

- 1 EIFS TAPE & PRIMER
- 2 ICF INSULATION
- 3 HYDROFLEX STD MEMBRANE
- 4 GD-CONTOUR BOARD
- 5 EPS-GD INSULATION
- 6 ADEX BASECOAT
- 7 STANDARD MESH
- 8 PRIMEX PRIMER
- 9 FINISH COAT

Description

The adex-ICF system is a water-managed exterior insulation and finish system applied over an ICF construction without the use of mechanical fasteners. This system includes a second layer of eps, a secondary weather resistant barrier and a vertical drainage plane. These characteristics improve the tightness of the envelope and prevent damage caused by infiltrations. The incorporation of EIFS TAPE membranes allows the system to be easily connected to other components within the assembly.

Benefits

- Provides a monolithic blanket of insulation; reduces energy use
- Seals the building envelope and ensures seamless protection of the substrate
- Allows for the drainage of incidental moisture
- Lightweight, durable and flexible
- Architectural design flexibility
- Resists dirt, fading and abrasion

Features

- EPS-GD insulation
- Seamless substrate protection
- Non-combustible basecoat
- Unlimited colour selection

Please refer to adex.ca for the latest version of this document, specifications (PDF + Word), technical drawings, product technical sheets, warranties, maintenance guide....and much more.

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PART 1 GENERAL

1.1 WORK INCLUDED

Provide all labour, materials and equipment necessary to install the adex-ICF system.

1.2 RELATED SECTIONS

1. Insulated Concrete Forms:Section 03 11 19
2. Joint Sealers:Section 07 92 10
3. Sheet Metal Flashing and Trim:Section 07 62 00

1.3 DESCRIPTION

The adex-ICF system is a direct-applied coating system installed over insulated concrete form (ICF) construction. The system consists of the following components:

- Insulated concrete forms (ICF), by others;
- Insulated concrete forms (ICF), by others;
- Waterproofing and air barrier membrane (applied over the substrate);
- EPS-GD insulation boards;
- Flexible membranes around all openings;
- 100% acrylic base coat;
- Fibreglass mesh;
- 100% polymer acrylic finish coat (and primer coat).

1.4 DESIGN REQUIREMENTS

1. All work undertaken must comply with current codes, norms, construction best practices, as well as the manufacturer's installation instructions.
2. On horizontal surfaces, the minimum slope of the system shall be a 6:12 pitch with a maximum length of 250 mm (10").
3. Acrylic coatings shall not be installed directly over wood blocking, framing or plastic fastening strips.

4. Expansion joints that allow for building movement shall be installed in the following locations:
 - a) At floor levels of all buildings;
 - b) At expansion joints in the substrate;
 - c) Where dissimilar materials or substrates meet;
 - d) At inside corners and major openings;
 - e) Anywhere specified on the plans;
 - f) At a maximum distance of 9 m (30 ft), to counter thermal expansion.

1.5 QUALITY ASSURANCE

1. System manufacturer shall be ADEX Systems Inc.
2. The applicator shall have a sufficient amount of experience and enough qualified labour at his disposal to install the specified system.
3. The applicator shall follow all professional's directions when installing system components.

1.6 DELIVERY, STORAGE AND HANDLING

1. All materials supplied by ADEX Systems Inc. shall be delivered in their sealed, original packaging with legible labels intact.
2. All materials supplied by ADEX Systems Inc. shall be stored in a cool, dry location at temperatures above 5 °C (41 °F) and protected from weather and other damage.
3. Store materials away from direct sunlight and protect from temperatures in excess of 32 °C (90 °F).
4. Materials suspected of having been frozen or damaged must not be used.

1.7 JOB CONDITIONS

1. Ambient and substrate temperatures shall be minimum 5 °C (41 °F) during installation.
2. When installing in temperatures below 5 °C (41 °F), tarping, heating and ventilation shall be provided to maintain proper installation temperatures.
3. Ambient temperatures shall be maintained above 5 °C (41 °F) for a minimum of 24 hours after installation to ensure that drying is complete.
4. Installation of ADEX materials shall be co-ordinated with other construction trades.

1.8 ALTERNATIVES

Systems considered equivalent to the adex-ICF system shall be approved by the architect, in writing, at least ten (10) working days prior to the project bid date.

1.9 WARRANTY

Upon request, the manufacturer shall provide a ten (10) year limited warranty, stating that materials conform to specifications and are free of manufacturing defects.

PART 2 PRODUCTS

2.1 MANUFACTURER

All components of the system shall be obtained from ADEX Systems Inc. or its authorised distributors. No substitution or addition of other materials is permitted without written consent from the manufacturer.

