factor                       |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  |          | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |      | Condensation<br>Resistance |           |
|    |                                |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
| 17 | Energy Advantage / arg / Clear |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                          | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.157(#2)                                             | CL   | A1-D                       | N         |
|    | 0.46                           |             |                  | SHGC (N) 0.56                                                 |                  |             |                  |          | VT (N) 0.64                                           |      | CR                         | 47        |
|    | Clear / arg / Energy Advantage |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90    | 0.157(#3)                                             | CL   | A1-D                       | N         |
|    | 0.46                           |             |                  | SHGC (N) 0.60                                                 |                  |             |                  |          | VT (N) 0.64                                           |      | CR                         | 47        |
| 18 | Sungate 100 / air / Clear      |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.087(#2)                                             | CL   | A1-D                       | N         |
|    | 0.48                           |             |                  | SHGC (N) 0.49                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 46        |
|    | Clear / air / Sungate 100      |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.087(#3)                                             | CL   | A1-D                       | N         |
|    | 0.48                           |             |                  | SHGC (N) 0.52                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 46        |
| 19 | Solarban 80 / air / Clear      |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.024(#2)                                             | CL   | A1-D                       | N         |
|    | 0.46                           |             |                  | SHGC (N) 0.22                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR                         | 47        |
|    | Clear / air / Solarban 80      |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.024(#3)                                             | CL   | A1-D                       | N         |
|    | 0.46                           |             |                  | SHGC (N) 0.27                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR                         | 47        |
| 20 | Solarban 80 / arg / Clear      |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.024(#2)                                             | CL   | A1-D                       | N         |
|    | 0.42                           |             |                  | SHGC (N) 0.22                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR                         | 47        |
|    | Clear / arg / Solarban 80      |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.024(#3)                                             | CL   | A1-D                       | N         |
|    | 0.42                           |             |                  | SHGC (N) 0.27                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR                         | 47        |
| 21 | Atlantica / air / Solarban 60  |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#3)                                             | GR   | A1-D                       | N         |
|    | 0.46                           |             |                  | SHGC (N) 0.28                                                 |                  |             |                  |          | VT (N) 0.47                                           |      | CR                         | 47        |
| 22 | Clear / air / Clear            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                          | 0.500       | 0.225            |                                                               |                  |             |                  | AIR      |                                                       | CL   | CU-S                       | N         |
|    | 0.60                           |             |                  | SHGC (N) 0.63                                                 |                  |             |                  |          | VT (N) 0.69                                           |      | CR                         | 41        |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1                       | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill                                              | Low-e (Surface#) | Tint | Spacer                     | Grid Type |
|----|----------------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|-------------------------------------------------------|------------------|------|----------------------------|-----------|
|    | U-Factor                               |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |                  |      | Condensation<br>Resistance |           |
| 23 | Clear / arg / Clear                    |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.225                                  | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90                                                 |                  | CL   | CU-S                       | N         |
|    | 0.58                                   |             |                  | SHGC (N) 0.63                                                 |                  |             |                  | VT (N) 0.69                                           |                  |      | CR 42                      |           |
| 24 | Solarban 60 / air / Clear              |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR                                                   | 0.035(#2)        | CL   | CU-S                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.35                                                 |                  |             |                  | VT (N) 0.62                                           |                  |      | CR 48                      |           |
|    | Clear / air / Solarban 60              |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR                                                   | 0.035(#3)        | CL   | CU-S                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.41                                                 |                  |             |                  | VT (N) 0.62                                           |                  |      | CR 48                      |           |
| 25 | Solarban 60 / arg / Clear              |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90                                                 | 0.035(#2)        | CL   | CU-S                       | N         |
|    | 0.42                                   |             |                  | SHGC (N) 0.34                                                 |                  |             |                  | VT (N) 0.62                                           |                  |      | CR 49                      |           |
|    | Clear / arg / Solarban 60              |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90                                                 | 0.035(#3)        | CL   | CU-S                       | N         |
|    | 0.42                                   |             |                  | SHGC (N) 0.41                                                 |                  |             |                  | VT (N) 0.62                                           |                  |      | CR 49                      |           |
| 26 | Solarban 60 on Atlantica / air / Clear |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR                                                   | 0.035(#2)        | GR   | CU-S                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  | VT (N) 0.47                                           |                  |      | CR 48                      |           |
|    | Atlantica / air / Solarban 60          |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR                                                   | 0.035(#3)        | GR   | CU-S                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.28                                                 |                  |             |                  | VT (N) 0.47                                           |                  |      | CR 48                      |           |
| 27 | Solarban 70XL / air / Clear            |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR                                                   | 0.018(#2)        | CL   | CU-S                       | N         |
|    | 0.45                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  | VT (N) 0.56                                           |                  |      | CR 48                      |           |
|    | Clear / air / Solarban 70XL            |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR                                                   | 0.018(#3)        | CL   | CU-S                       | N         |
|    | 0.45                                   |             |                  | SHGC (N) 0.34                                                 |                  |             |                  | VT (N) 0.56                                           |                  |      | CR 48                      |           |
| 28 | Solarban 70XL / arg / Clear            |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90                                                 | 0.018(#2)        | CL   | CU-S                       | N         |
|    | 0.41                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  | VT (N) 0.56                                           |                  |      | CR 49                      |           |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1             | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill | Low-e (Surface#)                                      | Tint | Spacer                     | Grid Type |
|----|------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|----------|-------------------------------------------------------|------|----------------------------|-----------|
|    | U-Factor                     |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  |          | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |      | Condensation<br>Resistance |           |
|    | Clear / arg / Solarban 70XL  |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                        | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.018(#3)                                             | CL   | CU-S                       | N         |
|    | 0.41                         |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 49        |
| 29 | VE185 / air / Clear          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                        | 0.500       | 0.225            |                                                               |                  |             |                  | AIR      | 0.088(#2)                                             | CL   | CU-S                       | N         |
|    | 0.47                         |             |                  | SHGC (N) 0.49                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 48        |
|    | Clear / air / VE185          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                        | 0.500       | 0.222            |                                                               |                  |             |                  | AIR      | 0.088(#3)                                             | CL   | CU-S                       | N         |
|    | 0.47                         |             |                  | SHGC (N) 0.52                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 48        |
| 30 | VE185 / arg / Clear          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                        | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90    | 0.088(#2)                                             | CL   | CU-S                       | N         |
|    | 0.43                         |             |                  | SHGC (N) 0.49                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 49        |
|    | Clear / arg / VE185          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                        | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90    | 0.088(#3)                                             | CL   | CU-S                       | N         |
|    | 0.43                         |             |                  | SHGC (N) 0.52                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 49        |
| 31 | VE12M / air / Clear          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                        | 0.500       | 0.225            |                                                               |                  |             |                  | AIR      | 0.040(#2)                                             | CL   | CU-S                       | N         |
|    | 0.46                         |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 48        |
|    | Clear / air / VE12M          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                        | 0.500       | 0.222            |                                                               |                  |             |                  | AIR      | 0.040(#3)                                             | CL   | CU-S                       | N         |
|    | 0.46                         |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 48        |
| 32 | VE12M / arg / Clear          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                        | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90    | 0.040(#2)                                             | CL   | CU-S                       | N         |
|    | 0.42                         |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 49        |
|    | Clear / arg / VE12M          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                        | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90    | 0.040(#3)                                             | CL   | CU-S                       | N         |
|    | 0.42                         |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 49        |
| 33 | Comfort TiAC36 / air / Clear |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                        | 0.500       | 0.225            |                                                               |                  |             |                  | AIR      | 0.034(#2)                                             | CL   | CU-S                       | N         |
|    | 0.46                         |             |                  | SHGC (N) 0.33                                                 |                  |             |                  |          | VT (N) 0.57                                           |      | CR                         | 48        |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1               | Gap Width 1 | Pane Thickness 2 | Gap Width 2                        | Pane Thickness 3 | Gap Width 3             | Pane Thickness 4 | Gap Fill | Low-e (Surface#)           | Tint | Spacer                  | Grid Type |
|----|--------------------------------|-------------|------------------|------------------------------------|------------------|-------------------------|------------------|----------|----------------------------|------|-------------------------|-----------|
|    | U-Factor                       |             |                  | Solar Heat Gain Coefficient (SHGC) |                  |                         |                  |          | Visible Transmittance (VT) |      | Condensation Resistance |           |
|    | Grids (None / <1 / >=1)        |             |                  |                                    |                  | Grids (None / <1 / >=1) |                  |          |                            |      |                         |           |
|    | Clear / air / Comfort TiAC36   |             |                  |                                    |                  |                         |                  |          |                            |      |                         |           |
|    | 0.225                          | 0.500       | 0.222            |                                    |                  |                         |                  | AIR      | 0.034(#3)                  | CL   | CU-S                    | N         |
|    | 0.46                           |             |                  | SHGC (N) 0.41                      |                  |                         |                  |          | VT (N) 0.57                |      | CR                      | 48        |
| 34 | Comfort TiAC36 / arg / Clear   |             |                  |                                    |                  |                         |                  |          |                            |      |                         |           |
|    | 0.222                          | 0.500       | 0.225            |                                    |                  |                         |                  | ARG90    | 0.034(#2)                  | CL   | CU-S                    | N         |
|    | 0.42                           |             |                  | SHGC (N) 0.32                      |                  |                         |                  |          | VT (N) 0.57                |      | CR                      | 49        |
|    | Clear / arg / Comfort TiAC36   |             |                  |                                    |                  |                         |                  |          |                            |      |                         |           |
|    | 0.225                          | 0.500       | 0.222            |                                    |                  |                         |                  | ARG90    | 0.034(#3)                  | CL   | CU-S                    | N         |
|    | 0.42                           |             |                  | SHGC (N) 0.41                      |                  |                         |                  |          | VT (N) 0.57                |      | CR                      | 49        |
| 35 | Comfort TiAC23 / air / Clear   |             |                  |                                    |                  |                         |                  |          |                            |      |                         |           |
|    | 0.228                          | 0.500       | 0.225            |                                    |                  |                         |                  | AIR      | 0.041(#2)                  | CL   | CU-S                    | N         |
|    | 0.46                           |             |                  | SHGC (N) 0.22                      |                  |                         |                  |          | VT (N) 0.34                |      | CR                      | 48        |
|    | Clear / air / Comfort TiAC23   |             |                  |                                    |                  |                         |                  |          |                            |      |                         |           |
|    | 0.225                          | 0.500       | 0.228            |                                    |                  |                         |                  | AIR      | 0.041(#3)                  | CL   | CU-S                    | N         |
|    | 0.46                           |             |                  | SHGC (N) 0.42                      |                  |                         |                  |          | VT (N) 0.34                |      | CR                      | 48        |
| 36 | Comfort TiAC23 / arg / Clear   |             |                  |                                    |                  |                         |                  |          |                            |      |                         |           |
|    | 0.228                          | 0.500       | 0.225            |                                    |                  |                         |                  | ARG90    | 0.041(#2)                  | CL   | CU-S                    | N         |
|    | 0.42                           |             |                  | SHGC (N) 0.21                      |                  |                         |                  |          | VT (N) 0.34                |      | CR                      | 49        |
|    | Clear / arg / Comfort TiAC23   |             |                  |                                    |                  |                         |                  |          |                            |      |                         |           |
|    | 0.225                          | 0.500       | 0.228            |                                    |                  |                         |                  | ARG90    | 0.041(#3)                  | CL   | CU-S                    | N         |
|    | 0.42                           |             |                  | SHGC (N) 0.42                      |                  |                         |                  |          | VT (N) 0.34                |      | CR                      | 49        |
| 37 | Energy Advantage / air / Clear |             |                  |                                    |                  |                         |                  |          |                            |      |                         |           |
|    | 0.222                          | 0.500       | 0.223            |                                    |                  |                         |                  | AIR      | 0.157(#2)                  | CL   | CU-S                    | N         |
|    | 0.49                           |             |                  | SHGC (N) 0.56                      |                  |                         |                  |          | VT (N) 0.64                |      | CR                      | 48        |
|    | Clear / air / Energy Advantage |             |                  |                                    |                  |                         |                  |          |                            |      |                         |           |
|    | 0.223                          | 0.500       | 0.222            |                                    |                  |                         |                  | AIR      | 0.157(#3)                  | CL   | CU-S                    | N         |
|    | 0.49                           |             |                  | SHGC (N) 0.60                      |                  |                         |                  |          | VT (N) 0.64                |      | CR                      | 48        |
| 38 | Energy Advantage / arg / Clear |             |                  |                                    |                  |                         |                  |          |                            |      |                         |           |
|    | 0.222                          | 0.500       | 0.223            |                                    |                  |                         |                  | ARG90    | 0.157(#2)                  | CL   | CU-S                    | N         |
|    | 0.46                           |             |                  | SHGC (N) 0.56                      |                  |                         |                  |          | VT (N) 0.64                |      | CR                      | 48        |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1               | Gap Width 1 | Pane Thickness 2 | Gap Width 2                        | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill                   | Low-e (Surface#) | Tint | Spacer                  | Grid Type |    |    |
|----|--------------------------------|-------------|------------------|------------------------------------|------------------|-------------|------------------|----------------------------|------------------|------|-------------------------|-----------|----|----|
|    | U-Factor                       |             |                  | Solar Heat Gain Coefficient (SHGC) |                  |             |                  | Visible Transmittance (VT) |                  |      | Condensation Resistance |           |    |    |
