


S T R O M B E R G
ARCHITECTURAL PRODUCTS

Glass Fiber Reinforced Concrete (GFRC)
Glass Fiber Reinforced Polymer (GFRP)



Glossary of Architectural Terms

Volume II - Cornice Return through Hearth

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GFRC | GFRP | GFRG | CAST STONE | MARBLE | BRONZE

Cornice Return

Is the term for the continuation of a cornice, either back to the wall where it terminates, or in a change direction, at a gable end.

Corona

The overhanging vertical member of a cornice in classical architecture.

Cresting

A decorative design along the ridge of a roof, cornice, coping or parapet. Usually highly ornamented and often perforated. Often found in the Chateau style, Second Empire style, and Queen Anne style, but also found on other styles. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) cresting incorporates stainless steel or other non-corroding anchors which allow it to be bolted to the structure below.



Wall top cresting or crenellation in cast stone

Crocket

Gothic ornaments of medieval origin, usually plant like in form, placed along the edge of the sloping surface of pinnacles or spires. Most often seen in Gothic revival architecture. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) Crockets are generally cast with a stainless steel or noncorrosive metal all thread through them to allow for attachment to the structure.

Cupola

Structure located on a roof or a dome, with a circular polygon will base. Often louvered for ventilation, sometimes set with glass or stained-glass. The word comes from the Latin 'cupella' or the Greek 'kupellon')

meaning a small cup (A cupola resembling an upside down cup.) A cupola that is lighted is sometimes referred to as a lantern. A Cupola with access for viewing out of to view the scenery is often called a belvedere, from the Italian term for fair view. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) cupolas may be designed as one piece units, if small enough to be transported. Larger cupolas of GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) are generally made in segments that are pre-fitted at the factory, disassembled for shipping, reassembled on the ground at the site, and then hoisted into place with a crane. GFRC and GFRP cupolas may be custom designed or may be selected from a catalog of stock the cupola designs. In most cases a glass fiber reinforced concrete cupola sets over a roof membrane, as a decorative element on the roof. Flashing and waterproofing is therefore simplified.

**Cushion Capital**

Capital of the Romanesque style and Gothic style that somewhat resembles a cushion.

Cyma

A molding with the double curved shape of an S in section.

Date Stone

A panel or "stone" of GFRC, inscribed with the date of completion of the building, and sometimes other information. The glass fiber reinforced concrete date stone may be a cornerstone, a plaque or keystone.

Dentil

One of a row of "tooth like" blocks, set in a molding or cornice. These are part of the classical ornamentation of the Ionic, Composite, Corinthian and Doric orders. Found in Federal style, Adams style, Classical Revival style, French Eclectic architecture, Georgian style, and Greek revival architecture. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) moldings may be cast with the dentils as part of the molding, or the dentils may be cast separately and attached after casting. It is important that dentil molding and cornice with dentils be properly laid out so that the dentil spacing is uniform. This is generally done by the manufacturer in the shop drawings stage.

**Dome**

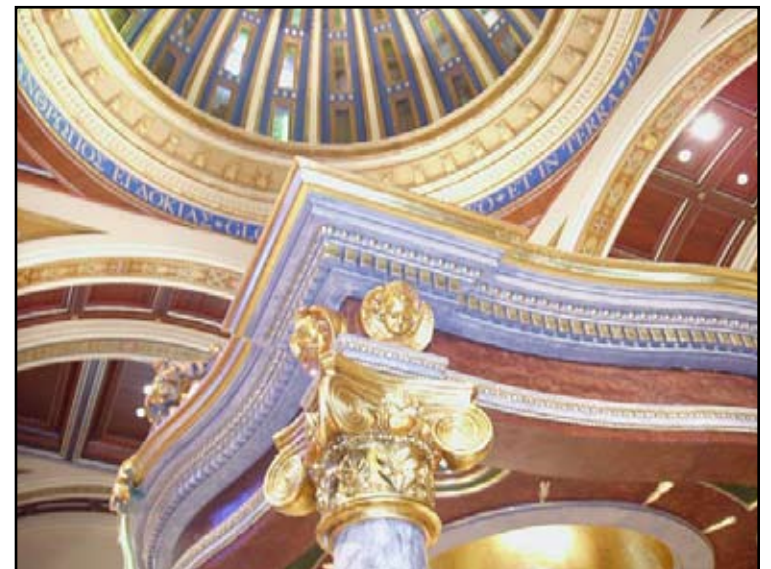
A roof structure generally shaped like a segment of a sphere, but may also be polygon or oval in plan. Large GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) domes are generally cast in pie shaped segments, and assembled on-site. Smaller domes, generally less than eight to 10 feet diameter, may be cast as one piece units, or in segments. If the dome is a decorative element to be viewed from the exterior only, the roof is put in place, and the dome placed above it. Similarly if the dome is to be viewed from the interior only, it may be suspended from the ceiling structure above it. If the domes are to be viewed from both the interior and the exterior then a double dome is required with insulation placed between the inner and outer dome. Exterior glass reinforced concrete and architectural fiberglass domes may be molded smooth or textured, with ribs or even with the molded in shape of roof tile, or glazed mosaic tile. Interior domes in GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) may be smooth, ribbed, or coffered. In some applications both an exterior dome of GFRC or architectural fiberglass, and an interior dome of GFRG or architectural fiberglass are used. Between the inner dome and outer dome, the dome cavity may be insulated.



