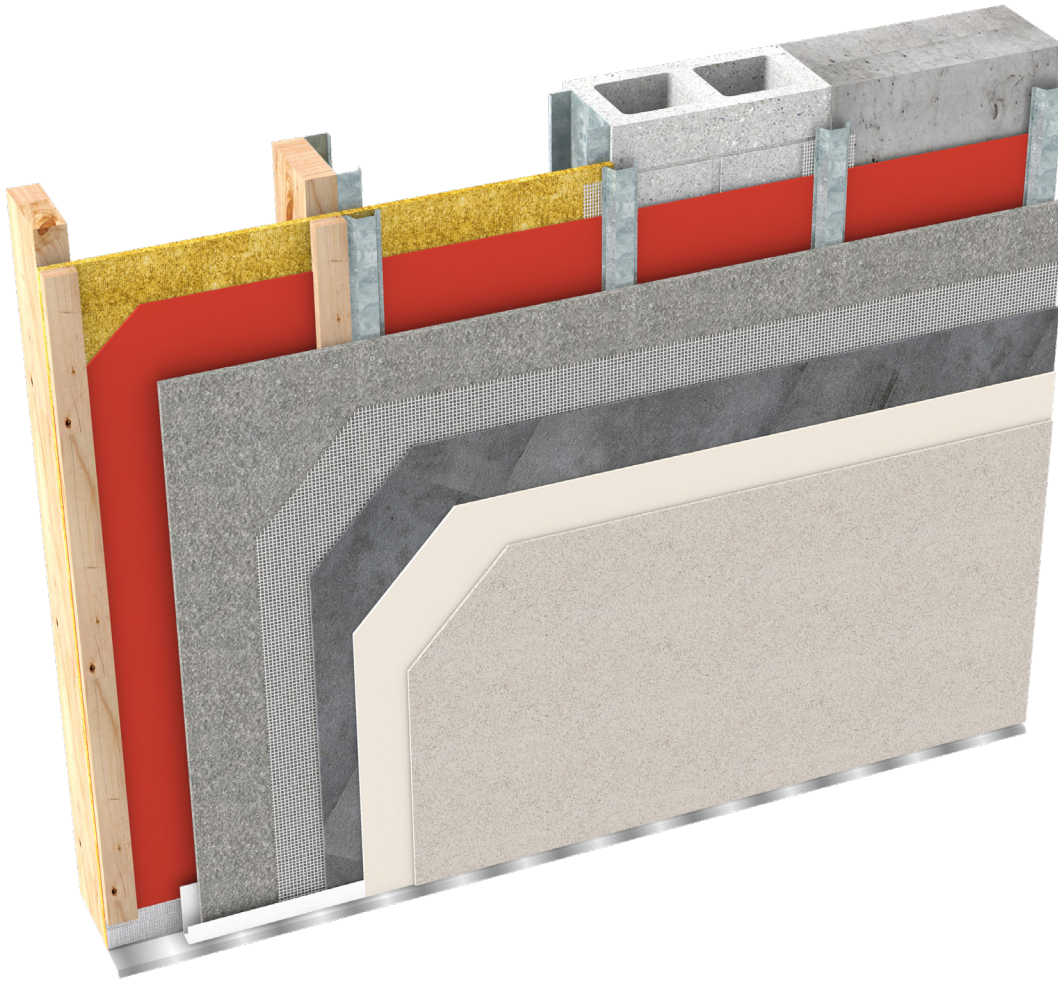


Durex®

Fiberglass Reinforced Wall Cladding System
Drained & Vented (Rainscreen Principle)

Stucco Lite Rainscreen



Water Repellent



Building Code



Drained



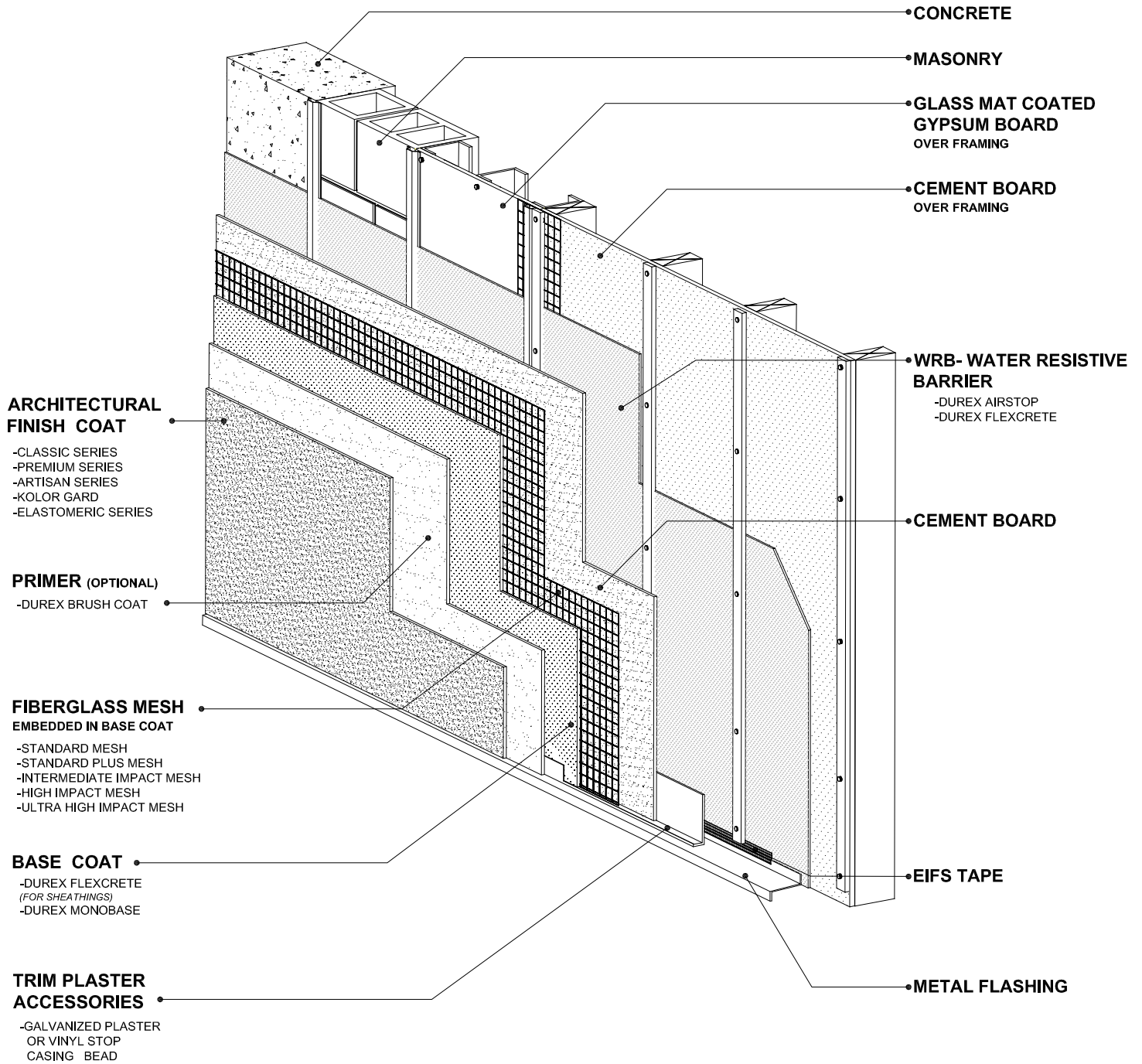
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ISOMETRIC & SPECIFICATIONS