|    |                                |             |                  | Grids (None / <1 / >=1)            |                  |             |                  | Grids (None / <1 / >=1)    |                  |      |                         |           |    |    |
| 39 | Clear / arg / Energy Advantage |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |    |    |
|    | 0.223                          | 0.500       | 0.222            |                                    |                  |             |                  | ARG90                      | 0.157(#3)        | CL   | CU-S                    | N         |    |    |
|    | 0.46                           |             |                  | SHGC (N)                           |                  |             |                  | 0.60                       | VT (N)           |      |                         | 0.64      | CR | 48 |
|    | Sungate 100 / air / Clear      |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |    |    |
| 39 | 0.223                          | 0.500       | 0.223            |                                    |                  |             |                  | AIR                        | 0.087(#2)        | CL   | CU-S                    | N         |    |    |
|    | 0.47                           |             |                  | SHGC (N)                           |                  |             |                  | 0.49                       | VT (N)           |      |                         | 0.67      | CR | 48 |
|    | Clear / air / Sungate 100      |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |    |    |
|    | 0.223                          | 0.500       | 0.223            |                                    |                  |             |                  | AIR                        | 0.087(#3)        | CL   | CU-S                    | N         |    |    |
| 40 | 0.47                           |             |                  | SHGC (N)                           |                  |             |                  | 0.52                       | VT (N)           |      |                         | 0.67      | CR | 48 |
|    | Solarban 80 / air / Clear      |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |    |    |
|    | 0.223                          | 0.500       | 0.223            |                                    |                  |             |                  | AIR                        | 0.024(#2)        | CL   | CU-S                    | N         |    |    |
|    | 0.45                           |             |                  | SHGC (N)                           |                  |             |                  | 0.22                       | VT (N)           |      |                         | 0.42      | CR | 48 |
| 40 | Clear / air / Solarban 80      |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |    |    |
|    | 0.223                          | 0.500       | 0.223            |                                    |                  |             |                  | AIR                        | 0.024(#3)        | CL   | CU-S                    | N         |    |    |
|    | 0.45                           |             |                  | SHGC (N)                           |                  |             |                  | 0.27                       | VT (N)           |      |                         | 0.42      | CR | 48 |
|    | Solarban 80 / arg / Clear      |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |    |    |
| 41 | 0.223                          | 0.500       | 0.223            |                                    |                  |             |                  | ARG90                      | 0.024(#2)        | CL   | CU-S                    | N         |    |    |
|    | 0.41                           |             |                  | SHGC (N)                           |                  |             |                  | 0.22                       | VT (N)           |      |                         | 0.42      | CR | 49 |
|    | Clear / arg / Solarban 80      |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |    |    |
|    | 0.223                          | 0.500       | 0.223            |                                    |                  |             |                  | ARG90                      | 0.024(#3)        | CL   | CU-S                    | N         |    |    |
| 42 | 0.41                           |             |                  | SHGC (N)                           |                  |             |                  | 0.27                       | VT (N)           |      |                         | 0.42      | CR | 49 |
|    | Atlantica / air / Solarban 60  |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |    |    |
|    | 0.223                          | 0.500       | 0.223            |                                    |                  |             |                  | AIR                        | 0.035(#3)        | GR   | CU-S                    | N         |    |    |
|    | 0.46                           |             |                  | SHGC (N)                           |                  |             |                  | 0.28                       | VT (N)           |      |                         | 0.47      | CR | 48 |
| 43 | Clear / air / Clear            |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |    |    |
|    | 0.225                          | 0.500       | 0.225            |                                    |                  |             |                  | AIR                        |                  | CL   | SS-D                    | N         |    |    |
|    | 0.61                           |             |                  | SHGC (N)                           |                  |             |                  | 0.63                       | VT (N)           |      |                         | 0.69      | CR | 40 |
|    | Clear / arg / Clear            |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |    |    |
| 44 | 0.225                          | 0.500       | 0.225            |                                    |                  |             |                  | ARG90                      |                  | CL   | SS-D                    | N         |    |    |
|    | 0.59                           |             |                  | SHGC (N)                           |                  |             |                  | 0.63                       | VT (N)           |      |                         | 0.69      | CR | 42 |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1                       | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill | Low-e (Surface#)                                      | Tint | Spacer                     | Grid Type |
|----|----------------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|----------|-------------------------------------------------------|------|----------------------------|-----------|
|    | U-Factor                               |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  |          | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |      | Condensation<br>Resistance |           |
| 45 | Solarban 60 / air / Clear              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#2)                                             | CL   | SS-D                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.35                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 48        |
|    | Clear / air / Solarban 60              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#3)                                             | CL   | SS-D                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 48        |
| 46 | Solarban 60 / arg / Clear              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.035(#2)                                             | CL   | SS-D                       | N         |
|    | 0.42                                   |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 48        |
|    | Clear / arg / Solarban 60              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.035(#3)                                             | CL   | SS-D                       | N         |
|    | 0.42                                   |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 48        |
| 47 | Solarban 60 on Atlantica / air / Clear |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#2)                                             | GR   | SS-D                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  |          | VT (N) 0.47                                           |      | CR                         | 48        |
|    | Atlantica / air / Solarban 60          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#3)                                             | GR   | SS-D                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.28                                                 |                  |             |                  |          | VT (N) 0.47                                           |      | CR                         | 48        |
| 48 | Solarban 70XL / air / Clear            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.018(#2)                                             | CL   | SS-D                       | N         |
|    | 0.45                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 48        |
|    | Clear / air / Solarban 70XL            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.018(#3)                                             | CL   | SS-D                       | N         |
|    | 0.45                                   |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 48        |
| 49 | Solarban 70XL / arg / Clear            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.018(#2)                                             | CL   | SS-D                       | N         |
|    | 0.42                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 48        |
|    | Clear / arg / Solarban 70XL            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.018(#3)                                             | CL   | SS-D                       | N         |
|    | 0.42                                   |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 48        |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1             | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill                                              | Low-e (Surface#) | Tint | Spacer                     | Grid Type |
|----|------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|-------------------------------------------------------|------------------|------|----------------------------|-----------|
|    | U-Factor                     |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |                  |      | Condensation<br>Resistance |           |
| 50 | VE185 / air / Clear          |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.222                        | 0.500       | 0.225            |                                                               |                  |             |                  | AIR                                                   | 0.088(#2)        | CL   | SS-D                       | N         |
|    | 0.47                         |             |                  | SHGC (N) 0.49                                                 |                  |             |                  | VT (N) 0.67                                           |                  |      | CR 48                      |           |
|    | Clear / air / VE185          |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.225                        | 0.500       | 0.222            |                                                               |                  |             |                  | AIR                                                   | 0.088(#3)        | CL   | SS-D                       | N         |
|    | 0.47                         |             |                  | SHGC (N) 0.52                                                 |                  |             |                  | VT (N) 0.67                                           |                  |      | CR 48                      |           |
| 51 | VE185 / arg / Clear          |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.222                        | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90                                                 | 0.088(#2)        | CL   | SS-D                       | N         |
|    | 0.44                         |             |                  | SHGC (N) 0.49                                                 |                  |             |                  | VT (N) 0.67                                           |                  |      | CR 48                      |           |
|    | Clear / arg / VE185          |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.225                        | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90                                                 | 0.088(#3)        | CL   | SS-D                       | N         |
|    | 0.44                         |             |                  | SHGC (N) 0.52                                                 |                  |             |                  | VT (N) 0.67                                           |                  |      | CR 48                      |           |
| 52 | VE12M / air / Clear          |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.222                        | 0.500       | 0.225            |                                                               |                  |             |                  | AIR                                                   | 0.040(#2)        | CL   | SS-D                       | N         |
|    | 0.46                         |             |                  | SHGC (N) 0.34                                                 |                  |             |                  | VT (N) 0.62                                           |                  |      | CR 48                      |           |
|    | Clear / air / VE12M          |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.225                        | 0.500       | 0.222            |                                                               |                  |             |                  | AIR                                                   | 0.040(#3)        | CL   | SS-D                       | N         |
|    | 0.46                         |             |                  | SHGC (N) 0.41                                                 |                  |             |                  | VT (N) 0.62                                           |                  |      | CR 48                      |           |
| 53 | VE12M / arg / Clear          |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.222                        | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90                                                 | 0.040(#2)        | CL   | SS-D                       | N         |
|    | 0.42                         |             |                  | SHGC (N) 0.34                                                 |                  |             |                  | VT (N) 0.62                                           |                  |      | CR 48                      |           |
|    | Clear / arg / VE12M          |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.225                        | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90                                                 | 0.040(#3)        | CL   | SS-D                       | N         |
|    | 0.42                         |             |                  | SHGC (N) 0.41                                                 |                  |             |                  | VT (N) 0.62                                           |                  |      | CR 48                      |           |
| 54 | Comfort TiAC36 / air / Clear |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.222                        | 0.500       | 0.225            |                                                               |                  |             |                  | AIR                                                   | 0.034(#2)        | CL   | SS-D                       | N         |
|    | 0.46                         |             |                  | SHGC (N) 0.33                                                 |                  |             |                  | VT (N) 0.57                                           |                  |      | CR 48                      |           |
|    | Clear / air / Comfort TiAC36 |             |                  |                                                               |                  |             |                  |                                                       |                  |      |                            |           |
|    | 0.225                        | 0.500       | 0.222            |                                                               |                  |             |                  | AIR                                                   | 0.034(#3)        | CL   | SS-D                       | N         |
|    | 0.46                         |             |                  | SHGC (N) 0.41                                                 |                  |             |                  | VT (N) 0.57                                           |                  |      | CR 48                      |           |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID   | Pane Thickness 1               | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill    | Low-e (Surface#)                                      | Tint  | Spacer                     | Grid Type |
|------|--------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|-------------|-------------------------------------------------------|-------|----------------------------|-----------|
|      | U-Factor                       |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  |             | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |       | Condensation<br>Resistance |           |
|      |                                |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
| 55   | Comfort TiAC36 / arg / Clear   |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
|      | 0.222                          | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90       | 0.034(#2)                                             | CL    | SS-D                       | N         |
|      | 0.42                           |             |                  | SHGC (N) 0.32                                                 |                  |             |                  |             | VT (N) 0.57                                           |       | CR 48                      |           |
|      | Clear / arg / Comfort TiAC36   |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
|      | 0.225                          | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90       | 0.034(#3)                                             | CL    | SS-D                       | N         |
| 0.42 |                                |             | SHGC (N) 0.41    |                                                               |                  |             |                  | VT (N) 0.57 |                                                       | CR 48 |                            |           |
| 56   | Comfort TiAC23 / air / Clear   |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
|      | 0.228                          | 0.500       | 0.225            |                                                               |                  |             |                  | AIR         | 0.041(#2)                                             | CL    | SS-D                       | N         |
|      | 0.46                           |             |                  | SHGC (N) 0.22                                                 |                  |             |                  |             | VT (N) 0.34                                           |       | CR 48                      |           |
|      | Clear / air / Comfort TiAC23   |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
|      | 0.225                          | 0.500       | 0.228            |                                                               |                  |             |                  | AIR         | 0.041(#3)                                             | CL    | SS-D                       | N         |
| 0.46 |                                |             | SHGC (N) 0.42    |                                                               |                  |             |                  | VT (N) 0.34 |                                                       | CR 48 |                            |           |
| 57   | Comfort TiAC23 / arg / Clear   |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
|      | 0.228                          | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90       | 0.041(#2)                                             | CL    | SS-D                       | N         |
|      | 0.42                           |             |                  | SHGC (N) 0.21                                                 |                  |             |                  |             | VT (N) 0.34                                           |       | CR 48                      |           |
|      | Clear / arg / Comfort TiAC23   |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
|      | 0.225                          | 0.500       | 0.228            |                                                               |                  |             |                  | ARG90       | 0.041(#3)                                             | CL    | SS-D                       | N         |
| 0.42 |                                |             | SHGC (N) 0.42    |                                                               |                  |             |                  | VT (N) 0.34 |                                                       | CR 48 |                            |           |
| 58   | Energy Advantage / air / Clear |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
|      | 0.222                          | 0.500       | 0.223            |                                                               |                  |             |                  | AIR         | 0.157(#2)                                             | CL    | SS-D                       | N         |
|      | 0.49                           |             |                  | SHGC (N) 0.56                                                 |                  |             |                  |             | VT (N) 0.64                                           |       | CR 47                      |           |
|      | Clear / air / Energy Advantage |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
|      | 0.223                          | 0.500       | 0.222            |                                                               |                  |             |                  | AIR         | 0.157(#3)                                             | CL    | SS-D                       | N         |
| 0.49 |                                |             | SHGC (N) 0.60    |                                                               |                  |             |                  | VT (N) 0.64 |                                                       | CR 47 |                            |           |
| 59   | Energy Advantage / arg / Clear |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
|      | 0.222                          | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90       | 0.157(#2)                                             | CL    | SS-D                       | N         |
|      | 0.46                           |             |                  | SHGC (N) 0.56                                                 |                  |             |                  |             | VT (N) 0.64                                           |       | CR 48                      |           |
|      | Clear / arg / Energy Advantage |             |                  |                                                               |                  |             |                  |             |                                                       |       |                            |           |
|      | 0.223                          | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90       | 0.157(#3)                                             | CL    | SS-D                       | N         |
| 0.46 |                                |             | SHGC (N) 0.60    |                                                               |                  |             |                  | VT (N) 0.64 |                                                       | CR 48 |                            |           |

