Glass Rail

ENGINEERED DASHERBOARD SPECIFICATIONS

PART 1 - GENERAL

1.01 PROJECT SCOPE

A. Contractor shall furnish and install one complete set of steel framed dasherboards as indicated on the drawings and specified herein. The contractor shall be responsible for all necessary labor, materials, equipment, and services to complete the project.

1.02 SUBMITTALS

A. The contractor shall upon receipt of contract from Owner, prepare a set of shop drawings which will itemize sizes and materials as well as construction details for installation. The manufacturer will submit drawings to the Contractor for review and submittal to the Engineer, Architect or Owner for approval prior to actual fabrication of materials.

B. Polyethylene samples shall be submitted for Owner approval of color and quality.

1.03 QUALITY ASSURANCE

A. All materials shall be per plans and specifications and constructed, manufactured, and installed per plans and specifications. All equipment and materials supplied under these specifications shall be new and of the highest grade material and construction.

B. Any deviation form this specification, unless approved by the owner prior to bidding, found after installation will be back charged to the contractor at the Owner's discretion. The value of irregularities shall be determined and agreed to by both parties.

C. Approved dasherboard systems, manufacturers and installers:

1. ***Legacy™ Elite*** dasherboard system identical in design to Rink Systems, Inc., Albert Lea, Minnesota.

D. To receive approval prior to bid, dasherboard contractors must:

1. Provide evidence of at least five (5) installations identical in construction to the following specifications, each with a minimum of three (3) years operating experience prior to the bidding date. A list of these installations including names, addresses, contacts, and telephone numbers is to be included with requests for prior approval.

2. Manufacturers wishing to obtain prior approval shall have a factory representative perform a site visit.

3. Submit a sample panel of proposed dasherboard system being bid showing exactly how the system will be manufactured. Samples shall show how shield mounting

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hardware will be attached to system, as well as samples of gate latches, hinges, and related hardware.

4. Submit certified test results from a nationally recognized testing laboratory showing that proposed system is equal to the ***Glass Rail*** dasherboard system as manufactured by Rink Systems, Inc., Albert Lea, Minnesota.

5. Submit dasher shop drawings detailing systems design. Drawings must be prepared and approved by a licensed professional engineer.

6. Approval must be obtained at least 10 days prior to the bid date.

E. Bids received from contractors without prior approval will be returned unopened.

1.04 GUARANTEE

A. Manufacturer shall warranty all equipment provided under this project against all defects in materials and/or workmanship for a period up to two years from the date of completed installation.

1.05 DELIVERY

A. To be arranged to coordinate with completion date of the project. Delivery date shall allow for sufficient installation time prior to project completion date.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER/TYPE

A. As noted in 1.03 B above.

2.02 MATERIALS AND EQUIPMENT

A. Demountable Frame Sections:

1. Dasher panels shall be fabricated in demountable 12” high sections of nominal 8' lengths. The design of all panels, whether straight sections, curved sections, or sections in which a gate is located shall be fundamentally similar.

2. At the front, each section shall be made of one horizontal 1-1/2" x 1-1/2" x 14 ga. steel square tube used at the top location and one horizontal 2" x 1-1/2" x 1/4" steel angle used at the base location.

3. At the back, each section shall be made of one 2" x 1-1/2" x 14 ga. steel square tube used at the top location and one 2" x 1-1/2" x 1/4" steel angle used at the base location.

4. All horizontal angles and tube shall be welded to end plates on each end of the panel. The end plates shall be made of two 2-1/2" x 2" x 3/16" steel angles welded to two 1/4" x 3" x 4" steel plates.

5. Each end plate shall have two 9/16" matching holes to accommodate 1/2" through bolts.

6. All panels over 5' in length shall have and additional 3" x 1-1/2" x 14 ga. steel rectangular tube welded vertically at the center of the panel to add rigidity.

7. Each panel is to be a complete welded construction. After construction of the framing, each panel shall be hot dip galvanized.

8. Standard size of dasher panel frame shall be 96" long x 12" high x 6" thick.

9. Dasherboard system shall be self supporting. Systems which require separate support posts to support the dasherboard system are not acceptable.