Stucco Lite Rainscreen



PART 1: - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 All conditions of the contract and Division 1, General Requirements apply to this section.
- .2 All work shall meet applicable codes and standards, the Occupation Health & Safety Act, manufacturer's recommendations and good building practice.
- .3 System Description: A polymer modified, rainscreen stucco cladding system, intended for direct application over wood or metal furring that is applied to monolithic concrete, masonry walls, cementitious panels, glass mat-surfaced gypsum panels and/or plywood or oriented strand board (OSB) sheathing.
- .4 The rainscreen stucco cladding system is intended for use on buildings where the applicable Building Code allows the use of combustible and noncombustible claddings.

1.2 COORDINATION

- .1 Ensure that the work of this section is coordinated with the work of related sections.

1.3 RELATED SECTIONS

- .1 Section 03 30 00 Cast-in-Place Concrete
- .2 Section 04 20 00 Unit Masonry
- .3 Section 06 10 00 Rough Carpentry
- .4 Section 06-16-00 Sheathing
- .5 Section 07-26-00 Vapour Barrier
- .6 Section 07-27 00 Air Barrier
- .7 Section 07 62 00 Sheet Metal Flashing and Trim
- .8 Section 07 90 00 Joint Protection (Sealants)
- .9 Section 08 00 00 Openings
- .10 Section 08 50 00 Windows
- .11 Section 09 28 00 Backing Board and Underlayment

1.4 REFERENCES

- .1 American Society for Testing Materials
 - .1 ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
 - .2 ASTM A 653 Specification for Sheet Steel Zinc Coated (Galvanized) by the Hot-dip Process, Commercial Quality.
 - .3 ASTM B 117 Standard Practice for Operating Salt Spray (Fog) Apparatus
 - .4 ASTM A580/A580M Specification for Stainless Steel Wire
 - .5 ASTM C 847 Standard Specification for Metal Lath
 - .6 ASTM C 926 Standard Specification for Application of Portland Cement-Based Plaster
 - .7 ASTM C 933 Standard Specification for Welded Wire Lath
 - .8 ASTM C 954 Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster

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		Bases to Steel Studs from 0.84 mm ((0.033") to 2.84 mm (0.112") in thickness
.9	ASTM C 1002	Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
.10	ASTM C1032	Standard Specification for Woven Wire Plaster Base
.11	ASTM C 1063	Standard Specification for Installation of Lathing and Furring for Portland Cement Plaster
.12	ASTM C 1177/C 1177M	Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
.13	ASTM C 1185	Standard Specification for Flat Fiber-Cement Sheets
.14	ASTM C 1280	Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing
.15	ASTM C 1325	Standard Specification for Fiber-Mat Reinforced Cementitious Backer Units
.16	ASTM C 1338	Standard Test Method for Determining the Fungi Resistance of Insulation Materials and Facings.
.17	ASTM C 1382	Standard Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finish Systems (EIFS) Joints.
.18	ASTM C 1481	Standard Guide for Use of Joint Sealants with Exterior Insulation and Finish Systems (EIFS).
.19	ASTM C 1513	Standard Specification for Steel Tapping Screws for Cold-formed Steel Framing Connections
.20	ASTM C 1861	Standard Specification for Lathing and Furring Accessories, and Fasteners, for Interior and Exterior Portland Cement-Based Plaster.
.21	ASTM D 226	Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
.22	ASTM D 5420	Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of Striker Impacted by Falling Weight (Gardner Impact).
.23	ASTM E 84	Standard Test Method for Surface Burning Characteristics of Building Materials.
.24	ASTM E 96/E 96M	Standard Test Methods for Water Vapor Transmission of Materials.
.25	ASTM E 330	Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
.26	ASTM E 331	Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
.27	ASTM E 1131	Standard Test Method for Compositional Analysis by Thermogravimetry.
.28	ASTM E 1252	Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis.
.29	ASTM G 154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials.
.30	ASTM G155-05a	Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

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- .2 Canadian Standards Organization (CSA)
 - .1 CSA A3000 Cementitious materials compendium
 - .2 CSA B111 Wire Nails, Spikes and Staples
 - .3 CSA O86 Engineering Design in Wood.
 - .4 CSA O325 Construction Sheathing.
 - .5 CSA O121 Douglas Fir Plywood.
 - .6 CSA O151 Canadian Softwood Plywood.
 - .7 CSA O153 Poplar Plywood.

- .3 Canadian General Standard Board (CGSB)
 - .1 CAN2-51.32 Sheathing Membrane, Breather Type

- .4 International Organization for Standardization (ISO)
 - .1 ISO 7892 Vertical Building Elements – Impact Resistance Tests – Impact Bodies and General Test Procedures
 - .2 ISO 15148 Hygrothermal performance of building materials and products - Determination of water absorption coefficient by partial immersion.

- .5 ULC (Underwriters Laboratories of Canada)
 - .1 CAN/ULC-S114 Standard Method of Test for Determination of Non-Combustibility in Building Materials.

1.5 DESIGN CRITERIA

- .1 Structural Design
 - .1 Design professional shall design the back-up wall in full compliance with the requirements of the National Building Code (NBC) of Canada and/or applicable provincial or territorial building codes. Sufficient details on architectural plans and drawings shall demonstrate compliance to the NBC.

SPEC NOTE: When used over stud wall framing, the structural wall framing members shall be at a maximum spacing of 406 mm (16") o/c.

- .2 Supporting Substrate
 - .1 All substrates shall be flat and plumb within 2 mm/m (1/4" per 10'), as per ASTM C 1397.
 - .2 All substrates shall be free of surface contamination, including (but not limited to): dirt, form release agents, efflorescence, oil and chalkiness.
 - .3 All substrates shall be free of any loose materials and cracks greater than 1 mm (1/24") in width.

- .3 Mass Wall Substrates
 - .1 Mass wall substrates shall be cast-in-place concrete, concrete masonry units or brick.
 - .2 Cast-in-place, concrete masonry units or brick shall be at least 28 days old.
 - .3 Unit masonry and brick veneer shall have mortar joints struck flush or recessed.

- .4 Sheathing Substrates
 - .1 Apply the rainscreen stucco system to one of the following recommended substrate sheathings or substrate system or approved equivalent:

- .1 Cementitious backer Board as per ASTM C1325.
- .2 Glass-mat gypsum sheathing conforming to ASTM C1177/C1177M.
- .3 OSB and/or plywood sheathing conforming to CSA O86. OSB conforming to CSA O325. Douglas fir Plywood conforming to CSA O121, Canadian Soft Plywood conforming to CSA O151 and Poplar Plywood conforming to CSA O153.