**NFRC 100/200/500 Summary Sheet  
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| ID | Pane Thickness 1              | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill | Low-e (Surface#)                                      | Tint | Spacer                     | Grid Type |
|----|-------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|----------|-------------------------------------------------------|------|----------------------------|-----------|
|    | U-Factor                      |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  |          | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |      | Condensation<br>Resistance |           |
|    |                               |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
| 60 | Sungate 100 / air / Clear     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.087(#2)                                             | CL   | SS-D                       | N         |
|    | 0.47                          |             |                  | SHGC (N) 0.49                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR 48                      |           |
|    | Clear / air / Sungate 100     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.087(#3)                                             | CL   | SS-D                       | N         |
|    | 0.47                          |             |                  | SHGC (N) 0.52                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR 48                      |           |
| 61 | Solarban 80 / air / Clear     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.024(#2)                                             | CL   | SS-D                       | N         |
|    | 0.46                          |             |                  | SHGC (N) 0.22                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR 48                      |           |
|    | Clear / air / Solarban 80     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.024(#3)                                             | CL   | SS-D                       | N         |
|    | 0.46                          |             |                  | SHGC (N) 0.27                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR 48                      |           |
| 62 | Solarban 80 / arg / Clear     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.024(#2)                                             | CL   | SS-D                       | N         |
|    | 0.42                          |             |                  | SHGC (N) 0.22                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR 48                      |           |
|    | Clear / arg / Solarban 80     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.024(#3)                                             | CL   | SS-D                       | N         |
|    | 0.42                          |             |                  | SHGC (N) 0.27                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR 48                      |           |
| 63 | Atlantica / air / Solarban 60 |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#3)                                             | GR   | SS-D                       | N         |
|    | 0.46                          |             |                  | SHGC (N) 0.28                                                 |                  |             |                  |          | VT (N) 0.47                                           |      | CR 48                      |           |
|    | Clear / air / Clear           |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                         | 0.500       | 0.225            |                                                               |                  |             |                  | AIR      |                                                       | CL   | ZF-S                       | N         |
|    | 0.60                          |             |                  | SHGC (N) 0.63                                                 |                  |             |                  |          | VT (N) 0.69                                           |      | CR 42                      |           |
| 65 | Clear / arg / Clear           |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                         | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90    |                                                       | CL   | ZF-S                       | N         |
|    | 0.58                          |             |                  | SHGC (N) 0.63                                                 |                  |             |                  |          | VT (N) 0.69                                           |      | CR 43                      |           |
|    | Solarban 60 / air / Clear     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.45                          |             |                  | SHGC (N) 0.35                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR 49                      |           |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1                       | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill | Low-e (Surface#)                                      | Tint | Spacer                     | Grid Type |
|----|----------------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|----------|-------------------------------------------------------|------|----------------------------|-----------|
|    | U-Factor                               |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  |          | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |      | Condensation<br>Resistance |           |
|    | Clear / air / Solarban 60              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.45                                   |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 49        |
| 67 | Solarban 60 / arg / Clear              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.035(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.41                                   |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 50        |
|    | Clear / arg / Solarban 60              |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.035(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.41                                   |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.62                                           |      | CR                         | 50        |
| 68 | Solarban 60 on Atlantica / air / Clear |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#2)                                             | GR   | ZF-S                       | N         |
|    | 0.45                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  |          | VT (N) 0.47                                           |      | CR                         | 49        |
|    | Atlantica / air / Solarban 60          |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#3)                                             | GR   | ZF-S                       | N         |
|    | 0.45                                   |             |                  | SHGC (N) 0.28                                                 |                  |             |                  |          | VT (N) 0.47                                           |      | CR                         | 49        |
| 69 | Solarban 70XL / air / Clear            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.018(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.44                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 49        |
|    | Clear / air / Solarban 70XL            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.018(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.44                                   |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 49        |
| 70 | Solarban 70XL / arg / Clear            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.018(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.41                                   |             |                  | SHGC (N) 0.25                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 50        |
|    | Clear / arg / Solarban 70XL            |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                                  | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.018(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.41                                   |             |                  | SHGC (N) 0.34                                                 |                  |             |                  |          | VT (N) 0.56                                           |      | CR                         | 50        |
| 71 | VE185 / air / Clear                    |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                                  | 0.500       | 0.225            |                                                               |                  |             |                  | AIR      | 0.088(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.46                                   |             |                  | SHGC (N) 0.49                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 49        |

