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LIGHTWEIGHT PORTABLE HANDRAILS AND RAILINGS

1.1 SECTION INCLUDES

- A. Roof edge protection. (Free-Standing Guardrail)
- B. Accessories. (weighted base cart, swing gate)

1.2 RELATED SECTIONS

- A. Metal Roof Panels.
- B. Membrane Roofing.

1.3 REFERENCES

- A. Occupational Safety & Health Administration (OSHA):
 - 1. 29 CFR 1910.23 - Guarding Floor and Wall Openings and Holes.
 - 2. 29 CFR 1926.500 - Scope, Application, And Definitions Applicable to this Subpart.
 - 3. 29 CFR 1926.501 - Duty to Have Fall Protection.
 - 4. 29 CFR 1926.502 - Fall Protection Systems Criteria and Practices.
 - 5. 29 CFR 1926.503 - Training Requirements.

1.1 SUBMITTALS

- A. Submittals for Review:
 - 1. Shop Drawings: Indicate fall protection anchor types, locations, attachments, and relationship to adjacent construction.
 - 2. Product Data: Manufacturer's descriptive data including components, materials, and finishes.

1.2 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Firm specializing in design and fabrication of fall protection systems for structures with minimum 15 years' experience.
- B. Manufacturer and installer shall have specific liability insurance (products and completed operations) in an amount of not less than \$9,000,000.

- C. Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

1.1 INFORMATIONAL SUBMITTALS

- D. Product Data: Manufacturer's data sheets on each product to be used, including:
 1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the job site in good condition and adequately protected against damage as handrails are a finished product.
- B. 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.
- C. Store products in manufacturer's unopened packaging until ready for installation.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Where handrails and railings are indicated to fit to other construction, check actual dimensions of other construction by accurate field measurements before fabrication.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on products by Fall Protection Associates, Inc. Dba Hy-Safe Technology, 960 Commerce Drive, Union Grove, WI 53182, phone (800) 642-0775, Fax (262) 752-2410, email info@hysafe.com, website www.hysafe.com
- B. Substitutions: Not permitted

2.2 SYSTEMS

- A. Railing Sections.
 1. ASTM A5131T-1 HREW tubing.
 2. Length: 6 feet (1829 mm).
 3. Length: 8 feet (2438 mm).
 4. Length: 10 feet (3048 mm).
 5. Height: 42 inches (1067 mm).
 6. Mid-rail: weld to posts at 21 inches (533 mm) below top rail.
 1. Finish: Powder coated safety yellow unless specified otherwise.
- B. Gate System.
 1. ASTM A5131T-1 HREW tubing.
 1. Length: 6 feet (1829 mm).
 2. Length: 8 feet (2438 mm).
 3. Length: 10 feet (3048 mm).

4. Height: 42 inches (1067 mm).
5. Mid-rail: weld to posts at 21 inches (533 mm) below top rail.
1. Finish: Powder coated safety yellow unless specified otherwise.
2. Support wheel: positive locking mechanism with ability to swing right or left.

C. Base Plates.

1. Material: ASTM A36 Plate and ASTM A513T-5 DOM TUBE
2. Size: 1 foot by 2 feet (305 by 610 mm).
3. Carrying handle: built in with a center carrying hook for base transporter.
4. Capacity: two railing sections or one railing and one outrigger segment.
5. Holes: Drilled and tapped holes for screw to secure railing in baseplate
6. Base will have 2 holes drilled through at receiver locations for water drainage.
7. Base plate must provide no less than 5 inches (127 mm) of leading edge substrate contact as concentrated load is applied to base.
1. Finish: Powder coated safety yellow unless specified otherwise.
2. Adhesive mounted Anti-skid tape attached to the bottom to avoid slipping when loaded.

D. Additional Base Weight.

1. Material: ASTM A36 Plate
2. Size: 1 foot 3 inches by 1 foot 5 inches (381 mm x 432 mm)
3. Carrying Handles: Built in carrying handles on sides
4. Connection: Slide over standard baseplate receivers without railing segment installed (typically used for outriggers)
5. Finish: Powder coated safety yellow unless specified otherwise.

2.3 ACCESSORIES

- A. Base Mover: Provide two-wheeled steel cart to transport one base unit.
1. Approved Product: Weighted Base Cart.

2.4 FINISHES

- A. Finish: Powder coat paint.
- B. Color: Safety yellow.

2.5 FABRICATION

- A. Ensure that all welds are as specified on drawing and no grinding of the weld on fillet welds.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Before installation, inspect all parts to insure no damaged parts are used.
- C. Railing must be secured to base with locking screws but not over tensioned.
- D. Use a Hy-Safe Rail outrigger at any interruption in continuous railing sections. Outrigger base plates are to be secured to railing and placed 90 degrees away from danger side of continuous railing.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION