



SECTION 12 63 00 STAGING CONCEPTS DEMOUNTABLE PRO RISER SYSTEM

PART 1-GENERAL

1.1 SUMMARY

- A. This specification section includes the engineering, fabrication, furnishing, delivery and installation of the Pro Riser tower sections and seating sections as specified.
- B. The demountable Pro Riser tower sections and seating sections shall consist of a system of forkliftable aluminum riser sections of appropriate construction on aluminum tower supports to provide the height and configuration as indicated on the drawings.

1.2 SCOPE OF WORK

- A. Comply with the State, Local and Jurisdictional codes.
- B. Work under this section consists of the fabrication of new equipment and installation of new demountable seating sections. Work shall include the installation of all materials and equipment necessary for the proper operation of the demountable Pro Riser system.
- C. Preparation and submission of complete engineered shop drawings for approval.
- D. Submission of required record documents.
- E. Coordination with other affected work, trades and inspections.
- F. Final assembly of components to provide a complete, operable system.

1.3 REFERENCES

- A. Aluminum Association (AA):
 - 1. AA Standard AA-M12C22A41.
 - 2. AA Standard AA-M12C22A42/44.
- B. American Institute of Steel Construction (AISC):
 - 1. AISC Manual of Steel Construction.
- C. International Code Council (ICC):
 - 1. International Building Code (IBC)
 - 2. ICC 300

D. American Society for Testing and Materials (ASTM):

1. ASTM A36: Standard Specification for Structural Steel.
2. ASTM A283: Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.
3. ASTM A307: Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
4. ASTM A325: Standard Specification for High-Strength Bolts for Structural Steel Joints.
5. ASTM A500: Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

6. ASTM A501: Standard Specifications for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
7. ASTM A570: Standard Specification for Steel, Sheet and Strip, Carbon, Hot-Rolled, Structural Quality.
8. ASTM B209: Standard Specification for Aluminum-Alloy Sheet and Plate.

E. American Welding Society (AWS):

1. AWS D1.1 Structural Welding Code-Steel.
2. AWS D1.2 Structural Welding Code-Sheet Steel, Second Edition.

F. Americans with Disabilities Act (ADA)

G. National Fire Protection Association (NFPA):

1. NFPA 102: Standard for Assembly Seating, Tents, and Membrane Structures.

H. Steel Structures Painting Council (SSPC):

1. SSPC SP3: Power Tool Cleaning.

1.4 RELATED SECTIONS

- A. Section 03 30 00 Cast-in-Place Concrete
- B. Section 05 12 00 Structural Steel Framing
- C. Section 05 14 00 Structural Aluminum Framing
- D. Section 05 52 00 Metal Railings
- E. Section 09 62 00 Specialty Flooring
- F. Section 09 96 00 High-Performance Coatings
- G. Section 10 14 00 Signage
- H. Section 12 60 00 Multiple Seating

1.5 SUBMITTALS

- A. Comply with Section 01 33 00 Submittal Procedures, unless otherwise indicated.

- B. Product Data: Staging Concepts specifications and technical data including the following:
 1. Detailed specification of construction and fabrication.
 2. Staging Concepts installation instructions.
 3. Certified engineer's reports indicating compliance with performance requirements specified herein.
 4. Description of operations, including step by step set-up and take-down tasks.

C. Shop Drawings: Prepared by Staging Concepts. Include dimensioned plans, sections and elevations showing Pro Riser component sizes, arrangements and details of each condition of installation. Show fabrication and installation details for each seating section type, tower type and accessories.

D. Samples: Provide samples by request of the owner, architect or consultant.

E. Demountable Pro Riser Storage Layout: Provide drawings and directions showing storage layout of portable seating system

F. Contract Closeout Submittals: Comply with Section 01 70 00 Execution and Closeout Requirements.

1. Project record documents
2. Operating and maintenance manuals.

1.6 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Not less than 10 years experience in the actual production of demountable seating systems.

B. Installer's Qualifications: Firm experienced in installation or application of systems similar in complexity to those required for this Project.

1. Acceptable to or licensed by manufacturer.
2. Not less than 3 years experience with systems.

C. Welding and Connections:

Welds: Performed by welders certified for the process employed.

1.7 DELIVERY, STORAGE AND HANDLING

A. Packing and Shipping: Deliver products in original unopened packaging as applicable, with legible manufacturer's identification.

B. Storage and Protection: Comply with manufacturer's recommendations.

1. Store in a cool, dry place out of direct sunlight.
2. Protect from the elements and from damage.

1.8 WARRANTY

A. Special Warranty: Staging Concepts written warranty indicating Staging Concepts intent to repair or replace the demountable Pro Riser system components that fail in materials or workmanship within three (3) years from the date of substantial completion. Paint and exterior surfaces are excluded. Failures are defined to include, but are not limited to the following:

1. Mechanical defects
2. Damaged materials due to fabrication
3. Material deterioration and discoloration other than normal wear and weathering conditions
4. failure to maintain dimensional stability

PART 2- PRODUCTS

2.1 MANUFACTURER

A. Basis of design: Demountable aluminum plank spanned seating system and aluminum support towers based on the design by Staging Concepts.

