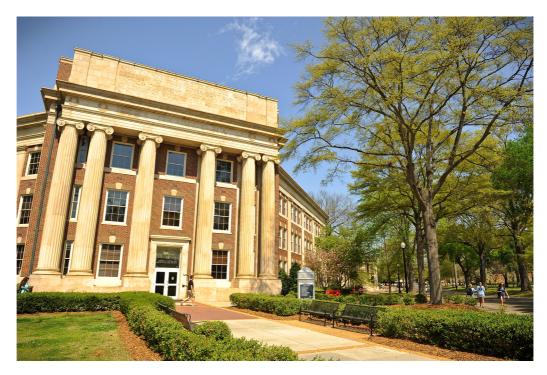


# Architecture



# 3.1. Purpose

The architectural guidelines herein address building form and character to ensure harmony and coherency, not to create "sameness".

# 1. Responsibility to the Campus

New structures should be designed to relate appropriately to adjacent campus buildings. Existing axes should be recognized and extended. Symmetry of form and detail should be shared with surrounding buildings.

# 2. Responsibility to Context

There are both subtle and dramatic shifts in architectural style throughout the campus. Even within the historic Core Campus there are distinct variations. Together, the varying architectural styles of individual buildings contribute significantly to the character of the campus. These variations also create a more dynamic context in which new buildings will be placed.

A. Adjusting for Context. Due to the diversity of campus architecture, site context should affect how the guidelines are interpreted and applied. For example, red brick is common throughout the campus and highly recommended; however, a red brick addition or auxiliary structure for Morgan Hall would be inappropriate. Certain contexts require a relaxation from classical detailing, though the form and geometry of traditional architecture should still be considered appropriate.

B. *Bridging Context*. Additions and renovations to existing structures shall be designed to bring them more into conformance with the desired character of the campus and the specific context in which they sit.



#### 3. Architectural Realms

The three campus design realms reflect variations in architectural design that are necessary to achieve the intended relationships between the open spaces and buildings and therefore overall character in each realm. Similarly, the uses and scales of buildings differ generally in each realm. See Figure 1 on page 1.5.

- A. *Traditional Campus Realm*. The character of this realm is based on the traditional classical and neoclassical styles of the Core Campus.
- B. Cultural Campus Realm. This realm involves buildings housing specialized uses requiring specific design elements. In contrast to the Traditional Campus Realm, these buildings more often "sit in space" rather than "define space." While buildings in this realm are allowed more architectural freedom, they must nonetheless be in harmony with University buildings overall.



Recent examples of "bridging context" include the addition of the curved pediment on Coleman Coliseum (far left) and the addition to the western side of Student Services Center (left). In each case, a 1960s or 1970s era building was modified to create greater harmony with its traditional context.

C. Residential Communities. Scale, geometry, placement, massing, and building form within the Residential realm will be different from the other realms though classical architectural detailing should be maintained.







Classical architecture (above left) exemplifies the character of the Traditional Campus Realm. More modern and post modern architectural styles (left) are seen in the Cultural Campus Realm. On-campus fraternity houses (above) and other residenital buildings feature classical and similarly historic architectural elements.

## 4. Gateway Projects

Establishing campus character and a positive first impression in gateway locations is as important to the architectural design as the campus/community context in which the site is located. Gateway buildings shall reflect the classical image of buildings in the Traditional Campus Realm.

#### 3.2. General Guidelines

#### 1. Campus Geometry

The placement of a building in relation to adjacent buildings and contextual geometry is both an urban design and architectural gesture. In placing new structures, the architecture shall recognize existing and proposed axes.

- A. Axes. All new buildings and additions should respond to existing incidences of symmetry within their environment and should present a symmetrical appearance of their own.
- B. Symmetry. The building form should be manipulated early in the design process to obtain the symmetry needed to respond to an existing or desired axis. Even very complicated footprints can be worked into a symmetrical arrangement.

## 2. Building Form

The following architectural guidelines address massing, scale, proportions, symmetry, and the horizontal and vertical organization of building elements.

