
APPENDIX:

CAMPUS AND INSTITUTIONAL DISTRICT STANDARDS

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INTRODUCTION

The South Jefferson Redevelopment Area Campus and Institutional District Standards are a supplement to the South Jefferson Redevelopment Area Design Guidelines, and apply to the Campus and Institutional District, delineated in the South Jefferson Redevelopment Area Design Guidelines. Questions concerning these standards or the overall design guidelines should be directed to Mr. Dann Campbell, Project Manager, Roanoke Redevelopment and Housing Authority (540-983-9201). This separate document was created for independent distribution. The original document of the South Jefferson Redevelopment Area Campus and Institutional District Standards contains actual samples, which can be viewed at the RRHA. It is recommended that your architect work from the original boards when specifying materials for the Campus and Institutional District.

SUSTAINABLE DESIGN

Basis

It seems an appropriate assumption that an institution dedicated to making life better would capitalize on every opportunity to act with environmental responsibility. The design of buildings and grounds will be held to a common standard, available in the new Leadership in Environmental and Energy Design (LEED) System. This system is fast becoming the national standard to evaluate and continuously improve the environmental responsibility of the built environment.

Many of the biomedical technology systems could be good candidates for sustainable design, if these ideas were considered during the design and operational phases of development. The system is more fully described on the internet site of the U.S. Green Building Council (www.leedbuilding.org) or (www.usgbc.org).

Achievement Level

All buildings and site plans of the Campus must achieve the LEED Certificate level of achievement (26 points), and should strive for a Silver Level of achievement (33 to 38 points). Formal certification of the building is not required.

BUILDING ENVELOPES

Public and Semi-public Space

The rhythm, spacing, and setback of buildings on the south side of Reserve Avenue are consistent with urban campus design. The new Reserve Avenue provides a large boulevard which hosts green areas with occasional institutional buildings, and athletic facilities, set back from its edges and landscaped. The facades of new Campus buildings facing Reserve Avenue must reflect this inviting front façade character of the public side of the institution. The architect must consider both the image of this institution to the region as well as the Owner's program within the facility in striking this balance.

Pedestrian entrances on Jefferson Street and Reserve Avenue are desirable if it is consistent with the building program. Facades will address Reserve avenue pedestrians through punched window openings and façade fenestration, providing occupied uses toward these streets. Consideration should be given to creating transparent common spaces within the building facing Reserve Avenue and Jefferson Street. Lobbies that extend through the building will also have openings towards these streets.

Cloistered Green

First suggested in the 1999 illustrative master plan for the Carilion Biomedical Campus, the 33 acres comprising Site I redevelopment envisioned a campus-like setting of buildings situated along the perimeter of the site focused on a central green space. The 2003 Carilion Master Plan is illustrated below.



The central green on this Campus is much smaller than its predecessors in Charlottesville or Blacksburg. The diminutive size of this green provides heightened importance that it be designed with attention to detail and built in its entirety.

