SECTION 000000
ARDEX TILE & STONE INSTALLATION EXTERIOR DRAINAGE MATERIALS AND SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings, general provisions of the Contract, and other related construction documents such as Division 01 specifications apply to this Section

1.2 SUMMARY

A. This Section includes the installation of ARDEX Watec® Drainage System over an exterior, on-grade and above-grade and framed substrate (with a 1.5 - 2% grade), prior to installing tile and stone with a mortar.

1. ARDEX A 38™ Rapid Set Screed or ARDEX A 38™ Mix Rapid Set Premixed Screed
2. ARDEX AM 100™ Pre-Tile Ramping and Smoothing Mortar
3. ARDEX SK 175™ Waterproofing Membrane and Vapor Retarder for Tile & Stone Installations
4. ARDEX UD 150™ Watec Drainage Mat
5. ARDEX UD 158 Seam Reinforcement Tape
6. ARDEX UD 146 Edge Insulation Strip
7. ARDEX ProFin Series Edge Strip
8. ARDEX X 32™ Drainage Mortar
9. ARDEX X 90 OUTDOOR™ MicroteC3 Rapid-Set, Flexible Tile and Stone Mortar
10. ARDEX FL™ Rapid Set, Flexible, Sanded Grout
11. ARDEX WA™ High Performance, 100% Solids Epoxy Grout and Adhesive
12. ARDEX SX™ 100% Silicone Sealant for Tile and Stone Applications

B. Complete ARDEX product and system installation details are provided in their corresponding Technical Data Sheet available at www.ardexamericas.com.

C. Related Sections include the following:

1. Division 09 Tile & Stone Sections

2. Division 32 Exterior Improvements

1.3 REFERENCES

A. AMERICAN NATIONAL STANDARDS INSTITUTE (A.N.S.I.)

1. A-118.10 Load Bearing, Bonded, Waterproof Membranes for Thin-set Ceramic Tile and Dimension Stone Installations

2. A-118.15 Improved Modified Dry-Set Cement Mortar

3. A-118.7 High Performance Cement Grouts for Tile Installation

4. A-108.01 General Requirements for Subsurfaces and Preparations by Other Trades

5. A-108.10 Installation of Grout in Tilework

6. A-108.5 Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar

D. TILE COUNCIL OF AMERICA, INC.

1. Handbook for Ceramic Tile Installation

E. INTERNATIONAL STANDARDS ORGANISATION (ISO)

1. ISO 13007 – Ceramic Tile-Grouts & Adhesives

1.4 SUBMITTALS

A. Product Data: Submit manufacturer's product data, a Revit file with applicable materials meeting the Revit Content Style Guide, and installation instructions for each material and product used. Include manufacturer’s Safety Data Sheets.

B. Qualification Data: For Installer

1.5 QUALITY ASSURANCE

A. Installation of the ARDEX Watec Drainage System must be completed by factory-trained installers. Contact ARDEX for a list of factory-trained installers.

B. Manufacturer Experience: Provide products of this section by companies which have successfully specialized in production of this type of work for not less than 5 years. Contact Manufacturer Representative prior to installation.

C. Single Source: Manufacturer of system must manufacture all parts of the installed system including substrate preparation and drainage, screeds, mortars, grouts, and sealants. No substitutions are allowed from the specified products unless approved by the manufacturer of the system.

D. The System must have high quality aluminum and powder coated edge profiles with integrated drip edges.

E. The System must have a 3-dimensional Capillary Passive Drainage System that manages rain and snow water by allowing the water to move freely through the System.

F. The System must have drainage grates for doorways and floor level windows to prevent water seepage into interior areas. Drainage grates must be manufactured by the same manufacturer of the drainage system as a single-source installation.

1.6 WARRANTY: When ARDEX UD 150™ is used in conjunction with ARDEX X 32™, ARDEX X 90™, and ARDEX FL™ or ARDEX WA™, the drainage system will not break down or disbond due to manufacturing or formulation defect for 5 years from the date of installation. See the ARDEX Exterior Drainage Systems Warranty for full warranty details.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver products in original packaging, labeled with product identification, manufacturer, batch number and shelf life.

B. Store products in a dry area with temperature maintained between 50° and 85°F (10° and 29°C) and protect from direct sunlight.

C. Handle products in accordance with manufacturer's printed recommendations.

1.8 PROJECT CONDITIONS

A. Do not install material below 50°F (10°C) surface and air temperatures. These temperatures must also be maintained during and for 48 hours after the installation of products included in this section. Install quickly if substrate is warm and follow warm weather instructions available from the ARDEX Technical Service Department.

B. When ARDEX Watec Drainage Systems is to be installed over occupied spaces, an intact primary roofing membrane must be installed and in place prior to the installation of the ARDEX Watec Drainage system (by others).

PART 2 – PRODUCTS

2.1 SLOPING ON CONCRETE SUBSTRATES

A. Acceptable Products:

1. ARDEX A 38, ARDEX A 38 MIX or ARDEX AM 100; Manufactured by ARDEX AMERICAS , USA, (724) 203-5000, www.ardexamericas.com

2.2 VAPOR PROTECTION MEMBRANE (Optional subject to project scope and details. Contact ARDEX Technical for further details.)