Architectural fiberglass domes by Stromberg, Atlantis, Bahamas



Dome in GFRG



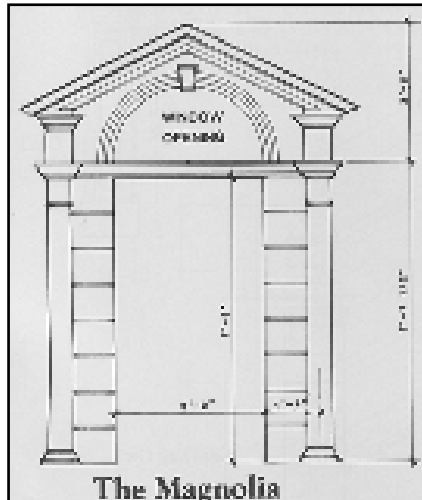
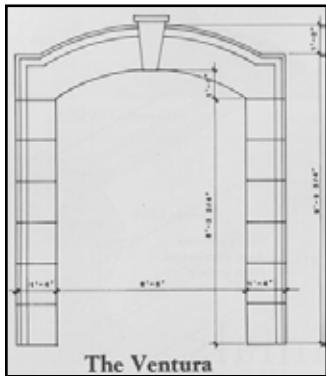
Interior GFRG domes

Door Surround

A structure or decorative element around the doorway. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) door surrounds range from the simple to the very ornate and are used with every style of architecture.



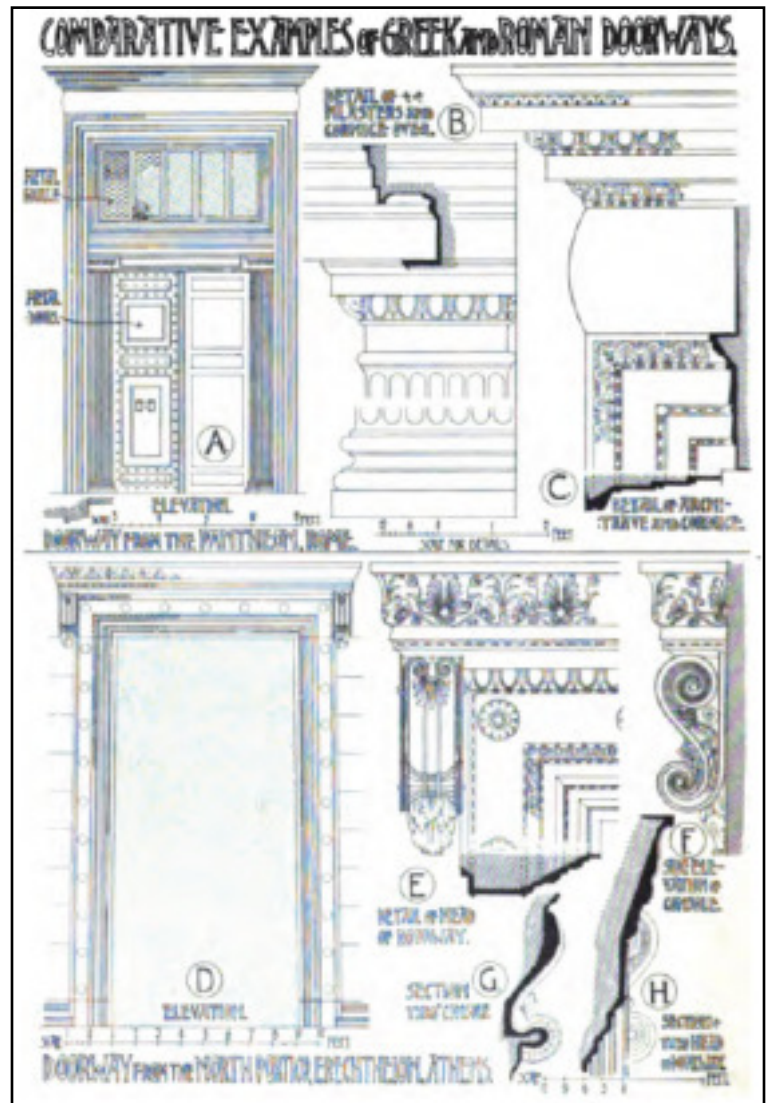
Ventura Door Surround on office building (Also shown is M30 banding, G29 balustrade and 24" diameter Corinthian columns.)
 The Ventura Surround is adjustable in size.



