SECTION 08 53 13.40

ALUMINUM-CLAD VINYL WINDOWS

JELD-WEN DF Hybrid Series

Display hidden notes to specifier. (Don't know how? [Click Here](http://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* JELD-WEN, Inc.; Aluminum-Clad Vinyl windows.  
This section is based on the products of JELD-WEN, Inc., which is located at:  
2645 Silver Crescent Dr.  
Charlotte, NC 28273   
Toll Free Tel: 800-535-3936  
Tel: 541-850-2606  
Fax: 541-851-4333  
Email: [request info (Architectural\_Inquiries@jeld-wen.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=JELD-WEN,+Inc.&coid=33445&rep=&fax=541-851-4333&message=RE:%20Spec%20Question%20(08564jwi):%20%20&mf=)  
Web: <http://www.jeld-wen.com/en-us>   
 [ [Click Here](http://www.arcat.com/arcatcos/cos33/arc33445.html) ] for additional information.  
As a JELD-WEN customer, you can count on us to provide reliable products and service.  
We are a comprehensive source for dependable wood, vinyl and aluminum windows; wood and wood composite interior doors; and wood, steel, engineered wood and fiberglass exterior doors.

1. GENERAL
   1. SECTION INCLUDES
      1. Aluminum Clad Vinyl Windows:

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + - 1. Awning windows.
      2. Casement windows.
      3. Fixed, radius and geometric windows.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. Canadian Standards Association (CSA):
       1. AAMA/WDMA/CSA 101/I.S.2 /A440 - North American Fenestration Standard/Specification for windows, doors, and skylights (NAFS).
    2. National Fenestration Rating Council (NFRC):
       1. NFRC 100 - Procedure for Determining Fenestration Thermal Properties.
       2. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.
    3. ASTM International (ASTM):
       1. ASTM E90 - Laboratory measurement of Airborne Sound Transmission of Building Partitions and Elements.
       2. ASTM E1332 - Standard Classification for Rating Outdoor - Indoor Sound Attenuation.
  1. SUBMITTALS
     1. Refer to Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings: Submit shop drawings indicating details of construction, flashings and relationship with adjacent construction.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each factory-finished product specified, two complete sets of color chips representing manufacturer's full range of available finishes.
    2. Verification Samples: For each factory-finished product specified, two samples, minimum size 6 inches (150 mm) square, representing actual finishes.
    3. Quality Assurance Submittals:

\*\* NOTE TO SPECIFIER \*\* Delete design data, test reports submittal requirements when propriety specification is used and can be held. Maintain design data, test reports submittal requirement when other products may be submitted as substitution.

* + - 1. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.
      2. Manufacturer Instructions: Provide manufacturer's written installation instructions.
    1. Closeout Submittals: Refer to Section 01 70 00 - Execution and Closeout Requirements - Execution and Closeout Requirements Execution and Closeout Requirements Closeout Submittals.
  1. QUALITY ASSURANCE
     1. Installer Qualifications:
        1. Minimum Years installing Similar Assemblies: \_\_\_\_\_\_.
     2. Certifications: Canadian Standards Association certification label indicating assemblies meet the design requirements.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of installation techniques and workmanship.
       1. Mock-ups shall incorporate surrounding construction, including wall assembly fasteners, flashing, and other related accessories installed in accordance with manufacturer's approved installation methods.
       2. Do not proceed with remaining work until workmanship is approved by Architect.
       3. Modify mock-up as required to produce acceptable work.

\*\* NOTE TO SPECIFIER \*\* Delete one of the two following subparagraphs.

* + - 1. At Substantial Completion, approved mockups may become part of completed Work.
      2. Demolish mockups and remove from site.
    1. Pre-installation Meeting: Conduct pre-installation meeting on site two weeks prior to commencement of installation.
  1. DELIVERY, STORAGE AND HANDLING
     1. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards.
     2. Deliver and store assembly materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact. Protect from damage.
  2. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by Manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  3. WARRANTY

\*\*NOTE TO SPECFIER\*\* DELETE warranty information not specific to project.

* + 1. Manufacturer's Standard Warranty: Assemblies will be free from defects in materials and workmanship from the date of Manufacture for the time periods indicated below:

\*\* NOTE TO SPECIFIER \*\* Select lifetime warranty time periods for owner occupied single-family residences only.

* + - 1. Basic Product Coverage - Window Unit: Owner Occupied Single-Family Residence: Lifetime.
      2. Basic Product Coverage - Window Unit: Commercial: 10 years.
      3. Glazing:

\*\* NOTE TO SPECIFIER \*\* Select warranty associated with the glazing types specified. Specialty glazing includes patterned and textured glass. Insulated glass that incorporates a specialty glass may be eligible for an extended warranty, but requires input from the manufacturer. Contact a JELD-WEN representative to discuss design options and their effect on the warranty.

* + - * 1. Insulated Glass - Owner Occupied Single-Family Residence: Lifetime.
        2. Insulated Glass - Commercial: 10 years.
        3. Laminated Glass: 5 years.
        4. Special Glazing: 5 years.

1. PRODUCTS

\*\* NOTE TO SPECIFIER \*\* Product information is proprietary to JELD-WEN. If additional products are required for competitive procurement, contact JELD-WEN for assistance in listing competitive products that may be available.

* 1. MANUFACTURERS
     1. Acceptable Manufacturer: JELD-WEN, Inc., which is located at: 2645 Silver Crescent Dr.; Charlotte, NC 28273 ; Toll Free Tel: 800-535-3936; Tel: 541-850-2606; Fax: 541-851-4333; Email: [request info (Architectural\_Inquiries@jeld-wen.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=JELD-WEN,+Inc.&coid=33445&rep=&fax=541-851-4333&message=RE:%20Spec%20Question%20(08564jwi):%20%20&mf=); Web: <http://www.jeld-wen.com/en-us>
     2. Substitutions: Not permitted.
     3. Substitution requested will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  2. ALUMINUM CLAD-VINYL WINDOWS- GENERAL
     1. Design Requirements: Provide assemblies capable of complying with requirements indicated, based on testing manufacturer's window that are representative of those specified.