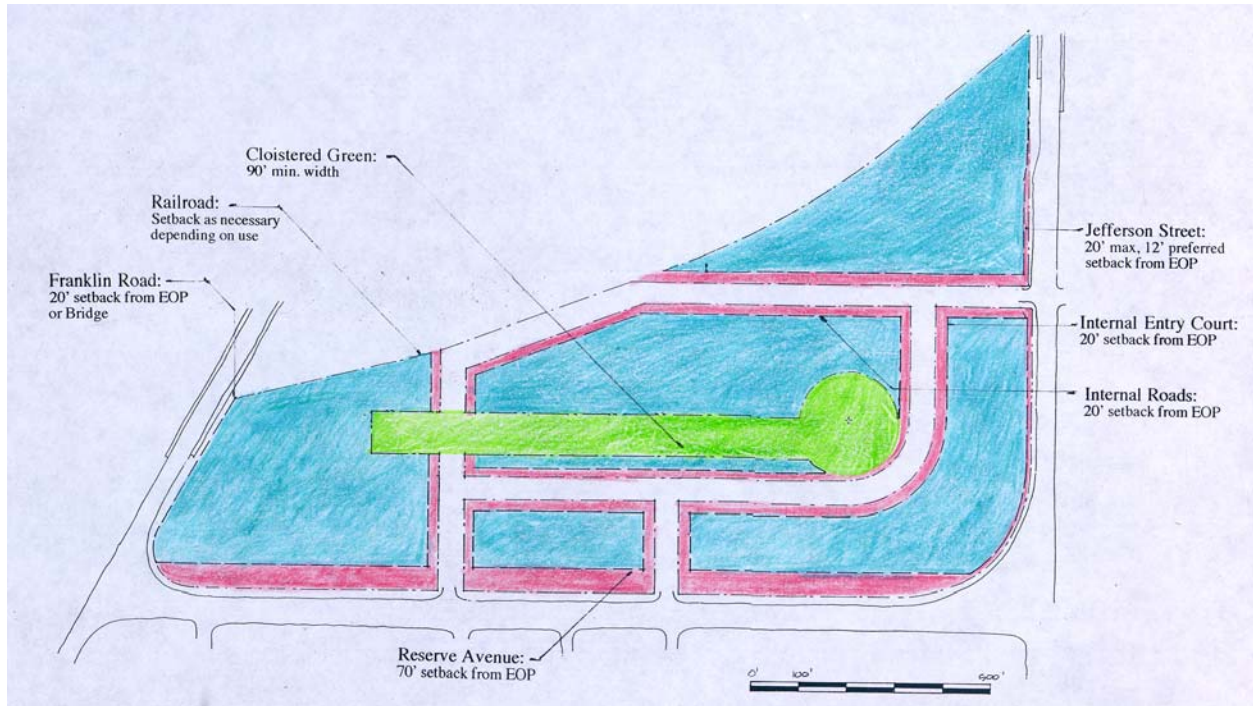
Articulated as an elevated enclave, the central green will provide a landscaped pedestrian plaza linking each of the campus' buildings at the first occupied floor level. While providing an elegant amenity enhancing both the visual aesthetic of the campus and opportunities for social and business interaction, the elevated enclave also covers ground level parking below. The enclave is situated to allow the primary vehicular boulevard below to remain open air allowing visual communication between the two levels and enhancing orientation and wayfinding. The boulevard itself is bordered by a ceremonial green with a small plaza and fountain. The 120-foot wide enclave extends from the anticipated hotel site at Franklin Road to the office/laboratory building envisioned at the northern most edge of the site along Jefferson Street. It is freestanding and linked to each building by a bridge element. Planters, fountains, and landscaping are set within the decoratively paved plaza to humanize the space and create a park-like setting.

Street Network

The street network proposed in the South Jefferson Redevelopment Master Plan is important as it provides a network of streets for public convenience, service, and emergency circulation. Streets are derived from existing public rights of way, supplemented by linking roads along the tracks and at the western end of the Campus. All improvements will be restricted by these public rights of way, as described in the Building Envelopes Section. Streets will conform to City of Roanoke Standards.

Building Envelopes – Plan

The figure ground diagram shown indicates dimensional envelopes for buildings, leaving space for the Green, setbacks, and roadways.



Building Envelopes – Elevation

The longitudinal elevation along Reserve Avenue indicates dimensional minimum and maximum heights proposed for buildings, leaving space for setbacks and roadways. In design and development of structures for this Campus, the following apply:

Guidelines for Central Campus (between Jefferson Street and Franklin Road)

Buildings fronting on Reserve Avenue shall be between 60' – 90' tall. Floor Area Ratio shall be 2.0.