**NFRC 100/200/500 Summary Sheet  
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| ID | Pane Thickness 1             | Gap Width 1 | Pane Thickness 2 | Gap Width 2                        | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill                   | Low-e (Surface#) | Tint | Spacer                  | Grid Type |
|----|------------------------------|-------------|------------------|------------------------------------|------------------|-------------|------------------|----------------------------|------------------|------|-------------------------|-----------|
|    | U-Factor                     |             |                  | Solar Heat Gain Coefficient (SHGC) |                  |             |                  | Visible Transmittance (VT) |                  |      | Condensation Resistance |           |
|    |                              |             |                  | Grids (None / <1 / >=1)            |                  |             |                  | Grids (None / <1 / >=1)    |                  |      |                         |           |
|    | Clear / air / VE185          |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |
|    | 0.225                        | 0.500       | 0.222            |                                    |                  |             |                  | AIR                        | 0.088(#3)        | CL   | ZF-S                    | N         |
|    | 0.46                         |             |                  | SHGC (N) 0.52                      |                  |             |                  | VT (N) 0.67                |                  |      | CR                      | 49        |
| 72 | VE185 / arg / Clear          |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |
|    | 0.222                        | 0.500       | 0.225            |                                    |                  |             |                  | ARG90                      | 0.088(#2)        | CL   | ZF-S                    | N         |
|    | 0.43                         |             |                  | SHGC (N) 0.49                      |                  |             |                  | VT (N) 0.67                |                  |      | CR                      | 49        |
|    | Clear / arg / VE185          |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |
|    | 0.225                        | 0.500       | 0.222            |                                    |                  |             |                  | ARG90                      | 0.088(#3)        | CL   | ZF-S                    | N         |
|    | 0.43                         |             |                  | SHGC (N) 0.52                      |                  |             |                  | VT (N) 0.67                |                  |      | CR                      | 49        |
| 73 | VE12M / air / Clear          |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |
|    | 0.222                        | 0.500       | 0.225            |                                    |                  |             |                  | AIR                        | 0.040(#2)        | CL   | ZF-S                    | N         |
|    | 0.45                         |             |                  | SHGC (N) 0.34                      |                  |             |                  | VT (N) 0.62                |                  |      | CR                      | 49        |
|    | Clear / air / VE12M          |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |
|    | 0.225                        | 0.500       | 0.222            |                                    |                  |             |                  | AIR                        | 0.040(#3)        | CL   | ZF-S                    | N         |
|    | 0.45                         |             |                  | SHGC (N) 0.41                      |                  |             |                  | VT (N) 0.62                |                  |      | CR                      | 49        |
| 74 | VE12M / arg / Clear          |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |
|    | 0.222                        | 0.500       | 0.225            |                                    |                  |             |                  | ARG90                      | 0.040(#2)        | CL   | ZF-S                    | N         |
|    | 0.41                         |             |                  | SHGC (N) 0.34                      |                  |             |                  | VT (N) 0.62                |                  |      | CR                      | 50        |
|    | Clear / arg / VE12M          |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |
|    | 0.225                        | 0.500       | 0.222            |                                    |                  |             |                  | ARG90                      | 0.040(#3)        | CL   | ZF-S                    | N         |
|    | 0.41                         |             |                  | SHGC (N) 0.41                      |                  |             |                  | VT (N) 0.62                |                  |      | CR                      | 50        |
| 75 | Comfort TiAC36 / air / Clear |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |
|    | 0.222                        | 0.500       | 0.225            |                                    |                  |             |                  | AIR                        | 0.034(#2)        | CL   | ZF-S                    | N         |
|    | 0.45                         |             |                  | SHGC (N) 0.33                      |                  |             |                  | VT (N) 0.57                |                  |      | CR                      | 49        |
|    | Clear / air / Comfort TiAC36 |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |
|    | 0.225                        | 0.500       | 0.222            |                                    |                  |             |                  | AIR                        | 0.034(#3)        | CL   | ZF-S                    | N         |
|    | 0.45                         |             |                  | SHGC (N) 0.41                      |                  |             |                  | VT (N) 0.57                |                  |      | CR                      | 49        |
| 76 | Comfort TiAC36 / arg / Clear |             |                  |                                    |                  |             |                  |                            |                  |      |                         |           |
|    | 0.222                        | 0.500       | 0.225            |                                    |                  |             |                  | ARG90                      | 0.034(#2)        | CL   | ZF-S                    | N         |
|    | 0.41                         |             |                  | SHGC (N) 0.32                      |                  |             |                  | VT (N) 0.57                |                  |      | CR                      | 50        |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1               | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill | Low-e (Surface#)                                      | Tint | Spacer                     | Grid Type |
|----|--------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|----------|-------------------------------------------------------|------|----------------------------|-----------|
|    | U-Factor                       |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  |          | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |      | Condensation<br>Resistance |           |
|    | Clear / arg / Comfort TiAC36   |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                          | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90    | 0.034(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.41                           |             |                  | SHGC (N) 0.41                                                 |                  |             |                  |          | VT (N) 0.57                                           |      | CR                         | 50        |
| 77 | Comfort TiAC23 / air / Clear   |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.228                          | 0.500       | 0.225            |                                                               |                  |             |                  | AIR      | 0.041(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.45                           |             |                  | SHGC (N) 0.22                                                 |                  |             |                  |          | VT (N) 0.34                                           |      | CR                         | 49        |
|    | Clear / air / Comfort TiAC23   |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                          | 0.500       | 0.228            |                                                               |                  |             |                  | AIR      | 0.041(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.45                           |             |                  | SHGC (N) 0.42                                                 |                  |             |                  |          | VT (N) 0.34                                           |      | CR                         | 49        |
| 78 | Comfort TiAC23 / arg / Clear   |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.228                          | 0.500       | 0.225            |                                                               |                  |             |                  | ARG90    | 0.041(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.41                           |             |                  | SHGC (N) 0.21                                                 |                  |             |                  |          | VT (N) 0.34                                           |      | CR                         | 50        |
|    | Clear / arg / Comfort TiAC23   |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.225                          | 0.500       | 0.228            |                                                               |                  |             |                  | ARG90    | 0.041(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.41                           |             |                  | SHGC (N) 0.42                                                 |                  |             |                  |          | VT (N) 0.34                                           |      | CR                         | 50        |
| 79 | Energy Advantage / air / Clear |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                          | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.157(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.48                           |             |                  | SHGC (N) 0.56                                                 |                  |             |                  |          | VT (N) 0.64                                           |      | CR                         | 49        |
|    | Clear / air / Energy Advantage |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.222            |                                                               |                  |             |                  | AIR      | 0.157(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.48                           |             |                  | SHGC (N) 0.60                                                 |                  |             |                  |          | VT (N) 0.64                                           |      | CR                         | 49        |
| 80 | Energy Advantage / arg / Clear |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.222                          | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.157(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.45                           |             |                  | SHGC (N) 0.56                                                 |                  |             |                  |          | VT (N) 0.64                                           |      | CR                         | 49        |
|    | Clear / arg / Energy Advantage |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.222            |                                                               |                  |             |                  | ARG90    | 0.157(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.45                           |             |                  | SHGC (N) 0.60                                                 |                  |             |                  |          | VT (N) 0.64                                           |      | CR                         | 49        |
| 81 | Sungate 100 / air / Clear      |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                          | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.087(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.46                           |             |                  | SHGC (N) 0.49                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 49        |

