SECTION 11 24 23 – NON-PENETRATING FALL PROTECTION ANCHOR SYSTEM

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes: Non-penetrating fall protection anchor system for use on flat or low-slope roofs:
   1. GREEN POINT Anchor Point with Ballasts (DiaSafe® Single).
B. System Components:
   1. GREENPOINT anchor post (AISI 316L stainless steel).
   2. GREENCARPET tarpaulin and ballast base.
C. Related Requirements:
   1. Section 07 50 00 – Membrane Roofing.
   2. Section 07 62 00 – Sheet Metal Flashing and Trim.

1.2 REFERENCES

A. EN 795:2012 Type A – Personal fall protection equipment: Anchor devices.
B. CEN/TS 16415:2013 – Anchor devices for use by more than one person.
C. UNI 11578 :2015 – Permanent fall arrest anchor devices.
D. EN 363:2008 – Personal fall protection systems.
E. EN 361 – Personal protective equipment against falls – Full body harnesses.
F. EN 362 – Connectors (carabiners).
G. EN 365-2 – Fall arresters.
H. ASTM A666 – Austenitic stainless steel.
I. ASTM A123 – Zinc (hot-dip galvanized) coatings on iron and steel.
J. AWS D1.1/D1.1M – Structural Welding Code – Steel (if applicable).
K. OSHA 29 CFR 1910 and 1926 – Fall protection regulations. GREEN POINT system may be used in compliance with OSHA when installed under the supervision of a Qualified Person in accordance with 29 CFR 1926.502 and 1910.140, meeting a 2:1 safety factor for arrest loads.
L. IBC – International Building Code (structural ballast loading).
M. TÜV Austria Services GmbH – System certification body.

1.3 SUBMITTALS

A. Product Data:
   1. Manufacturer’s catalog sheets.
   2. Technical data, including weights, dimensions, materials, and performance standards.
B. Shop Drawings:
   1. Layout and positioning plan.
   2. Fastening and load details.
C. Certificates:
   1. Installer certification by manufacturer.

2. Statement of Correct Installation in accordance with EN 795.
3. TÜV certification documents.

D. Operation and Maintenance Data:
1. Manufacturer's manual and inspection log.

E. Warranty Documentation:
1. Manufacturer's standard 5-year (60-month) warranty.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications:
1. Minimum 10 years' experience in fall protection systems.
2. Manufacturer certified by TÜV Austria Services GmbH.

B. Installer Qualifications:
1. Certified by the fall protection system manufacturer; or a qualified installer regularly engaged in the installation of rooftop fall protection systems, with training and credentials meeting OSHA 29 CFR 1926.32(m) and 29 CFR 1910.140(c)(17).
2. Installation shall be performed under the supervision of a Qualified Person as defined by OSHA.

C. Regulatory Requirements:
1. OSHA 29 CFR 1910 and 1926.
2. Local building codes.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver all materials in original packaging. B. Protect from moisture, contaminants, and damage during handling.

1.6 WARRANTY

A. Provide manufacturer's standard 5-year warranty for materials and workmanship.
B. Expected service life of 25 years, contingent on annual inspections and maintenance.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design:
1. Rothoblaas GREEN POINT System (DiaSafe® Single).
2. Contact: Rothoblaas USA Inc., 30 Wall Street, 8th Floor, New York, NY 10005 Tel: 917-656-9077, Email: sales@rothoblaas.com

B. Substitutions:
1. Submit per Section 01 60 00 with proof of equivalent performance and certification.

2.2 SYSTEM COMPONENTS

A. GREENPOINT Anchor Post:
1. Material: AISI 316L stainless steel (grade 1.4404).

2. Diameter: 250 mm (9.85 in), Height: 300 mm (11 3/4 in).
3. One (1) unit per anchor location.

B. GREENCARPET Base System:
1. Material: PRFV – glass fiber reinforced plastic.
2. Dimensions: 3 x 3 m (118 1/8 x 118 1/8 in).
3. VLF geotextile ballast membrane.

C. Ballast Options:
1. 80 kg/m² for 1+1 users = 720 kg total ballast per post.
2. Tables available for alternate ballast surface areas and layer thickness.

D. Accessories (Optional):
1. Signal cone, extended ballast mats, auxiliary risers, carabiners (per EN 362).

E. Identification:
1. Labels with model, serial number, manufacturer, and standard references.

2.3 PERFORMANCE REQUIREMENTS

A. Complies with EN 795:2012 Type A, CEN/TS 16415:2013.
B. May be used as a fall arrest system under OSHA 29 CFR 1926.502(d)(15) and 1910.140(c)(13), provided it is designed, installed, and used under the supervision of a Qualified Person as part of a complete personal fall protection system with a minimum safety factor of 2.
C. Allow to be use up to 2 users simultaneously but is not rated for simultaneous falls. Safety is guaranteed only when no more than one user falls at a time.
D. Load direction capacity: omnidirectional (x/y axis).
E. Installation without roof membrane penetration.
F. Maintains waterproofing integrity and avoids thermal bridging.
G. When used as part of a properly rigged personal fall arrest system (PFAS), the system must be configured to limit free fall distance to a maximum of 6 feet (1.8 m) in accordance with OSHA 29 CFR 1926.502(d)(16)(iii). GREEN POINT requires a minimum total fall clearance of 6.25 m (20.5 ft) to ensure arrest without contact with a lower level.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify roof slope does not exceed 5 degrees.
B. Confirm substrate is clean, dry, and structurally suitable for ballast loading.

3.2 PREPARATION

A. Coordinate with other trades, particularly roofing and waterproofing.
B. Prepare roof surface as required to receive GREENCARPET base.

3.3 INSTALLATION

A. Install GREENPOINT anchor per manufacturer instructions and installation manual.
B. Position GREENCARPET and ballast weights per certified layout plan.

C. Do not penetrate membrane; ensure no fasteners compromise waterproofing.
D. Maintain a minimum ballast layer thickness of 3 cm.
E. Ensure total ballast weight and coverage per manufacturer tables.
F. Install control labels and warning signage near roof access points.

3.4 FIELD QUALITY CONTROL

A. Document installation using Statement of Correct Installation.
B. Conduct inspection as per manufacturer's inspection report format.
C. Submit photographs showing anchor and ballast locations.
D. Apply validating inspection sticker to control label.
E. Register system online per manufacturer protocol.

3.5 CLEANING AND PROTECTION

A. Remove debris and unused materials from site.
B. Ensure all anchor points are clearly labeled and protected until turnover.

3.6 CLOSEOUT

A. Submit completed inspection form and installation certification.
B. Provide digital and hard copy system manual, including service log.
C. Schedule training session with building maintenance team.