\*\* NOTE TO SPECIFIER \*\* The following subparagraph applies only to windows. Delete if not required.

* + - 1. Test Size: In compliance with requirements of AAMA/WDMA/CSA 101/I.S2/A440.
      2. Structural Requirements: Provide assemblies complying with requirements indicated:

\*\* NOTE TO SPECIFIER \*\* Include window performance class and grade ratings as part of the performance requirements. Performance class and grade will vary dependent on project site, the location in the building and window size. Coordinate with the Structural Engineer. Performance class and grade ratings and related window size and style are available at www.jeld-wen.com or by contacting a JELD-WEN representative.

* + - * 1. Performance Class: As indicated on drawings.
        2. Performance Class: \_\_\_\_\_\_\_\_.
        3. Performance Grade: As indicated on drawings.
        4. Performance Grade: \_\_\_\_\_\_\_\_.
      1. NFRC Requirements - Provide assemblies capable of complying with the following total window ratings:

\*\*NOTE TO SPECFIER\*\* Include NFRC ratings as part of the performance requirements. NFRC ratings qualifying for the Energy Star program are based on the performance of the whole window assembly. Qualifying windows vary to fit the needs of different regions throughout the country. NFRC ratings and related JELD-WEN® window size and styles are available at www.jeld-wen.com or by contacting a JELD-WEN® representative.

* + - * 1. U-Factor in accordance with NFRC 100: \_\_\_\_\_\_.
        2. Solar Heat Gain Coefficient (SHGC) in accordance with NFRC 200: \_\_\_\_\_\_.
        3. Visible Transmittance (VT) in accordance with NFRC 200: \_\_\_\_\_\_.
      1. Acoustic Requirements: Provide assemblies capable of complying with the following:

\*\* NOTE TO SPECIFIER \*\* Acoustic requirements and related JELD-WEN window size and styles are available at www.jeld-wen.com or by contacting a JELD-WEN representative.

* + - * 1. STC: \_\_\_\_\_\_\_.
        2. OITC: \_\_\_\_\_\_\_.
    1. Installation Accessories:

\*\* NOTE TO SPECIFIER \*\* Accessories compatible with windows, patio doors and required installation may be specified in this section or in related sections. Coordinate with related sections so as not to duplicate information.

* + - 1. Flashing: Refer to Section 07 60 00 - Flashing and Sheet Metal.

\*\* NOTE TO SPECIFIER \*\* Delete options for sealants not required.

* + - 1. Sealants: OSI Sealants (OSI QUAD Max, OSI QUAD Foam) by Henkel Corporation.
      2. Sealants: Refer to Section 07 91 23 - Backer Rods.
      3. Sealants: Manufacturer recommended sealants to maintain watertight conditions.
    1. Materials:
       1. Exterior: Extruded Aluminum Cladding.
       2. Interior: Vinyl.
    2. Finishes for Windows:
       1. Interior Color: White.

\*\* NOTE TO SPECIFIER \*\* The following nine color options are standard. Delete color options not required or delete all of them.

* + - 1. Exterior Aluminum-Clad Standard Color: As selected by Architect.
      2. Exterior Aluminum-Clad Standard Color: White (standard).
      3. Exterior Aluminum-Clad Standard Color: Black Classic.
      4. Exterior Aluminum-Clad Standard Color: Commercial Brown.
      5. Exterior Aluminum-Clad Standard Color: Commercial Brown Classic.
      6. Exterior Aluminum-Clad Standard Color: Pebble.
      7. Exterior Aluminum-Clad Standard Color: Pebble Classic.
      8. Exterior Aluminum-Clad Standard Color: Slate.
      9. Exterior Aluminum-Clad Standard Color: Nutmeg.

\*\* NOTE TO SPECIFIER \*\* The following colors are optional. Delete colors not required or delete all of them.

