SECTION 05 7310

TAPER-LOC® DRY GLAZE GLASS RAILING SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Monolithic Tempered Glass Dry Glazed Railing Assemblies.

1.2 REFERENCES

A. ESR-3269 ICC-ES Evaluation Report, International Code Council Standards for Glass Balustrade Guard Rail Applications

B. ASTM C 1048 – Standard Specification for Heat Treated Flat Glass – Kind HS, Kind FT Coated and Uncoated Glass

C. NAAMM Metal Finishes Manual; national Association of Architectural Metal Manufacturers

1.3 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^2) 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.

1.4 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.)

1.5 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.

1.6 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)**
Tel: (800) 421-6144 Fax: (800) 587-7501
Email: railings@crlaurence.com
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

2.3 COMPONENTS

A. Glazing: Fully tempered ASTM C 1048 Kind FT, Quality q3.
   1. Monolithic Tempered Thickness: 3/4 inch
   2. Color: Clear

B. Internal Handrail Cap Connection Sleeves: Metal tube, material compatible with handrail cap material.

C. TAPER-LOC® Dry Glazing System: Each TAPER-LOC® Set consists of two Tapers, and one L-Setting Block. Designed for B5A, B5S, B5T, B6S, and B7S Shoe Bases. Patent Pending.

D. Shoe Base:
   1. Profile: **CRL Part # B5A**; 2-1/2 inches (63.5 mm) wide by 4-1/4 inches (106.4 mm) high rectangular cross-section. Designed to work with CRL's TAPER-LOC® Dry Glazed System with 1/2" (12 mm) monolithic tempered glass.
   2. Material: Aluminum 6063-T52
   3. Finish:
      a. 304 Polished Stainless

E. Metal Cap Railing:
   1. Profile: **Part # GRLC10**, crisp corner low profile 11 gauge u-channel 1-5/16 inches (33.3 mm) high.
   2. Material: _____.
   3. Finish: Brushed Stainless Steel

F. Handrail Brackets:
   1. Material: Stainless Steel
   2. Finish: Match handrail cap finish

G. Metal Handrail Tubing:
   1. Profile: **Part # HRS15**, square 1-1/2 inches (38.1 mm).
   2. Finish: Brushed Stainless Steel

H. Fasteners: Types and sizes indicated in shop drawings.
   A. For concrete attachment, hole size in base shoe is to be 9/16" (14.3 mm), counter bore 7/8" (22.2 mm) x depth ½" (12.7 mm), center-to-center spacing of holes is 12" (304.8mm). Use Hilti HSL3 Expansion Anchors 3-3/4" (95 mm) long **CRL Part # EBA334,** Washer is included.

I. 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