SPEC NOTE: Sheathing/substrate system type and condition shall be as approved by Durabond Products Ltd. Questionable substrates to be reviewed by Durabond Products Ltd. and/or the Designer.

- .2 Sheathing shall be designed with framing to resist applicable wind loads, with a maximum design deflection of substrate not to exceed L/240.

SPEC NOTE: Sheathing shall be of a structural grade when used in conjunction with framing members spaced at 600 mm (24") o/c.

- .3 Sheathing substrates shall be installed in accordance with the sheathing manufacturer's latest installation instructions and in general conformance with ASTM C1280. Sheathing joints shall be properly staggered. Vertical joints shall be offset by at least one framing member. Sheathing shall be:
 - .1 Minimum 11.1mm (7/16") and 12.7 mm (1/2") thick for OSB and plywood sheathing respectively.
 - .2 Minimum 12.7 mm (1/2") thick for glass-mat gypsum, cementitious and fibre cement boards.
 - .3 Continuously supported by framing.
 - .4 The sheathing shall be installed horizontally across framing when using wood sheathing.
 - .5 Having sheathing joints not exceeding 3.0 mm (1/8").
 - .6 Installed with corrosion resistance fasteners tight and flush to the sheathing surface. (Not to be countersunk.)
 - .7 Replaced where damaged or weathered.
- .5 Air/Moisture Controls
 - .1 The air/moisture control shall be designed using the specified, designated control membrane. Continuity of these membranes shall be maintained at all wall interfaces.
 - .2 The use, location and performance of the air barrier shall be determined by the design professional.
 - .3 The use and location of the vapour retarder within the wall assembly shall comply with the requirements of Part 5 of the National Building Code (NBC) of Canada and/or the applicable provincial or territorial building codes.

SPEC NOTE: Conduct a condensation control (dew point) analysis of the wall assembly to determine potential condensation within the assembly. Adjust the wall assembly components accordingly to minimize condensation risks.

- .6 Air/Water Resistive Barrier (WRB)
 - .1 The air/moisture control shall be designed using the specified, designated control membrane.
 - .2 The use, location and performance of the air barrier shall be determined by the design professional.
 - .3 Water Resistive Barrier (WRB)

- .1 A ready-mix, 1 or 2 components, polymer-based water resistive barrier which can be roll, spray or trowel applied in a continuous layer
 - .2 Water damage susceptible substrates shall be protected with the specified water resistive barrier and as shown on the drawings.
 - .3 The second plane of protection for moisture management shall be made using the specified rainscreen stucco system's water resistive barrier and the drained air space provided through the stucco system's application over furring.
 - .4 The designated water resistive barrier system shall include the specific sheathing joint transition membrane.
 - .5 The water resistive barrier shall be applied in conformance with the rainscreen stucco system manufacturer's instructions.
 - .6 The continuity of water resistive barrier shall be maintained across windows, openings, joints and all other wall interfaces.
 - .7 The drained air space behind the metal lath, as provided by the furring shall remain unobstructed and shall terminate in such a way as not to obstruct the drainage of any incidental moisture to the exterior.
- .7 Air/Moisture Transition Membrane
- .1 The continuity of the air/moisture control elements shall be maintained across joints, windows, openings and all other wall interfaces using the specified transition membranes.
 - .2 Through wall penetrations and openings shall be sealed to the air/water resistive barrier with transition membranes.
 - .3 Transition membranes shall be installed at all movement joints, roof junctions and window and door interfaces.
 - .4 Transition membranes shall be installed in conformance with manufacturers' instructions.
 - .5 Transition membranes shall be as listed in Part 2, "Products" of this specification. No other generic transition membranes should be permitted.

SPEC NOTE: Allowance for use of generic transition membranes could result in membranes that may not be compatible with the stucco system.

METAL LATH

SPEC NOTE: The rainscreen stucco wall could be applied over paper-backed welded wire metal lath as permitted by Sentence 9.28.4.2. of Division B of the National Building Code (NBC) Canada.

- .8 Drainage mediums/Capillary break
- .1 The drainage medium/capillary break of the rainscreen stucco system shall consist of continuous, uninterrupted, 19 mm (3/4") air cavity between the stucco system's metal lath and the sheathing through the application over the specified strapping.
 - .2 The drainage medium/capillary break created between the stucco system and the backing assembly shall be vented.
- .9 Furring
- .1 Wood furring for the attachment of the stucco's metal lath shall not be less than 19 mm (3/4") by 38 mm (1 1/2").
 - .2 Wood furring shall be pressure treated.

- .3 Metal furring for the attachment of the stucco's metal lath shall not be less than 19.5 mm (3/4") cold-rolled channels
- .4 Metal furring shall have a minimum corrosion treatment of G60.

- .10 Attachment of Furring
 - .1 Metal furring shall be attached to concrete or masonry substrates using concrete nails that are driven securely into the concrete or masonry surfaces substrate
 - .2 Wood furring shall be attached to the structural framing and/or to the structural sheathing
 - .3 Wood furring shall be not less than 19 mm (3/4") by 38 mm (1 1/2").

- .11 Spacing of Furring
 - .1 The spacing of furring shall take into consideration the type and weight of the stucco metal lath and the stucco base.
 - .2 The maximum permissible centre to centre spacing of wood or metal furring shall be in accordance with Table 3 of ASTM C1063.

SPEC NOTE: The spacing of furring is related to the type of furring and the weight of the stucco metal lath. The unsupported stucco metal lath shall be properly spaced in accordance with the applicable standards. The designer shall determine the maximum spacing of the furring members for types and weights of metal plaster bases that are beyond Table 3 of ASTM C1063.

- .12 Metal-Lath Material
 - .1 Metal lath shall be rib metal lath, flat or self-furring expanded metal mesh, diamond mesh, woven or welded wire mesh.
 - .2 Metal lath shall be in conformance with ASTM C 847, with a minimum corrosion resistance of G 60 coating in accordance with ASTM specification A 653/A653M.

SPEC NOTE: The designer must decide on the corrosion resistance levels, beyond the specified minimums based on the applicable surrounding climates and environmental conditions specific to the project location, salinity, industrial pollution, high moisture, etc.