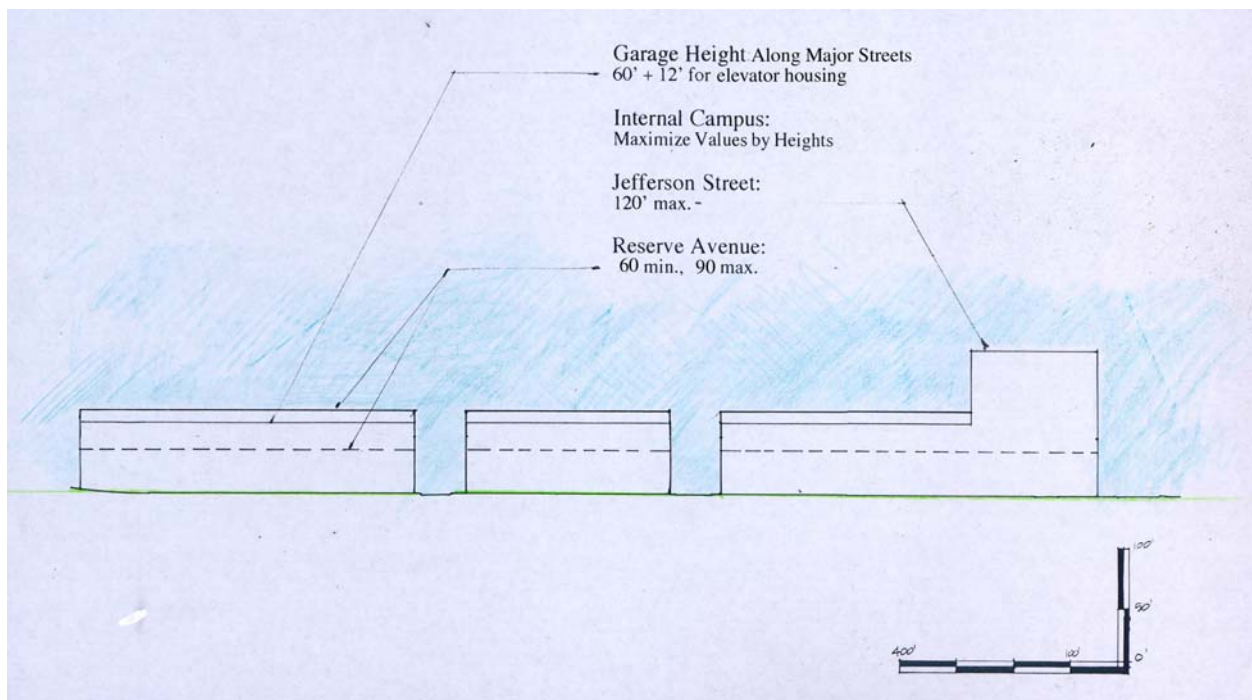
Buildings fronting on Jefferson Street shall not exceed 120' tall. Floor Area Ratio shall be 3.0

Buildings not fronting Jefferson Street or Reserve Avenue may be taller than 120' to maximize their value while not imposing on housing. The maximum height is 140'.

Buildings at Jefferson Street and Reserve Avenue shall have a minimum of four occupied levels above parking.

Buildings not fronting on Jefferson Street or Reserve Avenue and located within the interior of the Central Campus shall have a minimum of 8 occupied levels above parking.

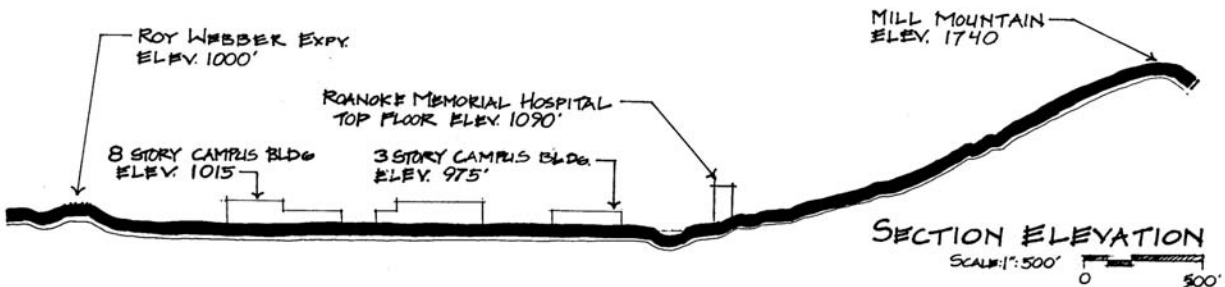
Unlike most areas of the city, including downtown, there are not adjacent neighborhoods to be concerned about heights. Courtesy height limits should be considered only when blocking other campus views, or distant neighborhoods' views to Mill Mountain.



ROOFTOPS

Preliminary Rooftops Guidelines

Given its location in the floodplain and the elevated position of adjacent roadways, buildings, and landmark properties, much of the South Jefferson Redevelopment Area can be seen from above.