A. *Massing*. Classical building design should begin with a simple volume to which additional volumes are added to meet the spatial needs of the building program and the building shape needed by the context.

The Classical style ensures appropriate treatment of unique building shapes that result from programmatic and/or functional needs.

B. Scale. Generally, two scales shall be observed throughout the campus, "residential" and "non-residential".
Non-residential buildings have a larger scale than residential buildings, both in terms of massing and detail.

Building massing shall be adjusted to maximize scale compatibility with surrounding buildings, especially at the community edge.

The basic form of a residential building will likely be derived from a 10 ft x 12 ft module (approximate size of a basic sleeping room), while the scale of academic and other non-residential buildings is based on a larger module (often over 30 ft x 30 ft). The academic portion of the campus has its own scale; most structures are three to four stories. These buildings have heroically-scaled, classical architectural features—24 ft to 30 ft tall colonnades and porticos and 6 ft to 8 ft entablatures.

## C. Gravity.

- "Heavy" building materials, such as stone and masonry, shall be used in the lower portions of the building envelope to visually carry building loads. Stone or masonry is typically used at the building base, whereas lighter materials (or more fine-grained stone or masonry) are used above.
- Building elements shall be scaled proportionately to the load they carry (visually, if not physically).
   Disproportionately slender or wide columns appear disingenuous or clumsy, even if they are structurally sound. In the classical orders, slender columns are used in the upper portions of the building where less weight is to be carried.
- Other building elements should be treated similarly, as mentioned throughout these guidelines.

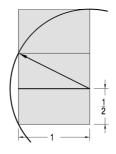


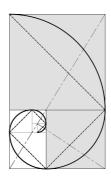
Campus buildings use classical architectural elements, such as columns that span two stories, vertical openings, and extruding building volumes to accentuate verticality in otherwise horizontal building masses.

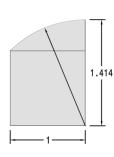
- D. *Proportion*. Architectural features should accentuate verticality.
  Classical architectural features shall be proportioned in accordance with the classical orders. For instance, there is an established ratio of height to diameter (at base) for classical columns (Doric 7:1, Ionic 8:1, and Corinthian 9:1). The bulkier Doric column is used at the building base whereas narrower columns are used in upper levels.
- The "golden rectangle", is the most recognized height-to-width (1.6103:1) proportioning system in classical architecture and its use in establishing architectural proportions is desirable in all realms. The diagon ratio (1.414:1) may also be used.
- When, due to programmatic, functional, or contextual reasons, the overall mass of a building is horizontal, verticality should be emphasized through façade articulation and extrusion of building volumes.



Towers, such as Denny Chimes, taper as they rise. The tower's "heavy" base withstands the weight of the shaft.







Above left and center: Two graphic depictions of the "golden rectangle".

Above right: Graphic depiction of the diagon ratio.

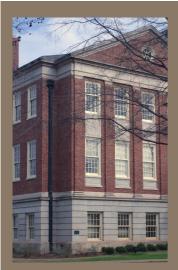
## 3. Building Envelope

Building envelopes shall be designed to reflect the "crown, shaft, and base" vertical organization of traditional architecture.

A. *Materials*. Appropriate materials and details shall articulate this organization. See the following sections §3.3-3.5.

## B. Proportions.

- Crown height shall be less than that of the base or shaft.
- Shaft height shall be equal to or greater than the sum of crown and base unless three-part organization employs "stacked orders" of classical elements where other rules apply (see §3.7).
- Avoid near-equal heights of bases and shafts. When sizing crown (cornice), consider how large it would be with an appropriately scaled column supporting it.



The original east and west wings of Gorgas Library are a perfect example of the three-part design. The stone base supports all above it; walls and engaged pilasters form the shaft based on the height of the columns. The crown is composed of a classically-proportioned entablature and pediment supported by the shaft.

#### 3.3. The Base

Each building shall incorporate a "base" feature, either as a pedestal upon which the building sits (for one and two-story buildings) or a ground floor articulated through the materials and details of the lower portions of the building façade (for three-story and taller buildings).