* + - 1. Exterior Aluminum-Clad Optional Color: Hartford Green.
      2. Exterior Aluminum-Clad Optional Color: Chestnut Bronze.
      3. Exterior Aluminum-Clad Optional Color: French Vanilla.
      4. Exterior Aluminum-Clad Optional Color: Mesa Red.
      5. Exterior Aluminum-Clad Optional Color: Desert Sand.
      6. Exterior Aluminum-Clad Optional Color: Arctic Silver.
      7. Exterior Aluminum-Clad Optional Color: Dark Chocolate.
      8. Exterior Aluminum-Clad Optional Color: Redwood.
      9. Exterior Aluminum-Clad Optional Color: Mocha Cream.
      10. Exterior Aluminum-Clad Optional Color: Luxury Bronze.
      11. Exterior Aluminum-Clad Optional Color: Heirloom White.
      12. Exterior Aluminum-Clad Optional Color: Sage Brown.
      13. Exterior Aluminum-Clad Optional Color: Smoke.
      14. Exterior Aluminum-Clad Optional Color: Bone White.
      15. Exterior Aluminum-Clad Optional Color: Dark Buckskin.
      16. Exterior Aluminum-Clad Optional Color: Hunter Green.
      17. Exterior Aluminum-Clad Optional Color: Ivory Classic.
      18. Exterior Aluminum-Clad Optional Color: Cascade.
      19. Exterior Aluminum-Clad Optional Color: Sea Foam.
      20. Exterior Aluminum-Clad Optional Color: Chestnut Brown Classic.
      21. Exterior Aluminum-Clad Optional Color: Window Bronze.
      22. Exterior Aluminum-Clad Optional Color: Moonlit Moss.
      23. Exterior Aluminum-Clad Optional Color: Windswept Smoke.
      24. Exterior Aluminum-Clad Optional Color: Maize.
      25. Exterior Aluminum-Clad Optional Color: Colonial red.
      26. Exterior Aluminum-Clad Optional Color: Red.
      27. Exterior Aluminum-Clad Optional Color: Charcoal Black.
      28. Exterior Aluminum-Clad Optional Color: Clay.
      29. Exterior Aluminum-Clad Optional Color: Green.
      30. Exterior Aluminum-Clad Optional Color: Heron blue.
      31. Exterior Aluminum-Clad Optional Color: Slate blue.
      32. Exterior Aluminum-Clad Optional Color: Smoke Grey.
      33. Exterior Aluminum-Clad Optional Color: Savanna.
      34. Exterior Aluminum-Clad Optional Color: Chestnut.
      35. Exterior Aluminum-Clad Optional Color: Hickory.
      36. Exterior Aluminum-Clad Optional Color: Cashmere.
      37. Exterior Aluminum-Clad Optional Color: Mist Blue.
      38. Exterior Aluminum-Clad Optional Color: Almond.
      39. Exterior Aluminum-Clad Optional Color: Sumac.
      40. Exterior Aluminum-Clad Optional Color: Arcadian.
      41. Exterior Aluminum-Clad Optional Color: Forest Green.
      42. Exterior Aluminum-Clad Optional Color: Dark Clay.
      43. Exterior Aluminum-Clad Optional Color: Canyon.
      44. Exterior Aluminum-Clad Optional Color: Sandal Wood.
      45. Exterior Aluminum-Clad Optional Color: Wicker.
      46. Exterior Aluminum-Clad Optional Color: Old world blue.
      47. Exterior Aluminum-Clad Optional Color: Tan.
      48. Exterior Aluminum-Clad Optional Color: Brown.
      49. Exterior Aluminum-Clad Optional Color: Sablon.
      50. Exterior Aluminum-Clad Optional Color: Ivy Green.
      51. Exterior Aluminum-Clad Optional Color: Burgundy.
      52. Exterior Aluminum-Clad Optional Color: Oak.
      53. Exterior Aluminum-Clad Optional Color: Walnut.
      54. Exterior Aluminum-Clad Optional Color: Mahogany.
      55. Exterior Aluminum-Clad Optional Color: Clear anodized.
      56. Exterior Aluminum-Clad Optional Color: Residential beige.
      57. Exterior Aluminum-Clad Optional Color: GTK Sandalwood L/G.
      58. Exterior Aluminum-Clad Optional Color: GTK Antique brown.
      59. Exterior Aluminum-Clad Optional Color: GTK Royal clay.
      60. Exterior Aluminum-Clad Optional Color: GTK Royal sandalwood.
      61. Exterior Aluminum-Clad Optional Color: GTK Window bronze.
      62. Exterior Aluminum-Clad Optional Color: GTK Cream L/G.
      63. Exterior Aluminum-Clad Optional Color: GTK Lambeth beige.
      64. Exterior Aluminum-Clad Optional Color: GTK Maize.
      65. Exterior Aluminum-Clad Optional Color: GTK Windswept smoke.
      66. Exterior Aluminum-Clad Optional Color: GTK Midnight surf.
      67. Exterior Aluminum-Clad Optional Color: GTK Canyon clay.
      68. Exterior Aluminum-Clad Optional Color: GTK Moonlit moss.
      69. Exterior Aluminum-Clad Optional Color: GTK Cashmere.
      70. Exterior Aluminum-Clad Optional Color: GTK Amber.
      71. Exterior Aluminum-Clad Optional Color: GTK Sage.
      72. Exterior Aluminum-Clad Optional Color: GTK Ivy green.
      73. Exterior Aluminum-Clad Optional Color: GTK Slate.
      74. Exterior Aluminum-Clad Optional Color: GTK Black.
      75. Exterior Aluminum-Clad Optional Color: GTK Cedar XL.
      76. Exterior Aluminum-Clad Optional Color: GTK Almond.
      77. Exterior Aluminum-Clad Optional Color: GTK Antique ivory.
      78. Exterior Aluminum-Clad Optional Color: GTK Pearl.
      79. Exterior Aluminum-Clad Optional Color: GTK Wedgewood blue.
      80. Exterior Aluminum-Clad Optional Color: GTK Dover gray.
      81. Exterior Aluminum-Clad Optional Color: GTK Wicker.
      82. Exterior Aluminum-Clad Optional Color: GTK Venetian red.
      83. Exterior Aluminum-Clad Optional Color: GTK Sandstone.
      84. Exterior Aluminum-Clad Optional Color: GTK Khaki XL.
      85. Exterior Aluminum-Clad Optional Color: GTK Old world blue.
      86. Exterior Aluminum-Clad Optional Color: GTK Harvest wheat.
      87. Exterior Aluminum-Clad Optional Color: GTK Dutch green XL.
      88. Exterior Aluminum-Clad Optional Color: GTK Sable.
      89. Exterior Aluminum-Clad Optional Color: GTK Country red XL.
      90. Exterior Aluminum-Clad Optional Color: GTK Chestnut brown.
      91. Exterior Aluminum-Clad Optional Color: GTK River rock XL.
      92. Exterior Aluminum-Clad Optional Color: GTK Forest green.
      93. Exterior Aluminum-Clad Optional Color: GTK Dark drift.
      94. Exterior Aluminum-Clad Optional Color: GTK Pebble.
      95. Exterior Aluminum-Clad Optional Color: GTK Commercial brown.
      96. Exterior Aluminum-Clad Optional Color: GTK Burgundy.
      97. Exterior Aluminum-Clad Optional Color: GTK Saddle brown.
      98. Exterior Aluminum-Clad Optional Color: GTK Storm.
      99. Exterior Aluminum-Clad Optional Color: GTK Brownstone.
      100. Exterior Aluminum-Clad Optional Color: GTK Acadia XL.
      101. Exterior Aluminum-Clad Optional Color: GTK Yellowstone XL.
      102. Exterior Aluminum-Clad Optional Color: GTK Alu copper.
      103. Exterior Aluminum-Clad Optional Color: GTK Mist grey XL.
      104. Exterior Aluminum-Clad Optional Color: GTK Sierra XL.
      105. Exterior Aluminum-Clad Optional Color: GTK Juniper grove.
      106. Exterior Aluminum-Clad Optional Color: GTK Scotia blue XL.
      107. Exterior Aluminum-Clad Optional Color: GTK Pine forest XL.
      108. Exterior Aluminum-Clad Optional Color: GTK Sand XL.
      109. Exterior Aluminum-Clad Optional Color: GTK Almond XL.
      110. Exterior Aluminum-Clad Optional Color: GTK Autumn gold XL.
      111. Exterior Aluminum-Clad Optional Color: GTK Walnut XL.
      112. Exterior Aluminum-Clad Optional Color: GTK Mountain arbor
      113. Exterior Aluminum-Clad Optional Color: GTK Graphite.
      114. Exterior Aluminum-Clad Optional Color: GTK Iron ore.
      115. Exterior Aluminum-Clad Optional Color: GTK Monterey sand.
      116. Exterior Aluminum-Clad Optional Color: GTK Coastal blue.
      117. Exterior Aluminum-Clad Optional Color: GTK Midnight blue XL.
      118. Exterior Aluminum-Clad Optional Color: GTK Cream XL.
  1. ALUMINUM CLAD-VINYL WINDOW ASSEMBLlES
     1. Basis of Design: DF Hybrid Series vinyl window assemblies as manufactured by JELD-WEN, Incorporated.

