



STAINLESS STEEL RAILING SYSTEMS

Note: These specifications were current at the time of publication but are subject to change without notice. Please confirm the accuracy of these specifications with the manufacturer and / or distributor prior to installation. ©2016

PART 1: GENERAL

1.1 Section Includes

SPECIFIER NOTE: *Delete items below not required for project.*

- A. Ornamental stainless steel cable railing system. (Rainier)
- B. Ornamental stainless steel railing system with glass infill. (Glacier)
- C. Ornamental stainless steel railing system with horizontal bars. (Olympus)

1.2 Related Sections

SPECIFIER NOTE: *Delete any sections below not relevant to this project; add others as required.*

- A. Section 061000 - Rough Carpentry
- B. Section 064316 - Wood Railings
- C. Section 088000 - Glazing.

1.3 Reference

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

- A. ASTM International:
 - 1. ASTM A 554 - Standard Specification for Welded Stainless Steel Mechanical Tubing.
 - 2. ASTM A 492 - Standard Specification for Stainless Steel Rope Wire.

1.4 Submittals

- A. Submit under provisions of Section 013000 – Administrative Requirements.

- B. Product Data: Manufacturer's specifications and technical data including the following:

1. Detailed specification of construction and fabrication.
2. Manufacturer's installation instructions.

SPECIFIER NOTE: *Provision for contractor-designed system and structural support. Delete if not required.*

- C. Shop Drawings: Submit shop drawings for fabrication and installation. Include the following:

1. Plans, elevations, and detail sections.
2. Indicate materials, methods, finishes, and types of joinery, fasteners, anchorages, and accessory items.
3. Where materials or fabrications are indicated to comply with certain design loadings, include structural computations, material properties, and other information needed for structural analysis.

SPECIFIER NOTE: *Specify items for which samples are required, or delete if not required.*

- D. Samples: Prepare samples on metal of same alloy and thickness to be used for the Work.
- E. Quality Control Submittals: Statement of manufacturer's qualifications.

1.5 Quality Assurance

- A. Manufacturer's Qualifications: Not less than 10 years experience in the actual production of specified products.
- B. Installer's Qualifications: Firm with demonstrated experience in installation of systems similar in complexity to those required for this Project.

1.6 Delivery, Storage and Handling

- A. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards.
- B. Store materials in manufacturer's original sealed, labeled packaging until ready for installation and in accordance with manufacturer's instructions. Protect from damage.

1.7 Project Conditions

- A. 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.

1.8 Warranty

- A. Manufacturer's Warranty: Provide manufacturer's standard 10 year limited warranty.

PART 2: PRODUCTS

2.1 Manufacturer

- A. Acceptable Manufacturer: AGS Stainless, Inc.; 7873 NE Day Road, Bainbridge Island, WA 98110. ASD. Toll Free Tel: (888) 842-9492. Tel: (206) 842-9492. Fax: (206) 842-8179. Email: info@agstainless.com Web: <http://www.agstainless.com>.

SPECIFIER NOTE: *Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.*

- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 016000 – Product Requirements.

2.2 System Description (General)

- A. Custom, shop-fabricated stainless steel railing frame with mechanical fittings and attachment for field installation.

SPECIFIER NOTE: *Delete option for infill not required.*

1. Infill: Glass panels.
2. Infill: Horizontal cabling.
3. Infill: Horizontal bar.

- B. Shop fabricate such that no jobsite welding, grinding or cutting is required.

SPECIFIER NOTE: *Delete if not required.*

2.3 Stainless Steel Railing Systems

- A. Stainless Steel Railing System: Clearview® Railing System as manufactured by AGS Stainless, Inc.
 1. Type: Rainier – Cable railing.
 2. Type: Glacier – Glass railing.
 3. Type: Olympus – Horizontal Bar railing.

4. Fabrication: Factory welded components. Verify dimensions on site prior to shop fabrication.
 - a. Mill joints to a tight, hairline fit.
 - b. Miter corner joints.
5. Structural Requirements: Fabricate integral railings and component connections to meet or exceed the requirements as set forth in the current, adopted ICC International Building Code (IBC), International Residential Code (IRC), or governing local code as applicable.

B. Posts:

SPECIFIER NOTE: *Delete option for post materials not required.*

1. Post Material: ASTM A 554, Type A316 stainless steel, minimum Fy=40 ksi.
2. Post Material: Wood posts provided by others.

SPECIFIER NOTE: *Delete all size options if wood posts by others is selected above. Delete options for post sizes not required.*

4. Post Size: 1-1/2 inch (38.1 mm) x 1-1/2 inch (38.1 mm).
5. Post Size: Tubing for posts as provided by others.

SPECIFIER NOTE: *Delete options for post mounting configuration not required.*

6. Post Mounting Configuration: Top mount, as indicated on installation Drawings.
7. Post Mounting Configuration: Side mount, as indicated on installation Drawings.
8. Post Mounting Configuration: As indicated on Drawings.

C. Top Rails:

SPECIFIER NOTE: *Delete option for top rail materials not required.*

1. Top Rail Material: ASTM A 554, Type A316 stainless steel, minimum Fy=40 ksi.
2. Top Rail Material: Wood top rails provided by others.