2.2 PRODUCTS

- 1.1. Air/Moisture barrier and adhesive:
 2. a) Shall be 100% acrylic such as HYDROFLEX AD (vapour permeable), or HYDROFLEX STD (vapour permeable) mixed 1:1 by weight with Type GU cement;
 3. b) Shall meet UEAct article 3.3.1.1 for water permeability;
 4. c) Shall meet ASTM E-283 for air permeability;
 5. d) Shall be manufactured by ADEX Systems inc.
2. GD-CONTOUR Board:
 - a) Shall be made by a manufacturer approved by ADEX Systems Inc.;
 - b) Shall conform to CAN-ULC S701-97, Type 1 with a nominal density of 16 kg/

- m³ (1 lb/ft³);
 - c) Shall be geometrically grooved to a depth 10mm minimum according to Adex Systems specifications;
 - d) Minimum board thickness shall be 25 mm (1") ;
 - e) Shall be sold by ADEX Systems Inc. or by one of its authorised distributors.
3. EPS Insulation Board:
 - a) Shall be made by a manufacturer approved by ADEX Systems Inc.;
 - b) Shall conform to CAN-ULC S701-97, Type 1 with a nominal density of 16 kg/m³ (1 lb/ft³);
 - c) Shall be geometrically grooved to a depth 10mm minimum according to Adex Systems specifications;
 - d) Minimum board thickness shall be 25 mm (1") and maximum board size shall be 600 mm x 1200 mm (24" x 48");
 - e) Shall be sold by ADEX Systems Inc. or by one of its authorised distributors.
4. PVC Mouldings (if necessary): Shall meet ASTM-D1784 standards for exterior use. (See models in ADEX catalogue).
5. Acrylic Base Coat: Shall be a 100% acrylic-based, asbestos-free product, made by ADEX Systems Inc., such as ADEX BASE coat.
6. Fibreglass Mesh:
 - a) Shall be sold by ADEX Systems or by one of its authorised distributors;
 - b) Shall meet ASTM D-5034 standards;
 - c) Shall have different weights according to specific needs:
 - 1.UNITAPE QUICK TAPE MESH: 65g/m² (2 oz/yd²)
 - 2.STARTER MESH: 150g/m² (4.5 oz/yd²)
 - 3.STANDARD MESH (DESIGN): 150g/m² (4.5 oz/yd²)
 - 4.STANDARD MESH PLUS: 190g/m² (6 oz/yd²)
 - 5.INTERMEDIATE MESH: 375g/m² (11 oz/yd²)
 - 6.ARMOUR MESH: 500g/m² (15 oz/yd²)
 - 7.CORNER MESH: 305g/m² (9 oz/yd²)
7. Primer: Shall be an acrylic and silica mix that can be applied by roller, such as PRIMEX, manufactured by ADEX Systems Inc.

8. Finish Coat:
 - a) Shall be factory-mixed, 100% acrylic-based, ready-to-use and shall contain integral colour and texture;
 - b) The texture shall be [see ADEX catalogue].

2.3 OTHER MATERIALS

1. Cement:
Shall be lump-free, GU Type cement meeting CSA A3001 standards.
2. Water:
Shall be clean, potable and free of sediment.
3. Flexible Membrane:
Shall be a flexible, self-adhesive composite material tested for adhesion to itself and to AKRILON components. Suitable material includes EIFS TAPE (4"-12" rolls) used with the appropriate primer or the A-FLEX SEALANT AND MESH. All other materials must be approved by ADEX SYSTEMS Inc.

2.4 TESTS

1. Tests performed by an independent laboratory on the specified materials can be requested.
2. Properties shall meet or exceed the following values when tested by the methods listed:

TEST METHOD

DURABILITY UNDER CLIMATIC CONDITIONS:
CCMC TG APPENDICE A2 (60 CYCLES)

No cracking, leaking or bubbling of base coat.
No delamination or cracking of finish coat.

ACCELERATED WEATHER RESISTANCE:
ASTM G155 (EXPOSED 2000 HOURS)

No deleterious effect.

SALT SPRAY RESISTANCE:
ASTM-B117 (EXPOSED 300 HOURS)

No deleterious effect.

MILDEW AND FUNGUS RESISTANCE:
CCMC 6.8

No mildew or fungal growth.

WATER PERMEABILITY:
CCMC 6.6

≥ 2 hours.

WATER ABSORPTION:
CCMC 6.7

≤ 20 %.

BOND TEST:
CCMC 6.5 (LAMINA)

After 2 hours drying: ≥ 100 kPa. After 7 days drying: ≥ 300 kPa.

WATER VAPOUR TRANSMISSION: ASTM E96-95:

≥ 170 ng/Pa.s.m².