\*\* NOTE TO SPECIFIER \*\* Delete window types not required.

* + - 1. Window Type: Awning windows.
         1. Frame: Fusion Welded Corners.
         2. Sash: Fusion Welded Corners.
         3. Glass: Mounted with flexible PVC barb and silicone glazing compound and/or glazing tape.
      2. Window Type: Casement windows.
         1. Frame: Fusion Welded Corners.
         2. Sash: Fusion Welded Corners.
         3. Glass: Mounted with flexible PVC barb and silicone glazing compound and/or glazing tape.
      3. Window Type: Fixed Radius and Geometric windows.
         1. Frame: Fusion Welded Corners.
         2. Glass: Mounted with flexible PVC barb and silicone glazing compound and/or glazing tape.
    1. Frames:
       1. Jamb Depth: 4 9/16 inch (115.8 mm).
       2. Frame Interior Finish: White (Standard).
       3. Frame Interior Finish: Laminated Black.
    2. Sashes:

\*\* NOTE TO SPECIFIER \*\* Delete sash thicknesses not required.

* + - 1. Sash Thickness: Awning Windows: 2 1/4 inch (57.1 mm).
      2. Sash Thickness: Casement Windows: 2 1/4 inch (57.1 mm).
      3. Sash Thickness: Fixed Radius and Geometric Windows: N/A.
    1. Exterior Trim:

\*\* NOTE TO SPECIFIER \*\* Delete aluminum mouldings not required.

* + - 1. Aluminum Mouldings: Without Brickmould.
      2. Aluminum Mouldings: Without Brickmould plus flange.
      3. Aluminum Mouldings: AL-047 Closed Brickmould 1-1/2 inch (38.1 mm) plus nailing flange.
      4. Aluminum Mouldings: AL-048 Closed Brickmould 1-1/2 inch (38.1 mm).
      5. Aluminum Mouldings: AL-049 Closed Brickmould 3-1/2 inch (88.9 mm) plus nailing flange.
      6. Aluminum Mouldings: AL-050 Closed Brickmould 3-1/2 inch (88.9 mm).
    1. Clad Type:
       1. Hybrid Standard Style (standard).
       2. Hybrid Contemporary Style.
    2. Extension Jambs:

\*\* NOTE TO SPECIFIER \*\* Delete window jamb sizes not required.

* + - 1. Awning: 2 inch (50.8 mm).
      2. Awning: 4-3/4 inch (120.6 mm).
      3. Awning: 8-7/8 inch (225.4 mm).
      4. Casement: 2 inch (50.8 mm).
      5. Casement: 4-3/4 inch (120.6 mm).
      6. Casement: 8-7/8 inch (225.4 mm).
      7. Fixed Radius and Geometric Windows: 2 inch (50.8 mm).
      8. Fixed Radius and Geometric Windows: 4-3/4 inch (120.6 mm).
      9. Fixed Radius and Geometric Windows: 8-7/8 inch (225.4 mm).

\*\* NOTE TO SPECIFIER \*\* DELETE Weatherstripping for window styles not project specific.

* + 1. Weatherstripping:
       1. Awning and Casement Windows: .270 fin pile combined with PVC flex compression bulb.
       2. Fixed Radius and Geometric Windows: N/A Fixed only.
    2. Window Hardware:

\*\* NOTE TO SPECIFIER \*\* In applications where both operable and non-operable casement or awning windows are desired, to maintain the aesthetic profile specify "stationary" awning or casement units in Part 3 Schedule Article.  
\*\* NOTE TO SPECIFIY \*\* Delete window styles not required.

* + - 1. Awning Windows:

\*\* NOTE TO SPECIFIER \*\* Delete hinge not required.

* + - * 1. Hinges: Standard Hardware (standard).
        2. Hinges: Coastal Stainless Steel Hardware.
        3. Operator: Dual Arm Assembly.
        4. Lock: Multi-point.
        5. Handle Profile: Manual Folding Crank.
        6. Finish: White.

\*\* NOTE TO SPECIFIER \*\* Delete vent stop not required.

* + - * 1. Vent Stop: None (standard).
        2. Vent Stop: At 4 inch (102 mm).
      1. Casement Windows:

\*\* NOTE TO SPECIFIER \*\* Delete hinge not required.

* + - * 1. Hinges: Standard Hardware (standard).
        2. Hinges: Coastal Stainless Steel Hardware.
        3. Operator: Dual Arm Assembly.
        4. Lock: Multi-Point.
        5. Handle Profile: Manual Folding Crank.
        6. Finish: White.

\*\* NOTE TO SPECIFIER \*\* Delete vent stop not required.

