

PART 1 - GENERAL

1.1 Summary

- .1 Section includes:
 - .1 Exterior rainscreen cladding system with positive drainage; consisting of exterior insulating finish system (EIFS).
 - .2 Seal joints within work of this section in accordance with Section 07 92 00, except where otherwise specified.
 - .3 Air barrier membrane transitions and connections between air barriers of adjacent wall and roofing systems.

1.2 Administrative Requirements

- .1 Conduct a pre-installation meeting in accordance with Section 01 31 19.
 - .1 Independent inspection and testing company shall attend the pre-installation meeting.

1.3 Submittals

- .1 Submit required submittals in accordance with Section 01 33 00.
- .2 *Product* data sheets:
 - .1 Submit manufacturer's *Product* data sheets for *Products* proposed for use in the work of this section.
- .3 Shop drawings:
 - .1 Submit engineered shop drawings.
 - .2 Submit drawings showing locations and details of control and expansion joints, section of entire system, section of each parapet, reveal and coping condition, flashing conditions, installation sequence, interface with doors and windows, and all other installation and fabrication information. Indicate layout of required fasteners.
 - .1 Cladding system manufacturer and *Subcontractor* to jointly review and sign shop drawings.
 - .2 Cladding system manufacturer shall review drawings and recommend/modify control joint locations.
 - .3 Indicate installation and attachment requirements to meet wind loads as required by building code.
- .4 Samples:
 - .1 Submit duplicate 600 mm x 600 mm (24" x 24") samples of final coating on sheathing board, of each texture and colour, and reveal profile, to be used in the work of this section for acceptance by *Consultant*.
 - .2 *Consultant* may request multiple colours for review. Resubmit samples as requested.

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- .5 Test and evaluation reports:
 - .1 Test reports:
 - .1 Submit copies of test reports to verify performance of cladding systems.

1.4 Quality Assurance

- .1 Qualifications:
 - .1 Installers / applicators / erectors:
 - .1 Execute the work of this section only by a specialized *Subcontractor* with equipment and skilled workers trained by manufacturer supplying products to this section, and is known to have been responsible for satisfactory work similar in size and class to that specified during a period of at least the past 10 years.
 - .2 Execute work of this section by *Subcontractor* trained and certified by cladding system manufacturer.
 - .2 Manufacturers: Manufacturer shall be a member in good standing of the EIFS Council of Canada.
- .2 Mock-ups:
 - .1 *Provide* mock-up showing components of assembly, including reveal profiles, flashings, assembly layers, control joint details, expansion joint details, and interface details.
 - .1 Mock-up size and location: Full corner suite, floor to floor, from control joint to control joint, showing typical detail conditions. Mock-up location as directed by *Consultant*.
 - .2 Approved mock-up may be used as part of the completed work.
 - .2 If more control/expansion joints are recommended by cladding system manufacturer than are indicated in the *Contract Documents*, they shall be located with *Consultant's* approval. There shall be no additional costs for such additional control/expansion joints.

1.5 Field Conditions

- .1 Conform to cladding system manufacturer's written requirements for field conditions, relative humidity, and substrate moisture content and temperature for application of materials of this section.

1.6 Delivery, Storage, and Handling

- .1 Delivery, storage, and handling of materials shall comply with cladding system manufacturer's written requirements.
- .2 Deliver materials in original, unopened packages with labels intact. Upon arrival, inspect materials for damage, and inform manufacturer of any discrepancies.

1.7 Extended Warranty

- .1 Warrant work of this section in accordance with Section 01 78 36.

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- .2 Installer agrees to provide materials and labour warranty in which installer agrees to repair or replace exterior insulated finish systems that fail within the specified warranty period. Failures shall include, but not be limited to, bond integrity of coats to substrates or one another, and weather-tightness.