- .13 Metal-lath Attachment
 - .1 Metal-lath stucco bases shall be securely attached to the wood or metal furring members using corrosion resistant metal fasteners.
 - .2 When used in conjunction with wood furring, nails for metal-lath stucco bases shall not be less than 3.2 mm diam with a head diameter of not less than 11.1 mm. Staples, when used shall not be less than 1.98 mm dia. in thickness. Staples and nails for attaching stucco lathing shall be of sufficient strength to penetrate 25 mm (1") into framing members. Staples shall have crowns not less than 19 mm (3/4") and shall engage not less than three (3) strands of lath. Screws used to attach metal-lath stucco base shall penetrate not less than 15.9 mm (5/8") into the furring member and shall engage not less than three strands of lath.
 - .3 When used in conjunction with wood furring, the metal-lath stucco bases shall be attached at an interval not exceeding:
 - .1 150 mm o.c. vertically and 400 mm o.c. horizontally or
 - .2 100 mm o.c. Vertically and 600 mm o.c. horizontally.
 - .4 When used in conjunction with metal furring, the metal-lath stucco bases shall be attached at an interval not exceeding:

- .1 xxx mm o.c. vertically and yyy mm o.c. horizontally
- .5 When used in conjunction with metal furring, the metal screws shall project not less than 9.5 mm (3/8") through the metal framing and shall engage not less than three (3) strands of lath. metal-lath stucco bases shall be attached at an interval not exceeding:
 - .1 300 mm o.c. vertically and 400 mm o.c. horizontally or

SPEC NOTE: Corrosion resistant metal fasteners shall be of a material other than aluminum.

- .14 Code-related Fire Protection
 - .1 The stucco system is intended to be used in combustible and/or noncombustible constructions. When used in non-combustible construction, the scratch coat and the base coat shall be in conformance with CAN/ULC S114, "Test for Determination of Non-Combustibility in Building Materials".
 - .2 Where required to meet the requirements of CAN/ULC S114, the compliant stucco system shall be listed with an accredited 3rd party certification organization for validating such performance.

SPEC NOTE: Code-prescribed stucco mixes have traditionally been considered as non-combustible, despite the potential use of polymer modified cement. Fire protection requirements are subject to provincial variations, refer to specific provincial fire protection code compliance requirements for specific allowances/limitations that may apply.

SPEC NOTE: Refer to manufacturer's fire protection code compliance report for specific limitations that may apply.

- .15 Design Details at Terminations
 - .1 Except when applied over concrete or masonry walls, the stucco system shall extend a minimum of 25 mm (1") below the sill plate onto the foundation wall. The system shall terminate at least 200 mm (8") above finished grade and 50 mm above the roofing system.
 - .2 The stucco system shall not be used on wall surfaces subject to continuous or intermittent water immersion or hydrostatic pressure.
 - .3 The stucco system shall be terminated a minimum of 12.7 mm (1/2") from adjoining materials at interfaces for sealant applications.
- .16 Projections and Decorative Elements
 - .1 Ensure termination of the stucco system at roof parapet is covered with continuous waterproofing membrane and sheet metal cap that is coordinated with the roofing contractor.
 - .2 Conform with the following guidelines for length and slope of inclined surfaces:
 - .1 Minimum slope (6:12), for projection greater than 102 mm (4").
 - .2 Minimum slope (3:12), for projection less than 102 mm (4").
 - .3 The stucco system shall not be used for areas defined by codes as roofs.

SPEC NOTE: Metal flashing with drip edge shall be used in areas where the minimum slopes for horizontal projections can't be executed.

SPEC NOTE: Decorative elements such as mouldings shall be installed in such a way not impede the water management performance of the stucco system.

.17 Sealant System

- .1 Joints in the stucco system shall be sealed using an elastomeric sealant with a closed-cell foam backer rod or bond breaker tape, as specified in Section 07 90 00 and as tested to ASTM C1382.
- .2 Minimum joint width shall be four times greater than the anticipated range of movement. Sealant shall be applied in a width to depth ratio of (4:1), (3:1), (2:1) as recommended by the Sealant manufacturer.
- .3 Sealant installation shall conform with the requirements of ASTM C1481.

SPEC NOTE: Recommended joint width is 19 mm (3/4") for expansion joints, however, site and design conditions may require the nominal width to vary.

.18 Expansion and Termination Joints

- .1 Provide two stage sealant joints at all expansion and termination joint locations. The inner joint seal is not required if the water resistive barrier system is continuous behind the outer joint seal and /or penetrations.
- .2 Sealant Joint Venting
All two stage sealant joints shall be vented:
 - .1 Horizontal joints shall be vented at not greater than 1.2 m (4'-0") on center.
 - .2 Vertical joints shall be vented at not greater than 3 m (10'-0") on center and/or at not greater than 50 mm (2") below the intersection of vertical and horizontal joints.

SPEC NOTE: The designer shall determine the spacing and amount of drainage and/or venting required for the stucco system. Note, the venting is only required at points where gravity-induced drainage is expected to occur, hence, roof parapets and/or the underside of window sill flashing would not require sealant vents.

- .3 Expansion joints are required at the following locations:
 - .1 At through wall penetrations
 - .2 At movement joint locations within the substrate.
 - .3 At building movement joint locations.
 - .4 At floor lines of all wood frame structures and as required by the structural design of other framing types.
 - .5 At junctions with different cladding materials and components.
 - .6 At changes in roof line, building shape or structural system.
 - .7 At changes in substrate materials.
 - .8 At all other locations specified or indicated on drawings
- .4 Control Joints
 - .1 Provide control joints every 13 m² (144 ft²) of finished surface area on vertical applications and at 9.3 m² (100 ft²) of finished surface area on horizontal and/or sloped applications.
 - .2 The distance between control joints shall not exceed 5.5 m (18') in

either direction or a length-to-width ratio of 2 ½ to 1.

SPEC NOTE: The specified control joint spacings represent industry recommendations based on typical stucco applications. Additional factors such as structural considerations and surface texture may require more conservative placements of control joints.

SPEC NOTE: Distance between control joints shall not exceed 5.5 m (18') on either direction or a length-to-width ratio of 2 ½ to 1.

- .5 Termination joints are required at the following locations:
 - .1 At windows, doors and through-wall penetrations interfaces.
 - .2 200 mm (8") above finished grade.
 - .3 50 mm (2") above roofing system.

- .19 Flashing
 - .1 The stucco system shall be used in conjunction with flashing conforming to Subsection 9.27.3 of Division B of the National Building Code (NBC) of Canada and/or the equivalent requirements of the related applicable provincial or territorial codes.
 - .2 Provide corrosion-resistant flashing at all roof-wall intersections, windows and door heads and sills, decks, balconies, chimneys, parapet walls, projecting features and other areas as necessary to direct water to the exterior and to prevent water entry behind the cladding.
 - .3 Flashing must be installed in accordance with section 07 60 00 and the applicable building codes.
 - .4 Flashing shall have a slope of not less than 6% towards the exterior, lap not less than 10 mm (3/8") vertically over the building element below, terminate in a drip offset not less than 5 mm (3/16") outward from the outer face of the building and terminate at each end with an end-dam.

- .20 Finish
 - .1 The design professional shall assess the design of the building façade to the desired finish textures and colours that could be expected at various sections of the façade.
 - .2 Where the type of texture and the intensity of the selected colours include vibrant, accent and / or mass tone colours that are more susceptible to UV degradation, the designer shall specify the use of Durex Kolor Gard Architectural Coatings to augment and heighten the colour fastness.
 - .3 Sufficient details / notifications on architectural plans and drawings shall demonstrate the required specialized finish texture and colour of the exterior insulation and finish system.