* + - * 1. Vent Stop: None (standard).
        2. Vent Stop: At 4 inch (102 mm).
        3. Vent Stop: At 4 inch (102 mm) WOCD.
        4. Performance Option: Standard (Standard).
        5. Performance Option: With Performance Grade.
      1. Fixed Radius and Geometric Windows: None.
    1. Glazing for Windows.

\*\* NOTE TO SPECIFIER \*\* Delete glazing type not required.

* + - 1. Glazing Type: Dual Pane (standard).
      2. Glazing Type: Triple Pane.

\*\* NOTE TO SPECIFIER \*\* Delete construction type not required.

* + - 1. Construction Type: Two panes of glass utilizing a continuous roll formed stainless steel and dual seal sealant.
      2. Construction Type: Three panes of glass utilizing a continuous roll formed stainless steel and dual seal sealant.
      3. Overall Nominal Thickness: 3/4 in (19 mm).

\*\* NOTE TO SPECIFIER \*\* Delete glass coatings not required.

* + - 1. Glass Coating: As selected by Architect.
      2. Glass Coating: Low-E 180 (standard).
      3. Glass Coating: Low-E 366.
      4. Type of Sealed unit: Clear.
      5. Type of Sealed unit: Low-E.

\*\* NOTE TO SPECIFIER \*\* Delete glass options not required.

* + - 1. Glass Options: Tempered.
      2. Glass Options: Frosted.
      3. Glass Options: Bronze.
      4. Glass Options: Grey.
      5. Glass Options: Glue Chip.
      6. Glass Options: Sandblasted.
      7. Glass Options: Frosted Tempered.
      8. As selected by Architect.

\*\* NOTE TO SPECIFIER \*\* Delete paragraph if not required.

\*\* NOTE TO SPECIFIER \*\* Insect screens are not available on fixed radius and geometric windows. DELETE insect screens when only fixed radius and geometric windows are specified.

* + 1. Insect Screen:
       1. Frame Finish: White.
    2. Grilles:

\*\* NOTE TO SPECIFIER \*\* Grilles are optional. SELECT grilles, profiles and width based on the desired aesthetic appearance of the window. Grilles are not available for textured glass. Delete grille types not desired.

* + - 1. Simulated Divided Lites (SDL):
         1. Exterior Muntins: Extruded aluminum contoured muntin permanently applied to exterior of insulating glass unit.

Profile: Beaded.

* + - * 1. Interior Muntins: Vinyl contoured muntin permanently applied to interior of insulated unit.

Profile: Beaded.

\*\* NOTE TO SPECIFIER \*\* Delete profile widths not required.

* + - * 1. Width: 7/8 inch (22 mm).
        2. Width: 2-15/16 (False Mullion) (74.7 mm).
        3. Pattern: As scheduled and indicated on Drawings.
        4. Finish: Outward facing grille bars match window clad exterior. Interior bars are White.

\*\* NOTE TO SPECIFIER \*\* Delete interior spacer bar not required.

* + - * 1. Interior Spacer Bars: None (standard).
        2. Interior Spacer Bars: Spacer Bar.
        3. Exterior Color:

\*\* NOTE TO SPECIFIER \*\* The following seven color options are standard. Delete color options not required or delete all of them.

As selected by Architect.

White (standard).

Black Classic.

Commercial Brown.

Commercial Brown Classic.

Pebble.

Pebble Classic.

Nutmeg.

Slate.

\*\* NOTE TO SPECIFIER \*\* The remaining colors are optional. Delete colors not required or delete all of them.

Hartford Green.

Chestnut Bronze.

French Vanilla.

Mesa Red.

Desert Sand.

Arctic Silver.

Dark Chocolate.

Redwood.

Mocha Cream.

Luxury Bronze.

Heirloom White.

Sage Brown.

Smoke.

Bone White.

Dark Buckskin.

Hunter Green.

Ivory Classic.

Cascade.

Sea Foam.

Chestnut Brown Classic.

Window Bronze.

Moonlit Moss.

Windswept Smoke.

Maize.

Colonial red.

Red.

Charcoal black.

Clay.

Green.

Heron blue.

Slate blue.

Smoke grey.

Savanna.

Chestnut.

Hickory.

Mist blue.

Almond.

Sumac.

Arcadian.

Forest green.

Dark clay.

Canyon.

Sandal wood.

Wicker.

Old world blue.

Tan.

Brown.

Sablon.

Ivy green.

Burgundy.

Oak.

Walnut.

Mahogany.

Clear anodized; not available in 1 3/8 inch (35 mm).

Residential beige.

GTK Sandalwood L/G.

GTK Antique brown.

GTK Royal clay.

GTK Royal sandalwood.

GTK Window bronze.

GTK Cream L/G.

GTK Lambeth beige.

GTK Maize.

GTK Windswept smoke.

GTK Midnight Surf.

GTK Canyon clay.

GTK Moonlit moss.

GTK Cashmere.

GTK Amber.

GTK Sage.

GTK Ivy green.

GTK Slate.

GTK Black.

GTK Cedar XL.

GTK Almond.

GTK Antique ivory.

GTK Pearl.

GTK Wedgewood blue.

GTK Dover gray.

GTK Wicker.

GTK Venetian red.

GTK Sandstone.

GTK Khaki XL.

GTK Old world blue.

GTK Harvest wheat.

GTK Dutch green XL.

GTK Sable.

GTK Country red XL.

GTK Chestnut brown.

GTK River rock XL.

GTK Forest green.

GTK Dark drift.

GTK Pebble.

GTK Commercial brown.

GTK Burgundy.

GTK Saddle brown.

GTK Storm.

GTK Brownstone.

GTK Acadia XL.

GTK Yellowstone XL.

GTK Alu copper.

GTK Mist grey XL.

GTK Sierra XL.

GTK Juniper grove.

GTK Scotia blue XL.

GTK Pine forest.

GTK Sand XL.

GTK Almond XL.

GTK Autumn gold.

GTK Walnut XL.

GTK Mountain arbor.

GTK Graphite.

GTK Iron ore.