The Magnolia Door Surround features two columns (pilasters) and a angular pediment. The size is adjustable.



Entry surround of M80 molding

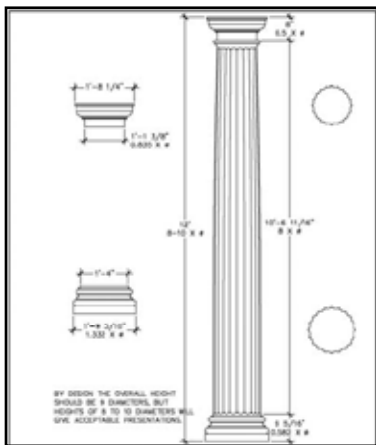
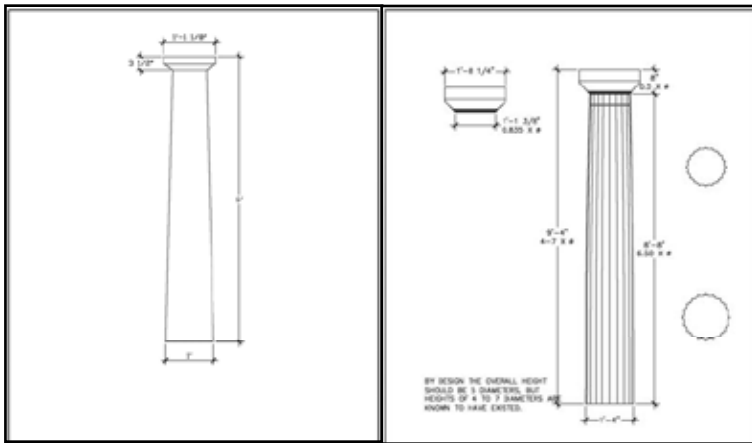


Doric Capital

The top or capital of a column or pilaster of the Doric order.

Doric Order

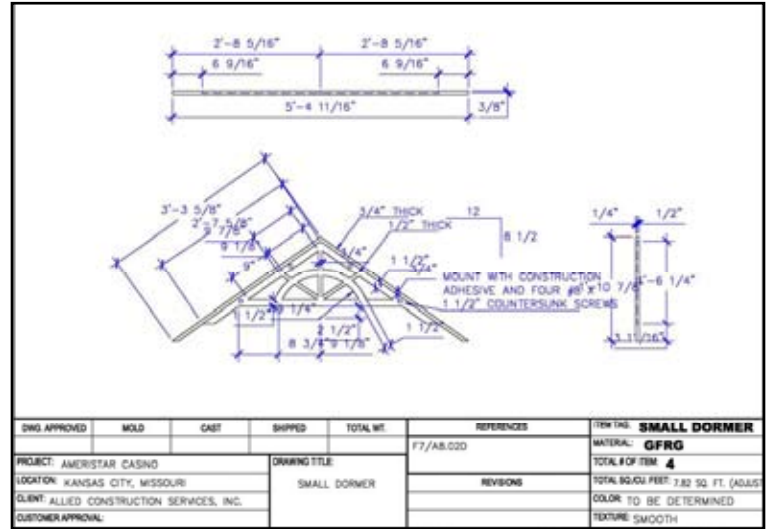
The Doric Order is the oldest and simplest of the three Greek architectural orders and was invented by the Dorian Greeks. The Doric order is characterized by sturdy proportions and a simple capital. The columns are thicker relative to their height than in the other orders. The Greek Doric column is fluted and has no base. The Roman Doric is usually not fluted and has a base. The entablature is deeper and visually heavier than that of either the Ionic or Corinthian Orders. Doric columns are available in GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) in a variety of standard sizes with shaft diameters typically in even numbered increments (12 inch, 14 inch, 16 inch, etc.)