**NFRC 100/200/500 Summary Sheet  
FT601 Curtain Wall (Bratton Corp)**

| ID | Pane Thickness 1              | Gap Width 1 | Pane Thickness 2 | Gap Width 2                                                   | Pane Thickness 3 | Gap Width 3 | Pane Thickness 4 | Gap Fill | Low-e (Surface#)                                      | Tint | Spacer                     | Grid Type |
|----|-------------------------------|-------------|------------------|---------------------------------------------------------------|------------------|-------------|------------------|----------|-------------------------------------------------------|------|----------------------------|-----------|
|    | U-Factor                      |             |                  | Solar Heat Gain Coefficient (SHGC)<br>Grids (None / <1 / >=1) |                  |             |                  |          | Visible Transmittance (VT)<br>Grids (None / <1 / >=1) |      | Condensation<br>Resistance |           |
|    | Clear / air / Sungate 100     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.087(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.46                          |             |                  | SHGC (N) 0.52                                                 |                  |             |                  |          | VT (N) 0.67                                           |      | CR                         | 49        |
| 82 | Solarban 80 / air / Clear     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.024(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.45                          |             |                  | SHGC (N) 0.22                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR                         | 49        |
|    | Clear / air / Solarban 80     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.024(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.45                          |             |                  | SHGC (N) 0.27                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR                         | 49        |
| 83 | Solarban 80 / arg / Clear     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.024(#2)                                             | CL   | ZF-S                       | N         |
|    | 0.41                          |             |                  | SHGC (N) 0.22                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR                         | 50        |
|    | Clear / arg / Solarban 80     |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | ARG90    | 0.024(#3)                                             | CL   | ZF-S                       | N         |
|    | 0.41                          |             |                  | SHGC (N) 0.27                                                 |                  |             |                  |          | VT (N) 0.42                                           |      | CR                         | 50        |
| 84 | Atlantica / air / Solarban 60 |             |                  |                                                               |                  |             |                  |          |                                                       |      |                            |           |
|    | 0.223                         | 0.500       | 0.223            |                                                               |                  |             |                  | AIR      | 0.035(#3)                                             | GR   | ZF-S                       | N         |
|    | 0.45                          |             |                  | SHGC (N) 0.28                                                 |                  |             |                  |          | VT (N) 0.47                                           |      | CR                         | 49        |

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening.

Ratings values included in this report are for submittals to an NFRC-licensed IA and are not meant to be used directly for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) by an NFRC accredited Inspection Agency (IA) are to be used for labeling purposes. The ratings values were rounded in accordance to the NFRC unit conversion and rounding policy.

Architectural Testing is an NFRC accredited simulation laboratory and all simulations were conducted in full compliance with NFRC approved procedures and specifications. The NFRC procedure requires that the computational results be verified through actual test results.

Detailed drawings, simulation data files, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire. Results obtained are simulated values and were secured by using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the product simulated. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:

SIMULATED BY:

REVIEWED BY:

---

Kevin S. Louder  
Project Engineer

---

Kristen L. Livelsberger  
Senior Simulation Technician  
Simulator-In-Responsible-Charge

KSL:ksl  
93418.01-116-45

Attachments (pages):

This report is complete only when all attachments listed are included.

Appendix A: Drawings and Bills of Material (14)

### Revision Log

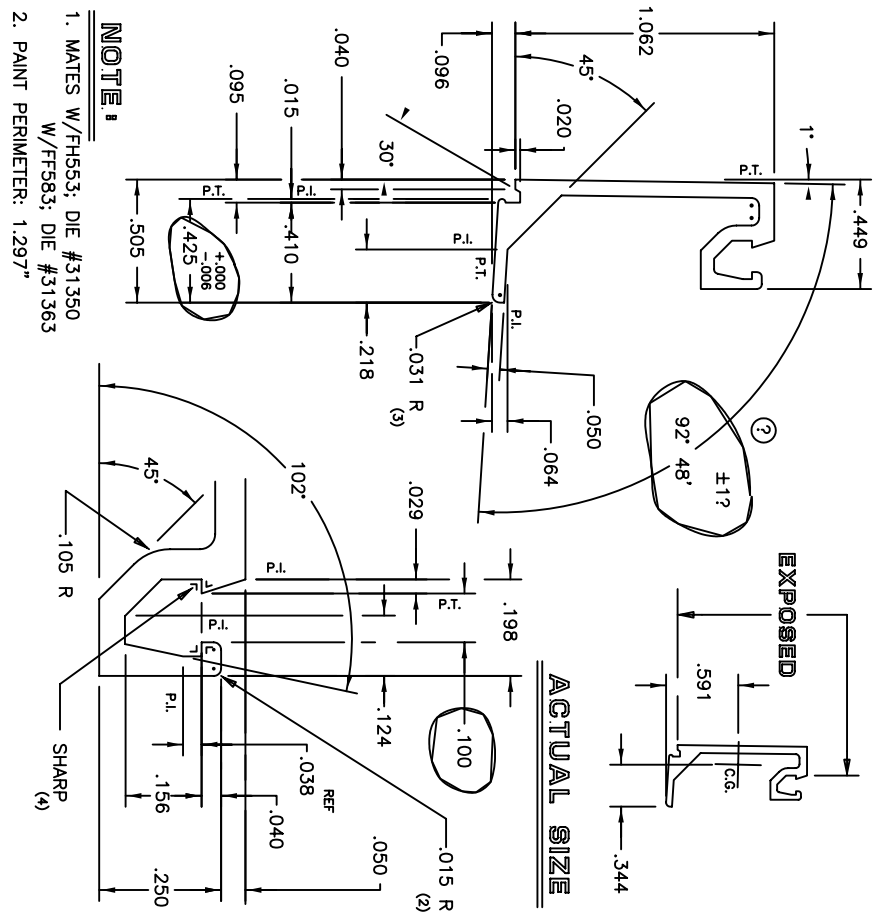
| <b><u>Rev. #</u></b> | <b><u>Date</u></b> | <b><u>Page(s)</u></b> | <b><u>Revision(s)</u></b>       |
|----------------------|--------------------|-----------------------|---------------------------------|
| .01R0                | 7/30/2009          | All                   | Original Report Issue           |
| .01 R1               | 8/18/2009          | Page 4-19             | Added option description labels |

All drawings and Bills of Material used to simulate this product are enclosed in this Appendix

## **Appendix A**

93418.01-116-45

**Simulator** 

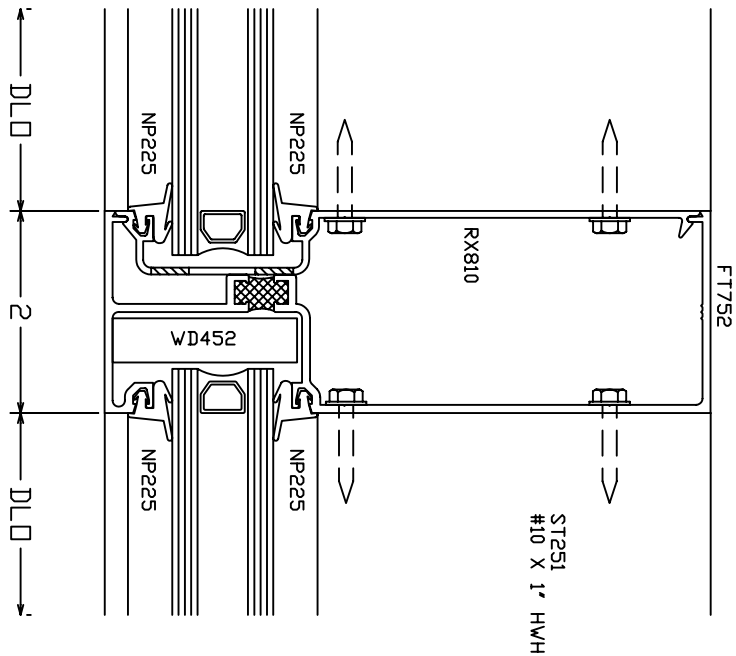
[illegible]