SPECIFIER NOTE: *Delete all size options if wood top rails by others is selected above. Delete options for top rail sizes not required.*

3. Top Rail Shape, Size: Round, 1-5/8 inch (15.8 mm) diameter x 16 gauge tubing.

4. Top Rail Shape, Size: Flat, 1/2 inch (12.7 mm) x 2 inch (50.8 mm) x 16 gauge tubing.
5. Top Rail Shape, Size: Elliptical, 1-1/16 inch (27 mm) x 1-31/32 inch (50 mm) x 16 gauge tubing.
6. Top Rail Shape, Size: Wood top rails provided by others.

SPECIFIER NOTE: *Delete the Infill option in the next two paragraphs that does not apply. There are three ways to specify the cabling for CLEARVIEW Stainless Steel Cable Railing Systems. OPTION 1: The cable comes in rolls of approximately 100 feet. You will need cable cutters and a crimper to attach the fittings to the ends. Cutters and crimpers are available for rent or purchase through AGS. OPTION 2: The cable comes in lengths approximately six inches longer than required for their designated run. This allows for easier handling and sorting. A fitting is attached at one end. You will need to trim the cable and attach one fitting. Cutter and Crimper are required. OPTION 3: The cable comes cut to length with the fittings attached at both ends. No cutter or crimper is required UNLESS you have a stair run. Because stair fittings are bent, they will not pass through the holes in the intermediate posts. For this reason, stair cable runs can only be delivered as option 1 or option 2.*

D. Infill - Cables:

1. Material: ASTM A 492, stainless steel, Type 316.
2. Construction: 1 X 19.
3. Diameter: 1/8 inch (3 mm) diameter.
4. Lay: Left Hand Lang's.
5. Core: Stainless steel.

SPECIFIER NOTE: *Stair fittings are bent, so they will not pass through the holes in the intermediate posts. For this reason, stair cable runs can only be specified with one of first two options below.*

6. Option 1: Cable provided in rolls for field cutting and a crimping; requires field attachment of fittings to ends.
7. Option 2: Cables provided in lengths approximately six inches longer than required for their designated run with fitting attached at one end; requires one end of each length of cable to be field cut and fittings field attached.
8. Option 3: Cable provided cut to length with fittings attached at both ends. (Not Available for Stairs)

SPECIFIER NOTE: *Delete option for interior or exterior application if not required.*

9. Cable Fitting Materials for Exterior Applications: Stainless steel, Type 316.
10. Cable Fitting Materials for Interior Applications: Stainless steel, Type 316.

SPECIFIER NOTE: *Delete option for cable attachments not required.*

11. Cable Attachments: Factory, machine swaged.
12. Cable Attachments: Field, hand swaged.

SPECIFIER NOTE: *Delete option for tensioning method not required.*

13. Tensioning Method: Threaded terminals.

E. Infill – Glass Panel:

1. Clamps:
 - a. Material: Type A316 stainless steel.
 - b. Mounting Bolts: 5/16 inch (8 mm) diameter.
 - c. Size: Suitable for 1/4 inch (6 mm) or 3/8 inch (9.5 mm) thick glass as applicable.
2. Glass Panels: Provided under the Glazing specification section; not provided by railing system manufacturer.

F. Infill - Horizontal Round Bars:

1. Bars: A316 5/8 inch (8 mm) diameter x 16 gage stainless steel tubing with #4 finish.
2. Infill tubes are horizontal or sloped to match finished floor.
3. Installation: Infill tube end connections achieved with proprietary A316 SS hardware.
4. Intermediate Connections: Proprietary ABS hardware.

- G. Hardware: Stainless steel construction; separate dissimilar materials with bushings, grommets or washers to prevent electrolytic corrosion.

SPECIFIER NOTE: *Delete if not required.*

H. Gates: Gate frames and cables factory assembled.

1. Configurations: Single gate with hinges and gravity latches.
2. Configurations: Double gates with hinges and cane bolts.

SPECIFIER NOTE: *36 inch maximum width. Fill in blank below with width or delete line as applicable. Delete option for gate widths not required.*

3. Widths: _____.
4. Widths: 36 inches (914 mm).

PART 3: EXECUTION

3.1 Examination and Preparation

- A. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
- B. Do not proceed with installation until substrates have been properly prepared and deviations from manufacturer's recommended tolerances are corrected. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Commencement of installation constitutes acceptance of conditions.

3.2 Installation

- A. Install railing system plumb, level, and true and in accordance with manufacturer's installation instructions and recommendations.
- B. Do not tighten the cables more than what is necessary to eliminate any sag.
- C. Provide anchorage devices and fittings to secure to in-place construction to adjacent construction. Separate dissimilar materials with bushings, grommets or washers to prevent electrolytic corrosion.
- D. Do not cut components, except for cable as required for installation, or abrade component finishes. Field touch-up of finishes only acceptable if done as per manufacturer's recommendations. Return components with damaged finishes to shop for required alterations according to manufacturer's return policy, followed by complete refinishing or provide new components.
- E. Secure mounting brackets to building structure in a positive manner using manufacturer recommended reinforcement and anchorage methods for substrate conditions. Locate brackets and hardware at spacing required to support structural loads.
- F. Installation of railing system shall be rigid and secure, installed by mechanics experienced in erection of architectural metal. Mounting hardware shall be drawn up tightly. Rails shall be set plumb and aligned.

END OF SECTION