An Addition to the Virginia Tech School of Architecture

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AN ADDITION TO THE VIRGINIA TECH SCHOOL OF ARCHITECTURE

Sandra Lynne Morris

ABSTRACT

This project is an addition to Cowgill Hall, the building that houses the College of Architecture on the Virginia Tech campus. Cowgill Hall is located on the north edge of campus, on a direct northern axis with the centerline of the campus drill field, which is the heart and center of the Va Tech Blacksburg campus. Cowgill Hall is a 4 story concrete and glass structure, built in 1969, with a dry moat-like hardscape on three sides around it and a wide bridge connecting the building at the second level to the campus via a large plaza.

My solution was to use the bridge as the way to connect an addition to the existing Cowgill Hall building. By extending the bridge the axis is also extended, and the addition can become a terminus to the axis. I wanted the addition itself to promote and enhance the Va Tech School of Architecture methodology of design education, which is that of constructive exploration and student collaboration. Being able to observe the design process of other students seems to be fundamental to design education. Therefore, I sought to provide a design that would enhance the student’s experience of a daily architectural education. The student experiences the building through a variety of pathways vertically through it, that path being a progression also of daylight to darkness, openness to closed, public to private. The path begins at the plaza, where the bridge takes the student from the campus into Cowgill Hall. My design extends the path out the other side of the building, creating another bridge. The addition is a semicircular four story form with a radial pattern of stair towers, with a slight skew and offset which serves to enhances a tension between the original Cowgill Hall building and the addition and thus become a dynamic large-occupancy gathering space and open lecture hall.

The building structure is concrete and waffle slab. The exterior is two layers; the outer one comprised of stone and concrete, the inner one comprised of glass and steel. The building in plan is surrounded by ramps rising up and to the east, and the outer layer of the exterior supports a series of stacked and parallel ramps, which serves as one method of navigating the building vertically; one path. Always above the ramp is the inner layer, which consists of a slim-profile steel curtainwall glazing system. As the ramp moves towards ground level, the stone and concrete cladding peel away and the curtainwall expands, allowing more daylight and views in the desirable direction towards the mountains.

The stone cladding is topped by precast concrete panels, the stone rising to the underside of the highest perimeter ramp on the building, which peels away as the building rises from the ground. The cladding consists of precast concrete and Virginia Bluestone, which is the stone most buildings on campus are built with. The bluestone is rough cut and heavy, and anchors the building to the site. Precast concrete tops the bluestone, aligning with the ramp, and easily allowing punched-openings to align squarely with the slope of the interior ramp system. The outer layer being heavy masonry grounds the building while giving it the mass and distinction that the surrounding Virginia Tech campus requires.

The project’s vertical structure is comprised of radial concrete walls which are in pairs. They support the waffle slab floor and roof structure, while housing the stairs. Movement inside the building vertically may be accomplished through any one of these radially located stair towers, which differ in their degree of solidity. Depending on the mood of the student or the educator, the path vertically can be chosen by the personal desire to be seen or to see others. One can sneak quietly or strut through the building openly. One can look through the stair walls to the student desks below and observe while being observed, or observe discreetly and without being intrusive. The path through the building is experiential, while the progression of spaces in the building provide unique and appropriate arenas for private introspection, collaboration and group learning.

The spaces in tension create gathering spaces for education and reflection. The whole promote movement, observation and interaction.
ACKNOWLEDGEMENTS

To Jaan Holt
Who believed in me
no matter how many years had
passed. Thank you for your
poetry.

To my daughters
Delaney and Sydney Hunter
Never give up, never surrender.

In memory of Tom Regan,
Who looked beyond my grades
one summer and invited me to
join the college of architecture.
“Away with the sourpusses, the wailing Willies, the sobersides, the brow furrowers, the eternally serious, the sweet-sour ones, the forever important!

“Important! Important!” This damned habit of acting important! Tombstone and cemetery facades in front of junk shops and old clothes stores! Smash the shell-lime Doric, Ionic and Corinthian columns, demolish the pin-heads! Down with “respectability” of sandstone and plate-glass, in fragments with the rubbish of marble and precious wood, to the garbage heap with all that junk!

Let the dusty, matted, gummed up world of concepts, ideologies and systems feel our cold north wind!”

Bruno Taut
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PROJECT SITE AND ORIENTATION ON AXIS THROUGH CAMPUS
Project site: south of existing building
The Virginia Tech School of Architecture and Urban Design
Cowgill Hall
Blacksburg, Virginia
“The Plan is the generator. 
Without a plan, you have lack 
of order and wilfulness. 
The Plan holds in itself the 
essence of sensation.”

Le Corbusier
FORM
Control sun/sun!

Amplifies towards Smith.
Top floor set back to receive sun.

An implied connection to the existing building.
An intermediate space between student and administration.
A place of high activity and seduction.
A control point of reference and interest.
A place of vertical circulation.

A continuation of the central grid with deviation and orientation.
A place of secondary axes, bridge to pay homage to the Kangill entry.

An experimental pathway.
A path of light, shadow and activity.
A path from town to campus.
A path through the study of architecture.

THE BUILD GETS ITS RICHESNESS FROM THE RECYCLING OF MATERIALS.

ENTRY 4

IMPULSED PATH OUT FROM BUILDING TO Carry Axes or Existing Bridge.

STRUCTURE: concrete.
RADIUS: 20°
STAIRS: 35°
EXPERIENTIAL

path to plaza into building from south campus
Library to be provided
8 - 15,000 sf (separate entry)
2 large main studies
with gallery / lecture
spaces
14 - 18 ISO sf offices for
prof.s
graphics and pottery studios
1 - 4,000 sf
Toilets on floor
provide primary, secondary
+ tertiary indoor +
outdoor experiences
roof garden, lots of sun

Does radial structure require
radial exterior? Facade framing?
wall pattern?
Does radial geometry need to
be experienced on every
floor?
Should main level be an issue?
Does bidg address the
connected parking lot?

GALLERY RADIAL SPACE
SECONDARY
VERTICAL CIRCULATION:
TERTIARY
Bldg. experience zone
(Primary) inside
bridge, secondary outdoor
Plaza, primary outdoor
roof garden, tertiary.
PATH
PUMP

What leads up to pump landing @ each floor?

Hc Ramps = 5° or 1:12
Max public ramp = 1:10 = 6°

CIRCULATION

14' F.T.O.F.
14' x 12' = 14' x 14' = 100'

F.T.O.F. Hc Ramps = 10°
5 to R public ramp = 140°

* Carve holes out of skin - not punched
* Change structure to orthogonal
* Accept consequences of radial structure
* Put homage to Goddell (Axis)?
* Stone skin, Conc. structure

Open entire buds to sun?
Concept

MODEL
CIRCULATION
* RAMP & STAIRS
* ROOF

why do design ideas repeat themselves?

BOOK
Elements of design principles:

idea decision
doubt
reverberation
uncertainty
confusion
process
detail:

creative
30

Details:

1) There shall be one place in
   likely on 2nd fl. where an
   edge of a structural wall
   will be visible (each floor)
   with a shaft of light
   from roof to highlight it.

2) Looking up at wall
   @ stairway cutout

Guided partition

duct, wire screen
wood? ledge
11/12
TENSION
STRUCTURE
Mechanical systems
Structural systems
Materials
Enclosure
Connection
Interior lighting
Continuity

duct pattern
How do ducts and columns meet?

columns

mechanical
structural
electrical

Lighting and wiring

double wall
Serves as light "director"
Mechanical system housing
Circulation
Semi exterior

Semi exterior
DAYLIGHT
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