

## SECTION 05 7310

## BLUMCRAFT WET GLAZE GLASS RAILING SYSTEMS

PART 1 GENERAL

## 1.1 SECTION INCLUDES

- A. Tempered Glass Wet Glaze Railing Assemblies.

## 1.2 RELATED SECTIONS

- A. Section 05 5000 - Metal Fabrications
- B. Section 05 7000 - Ornamental Handrails & Railings
- C. Section 05 7300 - Handrails and Railings
- D. Section 08 8000 - Glazing

## 1.3 REFERENCES

- A. ASTM C 1048 – Standard Specification for Heat Treated Flat Glass – Kind HS, Kind FT Coated and Uncoated Glass
- B. NAAMM Metal Finishes Manual; national Association of Architectural Metal Manufacturers

## 1.4 SYSTEM DESCRIPTION

- A. Performance Requirements for Handrail Assembly:
  1. Support distributed load of 50 pounds per linear foot (0.73kN/M), applied horizontally at right angles in any direction to the handrail.
  2. Support concentrated horizontal load of 200 pounds (0.89kN), applied in any direction at any point along handrail system.
  3. 50 lbs (0.22kN) on 1 sf (0.093m<sup>2</sup>) perpendicular to guard at any location
  4. Wind loads 25 psf or as otherwise specified.
  5. Distributed loads and concentrated loads not to be applied simultaneously.

## 1.5 SUBMITTALS

- A. Submit under provisions of Section 01 3300.

- B. Product Data: Submit Manufacturer's technical product data for railing components and accessories.
- C. Shop Drawings: Dimensioned drawings of railing assemblies indicating the following:
  - 1. Elevations; include joint locations, transitions, and terminations.
  - 2. Manufacturer's installation and maintenance instructions.
- D. Samples of manufacturer's finishes (As selected by Architect.)

#### 1.6 QUALITY ASSURANCE

- A. Components and installation are to be in accordance with state and local building codes.
- B. All components and fittings are furnished by the same manufacturer.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials properly protected against damage to finished surfaces during transit.
- B. Inspect materials upon delivery for damage. Unless minor defects can be made to meet the Architect's specifications and satisfaction, damaged parts should be removed and replaced.
- C. Store materials at building site under cover in dry location

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: **C.R. Laurence Co., Inc. (CRL / Blumcraft)**  
**Tel: (800) 421-6144 Fax: (800) 587-7501**  
**Email: [railings@crlaurence.com](mailto:railings@crlaurence.com)**  
**[www.crlaurence.com](http://www.crlaurence.com)**
- B. Manufacturers of equivalent products will be considered for substitution in accordance with provisions of Section 01 2500 - Product Substitution Procedures.

## 2.2 MATERIALS

- A. Aluminum Components: Conforming to ASTM B 221/ASTM B221M, Alloy 6063- T52
- B. Stainless Steel Components: Conforming to ASTM A 666, Type 304
- C. Brass Components: Conforming to ASTM B 248, No. 260, Yellow Brass
- D. LEED® requirements:
  1. Recycled Content Materials: Provide building materials with recycled content such that post-consumer recycled content plus one-half of pre-consumer recycled content constitutes a minimum of 20 percent of the cost of materials used for the project. See LEED® Green Building Rating System.
  2. Regional Materials: Provide a minimum of 10 percent (based on cost) of building materials that are regionally extracted, processed, and manufactured.

## 2.3 COMPONENTS

- A. Glazing: Fully tempered ASTM C 1048 Kind FT, Quality q3. As specified in Section 08800
  1. Monolithic Tempered Thickness: 1/2 inch (12 mm). (Architect to specify)
  2. Monolithic Tempered Thickness: 3/4 inch (19 mm). (Architect to specify)
  3. Color: Clear, or tint. (Architect to specify)
  4. Architect to specify edge type on exposed glass edges. (See section 08 8000.)
- B. Internal Handrail Cap Connection Sleeves: Metal tube, material compatible with handrail cap material.
- C. Expansion Cement: Hydraulic, conforming to ASTM c 595, **CRL Part # KWX50**.
- D. Shoe Base: (Architect to specify)
  1. Profile: **CRL-Blumcraft Part # RG200**; 3 inches (76.2 mm) wide by 3-9/16 inches (76.2 mm) high two-piece rectangular cross-section. Designed to work with expansion cement for use with 1/2" (12 mm) monolithic tempered glass.
  2. Profile: **CRL-Blumcraft Part # RG450**; 3-1/8 inches (79.4 mm) wide by 5-15/16 inches (150.8 mm) high two-piece rectangular fascia mount cross-section. Designed to work with expansion cement for use with 1/2" (12 mm) monolithic tempered glass.
  3. Profile: **CRL-Blumcraft Part # RG500**; 3-1/2 inches (88.9 mm) wide by 4 inches (101.6 mm) high two-piece rectangular cross-section. Designed to work with expansion cement for use with 3/4" (19 mm) monolithic tempered glass.
  4. Profile: **CRL-Blumcraft Part # RG650**; 3-5/8 inches (92 mm) wide by 6-1/4 inches (158.8 mm) high two-piece rectangular fascia mount cross-section. Designed to work with expansion cement for use with 3/4" (19 mm) monolithic tempered glass.
  5. Material: Aluminum 6063-T52
  6. Finish: (Architect to specify.)