1. Staging Concepts. 8400 Wyoming Ave. North, Suite 100, Minneapolis, MN 55445 763-533-2094. www.stagingconcepts.com

2.2 PERFORMANCE REQUIREMENTS

A. Loads

1. The greater of 100 psf or 120 lbs/linear foot vertical live load
2. Lateral live loads of 24 lbs/ft applied parallel to the direction of seating; 10 plf applied perpendicular to the level of seating
3. System capable of withstanding all environmental loads including, but not limited to wind, seismic and ice

B. Dynamic performance

1. System capable of resisting loads resulting from dynamic load cases created by simultaneous fan jumping and sporting event spectator activity as described in AISC Design Guide 11. Load densities based on actual system usage shall be considered.
2. Natural frequency of 6 Hz or greater when considering primarily vertical vibration.

2.3 COMPONENTS

A. Staging Concepts aluminum plank forkliftable seating sections. Weather resistant. Made to function with Staging Concepts Pro Riser support towers.

1. Aluminum plank surface
 - b. Mechanically fastened
 - a. Finished surface: Clear anodized aluminum
2. Aluminum framing- NOTE: member sizes vary per engineering calculations.
 - a. 5" square x 3/16" wall 6061-T6 aluminum tube
 - b. 4" square x 1/4" wall 6061-T6 aluminum tube
 - c. Finished surface: Mill aluminum
3. 2" square x 1/4" wall 6061-T6 aluminum tube bracing
 - a. Finished surface: Mill aluminum

B. Tower Support System: NOTE: member sizes vary per engineering calculations

1. Aluminum tube towers. 6" square x 3/8" wall 6061-T6 Frames
2. 5" square x 1/4" wall 6061-T6 aluminum tube bracing
3. Leveling Feet as indicated on the drawings
 - a. Finished surface: Mill aluminum
4. 12" square x 1" A572 GR50 base plates anchored to concrete

C. Spanning Beam System: NOTE: member sizes vary per engineering calculations

1. Aluminum tube frames 8" x 4" x 1/2" wall 6061-T6
 - a. Finished surface: Mill aluminum

D. Casters:

1. Design casters for loads and serviceability

2.4 ACCESSORIES

A. Design accessories to attach without the use of tools and shall be easily removable.

1. Exposed Fasteners: Non-corrosive and tamper resistant.

C. Demountable Railing:

1. Material: 1 ¼" inch (31 millimeters) Schedule 40 6061-T6 aluminum pipe.
2. Finish: Clear anodized aluminum
3. Equip handrail with locking mechanism to allow for attachment to seating riser. Design lock mechanism to allow for easy removal.
4. Provide manufacturer's standard handrails.

D. Guardrails:

1. Material: 1 ¼" inch (31 millimeters) Schedule 40 6061-T6 aluminum extrusion.
2. Finish: Clear anodized aluminum
3. Equip guardrail with locking mechanism to allow for attachment to seating riser. Design lock mechanism to allow for easy removal.
4. Provide manufacturer's standard guardrails.

E. Closure Panels: Provide closure panels meeting the following requirements as directed by design:

1. Material: 1/8" thick Aluminum sheeting
2. Finish: Clear anodized aluminum
3. Attach closure panels with snap-on clips ("button-lock" brackets) or set screw to platform frame.

B. Fixed Stair Units:

1. Material: 6061 aluminum pipe. Weld joints together and grind smooth.
2. Finish: clear anodized aluminum
3. Equip stair system with locking mechanism to allow for attachment to side of platform extrusion.
4. Treads: 18 inches deep by 48 inches wide, unless otherwise specified. Rise not to exceed 7 inches.
5. Tread Surface: Match deck surface.

2.5 FINISHES

A. Aluminum Framing: Mill Finish (standard) anodized aluminum (optional)

B. Seating finish: Mill Finish (standard) anodized aluminum (optional)

PART 3- EXECUTION

3.1 EXAMINATION

A. Verification of Conditions: Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper or timely completion.

1. Do not proceed until unsatisfactory conditions have been corrected.
2. Field verify dimensions for all units prior to fabrication if indicated by the owner, architect or consultant.

3.2 COORDINATION

A. Coordinate seat/ bench locations with seating contractor.

3.3 INSTALLATION

A. Comply with manufacturer's recommendations.

B. Set up each type of demountable Pro Riser towers, spanners and seating sections and adjust for proper operation and correct assembly.

1. Install plumb and level.

2. Accurately fit, properly align, securely fasten, and install free from distortion or defects.

3.4 CLEANING

A. Clean exposed surfaces of demountable Pro Riser sections. Comply with Staging Concepts written instructions for cleaning and touchup of minor finish damage.

B. Repair or replace defective work as directed by the owner, architect or consultant upon inspection.

3.5 TRAINING AND DEMONSTRATION

A. Train Owner's personnel to assemble, adjust, and operate demountable Pro Riser system

END OF SECTION 12 63 00