

## SECTION 068000 – COMPOSITE FABRICATIONS – FIBERGLASS CORNICE

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section includes:

1. Fabrication of fiberglass-reinforced polyester cornice and trim.

B. Related Sections:

1. Section 042000 – Unit Masonry
2. Section 061000 – Rough Carpentry
3. Section 079200 – Joint Sealants

C. Reference and Industry Standards

1. The following reference standards shall be applicable to this Section:
  - a. New York City Building Code, **current** edition, as amended, inclusive of:
    - Chapter 16 Structural Design
    - Chapter 26 Plastic
2. Industry Standards
  - ASTM (American Society for Testing and Materials)

#### 1.2 ACTION SUBMITTALS

- A. Shop Drawings: Include plan views, elevations, sections, profiles, and details of cornice sections. Illustrate dimensions, adjacent construction, materials, thickness, fabrications details, required clearances, field jointing, tolerances, colors, finishes, methods of support, attachments, anchorages to substrates, integration of components and anchorages. Detail all corner sections, unique sections, cornice termination sections, and all joint locations.
- B. Product Data: Submit manufacturer's product data and installation instructions.

#### 1.3 QUALITY ASSURANCE

- A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
1. Flame-Spread Index: 25 or less.
  2. Smoke-Developed Index: 450 or less.

- B. Inspect each molded piece to ensure that it complies with specified requirements, including nominal dimensions.

#### 1.4 MANUFACTURER'S QUALIFICATIONS

- A. Manufacturer: Provide products manufactured by a firm specializing in the manufacture of fiberglass cornice, in the United States with a minimum of ten (10) years experience.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Handle, store and transport fiberglass cornice according to manufacturer's recommendations and in a manner that prevents damage.
- B. Protect fiberglass cornice from damage by retaining shipping protection in place until installation.
- C. Damage Responsibility: Except for damage caused by others, the installer is responsible for chipping, cracking, or other damage to fiberglass cornice, after delivery to the jobsite and until installation is completed and inspected and approved by the Architect.

#### 1.6 WARRANTY

- A. Warrant fiberglass cornice to be free from defect due to materials and workmanship for one year

### PART 2 - PRODUCTS

#### 2.1 FIBERGLASS CORNICE

- A. General: Gelcoat-finished, glass-fiber reinforced plastic panels complying with ASTM D5319.

#### 2.2 ACCESSORIES

- A. Adhesive: As recommended by manufacturer.
- B. Sealant: sealant recommended by plastic paneling manufacturer and complying with requirements in *Section 079200 – Joint Sealants*.

#### 2.3 FABRICATION PATTERNS/MOLDS

- A. Cornice sections shall be manufactured with sealable lap and/or butt joints. Cornice joints shall be manufactured to accommodate adjoining sections and alignment of cornice surface sections.
- B. Factory inside and outside corners, and unique transition sections shall be shop fabricated. Field corner fabrication will not be permitted.
- C. Coordinate miscellaneous cutouts required for vents, drainage, and other cornice obstructions/penetrations.

## 2.4 MATERIALS CHARACTERISTICS

- A. MOLDED EXTERIOR SURFACE: U-V inhibited, NPG-ISO polyester gel coat, 18 to 22 mils thick. Color to be selected by Property Owner.
- B. BARRIER COAT: Specially formulated backup polyester surface veil 18-20 mils thick to prevent glass print through and ultimate Class A finish.

## 2.5 AVERAGE MECHANICAL PROPERTIES:

A.

PROPERTY	VALUE	TEST METHOD
Tensile strength	12,000 PSI	ASTM D638
Flexural strength	20,000 PSI	ASTM D790
Flexural modulus	$0.9 \times 10^6$ PSI	ASTM D790
Compressive strength	17,000 PSI	ASTM D695
Bearing strength	9,000 PSI	ASTM D638
Thermal expansion	$10 \times 10^{-6}$ ( $^{\circ}$ F)	
Specific gravity	1.5	

## 2.6 FINISH

- A. Color as selected by Property Owner/Sponsor organization.
- B. Surface Texture/Exposed side shall be smooth or textured based upon approved sample.

## 2.7 TOLERANCES

- A. Part Thickness: + or – 1/8 inch.
- B. Gel Coat Thickness: + or – 2.5 mils.
- C. Length: + or – 1/8 inch.
- D. Variation from Square: 1/8 inch.
- E. Hardware Location Variation: + or – 1/4 inch.

## 2.8 IDENTIFICATION

- A. Identify each fiberglass cornice unit with a permanent serial number.
- B. Number cornice parts to coordinate with shop drawings.

## 2.9 CURING AND CLEANING

- A. Cure and clean components prior to shipment and remove material which may be:
  - 1. Toxic to plant or animal life.
  - 2. Incompatible with adjacent building material.

## 2.10 ANCHORS AND FASTENERS

- A. Contractor to provide anchors and fasteners and other accessories for proper installation of fiberglass cornice as recommended and approved by fiberglass fabrication manufacturer.

## PART 3 - EXECUTION

### 3.1 PRE-INSTALLATION EXAMINATION

- A. Carefully observe and verify field conditions that substrates are ready for installation of fiberglass cornice. Contractor shall verify on site dimensions with shop drawings and assume full responsibility for fitting the components to the structure.
- B. Verify that bearing surfaces are true and level.
- C. Verify that support framing has been constructed to allow accurate placement, alignment and connection of fiberglass cornice to structure.
- D. Report discrepancies between design dimensions and field dimensions, which could adversely affect cornice installation, to the **[Design-Professional-of-Record] [and/or HPD]**.
- E. Do not proceed with installation until discrepancies are corrected, or until installation requirements are modified and approved by the **[Design-Professional-of-Record] [and/or Owner's Representative], [and/or HPD]**.
- F. Beginning of installation means acceptance of existing conditions and fiberglass materials.

### 3.2 INSTALLATION

- A. Install fiberglass cornice in accordance with manufacturer's instructions and approved shop drawings.
- B. Erect required connection blocking, framing, and cornice, plumb, square, and true to line and level to substrate. Recess blocking or notch continuous blocking behind each panel joint per manufacturer's instructions. The installer shall supply connectors, blocking and framing approved by cornice manufacturer.
- C. Space joints according to shop drawings, not less than 1/8" and not greater than 3/8". Prepare joints by lightly sanding and filling joints with a continuous bead of specified sealant as work progresses to make a weather tight joint. Carefully monitor ambient temperatures at time of installation to prevent excessive expansion and contraction of panels during sealant application.
- D. Do not field cut cornice where the finish cannot be field restored. Installer may repair small unnoticeable finish repairs with manufacturer's supplied colored gel-coat patching material.
- E. Countersink all exposed fasteners and repair with manufacturer's supplied colored gel-coat patching material. Repairs shall be made with care to be undetectable.

3.3 ALLOWABLE TOLERANCES FOR INSTALLED UNITS

- A. Maximum offset from True Alignment: 1/4 inch in 20 feet.
- B. Maximum Variation from True Position: 1/2 inch in 20 feet.

3.4 CLEANING

- A. Clean installed fiberglass cornice using cleaning methods and material approved by manufacturer.

3.5 PROTECTION OF INSTALLED FABRICATIONS

- A. Comply with manufacturer's recommendations and instructions for protecting installed cornice during construction activities.

**END OF SECTION 068000**