SECTION 05 51 00

METAL STAIRS - MODULAR CROSSOVER

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\*\* NOTE TO SPECIFIER \*\* Safety Rail Company; Fall protection.  
This section is based on the products of Safety Rail Company, which is located at:4244 Shoreline Dr.Spring Park, MN 55384Toll Free Tel: 888-434-2720Fax: 888-471-4931 Email: [request info (sales@safetyrailcompany.com)](https://arcat.com/rfi?action=email&company=Safety%252BRail%252BCompany&message=RE%253A%2520Spec%2520Question%2520(05510src)%253A%2520&coid=47628&spec=05510src&rep=&fax=888-471-4931%2520)  
Web: <http://www.safetyrailcompany.com>   
 [ [Click Here](https://arcat.com/company/safety-rail-company-47628) ] for additional information.  
Safety Rail Company LLC Spring Park, Minnesota is a premier manufacturer and nationwide supplier of passive fall protection railing systems. Our products are used widely for fall protection on flat commercial rooftops, inside factories, office buildings, construction sites and many other industrial/commercial applications. We manufacture non-penetrating Mobile and Permanent Mounted Safety Railing for leading edge fall hazards, Skylight and Roof Hatch Guards, Safety Gates, Visual Warning Line Systems, Fixed Ladders and more.  
The core of Safety Rail Company's solution is found in products that engineer away the fall hazard. Products that can be installed easily without tools, welding, or drilling. Products that are effective at preventing falls for everyone, not just trained personnel. Products that give piece of mind.  
All our products are Made in USA, and we are an American Welding Society Certified Fabricator offering exceptional customer service, Quote-stage CAD modeling and skilled engineering support. Call us today to discuss your fall protection needs or please visit us at our 50,000 sq ft manufacturing facility in the Minneapolis area. We look forward to hearing from you.

1. GENERAL
   1. SECTION INCLUDES

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

* + 1. Modular Crossover Stairs:
       1. Platform assemblies.
       2. Stair assemblies.
       3. Platform support legs.
       4. Fixed ladders.
       5. Safety Gates.
  1. RELATED SECTIONS

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

* + 1. Section 05 50 00 - Metal Fabrications
    2. Section 05 52 13 - Pipe and Tube Railings.
  1. REFERENCES

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

* + 1. Occupational Safety and Health Administration (OSHA):
       1. OSHA 29 CFR 1910.23 - Fixed Ladders.
       2. OSHA 29 CFR 1910.25 - Stairways.
       3. OSHA 29 CFR 1910.28 - Duty to Have Fall Protection and Falling Object Protection.
       4. OSHA CFR 1910.29 - Walking-Working Surfaces.
       5. OSHA CFR 1910.144 - Safety color code for marking physical hazards.
       6. OSHA CFR 1926.502 - Fall Protection Systems Criteria and Practices.
    2. American National Standards Institute (ANSI):
       1. ANSI A1264.1 - Safety requirements for Fixed Ladders and Workplace Surfaces Package.
    3. American Welding Society (AWS):
       1. AWS D1.1 - Structural Welding Code - Steel.
       2. AWS D1.3 - Structural Welding Code - Sheet Steel.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data:
        1. Manufacturer's data sheets on each product to be used.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
    2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
    3. Manufacturer's Certificates:
       1. Manufacturer must be American Welding Society Welding Certified for Welding Standards AWS D1.1 and AWS D1.3. Third party qualification documentation required prior to shipment.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
     2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
     3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on 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: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
       1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
       2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
       3. Retain mock-up during construction as a standard for comparison with completed work.
       4. Do not alter or remove mock-up until work is completed or removal is authorized.
  1. PRE-INSTALLATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver materials to the job site in good condition and protected against damage as handrails are a finished product.
     2. Inspect rail sections for damage before signing the receipt from the trucking company. Truck driver must note damaged goods on the bill of lading if damaged product is found.
     3. Store products in manufacturer's unopened packaging until ready for installation.
     4. Products to be palletized and labeled by roof level or designated drop zone.
  3. 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.
     2. Field Measurements: Where stairs and platforms fit over other construction, check actual dimensions of other construction by accurate field measurements before fabrication.
  4. WARRANTY
     1. Manufacturer's standard limited warranty unless indicated otherwise.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Safety Rail Company, which is located at:4244 Shoreline Dr.Spring Park, MN 55384Toll Free Tel: 888-434-2720Fax: 888-471-4931 Email: [request info (sales@safetyrailcompany.com)](https://arcat.com/rfi?action=email&company=Safety%252BRail%252BCompany&message=RE%253A%2520Spec%2520Question%2520(05510src)%253A%2520&coid=47628&spec=05510src&rep=&fax=888-471-4931%2520);Web: <http://www.safetyrailcompany.com>

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

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

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

* 1. PERFORMANCE AND DESIGN REQUIREMENTS
     1. OSHA
        1. OSHA 29 CFR 1910.23.
        2. OSHA 29 CFR 1910.25.
        3. OSHA 29 CFR 1910.28.
        4. OSHA CFR 1910.29.
        5. OSHA CFR 1910.144.
        6. OSHA CFR 1926.502.
        7. ANSI A1264.1.