#### 1. Materials

Base materials shall be either brick, limestone, or a stone-like material. Other materials may be accepted in special situations, as described below.

- A. *Brick*. For most applications, brick should be red with "burnt" black and grays and little orange (except in the context of Morgan, Comer, and Smith Halls or the Woods Hall Quad) and mortar color should be a very light buff to whitish gray.
- Brick and mortar color should be considered during schematic design and selected early in the design development phase.
- Brick color, mold, and bond choices should harmonize with, not imitate, that of adjacent buildings. Brick, in all realms, should be laid in common bond or running bond.
- Unless context dictates otherwise, such as additions to existing structures, wood mold or simulated wood mold (distressed wire cut) brick shall be used in the Traditional Campus Realm.

The most common masonry bond on campus is running bond although several exceptions do exist. Common bond was used on Nott Hall and the Victorian Gothic campus structures. Flemish bond is used on the Gorgas House.

- Either wood mold or wire cut brick may be used in the Cultural Campus and Residential realms.
- B. *Stone*. Limestone is common throughout campus buildings and is recommended.
- C. *Other Base Materials*. Cast stone and precast concrete may also be acceptable.
- Joint spacing used on slabs or panels in vertical applications should resemble that of natural stone.
- In precast construction, actual panel size may be detailed with faux-joints to obtain the necessary effect.



- Oversize concrete masonry units and precast and cast-in-place concrete detailed to resemble natural cut stone may be used in the Cultural Campus Realm. Proper detailing shall be used to avoid the look of "concrete blocks". For durability, a smooth finish product shall be applied directly to concrete masonry.
- Stucco and ground face concrete
  masonry may be used in the Residential
  realm. Stucco shall be detailed with
  joints to resemble that of natural stone.
- Stucco bases should be designed with sub-bases of concrete or concrete masonry where they touch the ground.



Campus buildings have used detailing to enhance the monumental nature of their bases through exaggerated joints and panel size.

# 2. Composition

- A. *Three-part design*. In the Traditional Campus Realm, a stone base taller than four feet from grade shall have its own three-part vertical organization with base cap, wall material, and sub-base.
- B. *Projection*. In the Traditional Campus and Cultural Campus Realms, the base should project outward from the façade.
- The amount of projection should increase with the size and monumentality of the base.
- For bases less than 24 inches tall, a one-inch projection is recommended. For bases greater than 24 inches, two to four inches is recommended. For bases of one-story or more, the projection should be four to eight inches. Bases in the Traditional Campus Realm shall project at least two inches.

- To shed water sheeting down the face of a wall, the water table shall have a sloping top surface. If the cap is over a stone base, it must project to provide a drip to improve weatherability and prevent stains.
- With a brick base, the projection shall be limited to two to four inches unless a stone base cap is used. An historic means of creating an all-brick base is through use of a water table brick unit, a custom shape that allows the wall to thicken, creating a base out of the same brick material. This same effect can be achieved with special shapes or jobsite cutting. Outside corners will require special shapes.





Brick bases, as shown in these images can lend the appearance of rustication, as with stone bases.











Above: Water table is sloped to shed water and protect stonework below.

Below: Water table brick unit used in an all-brick base.

## 3.4. The Shaft

Each building shall have a "shaft" feature, the middle portion of the façade (onestory buildings) or the portions of the façade enclosing upper floors (multi-story buildings).

## 1. Materials

Brick, limestone, cast stone, or a combination of these shall be used within the shafts of buildings in the Traditional Campus Realm. In the Cultural Campus and Residential realms, stucco, wood, and metal may also be acceptable.

- A. *Brick*. Refer to §3.3.1.A for brick selection. Wall surfaces in the Traditional Campus Realm shall generally be brick although other materials may be acceptable in other realms.
- B. *Stone*. Refer to §3.3.1.B for stone selection.
- Limestone is used in the shaft area as trim (belt courses, pilasters, window and door surrounds, keystones, and quoins).
- Architectural precast concrete may be used in lieu of stone in the Cultural Campus and Residential realms.