Dormer

And architectural element which projects from a sloping roof. Dormers usually contain a vertical window or louvers. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) dormers are generally not part of the roof structure but are cast separately.

Because the great variety of dormers, GFRC and GFRP dormers are generally custom-made for the needs of a specific project. Include such variations as the arch dormer, eyebrow dormer, Flathead dormer, hip dormer, Mission dormer, Palladian dormer, pointed dormer, random dormer, triangular dormer and through the cornice wall dormer.



Double Bellied Baluster

A baluster with two vase shaped “bellies,” the same profile on the upper and lower half. GFRC and Architectural Fiberglass balusters are available in a large selection of standard profiles.



Example of a double bellied baluster



Double bellied balustrade

Double Lancet Window

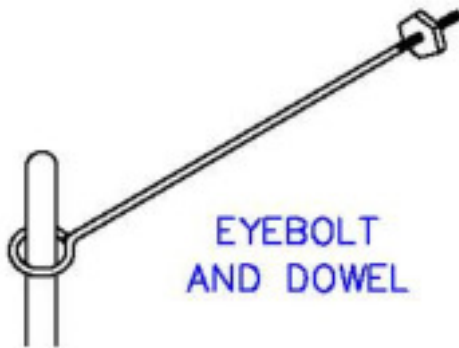
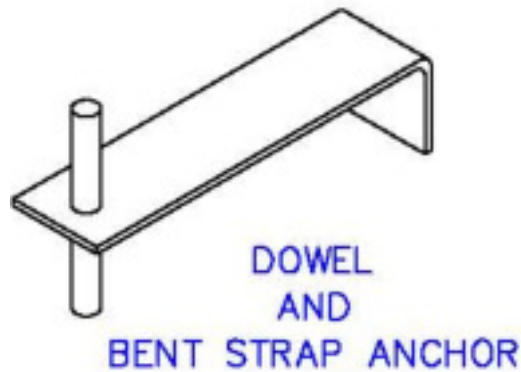
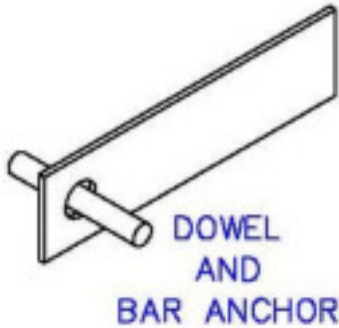
A window surround with two pointed Lancet windows side-by-side.



Double Lancet window

Dowel

Cylindrical metal rod often used to secure two pieces of GFRC together, or to secure GFRC (glass fiber reinforced concrete) to another material. Dowels for GFRC are generally stainless steel or galvanized steel. Shown are typical dowel anchors for GFRC.

**Drip Molding**

A horizontal molding over a door or window designed to channel rainwater away from the wall surface and as a decorative element.

Eaves

The underside of the part of the roof that projects beyond the exterior wall. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) eaves may be coffered or plain.



Highly ornamented eaves

Egg and Dart Molding

An ornamental molding with a repeating pattern of egg shaped ornaments alternating with dart shaped ornaments.