\*\* NOTE TO SPECIFIER \*\* Build your own personalized walkway with the help of our on-staff engineering team who utilize CAD-modeling technology to create a system to fit any application.

* + 1. Three Primary Components of System: Off-the-shelf parts
       1. Handrails.
       2. Universal platforms.
    2. Attachment Details: Can be freestanding with 72 inches (1829 mm) wide foot pad on stringers Can be bolted into substrate capable of supporting load rating of stairs and worker
  1. MODULAR CROSSOVER STAIRS
     1. Platform Assemblies:
        1. Universal Platform Bolted Assemblies:
           1. Model 401110 (WxDxH): 36 x 36 x 7-3/4 inches (914 x 914 x 197 mm).
           2. Model 401168 (WxDxH): 36 x 24 x 7-3/4 inches (914 x 610 x 197 mm).
           3. Model 401189 (WxDxH): 36 x 12 x 7-3/4 inches (914 x 305 x 197 mm).
        2. Width Clearance: 36 inches (914 mm).
        3. Length Range: up to 108 inches (2743 mm) between tower support.
        4. Material: 12 ga hot rolled steel. Finish: Galvanized.
        5. Platform Surface Perforation Pattern: 1 inch (25 mm) diameter staggered perforation.
        6. Safety Railing: On each side of platform width.
           1. Rails work in tandem with stair sections.
           2. Rail Height above platform surface: 42.08 inches (1069 mm)
           3. Finish: Powder coated yellow.
        7. Hardware:
           1. Hex Head Screws: 18-8 Stainless steel 1/2-13 UNC x 3 inches (76 mm) long
           2. Flat Washers: 18-8 Stainless steel 1/2 inch.
           3. Nylock Nuts: 18-8 Stainless steel 1/2-13 UNC.
     2. Stair Assemblies:
        1. Universal Stairs Bolted Assemblies:
           1. Model 401171: 8 inch (203 mm) 1-step rise and under platform clearance.
           2. Model 401102: 16 inch (406 mm) 2-step rise and under platform clearance.
           3. Model 401103: 24 inch (610 mm) 3-step rise and under platform clearance.
           4. Model 401104: 32 inch (813 mm) 4-step rise and under platform clearance.
           5. Model 401105: 40 inch (1016 mm) 5-step rise and under platform clearance.
           6. Model 401106: 48 inch (1219 mm) 6-step rise and under platform clearance.
           7. Model 401107: 56 inch (1422 mm) 7-step rise and under platform clearance.
           8. Model 401108: 64 inch (1625 mm) 8-step rise and under platform clearance.
           9. Model 401109: 72 inch (1829 mm) 9-step rise and under platform clearance.
        2. Stair Angle: 45 degrees.
        3. Stair Tread: 1/8 inch (3 mm) 6061 aluminum.
        4. Stair Width: 30 inches (762 mm) clearance.
        5. Stair Stringer: 7 ga. hot rolled steel. Finish: Galvanized
        6. Foot Pad (WxD): 72 x 24 inch (1829 x 610 mm). Material: Recycled plastic
        7. Safety Railing: On each side of stairs.
           1. Finish: Powder coated yellow.
        8. Hardware:
           1. Stainless Steel LAG SCREW 5/16 X 1.5 inches (38 mm).
           2. 18-8 Stainless steel HHCS 3/8-16 X 1.25 inches (32 mm).
           3. 18-8 Stainless steel HHCS 1/2-13 X 1.5 inches (38 mm).
           4. 18-8 Stainless steel HHCS 1/2-13 X 3 inches (76 mm).
           5. Stainless steel NUT-NYLOCK 3/8-16
           6. Stainless steel NUT-NYLOCK 1/2-13
           7. Stainless steel WASHER-FLAT 3/8 inches.
           8. 18-8 Stainless steel WASHER-FLAT 1/2 inches.
     3. Tower Supports: Platform support legs. For 3 or more Platform systems in tandem.
        1. Materials: 2 inch (51 mm) EWSQ tubing. Welded assembly.
        2. Foot Pad (WxD): 72 x 24 inch (1829 x 610 mm). Material: Recycled plastic. 1 per support leg.
        3. Three Platforms: Two support legs.
        4. Four Platforms: Three support legs.
        5. Five Platforms: Three support legs.
        6. Six Platforms: Four support legs.
        7. Note to Specifier \*\* Side-access fixed vertical ladders are optional. Delete if not required.
     4. Side-Access Fixed Vertical Ladders: Including railings, accessories,
        1. Standards Compliance: ANSI A14.3 and 29 CFR 1910.23.
        2. Length Range: Configured to height of platform landing
        3. Width: 24 in (610 mm).
        4. Material: Steel, round.
        5. Finish: Galvanized.

\*\* NOTE TO SPECIFIER \*\* Security self-closing gate is optional. Delete if Side Access ladder is not required.

* + - 1. Security Self-Closing Gate for Fixed Ladder : Self-closing gate on optional side-access fixed vertical ladders prevents accidental access to ladder rungs,

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly constructed and prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
   4. CLEANING AND PROTECTION
      1. Protect installed products until completion of project.
      2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION