

# HlySafe™



## FALL PROTECTION AND TIE BACK ANCHORS

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Permanently-attached fall protection and Tie-back anchors.
- B. Related Sections:
  - 1. Division 01: Administrative, procedural, and temporary work requirements.
  - 2. Section [03 3000 - Cast-In-Place Concrete substrate to receive fall protection anchors.
  - 3. Section [03 4500 - Precast Architectural Concrete substrate to receive fall protection anchors.
  - 4. Section [05 1200 - Structural Steel Steel framing to receive fall protection anchors.
  - 5. Section [13 3419 - Metal Building Systems Steel framing to receive fall protection anchors.

#### 1.2 REFERENCES

- A. American National Standards Institute/American Society of Safety Engineers (ANSI/ASSE) Z359 - Fall Protection Code.
- B. ASTM International (ASTM):
  - 1. A36/A36M - Standard Specification for Carbon Structural Steel.
  - 2. A182 - Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service.
- C. United States Department of Labor, Occupational Safety and Health Administration (OSHA) 1926.502 - Fall Protection System Criteria and Practices.
- D. American National Standards Institute / International Window Cleaning Association (ANSI/IWCA).
  - 1. ANSI/IWCA I-14.1 - Window Cleaning Safety Standard.
- E. Occupational Safety and Health Administration (OSHA).
  - 1. OSHA 1910, Subpart D, Walking and Work Surfaces.
  - 2. OSHA 1910, Subpart F, Appendix C, Personal Fall Arrest Systems.
  - 3. OSHA Ruling on Window Cleaning by Bosun's Chair.
- F. American Welding Society (AWS)
  - 1. AWS D1.1/D1.1M - Structural Welding Code - Steel.

#### 1.2 SYSTEM DESCRIPTION

- A. Design fall protection anchors and attachments in accordance with ANSI/ASSE Z359 and

### 1.3 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.
  - 3. Samples: Each fall protection anchor.

### 1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Firm specializing in design and fabrication of fall protection systems for structures with minimum 15 years' experience.
- B. 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

- C. 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.

### 1.5 CLOSEOUT SUBMITTALS

- A. Includes
  - 1. Manufacturer's system manual.

## **PART 2 PRODUCTS**

### 2.1 MANUFACTURERS

- A. Contract Documents are based on products by Hy-Safe Technology, 960 Commerce Drive, Union Grove, WI 53182, phone (800) 642-0775, Fax (262) 752-2410, email [info@hysafetech.com](mailto:info@hysafetech.com), website [www.hysafe.com](http://www.hysafe.com)
- B. Substitutions: Not permitted

### 2.2 MATERIALS

- A. Product
  - 1. Structural Components shall comply with the applicable standards:
    - a. Structural Steel: ASTM A36

- b. Structural Tubing: ASTM A500 Grade B
  - c. Structural Bars, Plates, Shapes, and Sheet Piling: ASTM A6, 304/304L
  - d. Piping: ASTM A53
2. Fasteners shall comply with the applicable standards:
- a. Structural Bolts: ASTM A325
  - b. Alloy-Steel and Stainless Steel Bolting: ASTM A193
3. Flashing and Sealing Material shall comply with the applicable standards:
4. Material substitutions shall be better than or equal to the requirements found in this section.
6. Fabrication
- a. Fabricate work true to dimension, square, plumb, level, and free from distortion or defects detrimental to performance.
  - b. Coordinate the system with supporting structure.
  - c. Welding:
    - I. AWS D 1.1 as applicable.
    - II. If Butt welds are used, then surplus welding material is to be ground off to ensure exposed surfaces are smooth. Fillet welds shall not be ground.
    - III. Slag is to be removed from the materials surface.
7. Finishes
- a. Hot Dipped Galvanizing: Comply with ASTM A123.
  - b. Powder Coat: Safety Yellow

## **PART 3 EXECUTION**

### **3.1 INSTALLERS**

- A. Provide experienced and qualified technicians to carry out erection, assembly and installation of window washing and suspended maintenance equipment system.
  - 1. Do steel welding to AWS D1.2/D1.2M.
  - 2. Do aluminum welding to AWS D1.1/D1.1M.
- B. Comply with manufacturer's written data, including product technical bulletins, product

catalog installation instructions and Hy-Safe Technology technical data sheets

### 3.2 EXAMINATION

- A. Site Verification of Conditions:
  - 1. Verify that substrate conditions which have been previously installed under other sections or contracts are acceptable for product installation in accordance with manufacturer's instructions prior to installation of window washing or fall protection equipment.
  - 2. Inform Architect of unacceptable conditions immediately upon discovery.
  - 3. Proceed with installation only after unacceptable conditions have been remedied.

### 3.3 INSTALLATION

- A. Install fall protection anchors in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Separate dissimilar metals with bituminous coating or gaskets to prevent electrolysis.
- C. Place anchors level, aligned, evenly spaced, and tightly fitted.
- D. Coordinate installation of anchors and flashings with adjacent materials installation to produce watertight installation.

### 3.4 PROTECTION

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

### 3.5 MAINTENANCE, INSPECTION AND TESTING

- A. Provide manufacturer maintenance, inspection and testing instructions.
- B. Provide documentation that is consistent with applicable OSHA, ANSI and IWCA standards.

END OF SECTION