IMPACT RESISTANCE:
ASTM E5420

Pass

Test Method

Result

PART 3 EXECUTION

3.1 INSPECTION

1. Inspect the ICF substrate to verify that it is structurally sound and solid, ensuring there are not any irregular voids or projections.
2. Ensure a flexible waterproofing membrane is installed, continuous and sealed at all junctions and around all wall openings.
3. Inspect all metal flashing to ensure that it is properly installed, making certain that moisture will be deflected to the exterior of the system.
4. The architect and general contractor shall be advised of any discrepancies. Work shall not proceed until unsatisfactory conditions are corrected.

3.2 MIXING

1. HYDROFLEX STD membrane:
 - a) In a clean container, mix HYDROFLEX and Type GU cement at a ratio (by weight) of one-to-one;
 - b) Allow mixture to set up for 5 minutes and mix again to break the initial set;
 - c) All other additives (such as rapid binder, anti-freeze, accelerator or others) are strictly prohibited.

2. ADEX BASE Coat:
 - a) In a clean container, mix ADEX BASE coat and GU Type cement at a ratio (by weight) of one-to-one;
 - b) Allow mixture to set up for 5 minutes and mix again to break the initial set;
 - c) All other additives (such as rapid binder, anti-freeze, accelerator or others) are strictly prohibited.

3.3 INSTALLATION

1. Air/Moisture Barrier:
 - a) Ensure flexible membranes are installed, sealing all junctions between the substrate and other materials (openings, wall penetrations, etc.);
 - b) Apply HYDROFLEX membrane over the surface ensuring the thickness required by the technical sheet.
 - d) Allow the Weather Resistant Barrier (WRB) to fully cure before adhering insulation boards over the membrane.

Note: Hydroflex STD and Hydroflex AD membranes applied at a thickness of 2.2 mm may serve as both second coat membrane and adhesive, as long as they are installed over a first coat of membrane. The EPS-GD insulation must be installed immediately after the membrane is applied.

2. Starter mesh (and/or PVC mouldings and/or GD-CONTOUR boards):
 - a) Shall be installed at the perimeter of all walls to wrap the thickness of the ADEX insulation boards (this includes system terminations, where dissimilar substrates meet, at expansion joints, at doors and windows, etc.);
 - b) A minimum of 76 mm (3") of mesh shall be present behind the insulation boards at all board edges;
3. Insulation Boards:
 - a) Apply ADEX BASECOAT adhesive as vertical ribbons onto the approved membrane on the wall using a 3/8" x 1/2" x 1-1/2" U-notched trowel.
 - b) Install insulation boards onto the substrate, starting from the bottom. The long edge of the insulation board shall be horizontal. Apply firm pressure to the board surface to ensure complete contact of the adhesive to the insulation board. Ensure the adhesive does not dry prior to installation of the insulation board;
 - c) Stagger the vertical joints of insulation boards and interlock insulation boards at all corners;

- d) Ensure insulation board joints are not aligned with the corners of any wall openings (such as windows, door openings, etc);
- e) Abut all insulation boards tightly. If gaps occur, insert slivers of insulation (without using BASE adhesive), or fill the void with expanding polyurethane such as Wind-lock's Foam2Foam;
- f) Insulation boards shall be sanded until even and plane;
- g) Reveals/V-Grooves shall be installed where required (using a hot-wire knife or router). The minimum thickness of the insulation board at any point shall no less than 19mm (3/4");
- h) Reveals/V-Grooves shall not be in alignment with insulation board joints or at the corners of openings;
- i) The entire surface of the insulation boards shall be clean prior to the application of the ADEX BASE coat mixture.

4. Battens & Foam Shapes:
 - a) All battens made of expanded polystyrene shall be installed by bonding them with ADEX BASE adhesive or with spray polyurethane such as Wind-lock's Foam 2 Foam or by mechanically fastening them to the structure;
 - b) All battens and grooves shall have an outward-facing slope to prevent moisture from accumulating on them.
5. Base Coat and Reinforcing Mesh:
 - a) Apply ADEX BASE coat mixture to the surface ends and edges of the insulation boards and fully embed the Starter mesh into the BASE coat;
 - b) Install an additional 300mm (12") long piece of Starter mesh (at a 45° angle) at the corners of all wall openings;
 - c) (Optional) Armour Mesh reinforcement:
 1. Apply ADEX BASE Coat mixture to the surface of the insulation boards to a thickness of 2.4mm (3/32") to embed the "Armour" glass fibre mesh.
 2. The surface shall be smoothed until the mesh is fully embedded.
 3. Armour mesh shall be abutted and not lapped.
 4. The Armour mesh shall be installed to heights indicated in the plans.
 5. All layers of Armour mesh shall be covered with a layer of Standard Mesh. (See below)
 - d) ADEX BASE coat mixture shall be applied over the surface of the insulation boards to a uniform

thickness of 1.6mm (1/16").