1.6 SUBMITTALS

- .1 Product Data
 - .1 Submit stucco system's specifications and individual component data sheets to show compliance to the intent of the design specifications, and installation instructions.
 - .2 Submit approvals and/or evaluations applicable to the system and/or

components to be installed.

- .2 Shop Drawings
 - .1 Submit shop drawings in accordance with requirements specified in Division 1.
 - .2 Clearly indicate dimensions, tolerances and materials in large-scale details for terminations, drainage/venting, description of related and abutting components and elevations of units with locations of expansion joints, control joints, and reveals.
- .3 Samples
 - .1 Prior to application of mock-up, submit duplicate 150mm x 200mm (6" x 8") representative colour samples of each colour and finish coat texture.
 - .2 Maintain an approved sample at the project site.
- .4 Closeout Submittals
 - .1 Provide stucco system's maintenance, repair and cleaning procedures.
 - .2 Provide stucco system's material warranty as per section 1.10.
 - .3 Provide workmanship warranty by stucco applicator as per section 1.10
 - .4 Provide identification labels of colour batch numbers, water resistive barriers, base coat, finish coats and reinforcing mesh used.

1.7 QUALITY ASSURANCE

- .1 Qualifications
 - .1 System Manufacturer: All system components shall be manufactured or sold by the stucco system's manufacturer and purchased from the system's manufacturer and/or its authorized distributors.
 - .2 Contractor: Shall be knowledgeable in the proper installation of the stucco system and shall be in possession of the system's current Certificate of Installer. Work of this this specification shall be executed in conformance with good trade practices and manufacturer's installation manual.
- .2 Mock-Up
 - .1 The contractor shall, before installation works, provide the owner/consultant with a mock-up demonstrating the stucco system's components and application.
 - .2 The Mock-up shall be constructed to dimensions and in location specified by the Designer.
 - .3 The mock-up system's component shall include the water resistive barrier, reinforcing mesh, base coat and finish coats that would include each colour and texture to be used.
 - .4 The mock-up shall demonstrate methods of application as well as typical details at opening (windows, doors etc.) and roofing assemblies.
 - .5 The Mock-up shall serve for initial review purposes by the Consultant and when accepted shall represent the minimum standard for work and the basis for acceptance for the rest of the project.
 - .6 The mock-up shall be prepared with the same products, components, tools and techniques required for the actual project.
 - .7 The approved mock-up shall be available at all time at the jobsite and shall form the basis for acceptance for the remainder of the project.
 - .8 Accepted mock-up may remain as part of the work.

SPEC NOTE: More than one mock-up may be required if more than one coating colour and/or texture is required for the project.

1.8 DELIVERY, STORAGE, HANDLING & PROTECTION

- .1 All required materials and components shall be supplied by the manufacturer of the stucco system and shall be delivered to job site in original, unopened packaging with all identifying labels and markers clearly visible and intact. Upon delivery, materials shall be inspected for any damages and the system's manufacturer shall be advised, in writing of any damaged and/or unacceptable materials. Any defective materials and/or components shall not be used.
- .2 Materials shall be stored in a dry, vented, weatherproof enclosures, stacked off the ground, out of direct sunlight and other detrimental conditions. Pail products and liquid materials shall be stored at ambient temperatures above 5°C and below 35°C. All materials shall be protected from freezing or overheating.
- .3 Protective coverings shall be provided to all freshly-applied coatings to protect them from damages due to rain, inclement weather and/or any other damages until the coatings have fully set and cured.
- .4 All capping and flashing shall be immediately and properly installed in co-ordination with the application of the stucco system, unless temporary protection has been provided. If capping and flashing or temporary protection have not been provided, the Architect and General Contractor shall be advised accordingly in writing.
- .5 All insulation boards shall be protected from direct sunlight.

1.9 PROJECT/SITE CONDITIONS

- .1 Prior to installation of the rainscreen stucco system, the substrate shall be examined with respect to the following:
 - .1 The substrate shall be type-approved by system's manufacturer.
 - .2 The substrate surface shall be free of any deleterious materials such as oil, dust, direct form-release agents, paint, wax glazing, water, moisture, efflorescence, frost, etc.
 - .3 The substrate shall be examined for soundness, such as tightness of connections, crumbling, spalling, delamination, voids, loose joints and projections.
 - .4 The substrate shall be examined for compliance with Contract Documents.
- .2 Ambient Conditions
 - .1 Application shall take place when ambient and substrate temperature are within the specified limits by manufacturer and when the substrate is free from any moisture arising from condensation, frost, and/or rainfall.
 - .2 Do not proceed with application of materials immediately prior to, during, or immediately after inclement weather conditions, nor if adverse weather is anticipated within 24 hours after application.
 - .3 Do not apply materials to wet, frozen or frosted surfaces.
 - .4 Application of water resistive barrier, scratch coat, base coat and finish coat shall not proceed during rainy conditions or weather conditions with ambient air and/or wall surface temperatures below 5°C, or above 38°C. Wet applied

- coatings shall be protected from rain until they are completely dry.
- .5 Avoid coating surfaces that are directly exposed to direct sunlight or windy conditions.
 - .6 When necessary, provide temporary enclosures for exterior work and ensure that temporary climatized enclosure is provided in the area of work to maintain the required ambient air temperature prior to, during application and for a minimum of 24 hours after application of coating.

SPEC NOTE: Carefully co-ordinate to determine whether or not the General Contractor is to provide temporary enclosure and heat.

- .7 Do not apply finish coat in areas where dust is being generated.
- .8 Proceed with work only when surfaces and conditions are satisfactory for the production of perfect application.
- .9 Protect applied coating from rapid evaporation during dry and hot weather.
- .10 Consult system's manufacturer for recommendations should adverse conditions exist.

1.10 WARRANTY

- .1 The warranty period stipulated in the General Conditions of the Contractor shall be extended as follows:
 - .1 The system is eligible for a manufacturer's warranty from the date of substantial completion, upon written request, against defective material. For full applicable warranty details contact the system manufacturer.
 - .2 The manufacturer warranty is effective only when materials and workmanship comply with this specification.
 - .3 The system manufacturer does not warrant workmanship.
 - .4 The system applicator shall warrant workmanship separately against faulty workmanship.

SPEC NOTE: Substitution of materials and/or components specified in this specification shall void the manufacturer's warranty.

PART 2: - PRODUCTS

2.1 MANUFACTURER

- .1 All components of the Durex® Rainscreen Stucco Wall system shall be manufactured and/or distributed by Durabond Products Ltd. or one of its authorized distributors. No substitutes of materials shall be allowed without prior written notice of the manufacturer.

2.2 AIR/WATER RESISTIVE BARRIER

- .1 Durex® AirStop, a ready to use, single component, silicone modified acrylic copolymer air barrier.

