DIVISION _____

Specification Section # _____

Aluminum Sani-Rail ASR-2

PART 1 GENERAL

Furnish and install SANI-RAIL® aluminum wall protection system with **WELDED STUDS FOR NO THRU-RAIL PENETRATIONS** as described in this section.

1.1 RELATED WORK: (Note to specifier: because of the structural design of the mounting brackets, attempting to locate the bracket over the wall studs is not recommended. The typical studs are not wide enough to accommodate the mounting hole pattern. We recommend, as an alternative to hollow wall anchors, installing an 8 inch wide 16 gauge sheet metal band between the studs and wall material. The band should be centered at the height at which the SANI-RAIL® is to be mounted. Brackets are then mounted using #16 Philips pan head type A self-tapping screws. If this detail is not possible, we recommend using flared brackets mounted with molly or toggle hollow wall anchors. See part 2.03, paragraph b.)

1.2 QUALITY ASSURANCE

1.2.1 Manufacturer's Qualifications: Obtain all materials from a single source manufacturer with at least five years experience in the fabrication of the product specified.

1.2.2 Contractor's Qualifications: Installation shall be performed by an approved contractor with not less than five years experience in the installation of SANI-RAIL® on projects of similar size and complexity and in similar facilities as this project.

1.2.3 Material Verification: Furnish the contractor with test data to verify the alloy composition of the rail and brackets to be utilized in this project.

1.3 WARRANTY: Manufacturer and contractor shall jointly offer a one year product and installation warranty.

1.4 SUBMITTAL

1.4.1 Sample: Submit at least one sample of rail and mounting bracket. Sample shall be 12 inches long and show end radius in addition to all features pertinent to this specification section. Submit any samples for consideration as equals at least 10 days prior to bid date.

1.4.2 References: Submit references on at least five projects listing:

1-project name
2-linear feet installed
3-name and phone number of contact

FIELD CONDITIONS: A representative of the manufacturer shall visit the job site prior to field dimensions and/or installation to evaluate the site conditions and report to the site supervisor any conditions that prohibit field measurements and/or the installation of SANI-RAIL®.

PART 2 PRODUCTS

2.1 RAIL: THE RAIL FOR THIS PROJECT SHALL HAVE NO HOLES IN THE FACE FOR BRACKET MOUNTING.

2.1.1 Material: Material shall be 1/4 inch x (specify 4 or 6 inch rail dimension) 6061-T6511 alloy extruded rectangular aluminum bar with 1/8 inch radius edge and 5/16 inch-18 x I/2 inch 5086 alloy studs welded to the back side of rail for attachment of rail to bracket. Federal specification QQA-200/8.

2.1.2 Finish: Clear sulfuric anodized to military specification A8625 Type II. Note: anodizing to be performed after all cutting, drilling, stud welding and bending.

2.1.3 Packaging: Rail to be covered with 4 mil vinyl on all surfaces and packed in plywood crates for shipping to site.

2.1.4 Each rail component shall be stamped with it's own unique identification number on the back of the component which will match the numbered section on the installation drawings which must be maintained on file with the manufacturer for future reference.

2.2 BRACKET MATERIAL

2.2.1 Material: 6061-T6511extruded aluminum, federal specification QQA-200/16 with .200 radius vertical flange to eliminate 90 degree edges at points of possible hand contact.

2.2.2 Finish: Clear sulfuric anodized to military specification A8625 type II. Material is to be anodized only after fabrication is completed.

2.3 BRACKET DIMENSIONS**:** (3" brackets typical)

2.3.1 For CMU and concrete surfaces, wood or metal doors, and gypsum with metal blocking: 3 inch **(or specify other bracket depth)** offset from wall to back of rail; .13" inch web thickness; .20" flange thickness; 2.5 x 3.0 inch bracket face at rail; 2.5 inch x 3.0 inch bracket face at wall.

2.3.2 For drywall and hollow walls without 16 gauge metal blocking: 27 degree flared bracket; 3.0 inch offset from wall to back of rail; .13 inch web thickness; .20 inch flange thickness; 2.5 inch x 3.0 inch bracket face at rail; 2.5 inch x 5.5 inch bracket face at wall.

2.3.3 All vertical bracket flanges shall have a .200 radius edge.

2.3.4 **Special bracket dimensions other than those listed above must be noted prior to bid date.**

2.4 HARDWARE

2.4.1 Rail to bracket: 5/16 inch-18 x 1/2 inch 5086 alloy aluminum studs with 5/16 inch-18 stainless steel serrated flange nut tightened to 12 ft/lbs torque maximum.

2.4.2 Bracket to wall (masonry): #16 x 1 1/2 inch Philips pan head type a stainless steel tapping screw with #16 pvc masonry anchor; screw set with pneumatic wrench to 30 foot pound of torque.

PART 3 EXECUTION

3.1 FIELD MEASUREMENTS

3.1.1 Prior to field dimensions, all permanent walls and door bucks and dry wall must be in place. All cutouts in the walls for electrical panels, fire extinguishers etc., must be completed. Locations of cover plates shall be installed to avoid their being covered by SANI-RAIL®.

3.1.2 Field dimensions must be taken to the nearest 1/8 inch tolerance.

3.1.3 Measurements must be taken at the elevation at which the rail is to be installed.

3.2 FABRICATION

3.2.1 THRU HOLES DRILLED COMPLETELY THROUGH THE RAIL ARE NOT PERMITTED

3.2.2 Tolerance shall be to the nearest 1/8 inch.

3.2.3 Terminal radius ends are not to be separate components, but shall be an integral part of the rail.

3.2.4 Terminal end section shall have a 3” radius bend continuing from the plane of the rail face toward the wall and shall terminate 1/2” from the wall. The last 1.375” of the terminal end shall be straight. The arc of the radius shall be 54 degrees.

3.2.5 Inside and outside corners shall not be separate units but shall be fabricated as an integral part of the rail construction**.**

3.2.6 The entire rail configuration shall be continuous, with terminations being installed only at doors, electrical panels, fire extinguishers and other in-wall mounted apparatus that local codes prohibit from blockage. The continuous contour shall be maintained around all other wall configurations, protrusions, abutments and interruptions in such a manner as to maintain the established 3 inch distance from the wall at any point.

3.2.7 Mounting brackets shall be placed no greater than 4 feet apart. Exact bracket placement is to be determined by the manufacturer at the time of fabrication. Unless otherwise specified prior to bid date, bracket placement is the sole discretion of the manufacturer, as long as the 4 foot maximum interval is not violated.

3.2.8 The shortest wall section that can be covered with a rail section having one bracket is 10 inches.

3.2.9 The shortest wall section that can be covered with a rail section having two brackets is 12 inches.