Roofs of penthouses, elevator hoist ways, or stairwell structures are encouraged to become part of the architectural form.



Roof penetrations and equipment should be screened with raised parapets and architectural structures to complement area design and definition of the building.



Telecommunications equipment, satellite communications equipment, solar panels, and other related and/or exposed technology is encouraged to become a contributing architectural form rather than screening these devices.

Coping at the top of parapets shall be pre-cast concrete, or aluminum to match roof color.

Roofing on pitched roofs shall be dark, anodized aluminum or painted charcoal gray in color.



All pitched roofs will be no shallower than a 6:12 pitch.

Gable end louvers shall be treated as an architectural element.

Pitched roofs are preferred over flat roofs. EPDM Roofs should be adhered but not ballasted.

Where flat roofs are necessary, the use of parapets and other architectural forms along the building perimeter is encouraged.

Large expanses of flat roof area should be avoided or broken up with multiple roof levels and architectural elements.



BUILDING MATERIALS

Modulation and Order

Typical of well-designed classically-inspired campus buildings, the buildings of the Reserve Avenue campus will express a clearly defined base, middle, and top. On the sides that face public streets (Jefferson, Franklin and Reserve, punched window openings are required in lieu of curtain wall, strip windows or other methods of fenestration.

Materials

The simple palette proposed below is meant to resist the natural tendency for fragmentation of campus elements, and to build on an opportunity for coherence and cohesion in the new campus.

Brick masonry is the primary construction material, accented by non-reflective windows and pre-cast or limestone elements, such as window heads and sills, masonry coursing, medallions, etc. A small module of elements is preferred, with surface relief to express the handmade qualities of these materials. Entries and windows shall be recessed from the building's skin, articulated with architectural projections and shadow lines, to provide a three-dimensional quality to the surface of the building.

A clear hierarchical arrangement of spatial sequencing is required to greet the public and the visitor, the employee, and the automobile. A distinct hierarchy of entrances should be expressed within the building, calling attention to public and visitor entrances, providing safe employee and service access, and separating vehicular circulation and access from pedestrian movement.

The building façade at the ground level parking beneath the building must be developed in a manner consistent with the rest of the building. Using similar elements, it must be inviting and pedestrian-scale in its appearance. Further, it should enhance the pedestrian environment by screening the parking area and bringing the building's architecture to the ground.

Brick

Brick is a modular material that embraces a building with a human scale level of comfort. It conveys permanence and tradition and is often a basic element of the campus contextual environment. Victory Stadium, Carilion Roanoke Memorial Hospital, and the existing Reserve Avenue buildings provide a remarkably coherent basis for use of orange-red brick in campus buildings, reflecting over a century of local building tradition. Standard modular-sized brick is the predominant component of these major buildings, and it is required as the predominant component of the new Campus buildings.

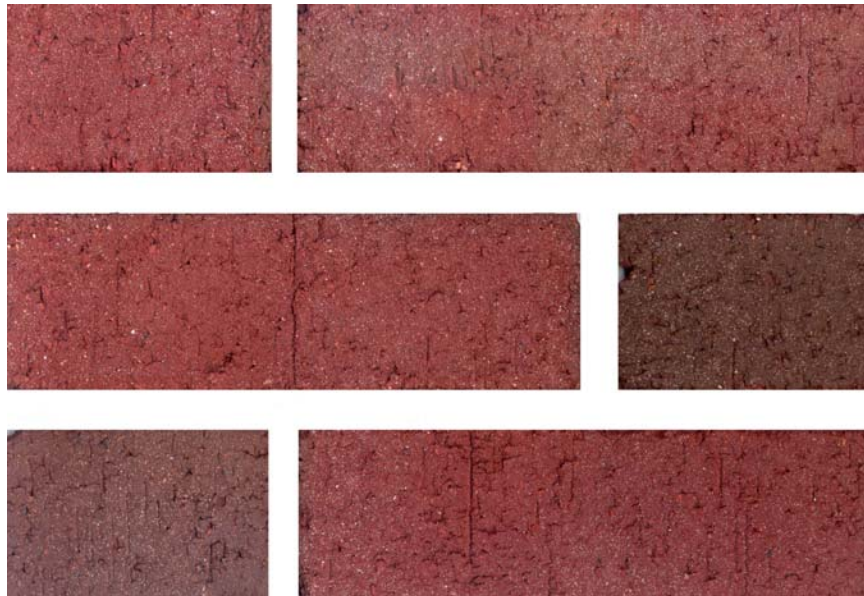
Used with plain cement, mortar color should complement the pre-cast. The preferred brick for the Campus area buildings is:

Poplar Forest Blend, Shenandoah Series, manufactured by Old Virginia Brick Company, Salem, Virginia

Alternative matching bricks are:

Raleigh Court Series, 30-10-591,
manufactured by General Shale
Company, Roanoke, Virginia

Old Colony F.R., manufactured by Pine Hall Brick Company, Winston-Salem, North Carolina



Pre-cast and Limestone

Expressive elements on buildings and site work will be matching Indiana Oolitic limestone, or matching color pre-cast or cast stone, available locally. Architects are encouraged to explore creative use of these products to detail buildings and articulate fenestration without adding a tremendous cost.

The preferred pre-cast colors for the Campus buildings are:

ACP-8 and ACP-14, manufactured by Architectural Concrete Products,
Daleville, Virginia

These pre-cast colors can be matched by:

Miscellaneous Concrete Products, Roanoke, Virginia, or other pre-cast suppliers.



Glazing

Advancements in glazing the past decade have dramatically reduced energy loss, enabling much larger surfaces to be glazed. At the same time, glazing panels have become darker, mirrored, and colored, which has worked to isolate the interior scene from the outdoors. A certain level of transparency is desired, as it better connects the people of the Campus. The Campus's glazing strives to balance efficiency with transparency. It is reasonable to assume that in the near future, further advancements (as seen in the new PPG Solarban 60 series) will better improve visibility to complement recent energy gains. It is inappropriate to lock into a specific type of glazing for cross-campus application.



The glazing for the campus buildings should share these criteria:

Gray to gray-green tint

Where appropriate for energy needs:

50% + solar energy block

0.25 or greater U value



Mullions and storefronts should be natural anodized finish, or black in color.



SITE MATERIALS

Landscape Setting

Located in an area of the city with a river, ball fields, and trails, and set against a mountain, this framed setting for a landscaped campus is rarely matched. The opportunity for private development is to reclaim each blighted site and reset its quality level within this greater regional presence.

While the activities within buildings may be private, it becomes the responsibility of the landscape to visually and spatially accommodate the pedestrian, the visitor, and the community at large. Expression of quality and clarity within the landscape will go a long way toward regional acceptance of the institution.

Materials

The simple palette proposed is meant to resist the natural tendency for fragmentation of campus elements, and to build on an opportunity for coherence and cohesion in the new campus.

In order to facilitate future reconfiguration and repair while maintaining consistency of finish and appearances, black asphalt roads and parking areas with natural gray concrete curbs and walkways are desired. Dipped curbs with handicapped ramps may be demarcated with gray-pebble exposed aggregate concrete.

Modular Pavers

Some special pedestrian and vehicular areas offer distinctive opportunities for pre-cast concrete pavers. These pavers may be used in installations demarcating porte cocheres, the sidewalks around the cloistered green, around fountains, and in plazas. Pavers will be sand or asphalt set to allow for easy addition to utilities below. Double soldier courses of 4" x 8" nominal units will be found in all paver installations.

The preferred pavers for the Campus are:

A blend of 50% Capital Blend #83, 30% Westover #72, and 20% Terra Cotta #58, manufactured by Gorla Enterprises, Inc., Greensboro, North Carolina.



Other alternative matching paver systems are manufactured by:

Interlock Pavers, manufactured by Interlock Paving Systems, Inc., Hampton, Virginia

Hanover Prest Bricks, manufactured by Hanover Architectural Products, Inc., Hanover, Pennsylvania

Site Lighting

Site lighting should provide safety to vehicular and pedestrian areas, and accent features of the buildings and landscape on the Campus. Site lighting should also contribute to, and not detract from, the Campus during daylight hours. There are three types of site lighting that will predominate on the Campus. Large parking lot poles should shine light down into the lots, and not broadcast light beyond the boundaries of the site. These lights should be minimal in their own presence. Uplights to accent planting, signage, and building should be concealed to better feature their highlighted elements. The third type of light, the pedestrian accent light, should contribute sculpturally to the overall design scheme. All light poles will be tapered, round and black in color, and will be mounted so that their base is at ground level. Exposed light foundations are not permitted. All light colors will be consistent, using metal halide or approved equal color-correct light source.

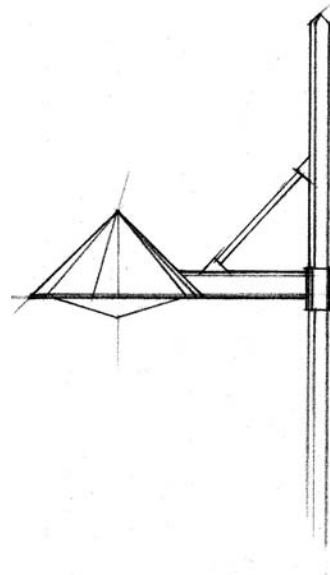
The preferred light for parking lots within the Campus include:

Models 8821, 8881, 8822, 8882, 8823, 8883, 8824 and 8884, manufactured by BEGA Products Inc., Carpinteria, California.

Single or double fixtures are recommended, between 16' and 26' in height.

The preferred light for pedestrian and plaza areas within the Campus is:

CF7 Series, manufactured by HADCO Products Inc., Littleton, Pennsylvania. Single fixtures are recommended, between 12' and 15' in height.

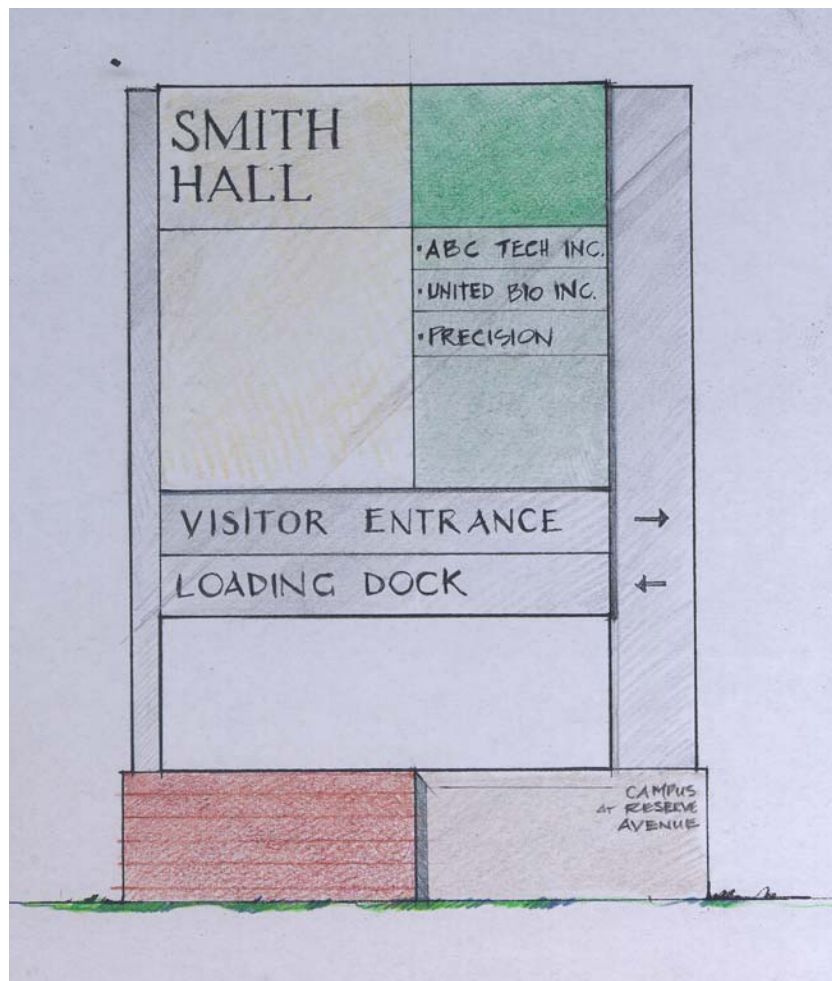


Lighting for Reserve Avenue and other exterior municipal improvements will complement this lighting with the Standard Downtown fixture.