SPEC NOTE: The water resistive barrier system may also be designed to act as the wall assembly air barrier and/or vapour barrier material as determined by the consultant of the wall assembly.

2.3 TRANSITION MEMBRANE

- .1 Durex® EIFS Tape, a 30 mil thick, self-adhering, Styrene Butadiene Styrene (SBS) modified rubberized asphalt membrane with a polyester top surface. Available in rolls 914 mm (36"), 457 mm (18"), 225 mm (9"), 152 mm (6") and 102 mm (4") wide. Durex® EIFS Tape requires the use of Durex® Flex-Seal Primer for proper adhesion.
- .2 Durex® EIFS Tape Super Stick TM, a 17 mil, self-adhering, high performance tape with a polyester fabric top layer. Available in rolls 914 mm (36"), 457 mm (18"), 225 mm (9"), 152 mm (6") and 102 mm (4") wide. Durex® Super Stick TM requires the use of Durex® Flex-Seal primer for proper adhesion.
- .3 Durex® Flex-Seal Membrane, a 40 mil thick, self-adhering, rubberized asphalt membrane with high density cross-laminated polyethylene reinforcement. Available in rolls 914 mm (36"), 457 mm (18"), 225 mm (9"), 152 mm (6") and 102 mm (4") wide. Durex® Flex-Seal Membrane requires the use of Durex® Flex-Seal Primer.

SPEC NOTE: Durex® Flex-Seal Primer, a primer specifically designed to enhance the adhesion of Durex® Flex-Seal Membrane and Durex® EIFS Tape on porous surfaces and cementitious coatings at temperatures above -30°C. It is composed of SBS synthetic rubbers, adhesive enhancing resins and volatile solvents. Durex® Flex-Seal Primer can be used on exterior gypsum boards, wood, metal and concrete.

2.4 METAL LATH

- .1 Expanded, self-furring diamond mesh metal lath that are copper-alloy coated or galvanized, meeting the physical characteristics of Sentence 9.28.4.3. of Division B of the National Building Code (NBC) Canada and/or provincial and territorial building codes.
- .2 Self-furring, woven or welded wire lath, meeting the physical characteristics of Sentence 9.28.4.3. of Division B of the National Building Code (NBC) Canada.
- .3 Self-Furring Paperback lath having a D60-grade asphalt-saturated felt.
- .4 Austenitic Stainless steel lath
- .5 10 mm (3/8") Rib lath (for horizontal surfaces)
- .6 The corrosion protection of the metal lath shall conform to ASTM A 641, or ASTM A847.

SPEC NOTE: Zin-coated metal lath may be insufficient in providing the corrosion resistance for application in exposed coastal environments and/or highly industrialized areas. Designers may want to consider using higher corrosion resistance metal lath such as zinc-alloy and Stainless steel lath.

2.5 FASTENERS FOR METAL LATH

- .1 Mechanical fasteners and Tie Wire for metal lath shall be non-corroding in compliance with CSA B 111 and/or ASTM C 1513. Fasteners shall be compatible with other metals. Aluminum fasteners shall not be used.
- .2 Fasteners shall be applied tight against the lath and shall penetrate into the framing members through the sheathing.

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- .3 Attachment to Wood Framing:
 - .1 Nails for stucco lath shall be not less than 11gauge, 3.2 mm diam., minimum 25 mm (1") long, and with a head diameter of not less that 11.1 mm (7/16").
- .4 Attachment to Steel Framing:
 - .1 Screws for stucco lath shall be corrosion resistance, self-tapping, minimum #8, fully threaded type ATek-Wafer Head, minimum 19 mm (3/4") long, with a minimum 8 mm (5/16"), three thread penetration into studs. Meeting ASTM C646
 - .2 Nails and screws for stucco lath of applications over wood or steel framing shall have metal retainer plates "Lath-Lock plates."
- .5 Attachment to Concrete wall and masonry
 - .1 Fasteners for concrete and masonry shall be minimum # 8 wafer head, fully threaded, Zamac Pin bolts, minimum 25 mm (1") length.
- .6 Tie Wire
 - .1 Tie wire shall be 18 gauge, galvanized and annealed low-carbon steel in compliance with ASTM A 641 with a minimum Class I Coating.

SPEC NOTE: Fasteners for the metal lath shall have a corrosion resistance at least equivalent to that of the metal lath.

2.6 TRIM & ACCESSORIES

- .1 All metal trims and accessories, expansion and control joints, casing beads/stops, corner beads, weep and drip screeds shall be minimum 26-gauge, hot-dipped galvanized steel G60 coating, zinc alloy and shall be compatible with other metallic surfaces. Trim and accessories shall have a minimum ground of 10 mm (3/8").
- .2 PVC trims and accessories shall conform to ASTM D 1784, cell classification 13244C.

SPEC NOTE: the depth (ground) of the accessories is dependent on the required thickness of the base coat, without the considering the thickness of the finish coat.

SPEC NOTE: Use welded wire external corner reinforcement for maximum embedment in base coat.

- .3 Provide all trims and accessories as detailed in shop drawings and/or as required to complete the work in accordance with good trade practices and reference standards.
- .4 PVC trims and accessories shall conform to ASTM D 1784, cell classification 13244C.

SPEC NOTE: Zinc alloy and PVC trims and accessories are intended to be used in areas exposed to corrosive elements and/or saline environments.

- .5 Fasteners for trims accessories shall be placed in the crotch of the trim flanges.

SPEC NOTE: Make sure that trim and accessories don't block any drainage behind the stucco system.

2.7 STUCCO MATERIALS

- .1 Water
 - .1 Water, if needed to be used within the stucco mix shall be potable, clean and free from any deleterious substances.

- .2 Scratch Coat and Based Coat
 - .1 Durex® Dryplast Coarse and Durex® Dryplast Medium, pre-blended, fibre reinforced Portland cement and graded sand stucco mix, mixed on site in a ratio of 1 bag Durex® Dryplast Coarse or Medium to 5 liters of potable water.
 - .2 Durex® Uniplast Coarse and Durex® Uniplast Medium, a two-component polymer-modified cementitious base coat mixed with Acrybond S, a water-based 100% acrylic polymer additive in a ratio of 1 bag Durex® Uniplast to 5 liters of Durex® Acrybond S.

- .3 Primer
 - .1 Durex® Brush Coat Primer, a water-based, 100% acrylic coating, colour-tinted to suit the colour of the final finish coat.

SPEC NOTE: Except for special finishes, the Primer is an optional component of the EIFS where its usage is recommended for providing uniform substrate absorption and finish colour.