Above: Base projecting outward from the shaft.

Below: Stone base with its own "base, shaft, and crown".

Right: The use of stone as a wall cladding at an accent area, such as the entrance of Gordon Palmer Hall is appropriate.

Below: At Nott Hall, as with many other campus buildings, the columned entrance is the core element on which the remainder of the shaft is designed.



- C. *Stone-like materials*. Refer to §3.3.1.C for stone-like materials selection.
- Oversize masonry units may be used as simple trim shapes in some Cultural Campus Realm areas and within the Residential realm.
- Use of stucco as a trim material may be acceptable in limited applications in the Residential realm.



#### D. Other Materials.

- Wood siding in residential structures in the Traditional Campus and Cultural Campus Realms may be acceptable.
   In the Residential realm wood siding and wood-like materials (cement bond plank) may be acceptable.
- Composite metal wall panels may be used in the Cultural Campus Realm.
   Panel color shall match that of stone or of windows/storefront; shall be flat (not corrugated); and shall be fabricated with stone-like reveal joints and profiles where appropriate.
- Metal siding is prohibited as an exposed wall material in any realm.

# 2. Composition

The primary components of the shaft include the wall surface, vertical pilasters, openings, ornament, and horizontal belt courses.

- A. *Symmetry*. In all realms, façade elements shall respond to the symmetry of the building.
- B. *Openings*. Arches or stone lintels shall be used to span wall openings.
- Wedge-cut brick shall be used with round brick arches to maintain consistent mortar joints.



• Use of stone as a surround with round arches is appropriate.



Example of a flat or jack arch used on campus.



- C. *Ornament*. Ornament shall be detailed using stone or stonelike material, brick, or metal as appropriate to the overall building design and context.
- Ornament should emphasize the order of a façade and embellish entrances. Use ornament to provide monumentality and human scale simultaneously.







Examples of stone ornament on campus.

- In the Traditional Campus and Residential realms, ornament shall be used to enhance the principal features of the façade.
- Ornament shall be applied to support the order of a building's façade, not distract from it.
- Use of ornament and horizontal belts shall enhance, not detract from, the hierarchy of a building's massing.
- Care shall be taken in ornamental detailing with brick due to weatherability of joints.





Examples of brick ornament on campus.



Appropriate uses of stone and brick belt courses in the Traditional Campus realm.





- Metal leader heads and downspouts shall be treated as integral elements of the building design, not afterthoughts. Appropriate materials shall be consistent with §3.8.2 (for roof metal).
- Wrought-iron and similar ornamental metal are appropriate for decorative features, such as sconces.
- D. *Belt Courses*. Belt courses shall be used to bridge the base and shaft, though they may also appear within the shaft. When there is a belt within the shaft, it traditionally occurs as an extension of a pedestal feature about a building's entry portico, or it separates an arcade from the wall surface above.

## 3.5. The Crown

Each building shall incorporate a "crown" element within the uppermost portion of the façade.

#### 1. Materials

- A. *Brick*. Refer to §3.3.1.A. for brick selection. Brick is used primarily as an extension of the wall surface such as in the parapet.
- B. *Stone and Other Materials*. Refer to §3.3.1.B-C for stone and other materials selection.
- Use of limestone in the entablature and other trim features is recommended in the Traditional Campus Realm.
- Architectural precast concrete may be used in crowns in the Cultural Campus and Residential realms. In the Traditional Campus Realm, it may only be used when the crown is no closer than 25 feet to grade.





Crowns of pitched and flat roofs on campus



There are many examples of crowns on campus that consist of a parapet-like element used in conjunction with a portion of the entablature. The parapet may be treated as a balustrade with its own three-part organization.

- In the Traditional Campus Realm, where stone or stone-like elements of the crown act as lintels, material thickness and joint design shall respond to the structural needs of a lintel.
- When designing architectural precast concrete cornices, joints that extend vertically through a cornice should be concealed. When using stone-like materials, obvious oversize pieces diminish the appearance of historical character.
- Stucco may be used as a crown material in the Residential realm.