### GASKET POCKET DETAIL

SCALE: 4X SIZE 9x1 1/4DIE NO STEP

|  |       |         |  |         |  |
|--|-------|---------|--|---------|--|
|  |       |         |  | .062    |  |
|  | .154  | P-21779 |  |         |  |
|  | .185  | 1.300   |  |         |  |
|  | 4.713 | SOLD    |  |         |  |
|  | 26    |         |  | T-31348 |  |

| SYM | REVISION | DATE | BY |
|-----|----------|------|----|
|     |          |      |    |
|     |          |      |    |
|     |          |      |    |



4

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

|                                                                                                             |          |             |                         |
|-------------------------------------------------------------------------------------------------------------|----------|-------------|-------------------------|
| THIS SPACE RESERVED FOR STRUCTURAL ENGINEER                                                                 |          |             |                         |
| THIS SPACE RESERVED FOR METRO-PARK USE ONLY                                                                 |          |             |                         |
| United States Aluminum<br>780 Cal-River Road<br>Rock Hill, SC 29730<br>803-780-1234<br>Vero Beach, FL 33462 |          |             |                         |
| DRAWN BY                                                                                                    | DCW      | SYSTEM      | SERIES FT601            |
| DATE                                                                                                        | 03.12.09 | DESCRIPTION | 6" FLUSH OUT STOREFRONT |
| APPROVED BY                                                                                                 |          | DETAILS     |                         |
| SCALE                                                                                                       | FULL     | DRAWING NO. | USA-3104                |
|                                                                                                             |          | SHEET       | 6 OF 7                  |

ATI

Report # 93418

Date 7/30/2009

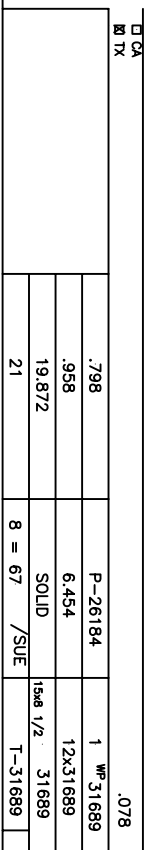
Simulator 

**ATI**

**Report #** \_\_\_\_\_ **93418**

**Date** \_\_\_\_\_ **7/30/2009**

**Simulator** \_\_\_\_\_ 







Technical drawing of a cross-section of a wall and floor assembly. The wall is 2.060 units thick. The floor is 1.000 units thick. The wall is labeled "C.6." and the floor is labeled "EXPOSED".

# EXPOSED

1.SNAP-FITS W/FF773; DIE #31699  
W/FH763; DIE #31696  
2.PAINT PERIMETER: 5.023"  
3.XXX INDICATES I.D. MARK FOR IEC-TX

The drawing shows a mechanical component with the following features and dimensions:

- Top View Dimensions:**
  - Overall width: .250
  - Inner width: .157
  - Distance from centerline to outer edge: .040
  - Distance from centerline to inner edge: .038
  - Radius at bottom left: .020 R
  - Radius at bottom right: .029
  - Overall height: .100
  - Distance from centerline to top edge: .050
  - Distance from centerline to bottom edge: .124
- Side View Dimensions:**
  - Overall length: .105 R
  - Distance from centerline to outer edge: .045
  - Distance from centerline to inner edge: .045
  - Angle: 45°
  - Angle: 102°
- Labels and Notes:**
  - P.L. (Part Line)
  - P.T. (Part Thread)
  - T.D. (Thread Diameter)
  - SHARP
  - (3) - Three identical parts

$$\begin{aligned} l_{xx} &= 1.130 \text{ in}^4 \\ S_{xx} &= 0.549 \text{ in}^3 \\ l_{yy} &= 0.080 \text{ in}^4 \\ S_{yy} &= 0.080 \text{ in}^3 \end{aligned}$$

## GASKET POCKET DETAIL

SCALE: 4X SIZE

[illegible]

**U.S. ALUMINUM CORP.**

6" FT SYS

MAMO

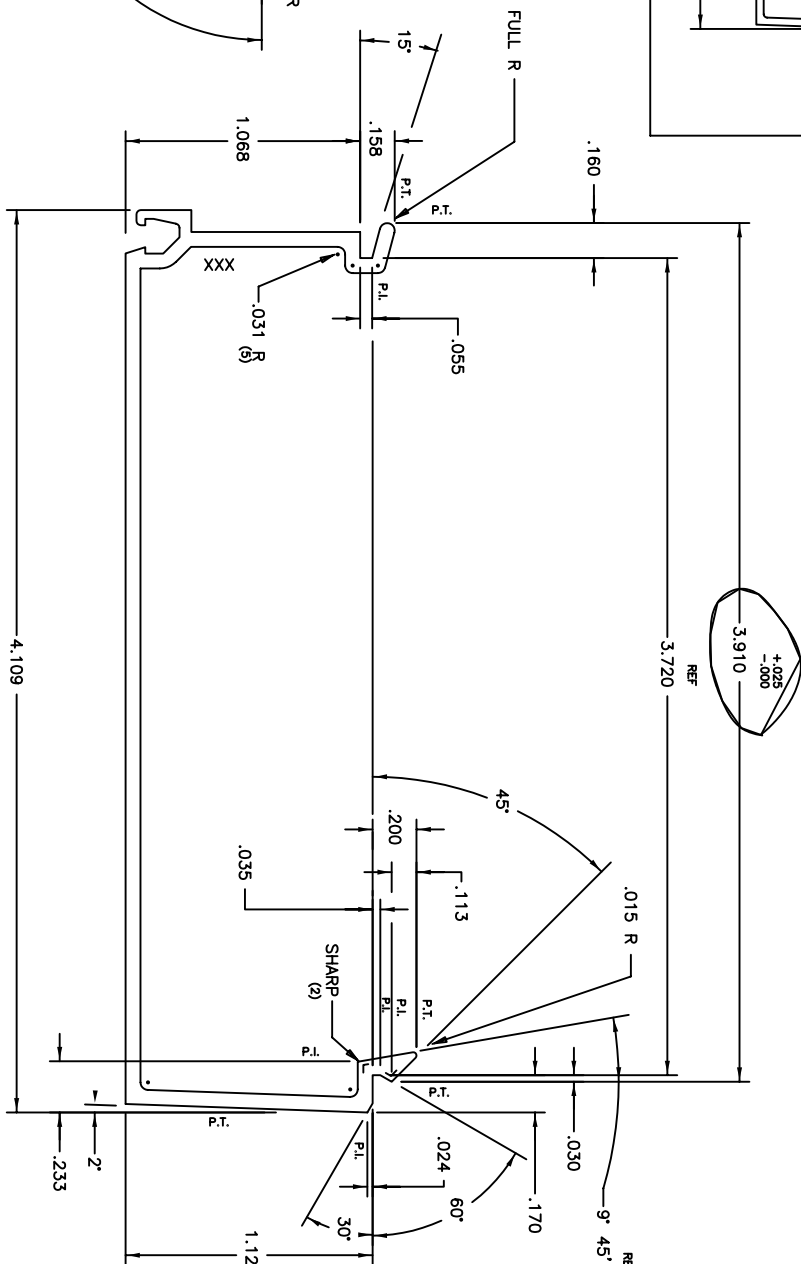
|         |        |
|---------|--------|
| 1/10/96 | —31695 |
|---------|--------|

ATI

Report # 93418

**Date** 7/30/2009

## Simulator



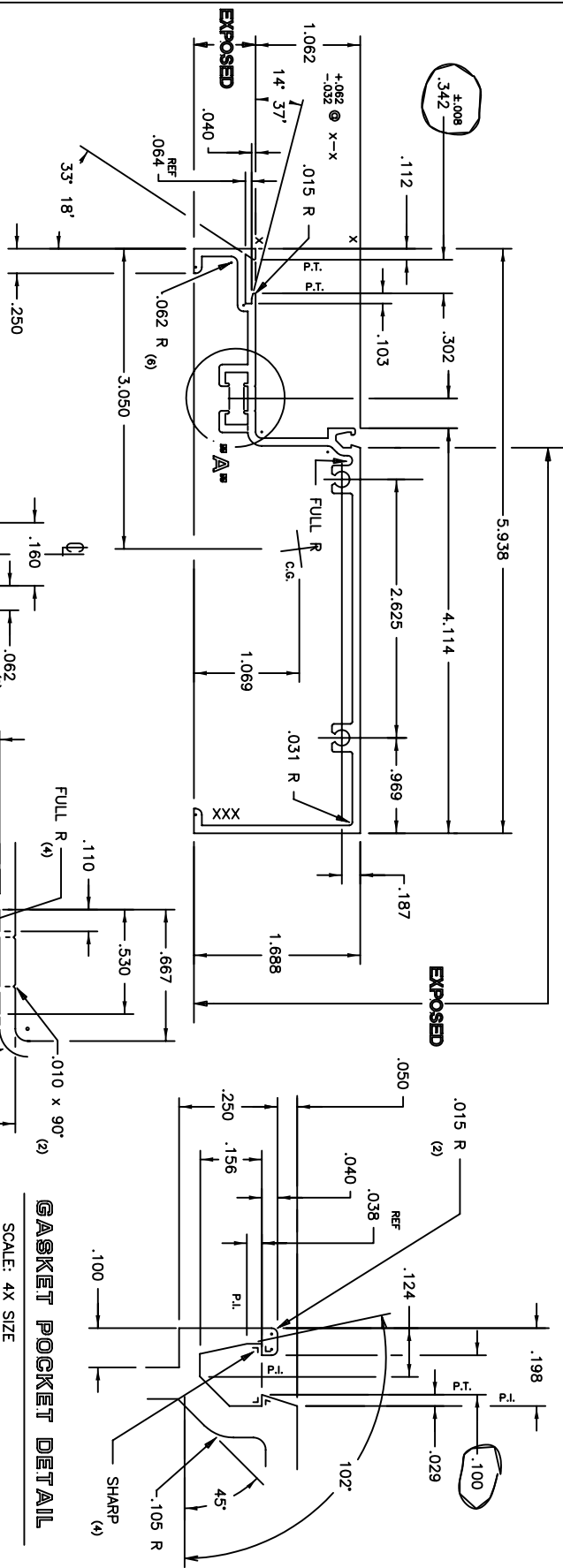
CA TX

9x1 1/4 W/P 9x1 1/4 DIE NO STEP

890.