- .4 Finish Coat
 - .1 Durex® Architectural Coatings, Classic Series, a 100% acrylic, water-based, multi-coloured, textured, protective coating. (Colour and texture to be selected)
 - .2 Durex® Architectural Coatings, Premium Series, high build, multi-coloured, protective and decorative coating consisting of coloured quartz aggregates and oversized mica flakes embedded in a clear 100% acrylic resin, textured, protective coating. (Colour and texture to be selected)
 - .3 Durex® Architectural Series, Artisan Series, a 100% acrylic, water-based, high-build, multi-coloured, textured with special patterns and artistic reliefs, protective coating. (Colour, texture and finish pattern to be selected)
 - .4 Durex® Architectural Series, Kolor Gard Series, a 100% acrylic, Fade Resistant Decorative High Build Protective Textured Coating for Accent & Bright Colours. (Colour, texture and finish pattern to be selected)
 - .5 Durex® Architectural Coatings, Elastomeric FX Series, a 100% acrylic, water-based, high-build, high flexibility, multi-coloured, textured, protective coating. (Colour and texture to be selected)

SPEC NOTE: In cases where the selected colours of the finish texture are of a vibrant accent and/or mass tone nature (Colours that require organic pigments in order to attain and retain the colour intensity), the designer is encouraged to consider specifying, exclusively, the use of Durex® Kolor Gard Series Coatings to augment and heighten the colour fastness of bright and mass tone coloured finishes. This engineered augmented UV fade resistance is limited to the Kolor Gard line of finishes that may result in additional application requirements that should be considered prior to tender.

2.8 MIXING

- .1 Perform all mixing under the conditions set forth in Article 1.9 "PROJECT/SITE CONDITIONS".
- .2 Ensure materials, mixing and application equipment are clean and free of any contamination.
- .3 Prepare and mix scratch coat, base coat, finish coat and primer in strict accordance with Durabond's written instructions to obtain a homogeneous consistency of mixture.
- .4 Do not add any other additives, rapid binders, antifreeze, accelerators, fillers, surfactants to the mixture except those permitted by Durabond Products Limited.

SPEC NOTE: Do not use surfactants (household detergent) to modify the working consistency of the mix.

- .5 Do not use frozen, baked or lumpy materials.
- .6 Size batches for complete use within 45 – 60 minutes of its mixing.
- .7 Do not over-mix or use excessive mixing speed. Let mixed materials stand for a few minutes until they begin initial stiffening.

2.9 EQUIPMENT

- .1 All mixing shall be carried out with a clean, rust-free paddle mixer that shall minimize air entrainment, powered by a power-drill at 400-500 rpm maximum speed.
- .2 Metal trowels, hawks, utility knives, corner trowels and plastic floats

2.10 SEALANTS

- .1 Sealant: a low modulus sealant, as recommended and approved by Durabond Products Ltd. Standard colour shall be selected by consultant.

PART 3: - EXECUTION

3.1 EXAMINATION

- .1 Examine framing, furring and surfaces to have lath and to receive the rainscreen stucco system for defects that could adversely affect execution and quality of work.

SPEC NOTE: Make sure that wood-based sheathing is gapped at least 2 mm (1/12") and less than 3 mm (1/8") at edge and end joints to avoid cracking in the coating.

SPEC NOTE: Make sure that wood furring is fastened to the framing with not less than 51 mm (2") nails.

- .2 Report in writing to Contractor or Consultant any conditions and/or deviations that might adversely affect proper the rainscreen stucco system installation.

SPEC NOTE: No work shall commence until all framing, sheathing and furring adverse conditions and defects have been corrected and surface conditions made acceptable.

- .3 Ensure substrate tolerances are within 3.2 mm in 2,430 m (1/8" in 8'-0")
- .4 Commencement of work shall indicate acceptance of substrate conditions.
- .5 Ensure lath, furring, trims and accessories are securely and tightly fixed in place. Ensure substrate surfaces, including each applied base coat, are dry, solid and sound, free of weak and powdery surfaces, free from ice, snow and frost, oil, grease, releasing agents and other deleterious materials detrimental to a positive bond.

SPEC NOTE: Deteriorating, weak, powdering or flaking surfaces may require further preparation work prior to installation of the stucco system. Check with the system's manufacturer for questionable substrate materials and conditions.

- .6 Ensure that flashing at all openings, roof-wall intersections, terminations and other areas as required, have been installed to divert water away from the rainscreen stucco system.

SPEC NOTE: A pre-construction meeting is recommended between all representatives responsible for framing, windows, roofing, flashing, sealants, any other building components interfacing with stucco and stucco applicators.

3.2 PREPARATION

- .1 Prepare substrates to receive the rainscreen stucco system as recommended in manufacturer's instructions.
- .2 Thoroughly clean and wash (existing) surfaces, including each applied scratch coat and base coat, (and including existing coated surfaces) by wire brushing or other approved methods to remove all dirt, dust, grease, oil, latent, efflorescence, loose coatings and any other deleterious materials.
- .3 Where necessary, mask all surrounding surfaces to provide neat, clean, true juncture lines with no over-spray of the coatings on surrounding surfaces.
- .4 Co-operate and co-ordinate with other trades penetrating or abutting to the work of this Trade. Ensure that components by other trades are in position before the application of the exterior insulation and finish system.

3.3 INSTALLATION OF WATER RESISTIVE BARRIER (WRB)

- .1 Apply the rainscreen Stucco system's moisture transition membrane at all vertical and horizontal sheathing board joints and all sheathing board corners.
- .2 Apply the rainscreen Stucco system's moisture transition membrane at all openings, fenestration and interfaces to maintain the continuity of the water resistive barrier at these locations.
- .3 Tie-in the specified water resistive barrier transition membrane to window frames, door frames, spandrel panels, roofing system and at interfaces of dissimilar materials as indicated in drawings.

SPEC NOTE: Refer to manufacturer's standard details.

- .4 Apply the selected rainscreen stucco system's water resistive barrier as per the manufacturer's application instructions, over the entire substrate surface, applying sufficient pressure in the troweling process to ensure full contact with the substrate.
- .5 Extend the water resistive barrier beyond the limits of the rainscreen stucco system not less than 100 mm (4") and seal termination.
- .6 Allow a minimum of 24 hours for drying and curing.
- .7 At all locations where the substrate material changes, install a 30 mm (12") strip of the system's moisture barrier transition membrane in strict accordance with the manufacturer's printed instructions to maintain continuity of the water resistive barrier.

SPEC NOTE: Transition membranes used in conjunction with the WRB must be applied over clean, dry and contaminants free substrates that are primed with the specified primer. To ensure the proper level of adhesion and bond strength of the transition membrane, applicators must strictly follow the setting time, setting temperature conditions and tack characteristics of the primer.

3.4 INSTALLATION OF TRIM ACCESSORIES

- .1 Trim and accessories shall be installed in accordance with related reference standards, trim manufacturer, rainscreen stucco system's Installation Manual requirements and good trade practices.
- .2 Casing beads/stops shall be installed prior to the installation of the lath while Corner beads shall be installed subsequent to the installation of the lath.
- .3 Trims shall be mechanically fastened to the furring with fasteners placed within 50 mm (2") from the ends and spaced at no more than 300 mm (12") o.c.
- .4 Plaster stop trims shall be installed at all terminations and around all openings.
- .5 Weep screed shall be installed at the base of all walls situated above roofing and at

grade level.