A. Acceptable Products:

1. ARDEX SK 175; Manufactured by ARDEX AMERICAS USA, (724) 203-5000, www.ardexamericas.com

2.3 DRAINAGE MAT

A. Acceptable Products:

1. ARDEX UD 150™ Drainage Mat; Manufactured by ARDEX AMERICAS , USA, (724) 203-5000, www.ardexamericas.com

2.4 SEAM REINFORCEMENT TAPE

A. Acceptable Products:

1. ARDEX UD 158 Seam Reinforcement Tape; Manufactured by ARDEX AMERICAS , USA, (724) 203-5000, www.ardexamericas.com

2.5 PERIMETER STRIP

A. Acceptable Products: Perimeter Strip must be constructed of high quality aluminum to provide a decorative finished look to the installation. Perimeter strip must also provide an integral drip edge to shed water from the installation:

1. ARDEX UD 146 Edge Insulation Strip; Manufactured by ARDEX AMERICAS USA, (724) 203-5000, www.ardexamericas.com.

2. ARDEX ProFin Series Edge Profile; Manufactured by ARDEX AMERICAS USA, (724)203-5000, www.ardexamericas.com

2.6 MORTAR

A. Acceptable Products:

1. ARDEX X 32™; Manufactured by ARDEX AMERICAS USA, (724) 203-5000, www.ardexamericas.com

2. ARDEX X 90; Manufactured by ARDEX AMERICAS USA, (724) 203-5000, www.ardexamericas.com

2.8 GROUT

A. Acceptable Products:

1. ARDEX FL™ or ARDEX WA™; Manufactured by ARDEX AMERICAS USA, (724) 203-5000, www.ardexamericas.com

2.9 CAULK

A. Acceptable Products:

1. ARDEX SX™; Manufactured by ARDEX AMERICAS USA, (724) 203-5000, www.ardexamericas.com

PART 3 – EXECUTION

3.1 PREPARATION

A. Substrate : Prepare substrate in accordance with manufacturer's instructions, industry standards

1. Prior to proceeding please refer to ANSI A 108.01 "General Requirements for Subsurface" and the TCNA's "Handbook for Ceramic Tile Installation" for detailed information. Substrate and ambient temperatures must be a minimum of 50°F (10°C).

2. Ensure that the substrate is clean, dry, sound, flat and smooth with a 1.5 – 2% slope prior to proceeding with the installation. Prepare substrate as required by mechanical means. Do not use chemicals to clean substrate. Substrates that consist of existing waterproof systems must be prepared per manufacturer's recommendations.

B. Follow Manufacturer's Technical Data sheets for installation of the ARDEX Watec Drainage System, including substrate preparation, and installation of all components of the system.

3.2 CRACK AND JOINT PREPARATION

A. All installations must include soft joints in accordance with ANSI A 108.01-3.7 and TCNA EJ 171.

3.3 MIXING SANDED MATERIALS

A. When mixing sanded materials, ARDEX recommends using the ARDEX DUSTFREE™ or a standard "gutter hook" vacuum attachment in combination with a wet/dry (Shop-Vac® style) vacuum and HEPA dust extraction vacuum system. Additionally, each bag should be handled with care and emptied slowly to avoid creating a plume of dust. Contact the ARDEX Technical Service Department for more details on ARDEX products and air quality management.

3.4 SLOPING INSTALLATION (As needed)

A. Install ARDEX A 38, ARDEX A 38 MIX or ARDEX AM 100 as needed to provide proper slope in accordance with the technical data sheet.

B. Comply with manufacturer's printed instructions for mixing of material, installation, and cure. For questions contact the ARDEX Technical Services Department at (724) 203-5000.

3.5 VAPOR PROTECTION MEMBRANE INSTALLATION (Optional subject to project scope and details. Contact ARDEX Technical for further details.)

A. Install ARDEX SK 175 using ARDEX X 90 or ARDEX X 78 in accordance with the technical data sheet. Do not penetrate the membrane, including fixing any posts or railings once the draining system is installed.

B. Comply with manufacturer's printed instructions for mixing of material, installation, and cure. For questions contact the ARDEX Technical Services Department at (724) 203-5000.

3.6 DRAINAGE MAT INSTALLATION

A. Install ARDEX UD 150™ in accordance with the installation guide. in accordance with technical data sheet, including use of UD 158™ Seam Reinforcement Tape and UD 146 Edge Insulation Strip.

B. Comply with manufacturer's printed instructions for mixing of material, installation, and cure. For questions contact the ARDEX Technical Services Department at (724) 203-5000.

3.7 APPLICATION OF MORTAR

A. Install tiles using ARDEX X 32™ or ARDEX X 90 per ANSI A108.5, and in accordance with manufacturers printed instructions

B. Comply with manufacturer's printed instructions for mixing of material, installation, and cure. For questions contact the ARDEX Technical Services Department at (724) 203-5000.

3.8 APPLICATION OF GROUT AND CAULK

A. Install Grout

1. Install ARDEX FL in accordance with ANSI A108.10 or install ARDEX WA in accordance with ANSI A108.06. Grouting must not be applied around the perimeter edge.
2. Comply with manufacturer's printed instructions for mixing of material, installation, and cure. For questions contact the ARDEX Technical Services Department at (724) 203-5000.

C. Install Caulk

1. Install ARDEX SX in accordance with manufacturers printed instructions, the technical data sheet around the perimeter edge movement joint and any soft joints.

3.9 FIELD QUALITY CONTROL

A. If needed, contact manufacturer for field sampling methods and procedures.

3.10 PROTECTION & CLEANING

A. Protect from abuse by other trades by the use of plywood, Masonite or other suitable protection course.

B. Clean soiled surfaces using solution which will not harm tile assembly. Consult tile supplier for recommendations. Use non-metallic tools for cleaning.

END OF SECTION