Immediately embed ADEX Standard mesh into the wet ADEX BASE coat. The base coat shall be smoothed until the mesh is fully embedded;

- e) The mesh shall be lapped a minimum of 63mm (2-1/2") on all sides;
- f) The mesh shall be completely embedded in the ADEX BASE coat mixture over the entire surface of the insulation;
- g) A second coat of ADEX BASE coat mixture may be required if, after drying, there are imperfections or the mesh is not completely embedded;
- h) A period of 24 hours shall elapse prior to installation of the finish coat.

6. Finish Coat:

- a) With a roller, apply an even coat of ADEX PRIMEX primer (same colour as the finish coat) prior to installing the finish coat;
- b) Trowel-apply a tight coat of ADEX Finish, texture [see ADEX CATALOGUE] to a thickness not greater than the largest aggregate. Apply the finish coat in a continuous fashion, maintaining a wet edge. Levelling and texturing shall take place in one operation to give the ADEX Finish a uniform appearance;
- c) Avoid applications in direct sunlight;
- d) Finish coat shall not be used where caulking will be applied;
- e) Ensure all PVC moulding connections are properly sealed.

3.4 CLEAN-UP

- 1. Remove waste and left over materials (used in this section) from the job site.
- 2. Clean all adjacent materials and surfaces, and repair any defects caused to this application or any other work.

3.5 PROTECTION

- 1. Ensure that the general contractor protects all work against moisture infiltration and other damages by installing the necessary flashing and caulking in a timely manner.
- 2. Provide protection against dirt, moisture, high humidity, and freezing temperatures until materials are fully dry.

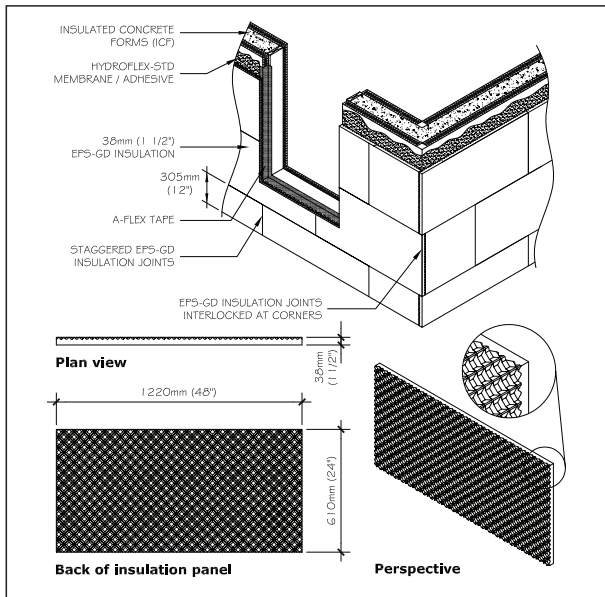
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CORPORATE SALES CENTER

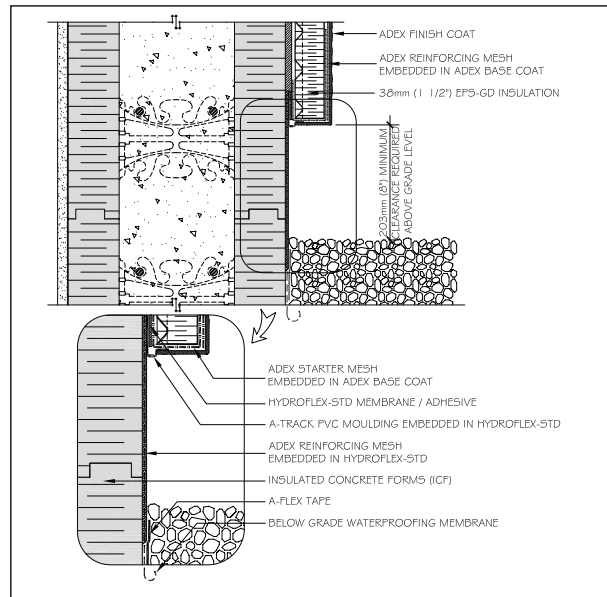
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October 2017

