



January 7, 2020

TO: HOLDERS LIST

**SUBJECT: Parcel 1A (TOTE) Inbound Gate Roof Replacement Project
CONTRACT NO. 071249**

ADDENDUM NUMBER # 02

This addendum is issued to add, remove, clarify and amend the following:

Section 11 01 00 – Fall Protection Systems

Part 2-PRODUCTS

2.01 MANUFACTURERS

- A. Provide fall protection system components manufactured by one of the following:
1. Guardian Fall Protection, Inc.
 2. PRO-BEL Safety Systems
 3. 3M DBI Sala Fall Protection
 - 4. Safeguard Industries**
 - 5. Or approved equal**

PART 1 – GENERAL

1.01 SUMMARY

- A. Work in this section includes:
 - 1. New permanent fall protection anchors welded to existing canopy structure.
 - 2. New permanent horizontal fall protection lifelines with integral impact absorber.
 - 3. Load testing of welded post anchors prior to service.
- B. Work in other sections:
 - 1. Section 07 41 13 – Metal Roof Panels for roof anchor penetration flashing boots.

1.02 SYSTEM DESCRIPTION

- A. General: Provide structural fall restraint and fall arrest systems capable of withstanding loads and stresses within limits and under conditions specified in OSHA and other applicable safety codes. Provide fall prevention anchors permanently attached to roof structure.

1.03 QUALITY ASSURANCE

- A. Design of system shall be one that complies with Federal OSHA Standard 1910.66, Subpart F, "Powered platforms for building maintenance", App C, "Personal Fall Arrest Systems and State of Washington Department of Labor and Industries regulations and all other occupational, health and safety codes of the applicable governing jurisdictions.
- B. Manufacturer Qualifications: Approved manufactured units shall be supplied from the product line of a firm engaged exclusively in the production of safety anchor equipment.
- C. Welding Standards for Manufactured Units: Comply with the following applicable provisions:
 - 1. AWS D1.1, "Structural Welding Code - Steel," and D1.3, "Structural Welding Code - Sheet Steel". Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.

1.04 SUBMITTALS

- A. Manufacturer's Product Information: Submit product information and detail drawings of each type of safety anchor specified for use on this project if units supplied are from a manufacturer's product line. Include installation instructions.
- B. Engineers Stamp: If proposed design differs from that shown in details, submit stamped engineer's calculations showing installed condition for each type of structural condition encountered.
- C. Shop Drawings: Submit shop drawings with details showing installation of safety anchors to building structural system. Submit complete layout and configuration of system, anchor locations, and all other components and accessories.
- D. Test Reports: Indicate compliance with required performance requirements.

PART 2 – PRODUCTS

2.01 MANUFACTURER

- A. Provide fall protection system components manufactured by one of the following:
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2.02 FALL PROTECTION ANCHORS

- A. Description: Manufactured fall protection post anchors designed for weld-on installation to existing steel structure, and compatible for use with horizontal lifeline.
 1. Basis of Design: Guardian CB-18 Weld-On Post Anchor, with no swivel top.
 2. Material: 2-1/2" schedule 80 pipe, galvanized steel with 5/8" diameter U-bar.

2.03 HORIZONTAL LIFELINES

- A. Description: Continuous wire rope assembly with integral attachment hardware and energy impact absorber at anchorage connections.
 1. Basis of Design: Guardian Metal Energy Absorber System, Stainless Steel
 2. Components: Stainless steel shackles, cable fist grips, turnbuckles.
 3. Lifeline Cable: 3/8" diameter stainless steel aircraft cable
 4. Sliding O-Rings: Provide two (2) O-rings between each post anchor.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine job condition before commencement of work. Commencement of work will denote acceptance of existing conditions unless notice is given in writing of unacceptable conditions prior to commencement.
- B. Examine structural substrate at each anchor location for soundness. If any signs of decay, lack of structural integrity, or structural members other than those shown in drawings exist, notify the Engineer prior to installation.
- C. Faults occurring in the work completed under this Section of the specification due to the acceptance of incorrect conditions of existing work will be rectified at no cost to the Owner.
- D. Proceed with installation of roof anchors only after verifying conditions are satisfactory.
- E. Check actual locations of beams, joists, and other construction to which safety anchors must fit, by accurate field measurement. Show recorded measurements on final shop drawings.

3.02 INSTALLATION

- A. General: Installation of fall protection anchors and horizontal lifeline systems to be performed by contractor according to manufacturer's instructions and recommendations.
- B. Prepare existing structure at new post anchor locations by gridding the area free of all paint, dust, debris, and other items that may compromise welding.
- C. Use welding blankets and temporary overhead protection to protect adjacent construction from damage during welding activities.
- D. Install weld-on post anchors prior to installation of new metal roof systems. All post anchors to be installed by a certified welder.

- E. Perform load testing on installed anchors prior to installation of new metal roof systems as described in section 3.03. Document and repair any failures during the load testing process.
- F. Install horizontal lifelines using manufacturer's attachment hardware. Provide adjustable turnbuckle at each lifeline. Lifeline cable shall have no more than 2" of sag between anchors.
- G. Lifeline cables shall not exceed 60 feet in length. Provide one energy impact absorber per lifeline, anchored to weld-on post anchor. Locate impact absorbers near the rake edge so they can be easily inspected and observed prior to use.

3.03 INSPECTION & LOAD TESTING

- A. Instruct Owner in proper use and inspection of fall protection systems. Provide all manufacturer literature and safety inspection logs as part of O&M submittals.
- B. Ensure all manufactured anchors have been installed in accordance with fall protection manufacturer's engineering documentation and specifications.
- C. Conduct load testing on installed post-anchors prior to installation of metal roofing. A total of eight (8) anchors shall be tested during four (4) individual load tests. Provide a roof plan indicating test locations and photo document test procedures.
 - 1. The test procedure shall consist of tensioning two anchors using a chain/wire rope, and a load cell to measure the force applied to the anchors.
 - 2. Anchors shall be tensioned to a force of 1,500lbs measured using the load cell, and held at that force for a minimum of 3 minutes.
 - 3. Any observed stress damage, broken welds, or permanent deviation of the post anchor more than 1/2" out of plane shall constitute a failure.
 - 4. Notify the engineer of any failed load tests prior to starting repairs.

END OF SECTION