- a. Base Cladding: Sheet metal cladding added to exposed shoe base sections. Adhere with double-sided tape and/or silicone adhesive. Provide end caps where ends of shoe base sections are exposed.
- b. 304 Brushed Stainless (Architect to specify)
- c. 304 Polished Stainless (Architect to specify)
- d. C260 Polished Brass (Architect to specify)
- e. C260 Satin Brass (Architect to specify)

E. Metal Cap Railing: (Architect to specify)

1. Profile: **Part # GRL10**, low profile 11 gauge u-channel 1-5/16 inches (33.3 mm) high.
2. Profile: **Part # GRLC10**, crisp corner low profile 11 gauge u-channel 1-5/16 inches (33.3 mm) high.
3. Profile: **Part # L10**, u-channel 1-1/4 inches (31.8 mm). (laminated glass)
4. Profile: **Part # GRUC**, u-channel 1-1/2 inches (38.1 mm).
5. Profile: **Part # GRCF**, crisp corner u-channel 1-1/2 inches (38.1 mm).
6. Profile: **Part # GRCR**, crisp corner radius top u-channel 1-1/2 inches (38.1 mm).
7. Profile: **Part # GR15**, round 1-1/2 inches (38.1 mm) diameter.
8. Profile: **Part # GRS15**, square 1-1/2 inches (38.1 mm).
9. Profile: **Part # GRSC15**, crisp corner square 1-1/2 inches (38.1 mm).
10. Profile: **Part # GR16**, round 1.66 inches (42.2 mm) diameter.
11. Profile: **Part # GR19**, round 1-7/8 inches (48.3 mm) diameter (aluminum only)
12. Profile: **Part # GR20**, round 2 inches (50.8 mm) diameter.
13. Profile: **Part # 337**, CRL-Blumcraft round 2 inches (50.8 mm) diameter.
14. Profile: **Part # LR20**, round 2 inches (50.8 mm) diameter. (laminated glass)
15. Profile: **Part # GRS20**, square 2 inches (50.8 mm).
16. Profile: **Part # GRSC20**, crisp corner square 2 inches (50.8 mm).
17. Profile: **Part # GR25**, round 2-1/2 inches (63.5 mm) diameter.
18. Profile: **Part # 338**, CRL-Blumcraft round 2-1/2 inches (63.5 mm) diameter.
19. Profile: **Part # GRS25**, square 2-1/2 inches (63.5 mm).
20. Profile: **Part # LR25**, round 2-1/2 inches (63.5 mm) diameter. (laminated glass)
21. Profile: **Part # GR30**, round 3 inches (76.2 mm) diameter.
22. Profile: **Part # GR35**, round 3-1/2 inches (88.9 mm) diameter.
23. Profile: **Part # GR40**, round 4 inches (101.6 mm) diameter.
24. Profile: **Part # GR0V4**, oval 4 inches x 2-1/2 inches (101.6 mm x 63.5 mm) (aluminum only)
25. Profile: **Part # 324**, CRL-Blumcraft square 1-3/8 inches (35 mm).
26. Profile: **Part # 339**, CRL-Blumcraft rectangular 1-3/4 inches x 3-1/2 inches (44.4 x 90 mm).
27. Profile: **Part # 376**, CRL-Blumcraft elliptical 2-11/16 inches (68.2 mm).
28. Profile: **Part # 398**, CRL-Blumcraft rectangular 4 inches (102 mm).
29. Profile: **Part # 636**, CRL-Blumcraft rectangular 1-3/4 inches x 4 inches (44.5 x 102 mm).
30. Profile: **Part # 637**, CRL-Blumcraft rectangular 1-3/4 inches x 5 inches (44.5 x 127 mm).

31. Profile: **Part # 638**, CRL-Blumcraft rectangular 1-3/4 inches x 6 inches (44.5 x 152 mm).
32. Material: \_\_\_\_\_.
33. Finish: (Architect to specify.)