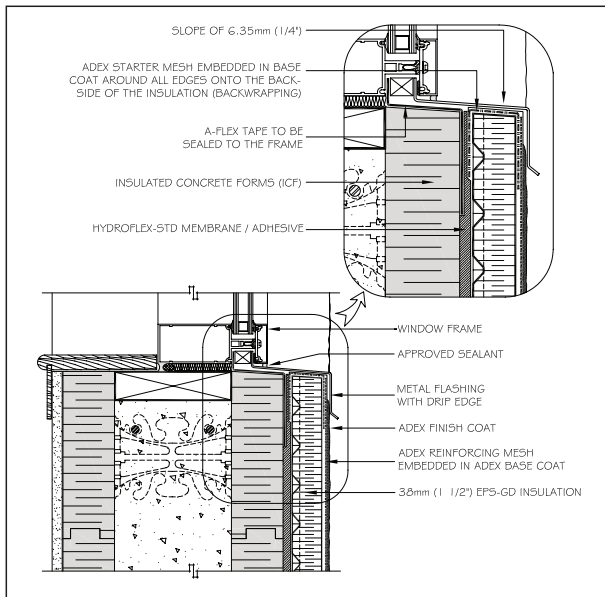




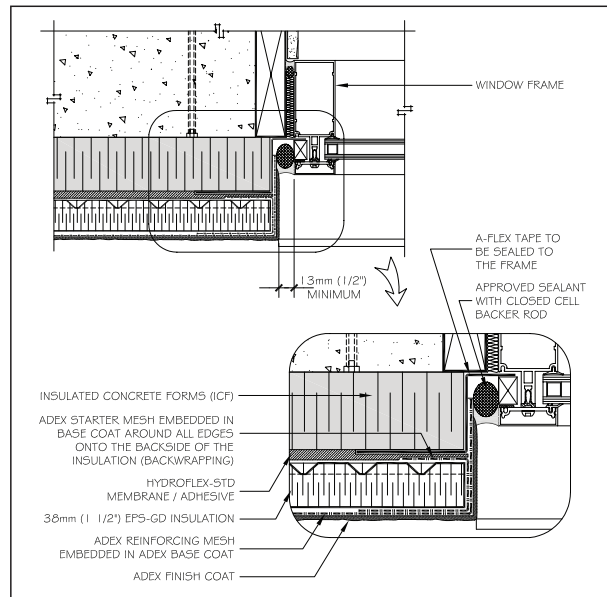
REINFORCING MESH INSTALLATION



TERMINATION AT GRADE

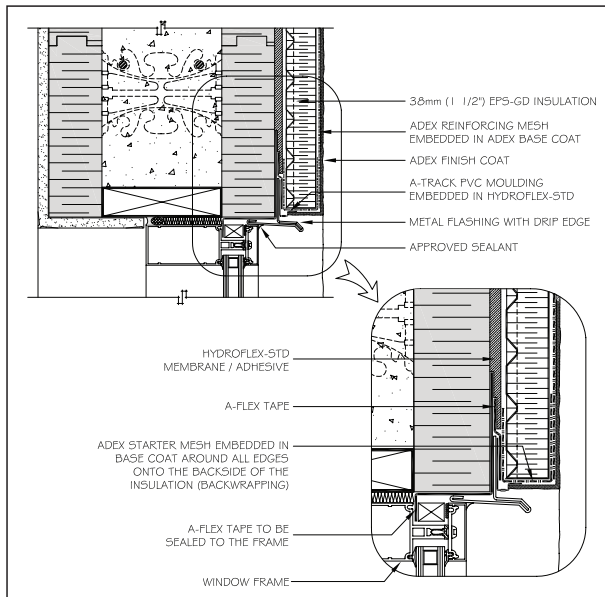


WINDOW SILL

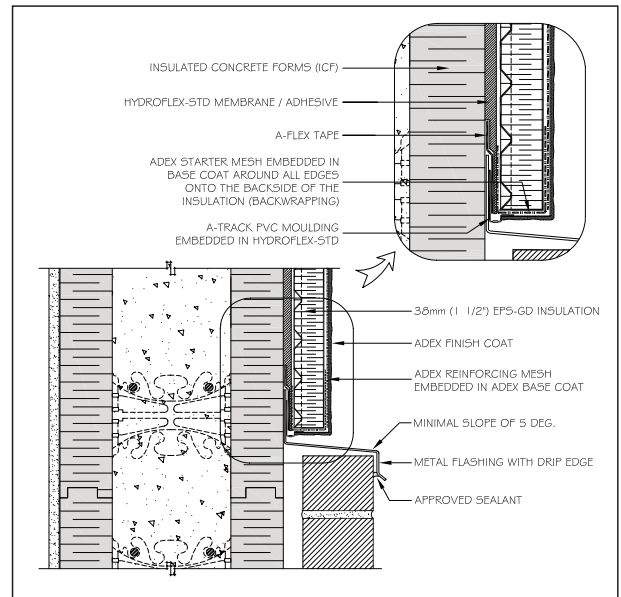


WINDOW JAMB