B. Floor Anchors:

1. The dasher contractor shall supply all new steel anchors and hardware, as detailed on the drawings, required for the installation of the dasherboards around the perimeter of the rink.

2. The dasher contractor shall supply 1/2" x 4" x 4-1/2" galvanized steel hold down plates. Plates shall have a 7/8" hole to accept a 5/8" bolt and flat washer for securing the dasher panels to the 5/8" cast-in-place type floor anchors. Each panel shall be fastened to the floor with a minimum of two 5/8" anchors and bolts per 8' section.

3. In applications where the dasherboards are to be removed, all anchors shall be supplied with flush plugs.

C. Dasher Facing:

1. Dasherboard facing shall be 1/2" thick high density polyethylene facing.

2. Facing shall be bright white in color. Color of facing shall be consistent throughout the system. Natural white is not acceptable.

3. Facing panels shall be one piece and cut to match length of demountable framing sections.

4. The 1/2" polyetheylene facing shall be attached to the horizontal and vertical frame members with 1/4" phillips flat head stainless steel machine screws and flanged lock nuts where possible. Spacing of fasteners shall not exceed 12” on center. All exposed fastener heads shall be painted to match facing color.

D. Backer Panel:

1. 1/2" thick high density polyethylene facing shall be attached to the back side the dasherboard framework, including all access and players gates.

2. Backer panels will be fastened using 1/4" phillips flat head stainless Tek screws. Spacing of fasteners shall not exceed 24” on center. All exposed fastener heads shall be painted to match backer panel color.

3. Color of backer panels shall be white.

E. Caprail:

1. The caprail shall be constructed of 3/4” thick high density polyethylene. The caprail must have a textured or mat finish. A smooth finish shall be unacceptable.

2. The 3/4" caprail shall be attached to the front horizontal frame members with 1/4" phillips flat head stainless steel Tek screws. Spacing of fasteners shall not exceed 12" on center. All exposed fastener heads shall be painted to match caprail color.

3. The caprail shall have smooth and radiused edges on the front and back edges.

4. Color of caprail shall be white.

F. Kickplate:

1. Kickplate shall be constructed of 1/2" thick, 8" high, high density polyethylene, and shall surround the entire rink.

2. The top edge of the kickplate shall be beveled.

3. The 1/2" kickplate shall be attached to the bottom of the dasher panel with 1/4" Phillips flat head machine screws, and flanged lock nuts where possible. All fastener heads used to attach kickplate to dasher panels shall be painted to match the kickplate color.

4. Red center line and blue lines shall be flush or integral with the kickplate.

5. Color of kickplate shall be white.

G. Hand Rail and Supports:

1. Horizontal hand rail shall be make of a 1-1/4” x 3” x 1/8” architectural grade aluminum tubing with 1/4" outside radius corners. Handrail shall be mounted 32” above top of dasherboard panels and surround entire perimeter of rink.

2. Vertical railing and tempered glass supports shall be round in design and of two piece construction. Shield mounting supports shall be made of architectural grade aluminum, alloy #6061-T6. Supports shall be installed through a snug fitting contoured opening in the finished caprail and secured at the bottom with a support mounting bracket at the bottom horizontal angle of the dasher panel. Installation of shielding panels to be from the rink side with the vertical support posts within the dimensions of the panels. No protruding anchors shall extend behind the boards. Total width of supports shall not exceed 2-1/2".

3. Front plate of vertical support post is to be removable so that the glass panels can be removed without demounting the dasher system.

4. Vertical supports shall be furnished with PVC gasketing to secure and cushion the tempered glass panels.

5. Gate shield mounting hardware shall be made of architectural grade extruded aluminum, alloy #6061-T6. It shall be of one piece design to allow the operation of the gate sections.

6. The spectator shield supports shall be nominally 48" apart except at gates or similar openings in the dasherboards.

H. Spectator Shielding:

1. Shielding shall be 1/2" thick clear float tempered glass, and surround the entire perimeter of rink. Tempered glass shielding shall have the top two corners clipped and all edges ground to minimize breakage and for safety in handling. Seamed edges are not acceptable.