#### C. Other Materials.

- In residential structures, the soffit and eave are part of the crown, and wood and metal profiles may be used.
- Metal gutter shapes may be used in all realms.



In many campus buildings only a portion of the entablature is extended around the building. Often it is the cornice, or derivation of it, that forms the crown. Sometimes, either the frieze or architrave is the portion of the entablature that becomes a part of the crown along with (or without) the cornice.

- Metal finishes should match the corresponding roofing metal (such as
- copper) or have a durable color coating selected to match the balance of the cornice.
- In the Cultural Campus and Residential realms, metal is an acceptable coping material. Color shall match stone, windows, or roofing metal color (refer to §3.8.2).
- In the Traditional Campus Realm, metal copings are allowed to substitute for stone if the color and finish are indistinguishable from stone from a distance of 25 feet.





A cornice constructed of limestone may have vertical joints offset from course to course.



# 2. Composition

- A. Composition by roof type. The composition of the crown shall be appropriate to the roof type.
- Buildings with pitched roofs shall have a crown composed of a cornice element at the eave.
- Buildings with flat roofs shall have a crown composed of the entablature and/or parapet.

## B. Composition by realm.

In the Traditional Campus Realm the elements of the crown shall be derived from the entablature over a building's principal entry or façade. At the eave of a pitched roof, the cornice shall be derived from the cornice of the entablature over the principal entry. In the absence of an entablature, the cornice shall be based on the cornice of a similar height consistent with the classical orders of architecture.

- In the Cultural Campus Realm, detail and articulation within the cornice may be reduced or deleted. Where present, detail should reflect the classical tradition.
- Parapets shall not project beyond the face of the shaft wall in any realm.
- In the Traditional Campus Realm,
  where a parapet is part of the building's
  crown, the parapet should resemble
  the three-part design of a balustrade or
  raised pedestal. The parapet shall recede
  back from the face of the exterior wall
  below the cornice.
- In the Residential realm, the projection and height of the cornice shall be based on the height of the shaft in accordance with the classical orders of architecture.
- In the Traditional Campus Realm, the vertical joints in a crown shall be staggered or concealed.



A product of the pitched roof design is the tympanum or triangular pediment at the gable end. Where it occurs, this element is part of the crown. The tympanum is surrounded by projections of the cornice profiles.

# 3.6. Fenestration

#### 1. Doors and Entrances

Entrances and doors shall be consistent with the architectural realm and building style.

# A. Openings.

- Doors should be inset from the exterior surface of the wall to accentuate the thickness of the wall.
- In the Traditional Campus Realm, main entrances should be recessed and project a monumental appearance.

## B. Door Style.

 In the Traditional Campus Realm, doors shall be custom architectural stile and rail with raised panels.



Appropriate doors and entryways in the Traditional Campus Realm.



- Aluminum stile and glass "storefront" doors shall not be permitted in the Traditional Campus or Residential realms but may be permitted in the Cultural Campus Realm if consistent with building use and style.
- In the Cultural Campus and Residential realms, doors shall be wood or metal, stile and rail with raised panels.

#### 2. Windows

Windows shall be consistent with the architectural realm and building style.

## A. Proportions.

- Subdivide windows into panes, which shall generally be vertical in proportion (between 5:6 and 4:7).
- In unique applications panes may be square, but never horizontal.

## B. Glazing and Size.

 All glazing shall be double-paned, insulated, and clear, except where due to programmatic constraints, tinted glazing is needed.

Typically, double-hung window jambs and heads on historic campus buildings are four inches wide (measured from the brick return to the start of the hung sash). Most sashes are a nominal two inches in width. This, combined with the jamb/brick mold dimension, is six inches and is referred to as the "sight line". Modern windows often do not maintain the traditional two inch sash width. A total six inch width is preferable. If a sash width is greater, then the jamb width must be less.

- Large expanses of glass are discouraged; however, some variation is acceptable within special building types in the Cultural Campus Realm.
- Minimize variation in pane size.
   Where applicable, the thickness of the
   horizontal member between a transom
   and window in a stacked window can
   be adjusted to maintain equal pane
   heights.