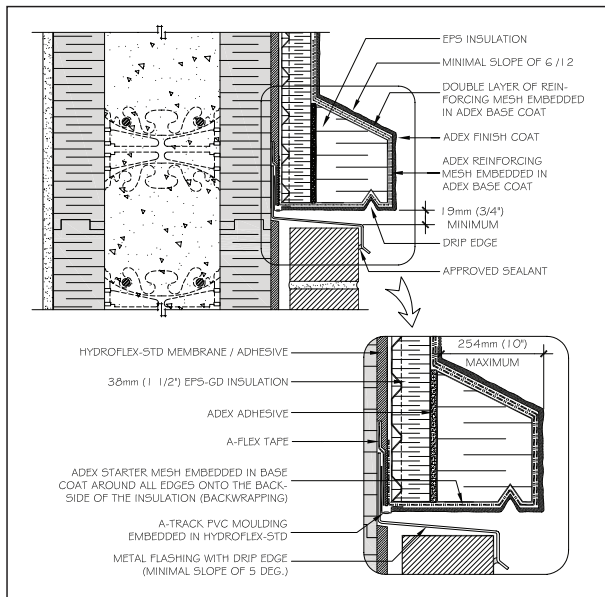
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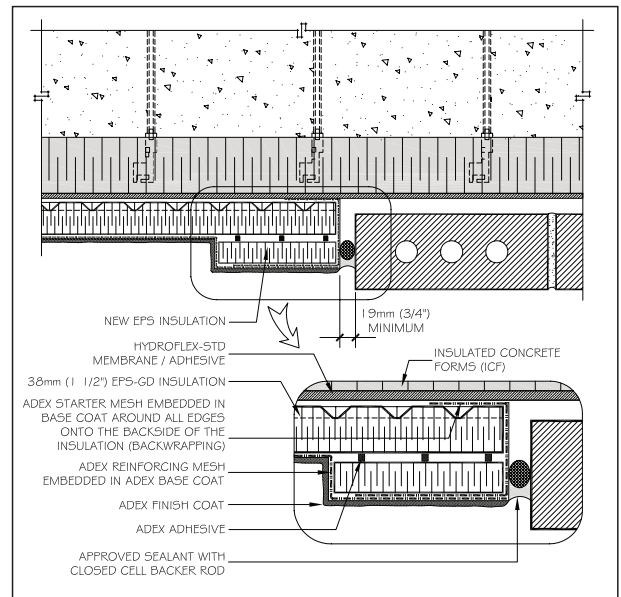
WINDOW HEAD



HORIZONTAL JUNCTION

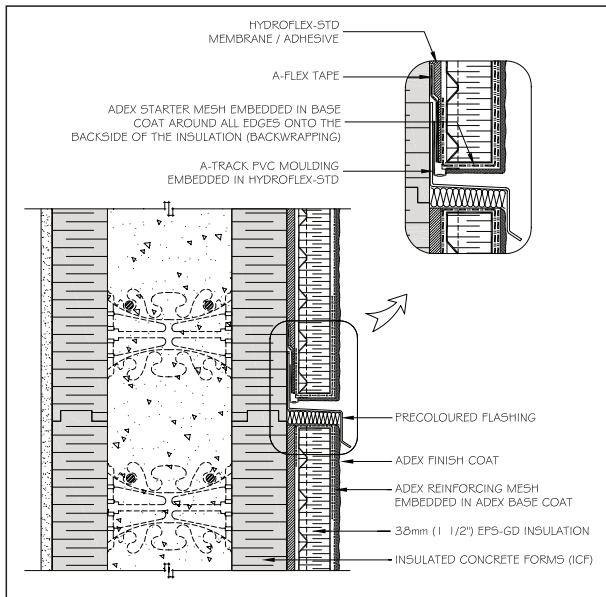


HORIZONTAL JUNCTION (OPTIONAL)