SIGNAGE

Modulation and Order

Signs on the Campus respond to the need to direct visitors and employees. As described in the design guidelines, buildings in the Jefferson Street Corridor are encouraged to announce themselves with the building as icon. Avoid fabric awnings. Identification on the crown of the building, similar to that downtown, is encouraged to provide individual identity. The preferred method is surface mounted letters of Times Roman or Helvetica style with a backlit “halo.” Letters should be of a compatible scale with the building. In contrast, the buildings on the Reserve Avenue area of the Campus must defer to the larger order of the institution. Ground level monument signs described in the guidelines are allowed to announce each building fronting Reserve Avenue. Monument signs are also allowed adjacent to spaces on the Campus.



A second type of sign on the Campus is a small sign that denotes rules for traffic movement. Parking and traffic directional signs shall be consistent throughout the Campus.

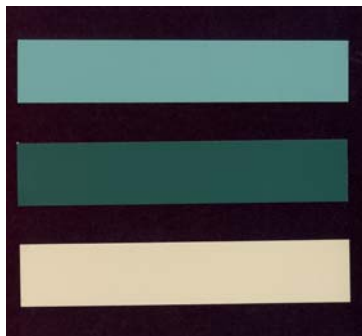
The preferred monument signage system for the Campus is:

The Compass Series, as manufactured by ASI Sign Systems, Inc., Dallas, Texas.

All signs will be mounted on a 2'4" tall base using brick and pre-cast as shown.

The logo for the Campus will be provided.

Colors for the background are Brushed Aluminum, Anodic Black, and Cream. (See below.)

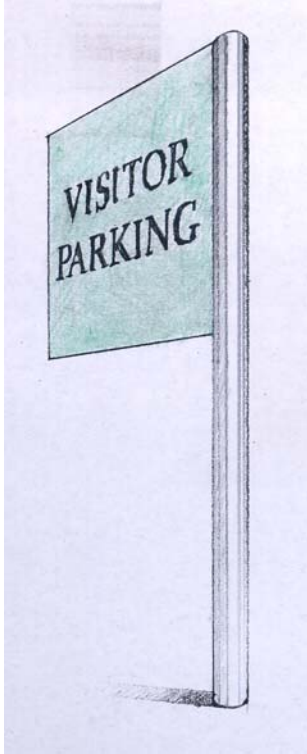


Predominant colors for letters and business logos are Federal Green, Light Teal and Black in Times Roman Typeface

Alternative matching signs are manufactured by:

Changeable Word Bar System, manufactured by Charleston Industries, Inc., Elk Grove Village, Illinois.

Custom Architectural Signage, manufactured by Signage Systems, Inc., Thomasville, North Carolina.



The preferred parking and directional signage system for the Campus is:

The 225 Series, featuring flush face flag signs on extended radius posts as manufactured by Charleston Industries, Inc., Elk Grove Village, Illinois.

Color for posts is Black Anodic

Color for the background is Brushed Aluminum.

Color for letters is Federal Green.

Times Roman Typeface.

TREES AND PLANTS

Planting on the Campus responds to two forces. First is the rare opportunity to emulate planning patterns of the two great host universities. Planting will also need to conform to the peculiarities of the compacted floodplain soils, along with the urban characteristics of this property. As with other elements of the Campus, a consistent framework of plants provides cohesion within parking areas, and the cloistered green, around buffers and along foundations. Planting around entrances is encouraged to be distinct and individual.

The required canopy tree for parking lots within the Campus is Japanese Zelkova.



The required canopy tree for the cloistered green is London Plane Tree. For accent purposes, this should be the only place this tree is used.



The required flowering tree for the cloistered green is Allegheny Serviceberry.



The preferred foundation plantings for buildings are American Boxwood and azaleas.



The preferred screening trees for railroad and other buffers are American Arborvitae.



The preferred groundcover is English Ivy (in planters), periwinkle, or pachysandra.



A preferred flower for edges and buffers is Black Eyed Susan.

Consider these entrance and other accent trees, successful on both the UVA and VPI campuses:

Purpleleaf Plum, Flowering Dogwood, Eastern Redbud, Washington Hawthorn and American Holly.