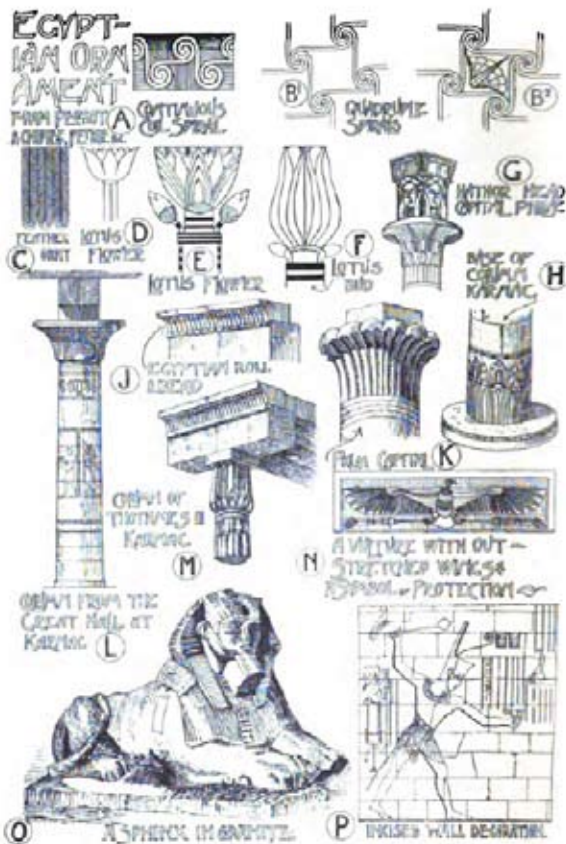
Egg and dart molding GFRC

Egyptian Revival

A style of architecture suggestive of the architecture of ancient Egypt. This architecture usually exhibits elements such as Lotus capitals, columns that bulge or that imitate papyrus stocks, Egyptian Gorge, winged sun discs, etc.



Egyptian Revival Columns and Capitals, Cheesecake Factory Restaurant (GFRG)



Egyptian Gorge

Also known as Egyptian cornice, Cavetto cornice, Gorge-and-roll cornice. Consisting of a large cavetto molding (round concave molding continuing at least a quarter circle) sometimes decorated with vertical leaves, and a roll molding below.

Elizabethan Architecture

An English style of architecture, it was the transitional style between Gothic architecture and Renaissance architecture.

Elliptical Arch

Any arch having the shape of half an ellipse.



Engaged Column

A column, attached to a wall. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) engaged columns, may be half round or three quarter round.



Entablature

An entablature, is a horizontal band and molding supported by columns. Entablatures are horizontally divided into three basic elements: the architrave (the upper most portion;) the frieze (the middle section,) and the cornice (the top section.) The proportions and details of an entablature are different depending on the order (Doric, Tuscan, Ionic, Corinthian or Composite.) GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) entablatures may be cast as U shaped sections to wrap a structural beam or be hollow and feature internal ribs for stiffening or an internal steel frame.



Entablature

Entasis

A slight convex curve added to the tapered profile of classical columns. Entasis is used to overcome the optical illusion of concavity of straight sided shafts.

Entry Surround

A door surround at the main entry to a home or building.



Entry surround (the Ventura) by Stromberg

Equilateral Arch

A pointed, centered arch whose radius of curvature is equal to the width of the opening.

Eye brow Lintel

A lintel over a door or window, with a slight arch to it. GFRC (glass fiber reinforced concrete) eyebrow lintels may be designed to be structural or non structural.

Facade

The exterior skin of a building, which is considered to be the architectural face or front.



Chico's Facade

Federal Style

Style architecture that developed in the postcolonial era in America. It was greatly influenced by the work of Robert Adam. Buildings constructed in the Federal style may contain the following architectural elements: large entrance porticos, columns and pilasters, cornice with moldings, quoins, festoons, garlands, urns, swags, dentils and egg and dart moldings. Many GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) elements are available as stock patterns or maybe custom fabricated in the Federal style.

Festoon

The decoration of suspended flowers, fruit, foliage, ribbons, etc. found in the Beaux Arts Style, Colonial Revival, Adam style and Federal style. Also known as garland or swag.



Festoon plaque over window • Part of the restoration of North Texas State University

Fieldstone

Construction of individual stones for walls and chimneys. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) field stone panels are available in a variety of stone types, colors and textures. GFRC and GFRP field stone panels allow for fast installation and quality workmanship.