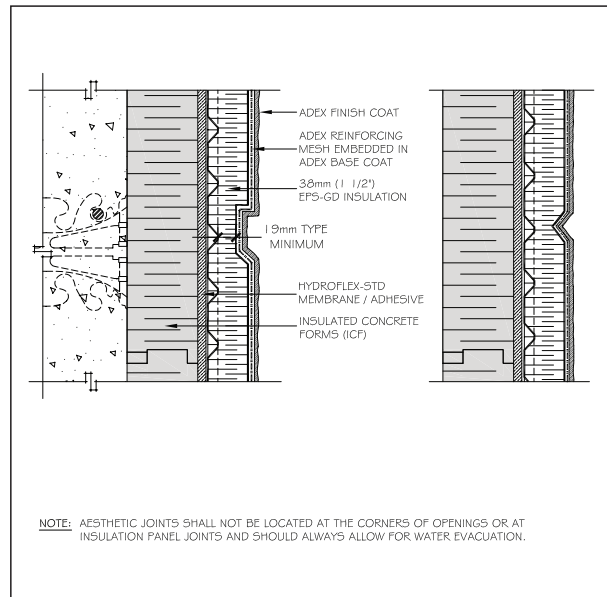


VERTICAL JUNCTION

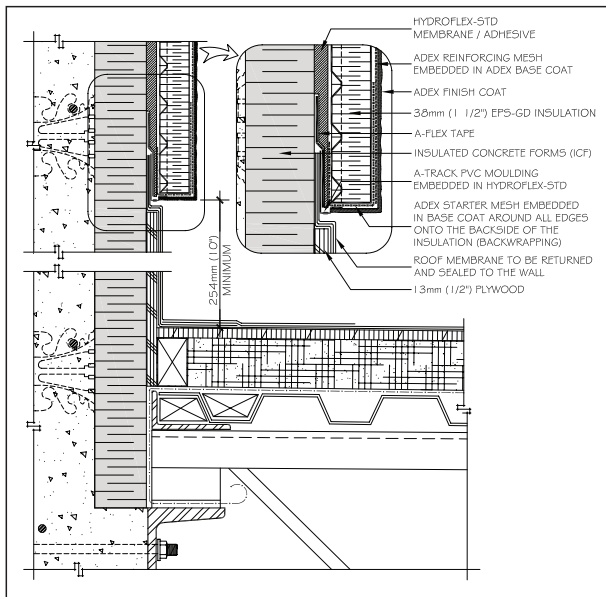
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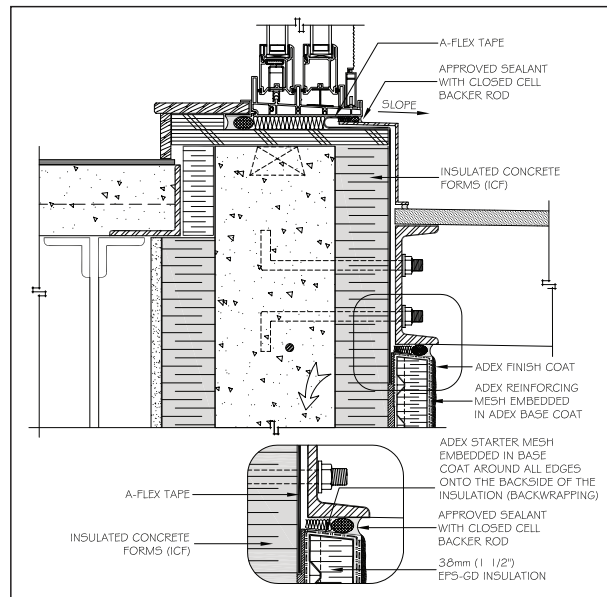
TYPICAL CONTROL JOINT