GTK Monterey sand.

GTK Coastal blue.

GTK Midnight blue XL.

GTK Cream XL.

Imitation clear anodized.

* + - 1. Grilles Between the Glass (GBG): Roll formed aluminum suspended within the air cavity.

\*\* NOTE TO SPECIFIER \*\* SELECT Internal flat profile for a narrow aesthetic and Georgian profile for a wider aesthetic. Delete profiles not required.

* + - * 1. Profile: Internal Flat.

Width: 5/8 inch (15.9 mm).

Finish: Outward facing grille bars match window clad exterior. Interior bars are White (Except for Clay which has the option of a Clay or White interior).

\*\* NOTE TO SPECIFIER \*\* The following seven color options are standard. Delete colors not required or delete all of them.

Exterior Color: As selected by Architect.

Exterior Color: DF White (standard).

Exterior Color: Black Classic.

Exterior Color: Commercial Brown.

Exterior Color: Commercial Brown Classic.

Exterior Color: Pebble.

Exterior Color: Pebble Classic.

Exterior Color: Nutmeg.

Exterior Color: Slate.

\*\* NOTE TO SPECIFIER \*\* The remaining colors are optional. Delete colors not required or delete all of them.

Exterior Color: Hartford Green.

Exterior Color: Chestnut Bronze.

Exterior Color: French Vanilla.

Exterior Color: Mesa Red.

Exterior Color: Desert Sand.

Exterior Color: Arctic Silver.

Exterior Color: Dark Chocolate.

Exterior Color: Redwood.

Exterior Color: Mocha Cream.

Exterior Color: Luxury Bronze.

Exterior Color: Heirloom White.

Exterior Color: Sage Brown.

Exterior Color: Smoke.

Exterior Color: Bone White.

Exterior Color: Dark Buckskin.

Exterior Color: Hunter Green.

Exterior Color: Ivory Classic.

Exterior Color: Sea Foam.

Exterior Color: Windswept Smoke.

Exterior Color: Maize.

Exterior Color: Colonial red.

Exterior Color: Red.

Exterior Color: Charcoal black.

Exterior Color: Clay.

Exterior Color: Green.

Exterior Color: Heron blue.

Exterior Color: Slate blue.

Exterior Color: Smoke grey.

Exterior Color: Savanna.

Exterior Color: Chestnut.

Exterior Color: Hickory.

Exterior Color: Cashmere.

Exterior Color: Mist blue.

Exterior Color: Almond.

Exterior Color: Sumac.

Exterior Color: Arcadian.

Exterior Color: Forest green.

Exterior Color: Dark clay.

Exterior Color: Canyon.

Exterior Color: Sandal wood.

Exterior Color: Wicker.

Exterior Color: Old world blue.

Exterior Color: Tan.

Exterior Color: Brown.

Exterior Color: Sablon.

Exterior Color: Ivy green.

Exterior Color: Burgundy.

Exterior Color: Residential beige.

Exterior Color: GTK Sandalwood L/G.

Exterior Color: GTK Antique brown.

Exterior Color: GTK Royal clay.

Exterior Color: GTK Royal sandalwood.

Exterior Color: GTK Window bronze.

Exterior Color: GTK Cream L/G.

Exterior Color: GTK Lambeth beige.

Exterior Color: GTK Maize.

Exterior Color: GTK Windswept smoke.

Exterior Color: GTK Midnight Surf.

Exterior Color: GTK Canyon clay.

Exterior Color: GTK Moonlit moss.

Exterior Color: GTK Cashmere.

Exterior Color: GTK Amber.

Exterior Color: GTK Sage.

Exterior Color: GTK Ivy green.

Exterior Color: GTK Slate.

Exterior Color: GTK Black.

Exterior Color: GTK Cedar XL.

Exterior Color: GTK Almond.

Exterior Color: GTK Antique ivory.

Exterior Color: GTK Pearl.

Exterior Color: GTK Wedgewood blue.

Exterior Color: GTK Dover gray.

Exterior Color: GTK Wicker.

Exterior Color: GTK Venetian red.

Exterior Color: GTK Sandstone.

Exterior Color: GTK Khaki XL.

Exterior Color: GTK Old world blue.

Exterior Color: GTK Harvest wheat.

Exterior Color: GTK Dutch green XL.

Exterior Color: GTK Sable.

Exterior Color: GTK Country red XL.

Exterior Color: GTK Chestnut brown.

Exterior Color: GTK River rock XL.

Exterior Color: GTK Forest green.

Exterior Color: GTK Dark drift.

Exterior Color: GTK Pebble.

Exterior Color: GTK Commercial brown.

Exterior Color: GTK Burgundy.

Exterior Color: GTK Saddle brown.

Exterior Color: GTK Storm.

Exterior Color: GTK Brownstone.

Exterior Color: GTK Acadia XL.

Exterior Color: GTK Yellowstone XL.

Exterior Color: GTK Alu copper.

Exterior Color: GTK Mist grey XL.

Exterior Color: GTK Sierra XL.

Exterior Color: GTK Juniper grove.

Exterior Color: GTK Scotia blue XL.

Exterior Color: GTK Pine forest XL.

Exterior Color: GTK Sand XL.

Exterior Color: GTK Almond XL.

Exterior Color: GTK Autumn gold XL.

Exterior Color: GTK Walnut XL.

Exterior Color: GTK Mountain arbor.

Exterior Color: GTK Graphite.

Exterior Color: GTK Iron ore.

Exterior Color: GTK Monterey sand.

Exterior Color: GTK Coastal blue.

Exterior Color: GTK Midnight blue XL.

Exterior Color: GTK Cream XL.

* + - * 1. Profile: Flat, 1 inch (25.4 mm).

Finish: Outward facing grille bars match window clad exterior. Interior bars are White.

\*\* NOTE TO SPECIFIER \*\* The following seven color options are standard. Delete colors not required or delete all of them.

Exterior Color: As selected by Architect.

Exterior Color: White (standard).

Exterior Color: Black Classic.