|        |              |
|--------|--------------|
| CA     | 068          |
| TX     |              |
| .477   | P-26210      |
| .572   | 4.238        |
| 14.155 | SOLD         |
| 25     | 7 = 86 /LOIS |
|        | T-31699      |

|   |                            |                   |                                 |           |        |
|---|----------------------------|-------------------|---------------------------------|-----------|--------|
| B | .040 W/S .023.<br>REPLACED | FF 10/20<br>SH 11 | U.S. ALUMINUM CORP.             | T-31701   | B      |
|   |                            |                   | SIL-OUTSIDE GLZ<br>6" FF SYSTEM | MAMO      | 1/8/96 |
|   |                            |                   | FF783                           | FULL SIZE |        |

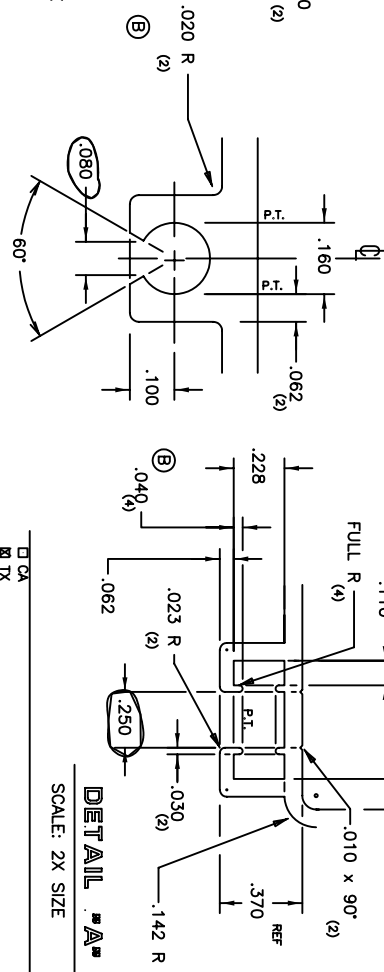


**NOTES:**

1. MATES W/M-116, DIE #31376 W/FF701, DIE #31689
2. PAINT PERIMETER: 6.230"
3. THERMO DETAIL AREA: .132; "AA"
4. DEBRIDGE WITH A .218 WIDE x .015 MAX PENETRATION INTO THERMO MATERIAL.
5. XXX INDICATES I.D. MARK FOR IEC-TX
6. F & D PART NO. IS FT783

**SCREW RACE DETAIL**

SCALE: 4X SIZE (2 PLACES)



**GASKET POCKET DETAIL**

SCALE: 4X SIZE

**SECTION PROPERTIES:**

Ixx = 3.551 in<sup>4</sup>  
Sxx = 1.164 in<sup>3</sup>  
Iyy = 0.300 in<sup>4</sup>  
Syy = 0.281 in<sup>3</sup>

**DETAIL AA**

SCALE: 2X SIZE

|      |      |            |             |       |          |
|------|------|------------|-------------|-------|----------|
| □ CA | □ TX |            |             |       |          |
|      |      | .923 (B)   | P-26208     | 1 W/P | 31701    |
|      |      | 1.108 (B)  | 6.174       |       | 12x31701 |
|      |      | 23.363 (B) | SOLID       |       | 31693    |
|      |      | 21         | 8 = 58 /SUE |       | T-31701  |
|      |      |            |             |       | B        |

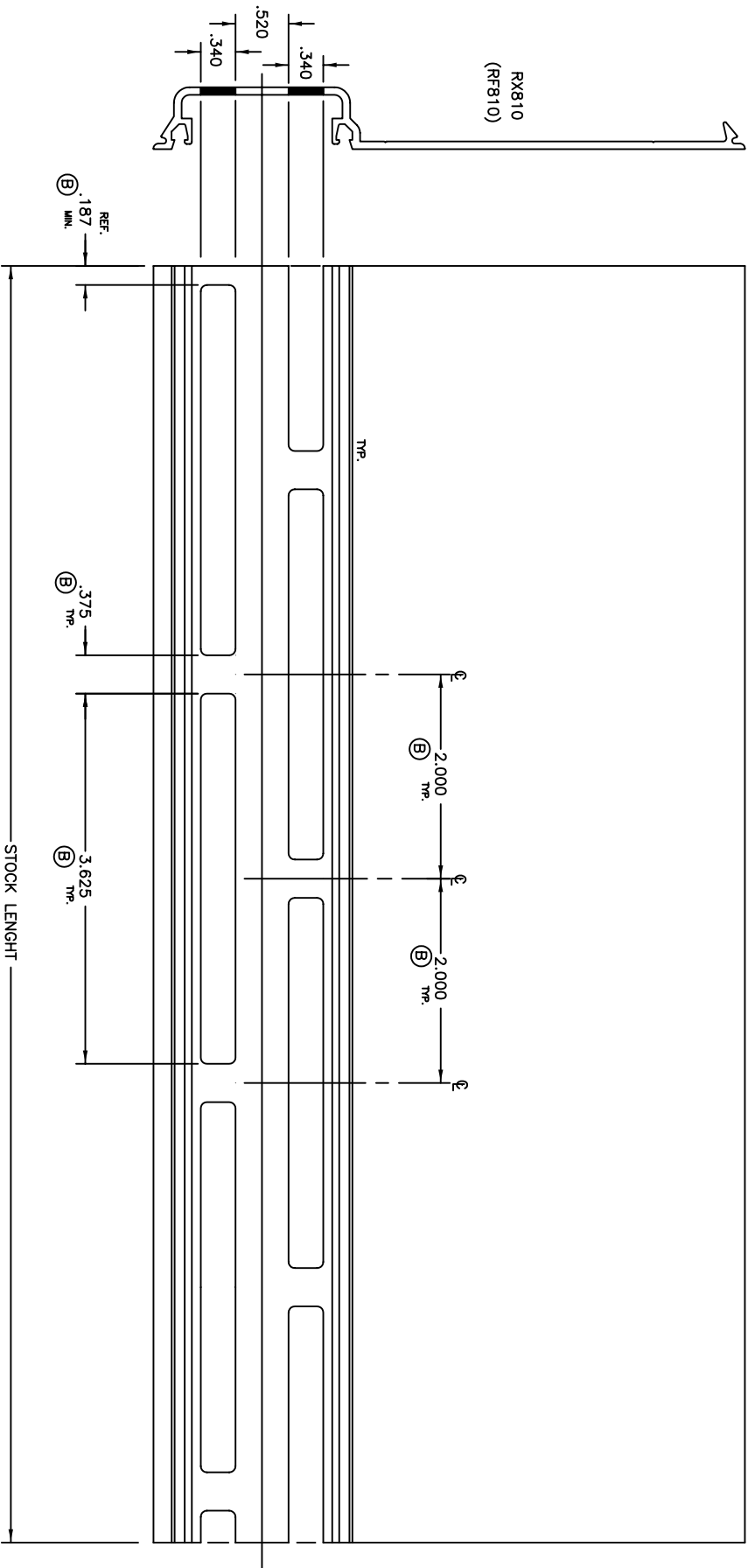
ATI

Report # 93418

Date 7/30/2009

Simulator

USA-2061 B



MADE FROM: RF810

|   |                                          |        |                     |         |                     |       |            |
|---|------------------------------------------|--------|---------------------|---------|---------------------|-------|------------|
|   |                                          |        | U.S. ALUMINUM CORP. |         |                     |       |            |
|   |                                          |        | GLH                 |         | FABRICATION         | RX810 |            |
|   |                                          |        |                     |         | THERMAL IMPROVEMENT |       |            |
|   |                                          |        |                     |         | NOTCH PATTERN       |       |            |
| B | REV. SLOT SIZE & SPACING<br>ECN 2000-110 | B-3-00 | GLH                 | 6-27-00 | FULL SIZE           |       | USA-2061 B |

TEST REQUIREMENTS

AAMA PERFORMANCE TEST:

(AAMA 1503-98)

<THERMAL TRANSMITTANCE (U-FACTOR)

<U CLASS>

<CONDENSATION RESISTANCE FACTOR FRAME (CRF)>

<CONDENSATION RESISTANCE FACTOR GLASS (CRFg)>

<CRF CLASS>

(AAMA 507-07)