AESTHETIC JOINTS

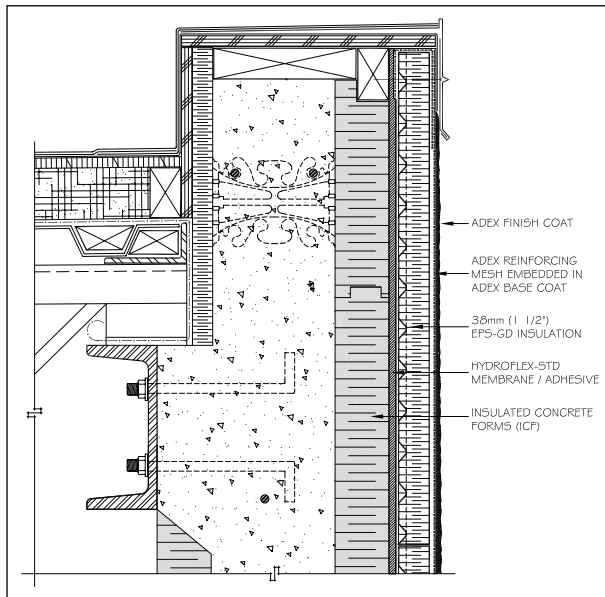


WALL/ROOF JUNCTION

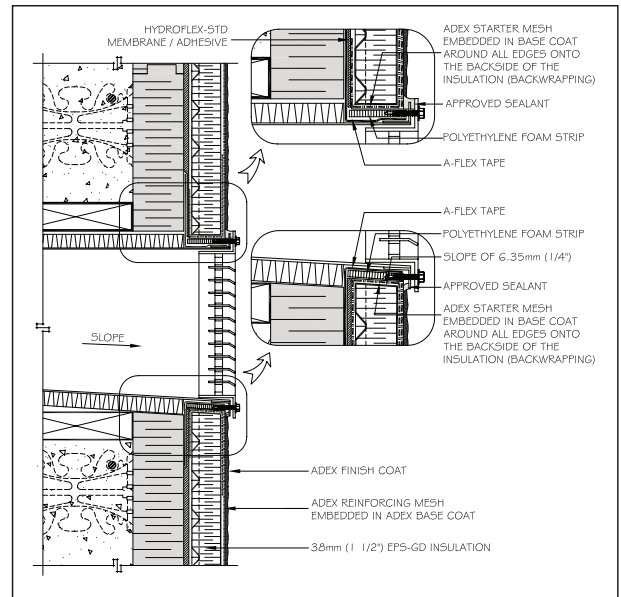


BALCONY JUNCTION

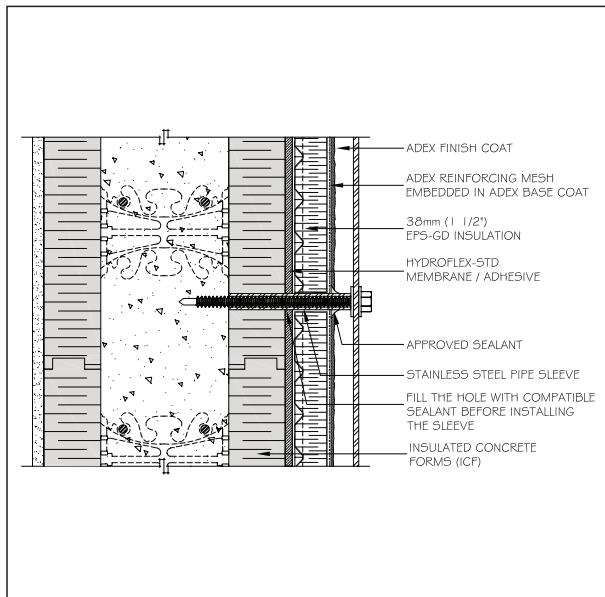
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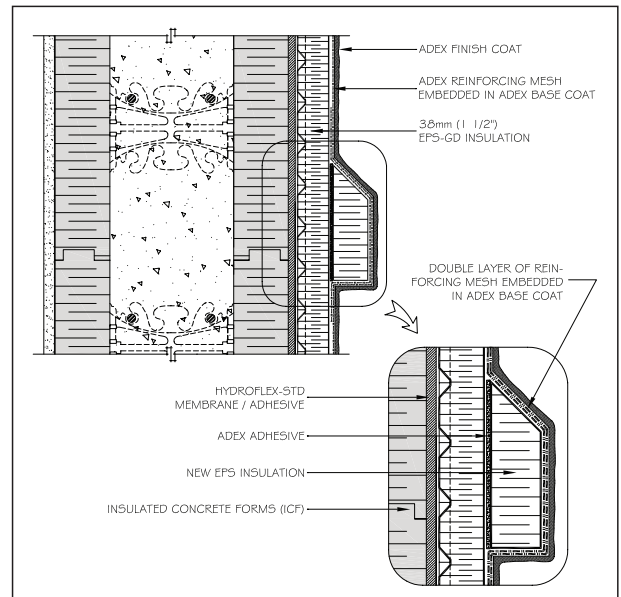
PARAPET



WALL PENETRATIONS

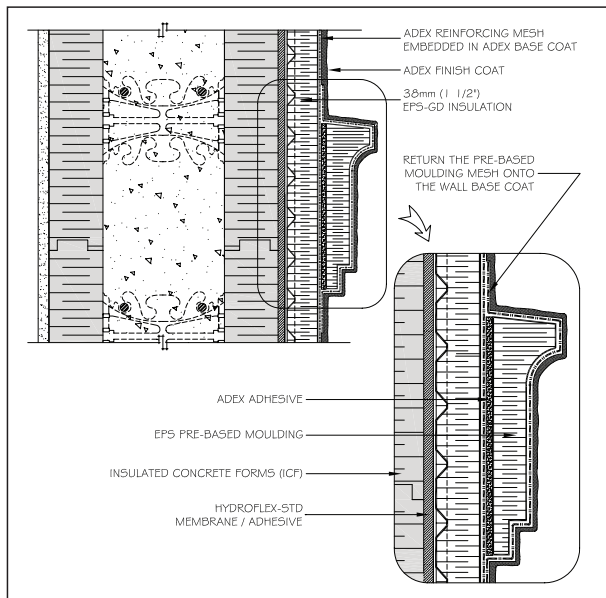


ACCESSORIES ATTACHMENT



DECORATIVE BAND

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PRE-BASED MOULDING

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