Fieldstone panel for "lighthouse" cast in GFRC (glass fiber reinforced gypsum) for interior use. Fieldstone panels could also be cast in architectural fiberglass or GFRC for exterior use.

Finial

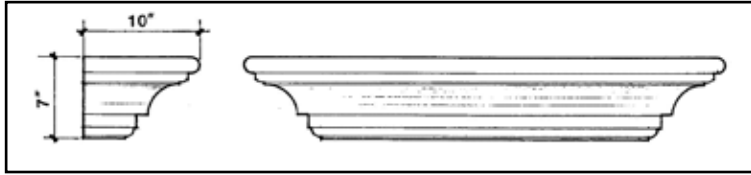
An ornament that tops a gate pier, pinnacle, spire or pediment. Typical GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) finials might be urns, pineapples, acorns, obelisks, etc.



Draped Urn finial

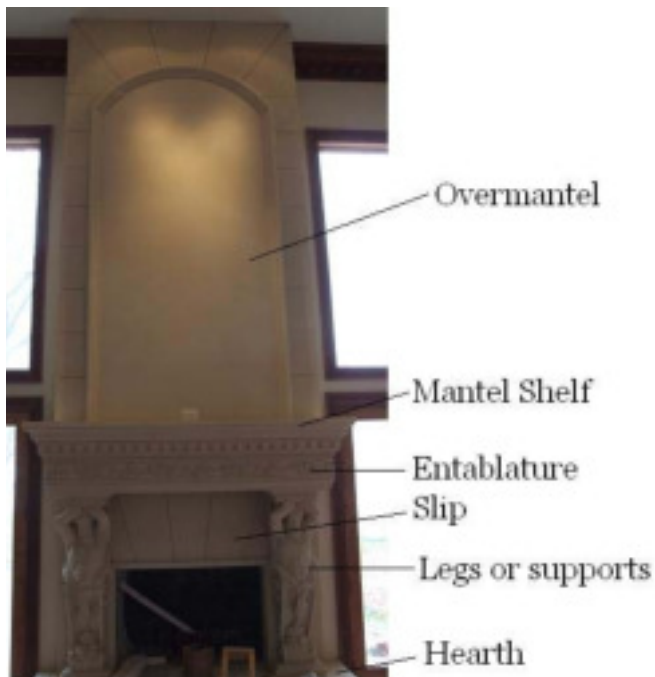
Fireplace Mantles

A shelf or entablature over a fireplace opening. Stromberg GFRC offers a selection of stock moldings and corbels that are used as fireplace mantles. Glass fiber reinforced concrete, being non combustible, is an ideal material for fireplace mantles.



Fireplace Surround

The frame around a fireplace opening. The surround consists of the side supports, which may be columns, engaged columns, pilasters, corbels, ancones or moldings, and the top entablature or shelf. GRC is an excellent choice for fireplace surrounds since it is non combustible. Glass fiber reinforced concrete fireplace surrounds can be cast in a texture and color to replicate cut stone or cast stone.



Fireplace Hearth

The floor of the fireplace opening. GFRC fireplace hearths are designed to extend into the room and the glass fiber reinforced concrete provides the non combustible material to protect the floor.

Flat Keystone Arch

A flat arch or lintel with a keystone at the center.



Fleur-de-lis

From the French word for “flower of the lily”. A stylized three-petaled iris flower tied by an encircling band, once used as the heraldic bearing of the French royal family (chosen by Charles V.) used on coats of arms and later used by English kings and royalty. An ancient emblem, the Empress Theodora bore one on her crown (approximately A.D. 527.) The three “petals” of the fleur-de-lis have also been used to represent the Holy Trinity.



Fleur-de-lis in architectural fiberglass

Fluting

Shallow vertical grooves on a column or pilaster shaft.

Foil

From the French word “foil” meaning “leaf”. A leaf-shaped curve or lobe, formed between points called cusps inside an arch or circle. Used in Gothic style
(continued on next page)



Foil - continued

tracery windows. The number of foils is indicated by a prefix, e.g. trefoil (three lobes,) quatrefoil (4 lobes,) cinquefoil, sexfoil, multifoil. Found in Gothic and Gothic Revival Styles and others.