U = XX  
U = XX  
60\* CRF - TARGET  
60\* CRF - TARGET  
XX CRF

NFRC PERFORMANCE TEST:

(NFRC 102-2004)

(NFRC 100-2004)

(NFRC 200-2004)

(NFRC 500-2004)

U\* = XX  
U\*\* = XX

THERMAL MOCK-UP  
FT601 FLUSH OUT  
STOREFRONT

| SYM | REVISION | DATE | BY |
|-----|----------|------|----|
| .   | .        | .    | .  |
| .   | .        | .    | .  |
| .   | .        | .    | .  |

NOTES:

1. SEAL ALL INTERSECTIONS OF FRAME MEMBERS DURING ASSEMBLY. TIGHTEN EXCESS SEALANT. 100L
2. SETTING BLOCKS AT 1/4 POINTS.
3. SEAL EXPOSED SURFACE OF TOP RAILS AS THE WEATHER STRIPS ARE ALL EXPOSED FASTENERS.
4. 7/16" TYP. GLASS BITE

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DADE USE ONLY

United States Aluminum

• 7200 Central River Road  
Miami, FL 33150  
• 2000 S. W. 10th Avenue  
Miami, FL 33155

7200 Central River Road  
Miami, FL 33150  
• 2000 S. W. 10th Avenue  
Miami, FL 33155

DESIGNED BY  
DCW

DATE  
03/12/09

APPROVED BY  
.

SYSTEM  
SERIES FT601  
6" FLUSH OUT  
STOREFRONT

DESCRIPTION  
TEST REQUIREMENTS

SCALE  
AS SHOWN

DATE  
USA-3104

SHEET  
1 OF 7

TEST UNIT SPECIFICATIONS

| BAY SAMPLES (ED)      |                                                            |   |   |   |   |   |   |   |   |    |    |    |
|-----------------------|------------------------------------------------------------|---|---|---|---|---|---|---|---|----|----|----|
| TEST UNITS            | 1                                                          | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| TEST                  | AAMA 1503-98                                               |   |   |   |   |   |   |   |   |    |    |    |
| SPECS                 | 1" MINIMUM GLASS<br>1 1/4" MINIMUM GLASS<br>1 1/4" MINIMUM |   |   |   |   |   |   |   |   |    |    |    |
| GLASS                 |                                                            |   |   |   |   |   |   |   |   |    |    |    |
| LOCK                  | N/A                                                        |   |   |   |   |   |   |   |   |    |    |    |
| HINGE                 | N/A                                                        |   |   |   |   |   |   |   |   |    |    |    |
| POSS/PULL             | N/A                                                        |   |   |   |   |   |   |   |   |    |    |    |
| CASER                 | N/A                                                        |   |   |   |   |   |   |   |   |    |    |    |
| JOINT                 | TECHNICAL<br>DETAIL                                        |   |   |   |   |   |   |   |   |    |    |    |
| PREPARED<br>DETAIL    | PREPARED<br>DETAIL                                         |   |   |   |   |   |   |   |   |    |    |    |
| SUBSTRATE<br>MATERIAL | HEAD-AND-<br>TAIL-AND                                      |   |   |   |   |   |   |   |   |    |    |    |

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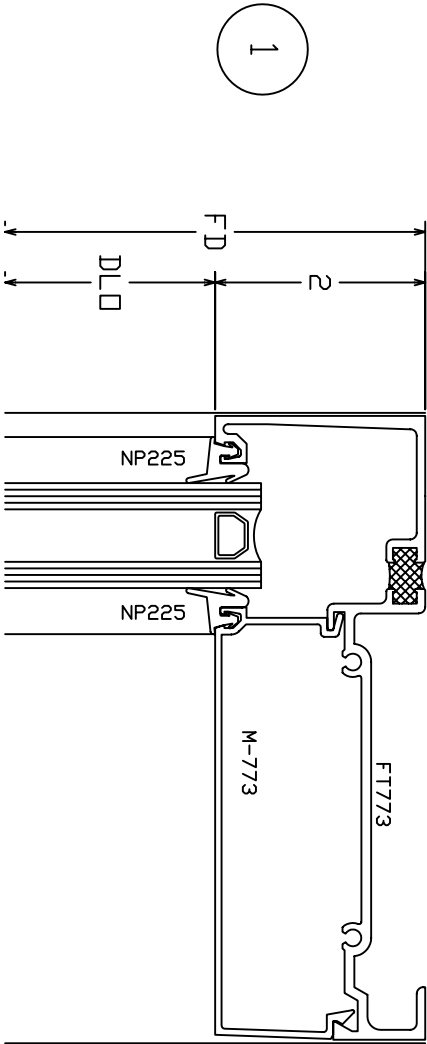
Report # 93418

Date 7/30/2009

Simulator 



| SW | REVISION | DATE | BY |
|----|----------|------|----|
|    |          |      |    |
|    |          |      |    |
|    |          |      |    |



THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METHOD-DONE USE ONLY

|                                                                                                                 |              |         |              |
|-----------------------------------------------------------------------------------------------------------------|--------------|---------|--------------|
| United States Aluminum<br>720 Cal-River Road<br>Rock Hill, SC 29730<br>Phone: 803-961-1111<br>Fax: 803-961-7565 |              |         |              |
| DESIGNED BY                                                                                                     | SYSTEM       | DATE    | DESCRIPTION  |
| DCW                                                                                                             | SERIES FT601 | 03/2/09 | 6" FLUSH OUT |
| APPROVED BY                                                                                                     | DETAILS      |         |              |
| SCALE                                                                                                           | DRAWING NO.  | SHEET   |              |
| FULL                                                                                                            | USA-3104     | 3 OF 7  |              |

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Report # 93418

Date 7/30/2009

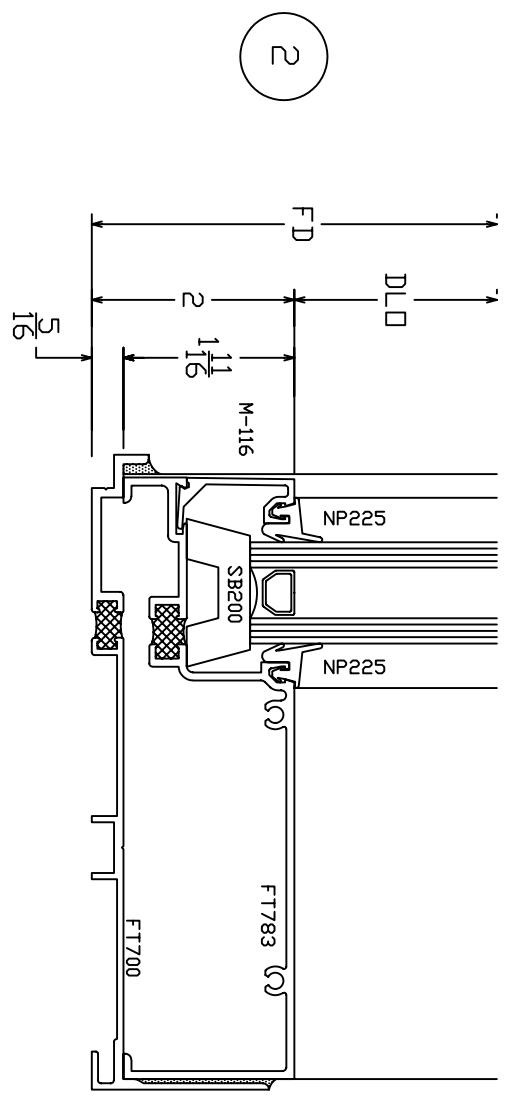
Simulator 

| SYM | REVISION | DATE | BY |
|-----|----------|------|----|
|     |          |      |    |
|     |          |      |    |
|     |          |      |    |

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DOME USE ONLY

|                                                                                    |          |             |                            |
|------------------------------------------------------------------------------------|----------|-------------|----------------------------|
| United States Aluminum                                                             |          |             |                            |
| 700 Cat-River Road<br>Rock Hill, SC 29730<br>P.O. Box 1000<br>Vanderbilt, TX 75685 |          |             |                            |
| DRAWN BY                                                                           | DCW      | SERIES      | FT601                      |
| DATE                                                                               | 03.12.09 | DESCRIPTION | 6" FLUSH OUT<br>STOREFRONT |
| APPROVED BY                                                                        |          | DETAILS     |                            |
| SCALE                                                                              | FULL     | DRAWING NO. | USA-3104                   |
|                                                                                    |          | SHEET       | 4 OF 7                     |



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ATI

Report # 93418

Date 7/30/2009

Simulator

| SYN | REVISION | DATE | BY |
|-----|----------|------|----|
|     |          |      |    |
|     |          |      |    |
|     |          |      |    |

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR RETRO-SHAPE USE ONLY

|                                                                                                  |          |              |          |
|--------------------------------------------------------------------------------------------------|----------|--------------|----------|
| United States Aluminum<br>624 Clinton Street<br>500 Springfield Avenue<br>New Rochelle, NY 10805 |          |              |          |
| DESIGNED BY                                                                                      | DATE     | PROJECT      | REVISION |
| DCV                                                                                              | 03.12.09 | SERIES FT601 | ST251    |
| BY                                                                                               |          | 6\"/>        |          |

**ATI**

**Report #** 93418

**Date** 7/30/2009

**Simulator**