Above: Historic example of the stacked window design

Below: A retrofit on campus includes a stacked window, providing consistent pane dimensions, however, the mullions and muntins have no thickness on the exterior of the window.



#### C. Details.

- Inset windows from the exterior surface of the wall to accentuate the thickness of the wall.
- Mullions and muntins shall have the appearance of thickness from the exterior. Muntin width shall be no less than 7/8 inches and no less than 1/12 pane width.
- Sight line at head and jambs of window shall be the same. Sight line at fixed sash and operable sash shall be the same.
- Combined sill and bottom sash rail height shall be no greater than width of jamb sight line.
- Typical sight line on windows with (faux) operable windows shall be six inches.
- Minimum width of fixed glazing jamb / head shall be four inches.
- Avoid single-hung windows where there is a difference in apparent sash width.



## 3.7. Arcades, Colonnades, and Porches

When arcades, porticos, and porches are used in new building projects, the details and proportions of their classical antecedents should be considered.

#### 1. General Guidelines

- A. *Materials*. The following guidelines apply particularly in the Traditional Campus Realm. Variation elsewhere is acceptable.
- Cast stone and architectural precast detailing may be used (rather than limestone) where it occurs 25 feet or more above grade.
- Columns shall be of limestone.

## B. Proportions and Details.

- All visible vertical joints shall course and appear to be developed from structural need.
- When possible, stone columns shall be load-bearing or independent of the building structure altogether to avoid vertical joints required for wrapping structure.

#### 2. Arcades

- A. *Proportions*. In all realms, arcades shall follow Roman proportions. In absence of columns, openings should be no greater than 2/3 of the center-to-center dimension between arches.
- B. *Depth*. Provide sufficient depth within the arcade to allow passage and gathering. Generally, arcades shall be no less than eight feet deep.

#### C. Arches.

- All arches shall appear to be "live" (structurally sufficient).
- In the Traditional Campus and Residential Realm, arches in arcades shall be single or triple-contoured or flat (jack).
- Pointed arches are prohibited beyond the Gothic Revival area of campus.
- Single-centered arches shall be Roman (half round) or channel (segment) type.
   All Roman arches shall be stilted.

 When arches are used in combination with columns and entablatures, follow the classical orders.

#### 3. Porticos and Colonnades

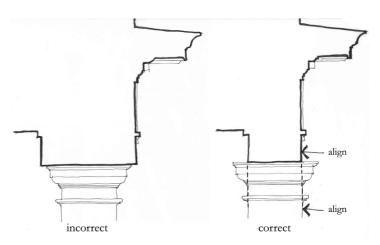
Colonnades and porticos shall only be used to serve a specific purpose such as to embellish a main building entrance and provide cover.

## A. Proportions and Details.

- Base proportions on the classical orders of architecture.
- In the Traditional Campus Realm, follow details of the classical orders of architecture.
- In the Cultural Campus Realm, detail may be removed from colonnades as long as the proportions remain consistent with the classical orders.

#### B. Materials.

 In the Cultural Campus and Residential realms, cast stone and architectural precast concrete may be use throughout a colonnade.



In designing colonnades, the architrave should be the same thickness of and aligned with the column at the necking.

- In the Residential realm, wood and wood-like materials may be used throughout a colonnade.
- Non-stone like materials may be used in the Cultural Campus Realm.

#### 4. Porches

Porches occur primarily in residential buildings and shall be constructed of wood, iron, or similar materials.

## A. Proportions and Details.

- In the Traditional Campus Realm on non-residential construction, porches shall be based on the classical orders.
- In the Cultural Campus Realm, proportions shall be consistent with the classical orders though detail may be abstracted or reduced.
- Within the Residential realm, detail porches in a similar manner as a portico, with columns and an entablature. Columns may be square and slender relative to classical proportions. The height of the base and capital should be in proportion with the overall height of the column. Column and entablature proportions of porches may be reduced in width while horizontal elements may be reduced in depth.

### B. Materials.

 In the Residential realm, wood and wood-like materials may be used in the construction of porches.