Quatrefoil Medallion

French Renaissance Style

The French version of the Renaissance style, the architectural style developed in early 15th century Italy and spread to France during the rebirth (rinascimento) of classical art and architecture.

Heavily influenced by Vitruvius's Treatise on Architecture, originally written in the time of Augustus, and later published in Rome in 1486. GFRC (glass fiber reinforced concrete) is uniquely suited to the replication of Renaissance style architectural elements. Renaissance style GFRC, columns, capitals, fireplace mantles, balustrade, ceilings, garden urns and planters, etc are available as stock patterns, or able to be custom produced.

Folly

A term of endearment for a structure that is functionally useless but designed for visual interest or effect, such as a false ruin in a garden or a gazebo that is designed to complete a garden vista or scene.

Fret

A type of running ornament consisting of repeated and symmetrical figures, often in relief, contained within a band or border. Old French: "fret" meaning grating.

Frieze

The middle section of the entablature. Above the architrave and below the cornice.



Jungle Frieze in architectural fiberglass. Siegfried and Roy Garden Mirage Las Vegas.

Gable

Known as the pediment in Classical architecture. The gable is the triangular portion of the wall, between the enclosing lines of a sloping roof. Gable cornice in GFRC (glass fiber reinforced concrete) or GFRP (architectural fiberglass) is the cornice that is used at the gable.

Gable Window

A triangular window top that is shaped like a gable or pediment.

Gargoyle

A grotesque figure, projecting from a building. A gargoyle may function as a waterspout or be purely decorative. Found in the Gothic, Queen Ann and Tudor Styles of architecture. GFRC and Architectural Fiberglass gargoyles are available as stock and custom designs. Generally attached with threaded rods.



Gargoyle in architectural fiberglass (GFRP)

Garland

A decoration of suspended flowers, fruit, foliage, ribbons, etc. found in the Beaux Arts Style, Colonial Revival, Adam style, Federal style and others. Also known as a festoon or swag. Garland may be incorporated into GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) elements such as door heads, planters, panels, cartouches, etc.



Gargoyle Finial in GFRC and cast stone

Gazebo

A small garden house, normally round or polygonal in plan, designed for providing a view. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) gazebos typically feature GFRC columns, a GFRC or Architectural Fiberglass entablature and a GFRC or Architectural Fiberglass dome or roof. Gazebos are sometimes referred to as a garden house or summerhouse.

**Georgian Style**

The dominant style of architecture in England during the 18th century, named Georgian after the reigns of the three King Georges from 1714 to 1820.

Inspired by the ideals of Andrea Palladio (1508-80) and Roman classical architecture popularized by Robert Adam (1728-1792). In the USA, Georgian is similar to and is also referred to as Federal. In New England, Colonial architecture is also referred to as "Georgian". GFRC (glass fiber reinforced concrete) is uniquely suited to the replication of Georgian style architectural elements, including Georgian style GFRC columns, capitals, fireplace mantles, cornice, entryways, window and door surrounds, balustrade, ceilings, garden urns and planters, cupolas, domes, dormers, quoins, porticos, keystones, etc.

Gibbs Surround

A window or door surround with rusticated alternating large and small blocks of stone. Named after the Scottish architect James Gibbs (1682-1754,) considered by many to be the most influential church architect in London during the early 18th century.

Gothic Architecture

The architectural style of the high middle ages in Western Europe. Typified by the great cathedrals, characterized by their flying buttresses, ribbed vaults, tracery, pointed arches, rose windows, etc.

Gothic Revival

The style of architecture following the forms and spirit of Gothic architecture. GFRP (architectural fiberglass) and GFRC (glass fiber reinforced concrete) architectural elements for Gothic revival architecture include GFRC ashlar masonry, GFRP and GFRC battlements, decorative brackets, foliated ornaments, finials, hood moldings, pinnacles, Crockets, rose windows, pointed arches, quatrefoils, trefoils and turrets. Gothic revival chimneys often feature high, ornamental chimney stacks and chimney pots. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) rose windows and lancet windows as well as various types of tracery are also produced, as well as glass fiber reinforced concrete Gothic columns, Gothic arches and even gargoyles.



Gothic revival style facade in architectural fiberglass

Grapevine

A type of ornament either running or enclosed usually consisting of the grape vine with leaves, and clusters of grapes. Used as a decorative element for cornices and interior moldings.