PART 2 - PRODUCTS

2.1 Performance/Design Requirements

- .1 Design and construct work of this section in accordance with building code and the following performance/design requirements:
 - .1 Standard for Exterior Insulation and Finish Systems (EIFS) – Materials and Systems: CAN/ULC-S716.1, if the systems are covered in the scope of that standard.
 - .2 Fire endurance tests; in accordance with building code classification, and limiting distance where applicable:
 - .1 EIFS base coat to meet the following requirements:
 - .1 CAN/ULC S101-07.
 - .2 CAN/ULC-S114-05.
 - .3 Exterior above-grade walls or wall assemblies designed and constructed according to rainscreen principles that include both primary and secondary planes of protection (water barriers), provision for drying of the assembly, and an air space no less than 10 mm (3/8") deep behind the cladding with positive drainage to the exterior to protect the interior of the building from precipitation that penetrates the primary plane of protection.
 - .1 EIFS wall assemblies shall comply with Pro-Demnity Insurance Requirements.
 - .4 Wall systems shall utilize drain systems to positively drain water from within wall system to exterior, slope of not less than 6:12 to exterior.
 - .5 Wall systems shall utilize profiles to positively drain water from top surfaces to exterior, slope of not less than 6:12 to exterior.
 - .6 *Provide* drip detail over window and door heads, copings, and as detailed.
 - .7 Design, engineer and construct systems (including exterior sheathing board substrates) to withstand own dead loads, seismic, snow, wind loads, wind uplift or suction loads as calculated in accordance with building code requirements.
 - .8 Metal fasteners shall be corrosion resistant.
 - .9 Install high impact mesh at the following locations and to minimum height of mesh coverage to following locations as applicable:
 - .1 At ground level areas: 2440 mm (8') above finished grade.
 - .2 At deck, balcony or terrace level areas: 2440 mm (8') above finished walking surface.
 - .3 At loading areas: 3660 mm (12') above finished grade.
 - .4 At roof level parapet areas: 2440 mm (8') below top of finished parapet and as required to resist damage by window cleaning operations.

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.10 Joints:

- .1 Provide weather-tight sealant joints for work of this section.
 - .1 Dual barrier sealant system.
 - .2 Joint width: 19 mm (3/4") wide joints, unless otherwise indicated.

2.2 Cladding System Components

- .1 Acceptable *Products*; EIFS system with EPS polystyrene insulation board with positive moisture drainage including water resistive barrier:
 - .1 Durex 'Quantum Select Insulated Drained Cladding'.
 - .2 Substitutions: in accordance with Section 01 25 00.
- .2 Cladding system shall be constructed in accordance with manufacturer's written specifications, using cladding system manufacturer's proprietary materials.
- .3 System components shall be as recommended by the manufacturer and include necessary materials to complete the work of this section. Conflict between such recommendations and the *Contract Documents* shall be resolved at no additional cost to the *Owner* before commencing the work.

2.3 EIFS Components

- .1 General: Use only *Products* forming part of EIFS system as approved and listed for use by the EIFS manufacturer. Do not mix products from different manufacturers, or products from different systems by same manufacturer.
- .2 Air/water resistive barrier components:
 - .1 Non-cementitious air and water barrier (vapour permeable) membrane: Factory mixed, fully formulated water-based material for use over all sheathing types.
 - .1 Acceptable *Products*:
 - .1 Durex 'Blue Shield'.
 - .2 Substitutions: in accordance with Section 01 25 00.
 - .2 Air, water, and vapour resistive barrier transition membrane: Flexible self-adhering bituminous transition membrane for perimeter of exterior openings, and transition between dissimilar substrates: flashing membrane and primer; for taping movement joints at exterior sheathings, transitions between dissimilar substrates and for continuity of the air barrier membrane.
 - .1 Acceptable *Products*:
 - .1 Durex 'EIFS Tape'.
 - .2 Substitutions: in accordance with Section 01 25 00.
 - .3 Flashing materials; to protect substrate edges at terminations:
 - .1 Liquid applied: Flexible water-based polymer material, ready for use.
 - .2 Sheet type: high density polyethylene film backed with a rubberized asphalt adhesive complete with substrate surface conditioner.
 - .4 Drainage strip and drainage track adhesive: moisture cure, urethane-based adhesive.