F. Wood Cap Railing: (Architect to specify)

1. Profile: **Part # WCR20**, CRL round 2 inches (50.8 mm) diameter.
2. Profile: **Part # 346**, CRL-Blumcraft round 2 inches (50.8 mm) diameter.
3. Profile: **Part # 347**, CRL-Blumcraft round 2-1/2 inches (63.5 mm) diameter.
4. Profile: **Part # WCR25**, CRL round 2-1/2 inches (63.5 mm) diameter.
5. Profile: **Part # 397**, CRL-Blumcraft 1-3/4 inches x 2-1/8 inches (44.5 x 54 mm)
6. Profile: **Part # 372**, CRL-Blumcraft 2 inches x 3-3/4 inches (51 x 95.3 mm)
7. Profile: **Part # 373**, CRL-Blumcraft 4-1/2 inches x 1-5/8 inches (114.3 x 41.3 mm)
8. Profile: **Part # 631**, CRL-Blumcraft 2-1/2 inches x 4 inches (63.5 x 102 mm)
9. Profile: **Part # 632**, CRL-Blumcraft 2-1/2 inches x 6 inches (63.5 x 152 mm)
10. Profile: **Part # 633**, CRL-Blumcraft 2-1/2 inches x 8 inches (63.5 x 203 mm)
11. Profile: **Part # WCR30**, CRL round 3 inches (76.2 mm) diameter.
12. Wood Type: \_\_\_\_\_.

G. Handrail Brackets: (Architect to specify)

1. Material: Aluminum
2. Material: Stainless Steel
3. Material: Brass
4. Fabrication: Machined
5. Fabrication: Cast
6. Finish: Match handrail cap finish

H. Metal Handrail Tubing: (Architect to specify)

1. Profile: **Part # HR15**, round 1-1/2 inches (38.1 mm) diameter.
2. Profile: **Part # HRH15**, heavy-wall round 1-1/2 inches (38.1 mm) diameter
3. Profile: **Part # 583**, CRL-Blumcraft round 1-1/2 inches (38.1 mm) diameter.
4. Profile: **Part # HRS15**, square 1-1/2 inches (38.1 mm).
5. Profile: **Part # HR19**, round 1-7/8 inches (48.3 mm) diameter.
6. Profile: **Part # HR20**, round 2 inches (50.8 mm) diameter.
7. Profile: **Part # 537**, round 2 inches (50.8 mm) diameter.
8. Profile: **Part # 576**, elliptical 2 inches x 1-3/8 inches (50.8 x 35 mm).
9. Profile: **Part # PR15**, round 1.9 inches (48.3 mm) 1-1/2 inch schedule 40.
10. Profile: **Part # PR12**, round 1.66 inches (42.2 mm) 1-1/4 inch schedule 40.
11. Profile: **Part # PR2**, square 2 inches (50.8 mm).
12. Material: \_\_\_\_\_.
13. Finish: (Architect to specify).

I. Wood Handrail: (Architect to specify)

1. Profile: **Part # 597**, CRL-Blumcraft 1-3/4 inches x 2-3/4 inches (44.5 x 69.9 mm)

2. Profile: **Part # 580**, CRL-Blumcraft round 2 inches (50.8 mm) diameter.
3. Profile: **Part # 572**, CRL-Blumcraft 2 inches x 4-1/2 inches (50.8 x 114.3 mm)
4. Profile: **Part # WD15**, round 1-1/2 inches (38.1 mm) diameter
5. Profile: **Part # WD20**, round 2 inches (50.8 mm) diameter
6. Wood Type: \_\_\_\_\_.

- J. Fasteners: Types and sizes indicated in shop drawings.
  1. Center-to-center spacing of holes is 12" (305 mm).
- K. Sill Angles for Tempered Glass Railing Assemblies: Steel angle profiles conforming to ASTM A 36, with anchoring devices, sizes indicated in shop drawing of section 05 5000, drilled and tapped for fastener types, sizes, and spacing indicated.

## 2.4 FABRICATION

- A. Fabricate handrail assembly components to lengths and configurations complying with shop drawings.
- B. Machine joint edges smooth and plane to produce hairline seams when site assembled; supply concealed sleeve connectors for joints.
- C. Isolate dissimilar metals to prevent electrolytic action by applying primer to concealed surfaces of metal components.

## PART 3 INSTALLATION

### 3.1

- A. Install handrails in accordance with manufacturer's recommended installation instructions and approved shop drawings.

### 3.2 CLEANING

- A. Clean glazing surfaces after installation, complying with requirements contained in the manufacturer's instructions. Remove excess glazing sealant compounds, dirt or other substances.
- B. Remove protective films from metal surfaces.
- C. Clean railing surfaces with clean water and mild detergent. Do not use abrasive chemicals, detergents, or other implements that may mar or gouge the material.

### 3.3 PROTECTION

- A. Institute protective measures required throughout the remainder of the construction period to ensure that all the materials do not incur any damage or deterioration.
- B. Repair components damaged by subsequent construction activities in accordance with manufacturer's recommendations; replace damaged components that cannot be repaired to Architect's acceptance.

END OF SECTION