Greek Key

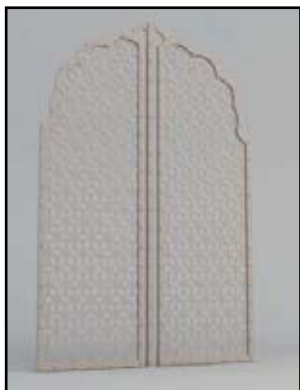
Also known as Greek fret. A running ornament that resembles the head of an old-fashioned skeleton key, and usually formed bands and moldings arranged in rectangular forms. The Greek key pattern is frequently used in GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) cornice, molding and door surrounds in the Greek revival style.

Greek Revival Style

Style architecture based on ancient Greek forms in architecture such as the Greek orders (Doric, Ionic and Corinthian). Buildings in the Greek revival style were generally rectangular in shape or a combination of rectangles. GFRC and Architectural Fiberglass elements produced the Greek revival style include raked cornice, classical pediments, anthemion, dentils and egg and dart molding. Greek revival style columns in GFRC (glass fiber and first concrete) and GFRP (Architectural Fiberglass) include round or square columns especially Doric columns, Ionic columns and Corinthian columns. Greek revival style entryways in GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) generally wide and imposing and framed by pilasters or engaged columns.

Grille

A grating or pierced panel, used to cover, decorate or protect an opening. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) grilles (or grills) can be produced in a variety of sizes and shapes.

**Groin Vault**

Formed by two barrel vaults intersecting. The groin is the edge or ridge where the two vaults intersect. GFRC (glass fiber reinforced concrete) being relatively light and moldable, is a perfectly suitable material for the production of barrel vaults and groined vaults.

Guilloche

Type of ornament consisting of circular openings created by two or more curved bands overlapping each other in a continuous series. Guilloche details in GFRC and Architectural Fiberglass are generally used in cornice, banding or moldings.

Half Baluster

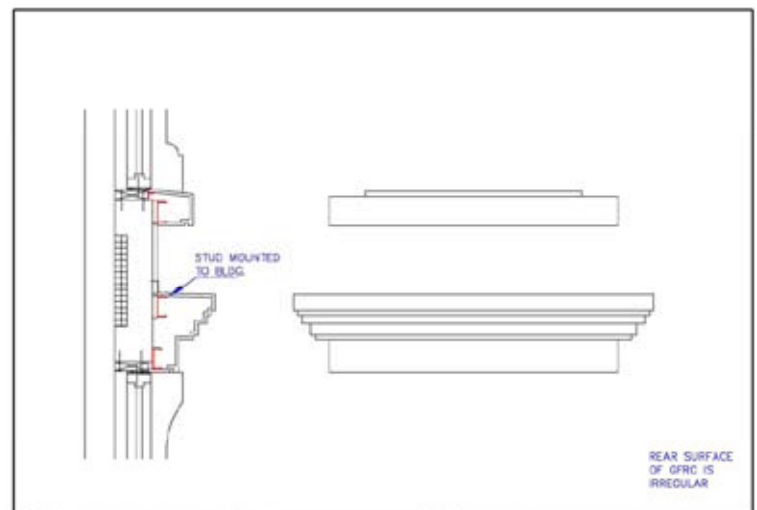
When a balustrade connects to a wall, pier or plinth, a half baluster may be used. Also known as an engaged baluster.

Half Column

Column that is engaged to wall projects from the wall by about one half its diameter. GFRC (glass fiber reinforced concrete) and GFRP (architectural fiberglass) half columns are available in all of the classical orders (Doric, Tuscan, Ionic, Corinthian) is will is custom column styles and sizes.

Head

The head is the top horizontal cross member of a door, window, fireplace surround or other opening. Window and door heads in GFRC and Architectural Fiberglass may be plain or ornamented.

**Hearth**

The part of the fireplace floor that extends into the room. GFRC (glass fiber reinforced concrete) being noncombustible, makes an ideal material for a fireplace hearth. When used as a hearth, glass fiber reinforced concrete is typically cast solid or has ribbing added to the underside. The hearth is buttered full with mortar, and is set in a full mortar bed.