3.5 INSTALLATION OF EXPANSION and CONTROL JOINTS

- .1 Provide and install expansion joints in alignment with building expansion joints.
- .2 Install expansion joints at all locations where dissimilar substrates meet.
- .3 Install expansion joints at all locations of maximum stress, in the direction as shown on drawings.
- .4 Install expansion joints at through wall penetrations. Expansion joints are to be installed so as to divide the wall surface into panels of not more than 13 m² (144 ft²) and not more than 3.0 m (10'-00") o.c. vertically. Neither dimension within the panel area should be greater than 2.5 times the other.
- .5 All horizontal joints shall be vented and located and spaced at intervals not greater than three stories.
- .6 Unless otherwise noted, provide all joints 12.7 mm (1/2") wide.

SPEC NOTE: It is very important that metal lath stops at each side of the joint and never continue through the control joint.

3.6 INSTALLATION OF LATH

- .1 Diamond Metal lath
 - .1 Install and mechanically fasten the metal lath to the substrate, with the lath long dimension oriented horizontally at right angles to the structural framing. All metal lath vertical laps shall be staggered.
 - .2 Terminate the metal lath at expansion joints making sure the metal lath does not run continuously through joints.
 - .3 Fasten the metal lath to the framing members at a spacing not exceeding 178 mm (7") o.c. vertically apart, and 406 mm (16") o.c. horizontally apart.
 - .4 Metal Lath shall be nested not less than 25 mm (1").
 - .5 Metal lath side laps, accessory side laps and/or end laps occurring between support shall be wire-tied at not more than 229 mm (9") o.c.
 - .6 Metal Lath overlaps shall not be places within 300 mm (12") of openings, corners, control joints or termination joints.
- .2 Self-furring Paper-backed wire lath
 - .1 Self-furring Paper-backed wire lath shall be installed in the same way as Diamond Metal Lath.
 - .2 Self-furring Paper-backed metal lath side laps shall lap lath over lath, and not paper to lath. Horizontal overlaps shall have the paper backing lapped in shingle style behind the lath to lath overlap.

3.7 APPLICATION

- .1 General:
 - .1 Supply experienced and qualified installers and applicators to carry out the work.

- .2 Mix materials in accordance with manufacturer's instructions.
- .3 Install the rainscreen stucco system in strict accordance with the approved mock-up and manufacturer's printed instructions (and reviewed shop drawings).

SPEC NOTE: Correlate requirements for shop drawings with Article 1.6.

- .2 Application of Scratch Coat
 - .1 Apply a scratch coat on trims and accessories that have been securely fastened in place.
 - .2 Apply the scratch coat firmly over the lath. The scratch coat shall not be less than 6 mm (1/4") thick. Apply uniformly and forcefully to fill all voids to ensure full bond with the substrate and to sufficiently cover and key the reinforcing lath.
 - .3 Rake the surface of the newly applied scratch coat with a plaster rake to form fairly uniform indentations which will act as a key surface for the base coat.
 - .4 Allow a minimum of 3 days for curing and drying.
- .3 Application of Base Coat
 - .1 Ensure that the surface of the scratch coat is dry and free of loose materials, and dirt and that detail work has been completed.
 - .2 In hot, dry weather, if the scratch coat surface is exceptionally dry, lightly dampen the surface with a fog mist of clean potable water. Do not over-saturate with water, as it will impair the bonding of the base coat.
 - .3 Trowel apply a layer of base coat over the scratch coat surface, not less than 3 mm, applying sufficient pressure in the trowelling process to ensure full contact with the scratch coat surface.
 - .4 Use a straight edge tool to darby the surface and bring it to a straight, even and true surface.
 - .5 Total thickness of both the scratch coats shall not be less than 10 mm (3/8").
 - .6 When the base coat has taken initial set, use a wood or sponge float and work the surface with light circular motion to remove all high points and to fill low points.
 - .7 Final surface shall be smooth, straight and true to a tolerance of not more than 3.2 mm in 3 m (1/8" in 10'-0"). Surface shall be free of trowel marks, irregularities and visible mesh pattern.
 - .8 Allow a minimum of 3 days for curing and drying.

SPEC NOTE: When applying high impact reinforcing meshes, do not overlap high impact mesh, the joints between meshes shall just be tightly butted.

- .4 Application of Finish Coat Primer
 - .1 Evenly apply the primer throughout with a high pile roller at a rate of 2.8 m²/l (600 ft²/pail). The substrate shall not be visible through the applied primer.
 - .2 Avoid excessive build-up in any one area.
 - .3 If required, re-coat when the first coat is dry to the touch, but in any event not earlier than 2 hours after initial setting.
 - .4 Allow minimum 4 hours for curing prior to application of finish coat.
- .5 Application of Finish Coat
 - .1 Apply the stucco system's selected finish coat, within 3 days after application of the system's selected primer. Longer periods may be scheduled between

- operations provided that the primed surface is kept clean and in good condition.
- .2 Apply the selected finish coat in strict accordance with manufacturer's printed instructions for the Selected finish.
 - .3 Apply the finish coat in such a way as to match the colour and texture of the approved site mock-up.
 - .4 Do not apply the finish coat onto surfaces that are intended to be caulked.

SPEC NOTE: As a rule of thumb, fulfill requirements 1 and 2 and then arrange the other requirements to best suit the intended aesthetics of the building.

SPEC NOTE: In cases where the selected colour of the finish texture is of a vibrant, accent and/or mass tone nature for which Durex® Kolor Gard Series have been specified, the applicator shall ensure that the products and their respective application procedures are followed and no substitutions are made in product and/or in application. The engineered augmented UV fade resistance is limited to the Durex® Kolor Gard line of finishes that may result in additional application requirements that should be considered prior to tender.

3.8 SEALANTS

- .1 Seal and caulk all joints in the stucco system with the system's specified elastomeric sealant that shall be applied over a compatible closed-cell foam backer rod or bond breaker tape.
- .2 Seal and caulk all expansion joints between the stucco system and dissimilar abutting building components.
- .3 Apply sealant and/or sealant primer in strict accordance with the sealant manufacturers printed instructions.

SPEC NOTE Apply sealant and/or sealant primer to base coat only.

3.9 SPECIAL CLEANING

- .1 Clean off all surfaces and work area of foreign materials resulting from material installation and leave work in clean condition.
- .2 Entirely reinstate at this Trade's own expense, any surface not to be coated, but soiled and attributable to this Trade due to spillage, mixing of material or any other cause.

3.10 PROTECTION

- .1 Protect the installed Stucco Lite system from damage during construction.
- .2 Provide protection of installed materials from precipitation, freezing, excessive heat, dust, and dirt during installation and curing of the system.
- .3 Provide protection to adjacent materials that could be damaged by the system's installation.
- .4 Post appropriate warning signs while work is in progress and during curing period.
- .5 Clean off all surfaces and work area of foreign materials resulting from material

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installation and leave work in clean condition.

END OF SECTION