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- .5 Drainage track, vents: UV treated plastic.
- .6 Adhesives: Used to adhere the insulation to the air/water-resistive barrier, shall be compatible with the water resistive barrier and the insulation.
- .7 Insulation board:
 - .1 Profiled EPS: 16 kg/m³ (1 lb/ft³) density, expanded polystyrene to Type I to CAN/ULC S701-11, with factory-cut vertical drainage channels and pressure moderation chambers, minimum depth 10 mm (3/8").
 - .1 Acceptable *Products*:
 - .1 Durex 'E.P.S. Insulation'.
 - .2 Substitutions: in accordance with Section 01 25 00.
 - .8 Mechanical fasteners: Steel screw type fasteners with corrosion resistant finish, of type and size to suit substrate, complete with plastic washers, and to be supplied or recommended by the EIFS manufacturer.
- .9 Base coat:
 - .1 Cementitious: factory mixed dry blend cementitious, copolymer-based product, field mixed with water.
 - .1 Acceptable *Products*:
 - .1 Durex 'Monobase NC'.
 - .2 Substitutions: in accordance with Section 01 25 00.
- .10 Reinforcing mesh:
 - .1 Fibre mesh with symmetrical, interlaced glass fibre made from twisted multi-end strands and coating to be alkaline resistant, proprietary to textured finish system manufacturer, to the following weights, ASTM D579:
 - .1 Standard-weight reinforcing mesh and detail mesh for reinforcing corners at openings, corners, and details: 168 g/m² (6 oz/yd²).
 - .2 Medium-heavy (intermediate) weight reinforcing mesh: 349 g/m² (11 oz/yd²).
 - .3 High-impact mesh: Open weave glass fibre mesh, 694 g/m² (15 oz/yd²).
 - .2 Mesh shall be shift proof, with trimmed roll edges to minimize building on overlapped seams.
 - .3 Acceptable *Products*:
 - .1 Durex 'Fibreglass Reinforcing Mesh'.
 - .2 Substitutions: in accordance with Section 01 25 00.
- .11 Finish:
 - .1 Exterior grade, ready-mixed, acrylic-based wall coatings, proprietary to textured finish system manufacturer.
 - .2 Texture and colours; locations as indicated on drawings:
 - .1 Colours:
 - .1 EIFS (white): Benjamin Moore 2125-70 Wedding Veil.

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- .2 EIFS (grey): Benjamin Moore 2126-20 Raccon Fur.
- .2 Manufacturer shall match colour samples from full colour range of any major paint manufacturer.
- .3 Acceptable *Products*:
 - .1 Durex 'Marble Coat'.
 - .2 Substitutions: in accordance with Section 01 25 00.
- .12 Sealants: *Provide* low modulus sealants, and sealants as recommended by EIFS manufacturer, in accordance with Section 07 92 00.

PART 3 - EXECUTION

3.1 Substrate

- .1 Confirm environmental and conditions at the *Place of the Work* are suitable for installation of system. Verify surface conditions with cladding system manufacturer.
- .2 Substrate shall be sound, dry, connections are tight; has no surface voids, projections, or other conditions that may interfere with cladding system installation or performance.
- .3 Substrate shall be within 3.2 mm (1/8") tolerance within 2440 mm (8 ft) radius; by straightedge method.

3.2 Preparation

- .1 Prepare substrate surfaces in accordance with cladding system manufacturer's written requirements.
- .2 Substrate shall be prepared free of foreign materials, including oil, dust, dirt, form-release agents, efflorescence, paint, wax, water repellents, moisture, frost, and other conditions that may inhibit adhesion.
- .3 Protect adjacent surfaces from damage resulting from work of this section.
- .4 Protect finished work at end of each day or on completion of each section of work from water penetration.
- .5 Protect completed installation from moisture in accordance with cladding system manufacturer's written requirements.
- .6 Protect top of parapet walls, and openings until flashings and trim, are installed.
- .7 For masonry and concrete substrates:
 - .1 Levelling coating and application as required by cladding system manufacturer, applied over substrate to fill holes and voids flush and level to substrate.

3.3 Installation

- .1 Install work of this section in accordance with cladding system manufacturer's written requirements and in compliance with reviewed engineered shop drawings.
- .2 Joint sealants; dual barrier sealant system:

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- .1 Sealants shall be installed after completion of basecoat, and before installation of finish coat, in accordance with Section 07 92 00. This section shall be responsible for workmanship of sealants applied to work of this section.
- .2 Provide sealant to joints within cladding system, including joints where cladding system interfaces with other adjacent materials and assemblies.
- .3 Dual barrier sealant system to be 2-stage type joint assembly, to 'rainscreen principle', vented immediately below each horizontal panel joint, at vertical joint.
- .3 Finish coat:
 - .1 Apply finish coat in accordance with cladding system manufacturer's written requirements, to texture and colour as approved by *Consultant*. Finished appearance and quality shall match approved mock-up and samples.
 - .4 Prior to application of finish coat, allow base coat to dry hard in accordance with cladding system manufacturer's written requirements.
 - .5 Apply finish coat to thickness required for type of finish specified.
 - .6 Maintain wet edge on finish coat by applying and texturing continually over wall surface.
 - .7 Work finish coat to corners, joints, or natural breaks. Do not allow material to set up within an uninterrupted wall area.

3.4 Field Quality Control

- .1 Conduct quality control in accordance with Section 01 45 00.
- .2 Manufacturer's field review to be in accordance with Section 01 45 00.

END OF SECTION