

ICA

(Institute of Contemporary Art)
VCU, Richmond, Virginia, USA

Precedent Studies

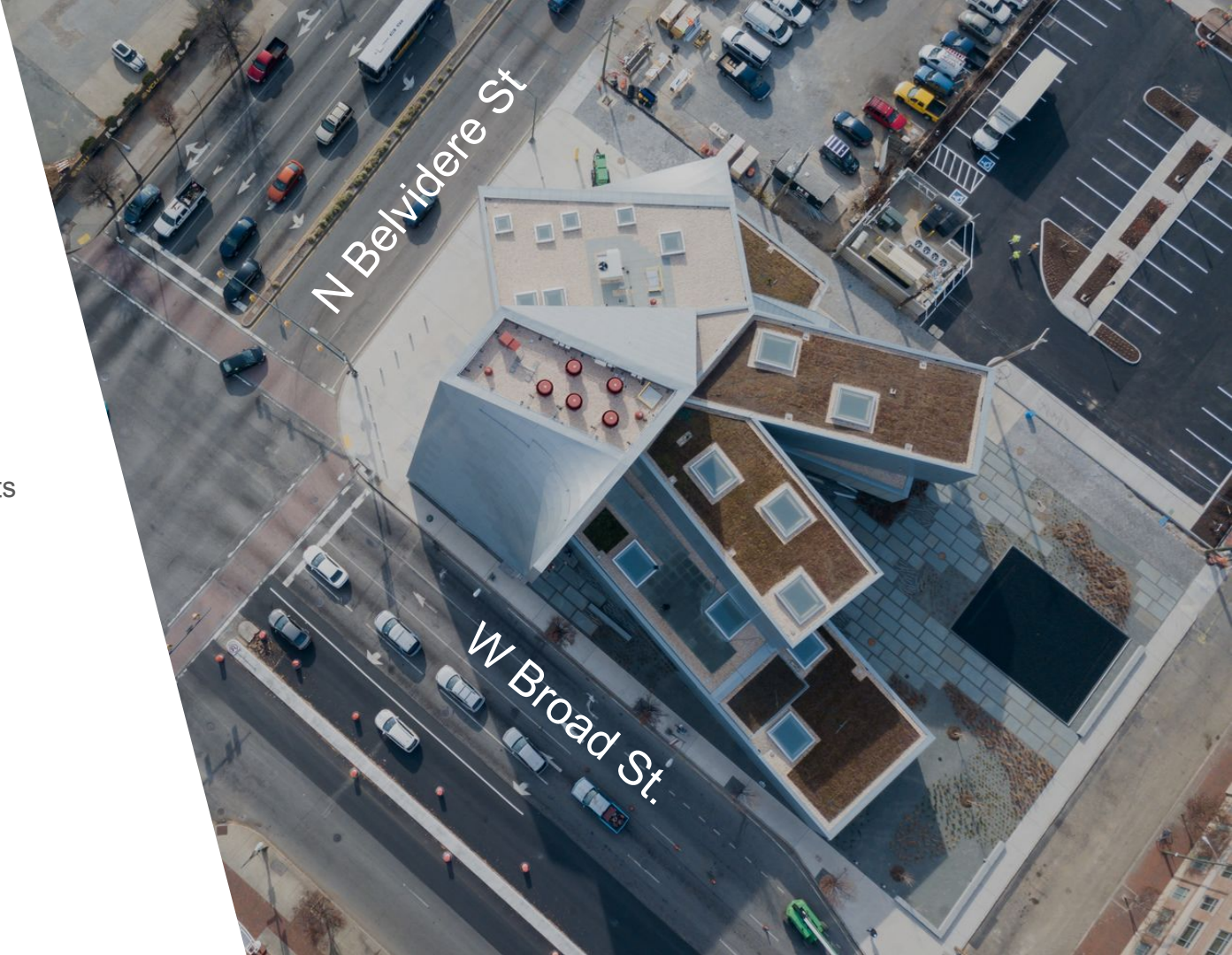


Introduction

Architect : Steven Holl Architects

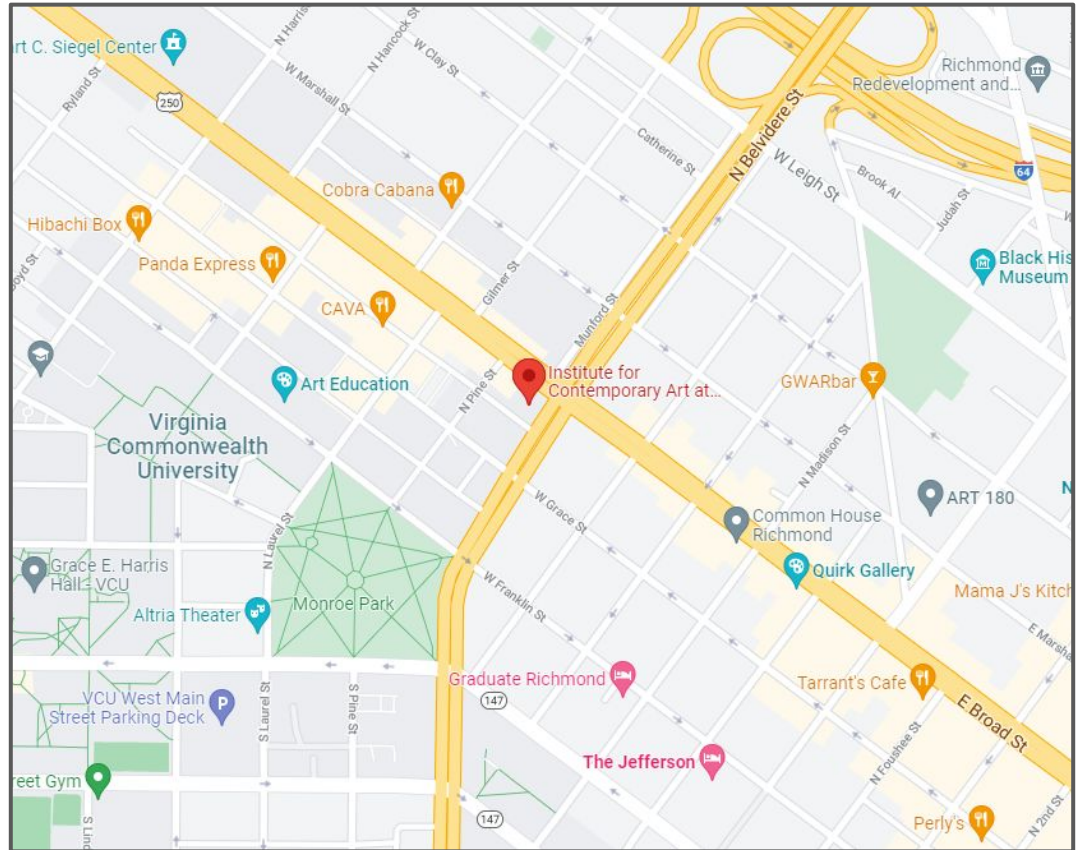
Area : 41000 ft² / 3809 m²

Year : 2018



Location

- Located within an urban context of Richmond, Virginia
- Location at the intersection of 2 busiest streets of Richmond



Location