Exterior Color: Commercial Brown.

Exterior Color: Commercial Brown Classic.

Exterior Color: Pebble.

Exterior Color: Pebble Classic.

Exterior Color: Nutmeg.

Exterior Color: Slate.

\*\* NOTE TO SPECIFIER \*\* The remaining colors are optional. Delete colors not required or delete all of them.

Exterior Color: Hartford Green.

Exterior Color: Chestnut Bronze.

Exterior Color: French Vanilla.

Exterior Color: Mesa Red.

Exterior Color: Desert Sand.

Exterior Color: Arctic Silver.

Exterior Color: Dark Chocolate.

Exterior Color: Redwood.

Exterior Color: Mocha Cream.

Exterior Color: Luxury Bronze.

Exterior Color: Heirloom White.

Exterior Color: Sage Brown.

Exterior Color: Smoke.

Exterior Color: Bone White.

Exterior Color: Dark Buckskin.

Exterior Color: Hunter Green.

Exterior Color: Ivory Classic.

Exterior Color: Sea Foam.

Exterior Color: Windswept Smoke.

Exterior Color: Maize.

Exterior Color: Colonial red.

Exterior Color: Red.

Exterior Color: Charcoal black.

Exterior Color: Clay.

Exterior Color: Green.

Exterior Color: Heron blue.

Exterior Color: Slate blue.

Exterior Color: Smoke grey.

Exterior Color: Savanna.

Exterior Color: Chestnut.

Exterior Color: Hickory.

Exterior Color: Cashmere.

Exterior Color: Mist blue.

Exterior Color: Almond.

Exterior Color: Sumac.

Exterior Color: Arcadian.

Exterior Color: Forest green.

Exterior Color: Dark clay.

Exterior Color: Canyon.

Exterior Color: Sandal wood.

Exterior Color: Wicker.

Exterior Color: Old world blue.

Exterior Color: Tan.

Exterior Color: Brown.

Exterior Color: Sablon.

Exterior Color: Ivy green.

Exterior Color: Burgundy.

Exterior Color: Oak.

Exterior Color: Walnut.

Exterior Color: Mahogany.

Exterior Color: Residential beige.

Exterior Color: GTK Sandalwood L/G.

Exterior Color: GTK Antique brown.

Exterior Color: GTK Royal clay.

Exterior Color: GTK Royal sandalwood.

Exterior Color: GTK Window bronze.

Exterior Color: GTK Cream L/G.

Exterior Color: GTK Lambeth beige.

Exterior Color: GTK Maize.

Exterior Color: GTK Windswept smoke.

Exterior Color: GTK Midnight Surf.

Exterior Color: GTK Canyon clay.

Exterior Color: GTK Moonlit moss.

Exterior Color: GTK Cashmere.

Exterior Color: GTK Amber.

Exterior Color: GTK Sage.

Exterior Color: GTK Ivy green.

Exterior Color: GTK Slate.

Exterior Color: GTK Black.

Exterior Color: GTK Cedar XL.

Exterior Color: GTK Almond.

Exterior Color: GTK Antique ivory.

Exterior Color: GTK Pearl.

Exterior Color: GTK Wedgewood blue.

Exterior Color: GTK Dover gray.

Exterior Color: GTK Wicker.

Exterior Color: GTK Venetian red.

Exterior Color: GTK Sandstone.

Exterior Color: GTK Khaki XL.

Exterior Color: GTK Old world blue.

Exterior Color: GTK Harvest wheat.

Exterior Color: GTK Dutch green XL.

Exterior Color: GTK Sable.

Exterior Color: GTK Country red XL.

Exterior Color: GTK Chestnut brown.

Exterior Color: GTK River rock XL.

Exterior Color: GTK Forest green.

Exterior Color: GTK Dark drift.

Exterior Color: GTK Pebble.

Exterior Color: GTK Commercial brown.

Exterior Color: GTK Burgundy.

Exterior Color: GTK Saddle brown.

Exterior Color: GTK Storm.

Exterior Color: GTK Brownstone.

Exterior Color: GTK Acadia XL.

Exterior Color: GTK Yellowstone XL.

Exterior Color: GTK Alu copper.

Exterior Color: GTK Mist grey XL.

Exterior Color: GTK Sierra XL.

Exterior Color: GTK Juniper grove.

Exterior Color: GTK Scotia blue XL.

Exterior Color: GTK Pine forest XL.

Exterior Color: GTK Sand XL.

Exterior Color: GTK Almond XL.

Exterior Color: GTK Autumn gold XL.

Exterior Color: GTK Walnut XL.

Exterior Color: GTK Mountain arbor.

Exterior Color: GTK Graphite.

Exterior Color: GTK Iron ore.

Exterior Color: GTK Monterey sand.

Exterior Color: GTK Coastal blue.

Exterior Color: GTK Midnight blue XL.

Exterior Color: GTK Cream XL.

* + - * 1. Profile: Internal Georgian.

Width: 3/4 inch (19 mm) profile width.

Finish: Outward facing grille bars match window clad exterior. Interior bars are White (Except for Clay which has the option of a Clay or White interior).

\*\* NOTE TO SPECIFIER \*\* The following seven color options are standard. Delete colors not required or delete all of them.

Exterior Color: As selected by Architect.

Exterior Color: White (standard).

Exterior Color: Brass.

Exterior Color: Black Classic.

Exterior Color: Commercial Brown.

Exterior Color: Commercial Brown Classic.

Exterior Color: Pebble.

Exterior Color: Pebble Classic.

Exterior Color: Nutmeg.

Exterior Color: Slate.

\*\* NOTE TO SPECIFIER \*\* The remaining colors are optional. Delete colors not required or delete all of them.

Exterior Color: Hartford Green.

Exterior Color: Chestnut Bronze.

Exterior Color: French Vanilla.

Exterior Color: Mesa Red.

Exterior Color: Desert Sand.

Exterior Color: Arctic Silver.

Exterior Color: Dark Chocolate.

Exterior Color: Redwood.