2. All shielding shall be 48" wide except those at gates, or similar openings in the dasherboards.

3. Height of tempered glass panels shall be 29” high and positioned above the dasher caprail and below the handrail.

4. Tempered glass panels shall be mounted in the two piece aluminum vertical support posts.

I. Access and Players' Gates:

1. Access gates shall be 3'-0" wide in quantity as specified in the drawings.

2. Gates shall be built into 8' dasher panels and shall be left or right hand swing as specified in the drawings.

3. Gate panels shall be constructed of the same materials and methods as the demountable frame panels.

5. The double bar gate latch mechanism shall be designed so the gate can be closed and latched in a single movement. The gate handle shall be designed so players wearing hockey gloves can easily open the gates. Latches shall be of solid welded steel construction. Single bar, or spring loaded bolt latches shall be unacceptable.

6. Hinges for all gates shall be of steel construction and bolted to the frame for easy maintenance, two per gate door. Hinges to have ¼” horizontal, and ½” vertical adjustment. Hinges shall have 1/2" internal steel ball bearing, oilite bushings and grease fittings for lubrication purposes. Hinges shall be designed so gates can be lifted off and removed. Piano hinges, or hinges welded to the frame shall be unacceptable.

7. All single swing access and player gates shall have 3/8" x 3-1/2" x 3" door stops welded to the frame gate. All gate with shielding shall be equipped with push button releases located on the caprail on the ice side of the shielding. Latches shall be designed so players wearing hockey gloves can easily open the gates.

8. Gates with shielding shall be made to accept shield mounting hardware.

9. Thresholds for 3' access gates shall be approximately 2-1/2" above floor level.

J. Equipment Gate:

1. Equipment gate shall be a double leaf gate with a 10'-0" opening. Each leaf shall be 5' wide.

2. Gate panels shall be constructed of the same materials and methods as the demountable frame panels.

3. Hinges for equipment gate shall be of steel construction and bolted to the frame for easy maintenance, two per gate door. Hinges to have ¼" horizontal, and ½" vertical adjustment. Hinges shall have 1/2" internal steel ball bearing, oilite bushings and grease fittings for lubrication purposes. Hinges shall be designed so gates can be lifted off and removed. Piano hinges, or hinges welded to the frame shall be unacceptable.

4. Equipment gate latch shall be the sliding bar type, constructed of 2" x 2" x 1/8" square tubing for structural rigidity, with a large grasp handle. Slide bars fabricated from round tube shall be unacceptable.

5. Each equipment gate shall lock into the steel threshold with 3/4" x 12" long cane bolts.

6. Each equipment gate shall be equipped with a sturdy, gas compensated, spring loaded, adjustable caster. For safety and component protection, the spring shall be totally enclosed in the caster mechanism, casters with exposed springs shall be unacceptable.

7. Threshold for equipment gate shall be 1-1/2" above floor level.

K. Hardware:

1. All steel hardware used during the construction or installation of the system shall be galvanized, zinc plated, or stainless for rust resistance.

2. Hardware shall include hinges, latches, nuts, bolts, washers, and miscellaneous fastening devices necessary to complete installation.

L. Thresholds:

1. Access and players' gates shall have 1" thick high molecular weight polyethylene, replaceable thresholds.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Manufacturer shall construct, fabricate and deliver all materials to the job site per plans and specifications under the direct supervision of a licensed professional engineer. All materials shall be installed to result in a complete steel frame dasher system with all boards and shielding to be straight and true in line and properly braced. All installation work shall be completed by a factory installation crew.

B. Installation shall be in strict conformance with manufactures requirements and instructions. Erect units rigid, straight, level, plumb, and true with horizontal and vertical lines level, and securely anchored in place. Whether shown on the drawings or not, this contractor shall provide all accessory materials for a complete, finished installation. No defective, scratches, marred or otherwise equipment and materials shall be installed.

C. Put all items of equipment and systems through at least five complete cycles of operation, verifying that each item is properly installed and properly operating, and making required adjustments to achieve optimum operation.

3.03 CLEANING

A. Clean all surfaces removing all evidence of dirt, packaging materials and protective wrappings.

B. Replace all damaged materials including scratched glass.

END OF SECTION