- In the Residential realm, painted steel and wrought iron may be used with porches. Color shall be black to match President's Mansion.
- In the Cultural Campus Realm, porches may be constructed of non-stone like materials. Color shall match trim or window.

#### 3.8. Roofs

The following guidelines are applicable to the visible portions of a roof. A roof is considered "visible" if it can be seen by an individual standing at grade from a distance of 1000 feet.

#### 1. Roof Form

Roofs should be conceived of as simple, functional shapes in the early stages of building design and become articulated as the building design takes shape to accentuate important features of the building.

A. Favor Simplicity. The design of the roof should not be "busy" or unnecessarily complicated. Roofs should be subordinate to the design of the building.

- B. *Pitch*. Roof pitches shall be consistent with that of buildings in the project's contextual area.
- High, narrow buildings can support steeper roof slopes; steep roofs should be avoided on low, wide buildings.
- Roofs of low, wide buildings should have no visible slope, or they should have a parapet or partial hip/faux mansard roof to disguise or conceal roof slope.
- Acceptable slopes for visible pitched roofs will range between 5:12 and 8:12. Shallow (faux mansard) roofs and equipment screens may be as steep as 12:12 when placed behind a parapet.

#### 2. Roof Materials

- A. *Pitched Roofs*. Materials for visible, pitched roofs shall be consistent with the following:
- Slate: Natural gray to black slate is the most historically appropriate.
- Steeper pitches are appropriate, like that of Tuomey Hall, in Gothic Revival buildings including those around the Woods Hall Quad.



- Simulated Slate: Three-dimensional, synthetic slate shingle that matches the gray to black color of natural slate is an acceptable alternative to slate. Similarly, cement fiber or recycled rubber products may also be an acceptable slate-like alternative.
- Asphalt shingles fabricated to provide "slate like" appearance within the natural gray to black color range are acceptable.
- Metal: Pitched, metal roofs shall be not be permitted in the Traditional Campus Realm except in accent applications and on isolated roof elements, such as narrow roofs above pediments within a façade. Acceptable metals include copper and "terne coated" steel (TCS). Copper has no substitute; however, it may be replaced by steel or aluminum panels in long lasting coated finish of similar color.
- Multi-tab shingles simulating wood shake, clay tile, and other non-slate material are discouraged.
- B. *Special Roof Shapes*. Materials for other visible roof forms such as domes and vaults, shall be consistent with the following:
- Metal: Flat seam and low profile standing seam metals of approved material are acceptable.
- Stone: Beyond the Traditional Campus Realm, a single-ply white to light gray membrane may be substituted, provided the seams, when visible, are placed to simulate stone.



- Slate-like materials as covering for domes, vaults, and similar roof elements are discouraged.
- C. Shallow Roofs and Screens. Use the following on shallow roofs and equipment screens occurring behind a parapet:
- Slate-like shingle may be used where slope does not exceed 8:12.
- Metal of approved type may be used where slope ranges between 5:12 and 8:12.

## 3. Roof Appurtenances

A. *Chimneys and chimney-like structures*. The size and shape of non-functional, decorative chimneys shall match that of a functioning one. Visible portions of chimneys should respond to gravity, narrowing upwards. Visible chimneys should be of masonry construction with brick or stone articulation at the crown.

- B. *Dormers Windows*. Dormer windows shall include the window, window casing, and a triangular tympanum or arched pediment.

  The sides of a dormer shall be clad consistently with the main walls within the crown. Pitched roof dormers shall be consistent in slope and material with the main roof. The roofs of arched-top dormers shall be of approved metal in either standing seam or flat seam construction.
- C. *Dormer Vents*. Dormer vents shall typically be the half-round type, as seen in the Traditional Campus Realm, and metal-covered. Copper is common in the Traditional Campus Realm.
- Retrofitting existing dormer windows as vents may be acceptable in certain projects. The casing and tympanum shall be consistent with that of dormer windows.
- As an alternative to the half-round design, dormer vents in new buildings may be designed similarly to dormer windows within the same project.