Exterior Color: Mocha Cream.

Exterior Color: Luxury Bronze.

Exterior Color: Heirloom White.

Exterior Color: Sage Brown.

Exterior Color: Smoke.

Exterior Color: Bone White.

Exterior Color: Dark Buckskin.

Exterior Color: Hunter Green.

Exterior Color: Ivory Classic.

Exterior Color: Sea Foam.

Exterior Color: Windswept Smoke.

Exterior Color: Maize.

Exterior Color: Colonial red.

Exterior Color: Red.

Exterior Color: Charcoal black.

Exterior Color: Clay.

Exterior Color: Green.

Exterior Color: Heron blue.

Exterior Color: Slate blue.

Exterior Color: Smoke grey.

Exterior Color: Savanna.

Exterior Color: Chestnut.

Exterior Color: Hickory.

Exterior Color: Cashmere.

Exterior Color: Mist blue.

Exterior Color: Almond.

Exterior Color: Sumac.

Exterior Color: Arcadian.

Exterior Color: Forest green.

Exterior Color: Dark clay.

Exterior Color: Canyon.

Exterior Color: Sandal wood.

Exterior Color: Wicker.

Exterior Color: Old world blue.

Exterior Color: Tan.

Exterior Color: Brown.

Exterior Color: Sablon.

Exterior Color: Ivy green.

Exterior Color: Burgundy.

Exterior Color: Oak.

Exterior Color: Walnut.

Exterior Color: Mahogany.

Exterior Color: Residential beige.

Exterior Color: GTK Sandalwood L/G.

Exterior Color: GTK Antique brown.

Exterior Color: GTK Royal clay.

Exterior Color: GTK Royal sandalwood.

Exterior Color: GTK Window bronze.

Exterior Color: GTK Cream L/G.

Exterior Color: GTK Lambeth beige.

Exterior Color: GTK Maize.

Exterior Color: GTK Windswept smoke.

Exterior Color: GTK Midnight Surf.

Exterior Color: GTK Canyon clay.

Exterior Color: GTK Moonlit moss.

Exterior Color: GTK Cashmere.

Exterior Color: GTK Amber.

Exterior Color: GTK Sage.

Exterior Color: GTK Ivy green.

Exterior Color: GTK Slate.

Exterior Color: GTK Black.

Exterior Color: GTK Cedar XL.

Exterior Color: GTK Almond.

Exterior Color: GTK Antique ivory.

Exterior Color: GTK Pearl.

Exterior Color: GTK Wedgewood blue.

Exterior Color: GTK Dover gray.

Exterior Color: GTK Wicker.

Exterior Color: GTK Venetian red.

Exterior Color: GTK Sandstone.

Exterior Color: GTK Khaki XL.

Exterior Color: GTK Old world blue.

Exterior Color: GTK Harvest wheat.

Exterior Color: GTK Dutch green XL.

Exterior Color: GTK Sable.

Exterior Color: GTK Country red XL.

Exterior Color: GTK Chestnut brown.

Exterior Color: GTK River rock XL.

Exterior Color: GTK Forest green.

Exterior Color: GTK Dark drift.

Exterior Color: GTK Pebble.

Exterior Color: GTK Commercial brown.

Exterior Color: GTK Burgundy.

Exterior Color: GTK Saddle brown.

Exterior Color: GTK Storm.

Exterior Color: GTK Brownstone.

Exterior Color: GTK Acadia XL.

Exterior Color: GTK Yellowstone XL.

Exterior Color: GTK Alu copper.

Exterior Color: GTK Mist grey XL.

Exterior Color: GTK Sierra XL.

Exterior Color: GTK Juniper grove.

Exterior Color: GTK Scotia blue XL.

Exterior Color: GTK Pine forest XL.

Exterior Color: GTK Sand XL.

Exterior Color: GTK Almond XL.

Exterior Color: GTK Autumn gold XL.

Exterior Color: GTK Walnut XL.

Exterior Color: GTK Mountain arbor.

Exterior Color: GTK Graphite.

Exterior Color: GTK Iron ore.

Exterior Color: GTK Monterey sand.

Exterior Color: GTK Coastal blue.

Exterior Color: GTK Midnight blue XL.

Exterior Color: GTK Cream XL.

Width: 1 inch (25.4 mm) profile width.

Finish: Outward facing grille bars match window clad exterior. Interior bars are White.

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

Color: As selected by Architect.

Color: White (standard).

Color: Black Classic.

Color: Commercial Brown.

Color: Pebble.

Color: Slate.

Color: Nutmeg.

* + - * 1. Profile: Internal Tubular.

Profile Width: 5/16 inch (7.94 mm).

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

Finish: As selected by Architect.

Finish: White.

Finish: Brass.

Finish: Pewter.

Finish: Silver.

* + - * 1. Profile: Internal Square

Profile Width: 5/16 inch (7.94 mm).

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

Finish: As selected by Architect.

Finish: White Ext./White Int.

Finish: Brass.

Finish: Pewter.

Finish: Black.

1. - EXECUTION
   1. GENERAL
      1. Install windows in accordance with manufacturer's installation guidelines and recommendations.
   2. EXAMINATION
      1. Inspect window prior to installation.
      2. Inspect rough opening for compliance with window manufacturer recommendations. Verify rough opening conditions are within recommended tolerances.
   3. PREPARATION
      1. Prepare windows for installation in accordance with manufacturer's recommendations.
   4. INSTALLATION
      1. Install products in accordance with manufacturer's instructions, approved submittals, and in proper relationship to adjacent construction.
         1. Insert units into rough opening.
         2. Shim side jambs straight.
         3. Inspect unit for square, level and plumb.
         4. Fasten unit through jamb, shim and into rough opening jamb.
         5. Test and adjust for smooth operation of unit.
         6. Ensure weep holes are clear of debris for proper drainage.
   5. CLEANING
      1. Clean the exterior surface and glass with mild soap and water.
   6. PROTECTION
      1. Protect installed windows from damage.

END OF SECTION