- ICA is the hinge point Virginia Commonwealth University with Richmond

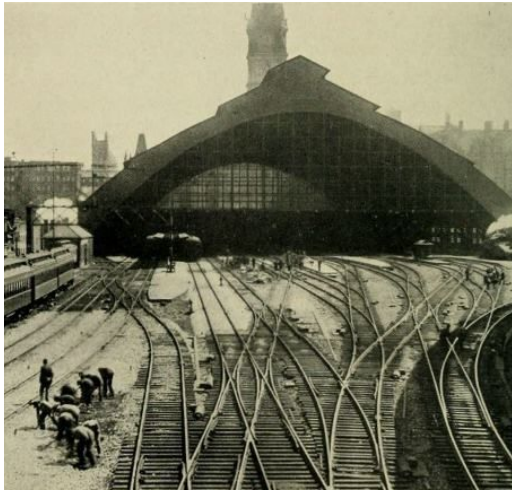
VCU



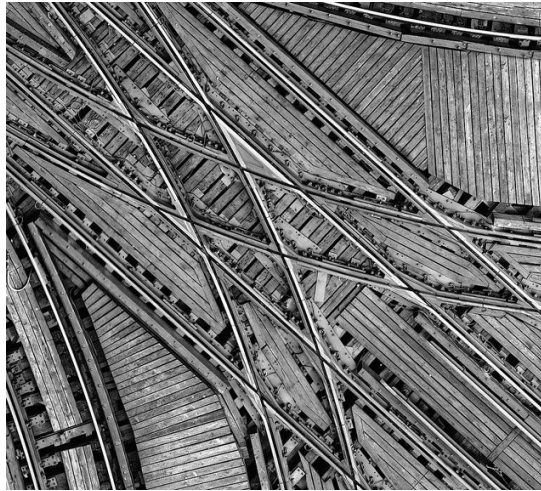
Richmond

Architect's Statement

- Relate to historical context - train station in Richmond
- Geometry of train tracks intersecting



Broad Street
Train Station



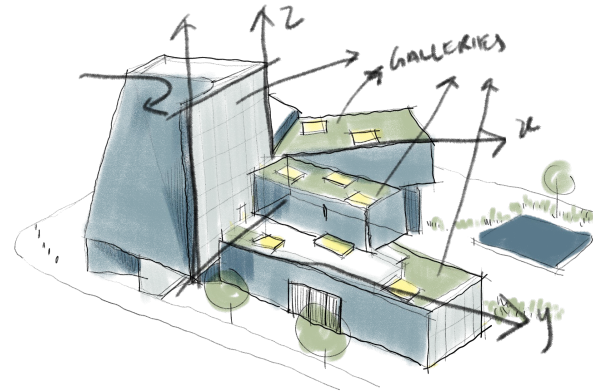
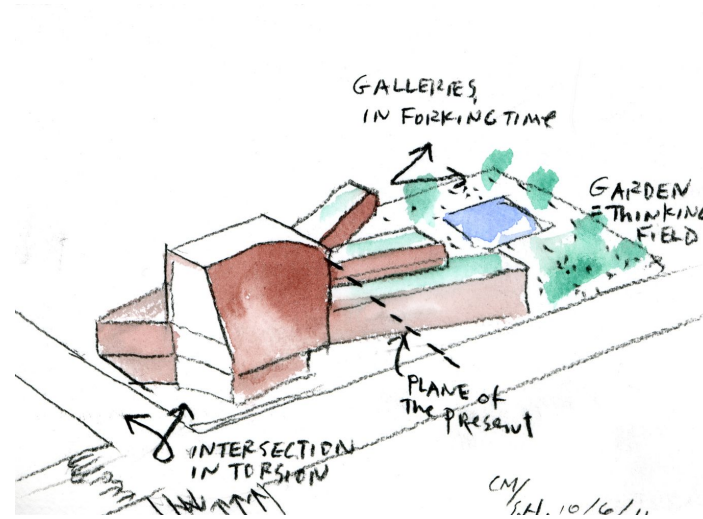
Intersection of
train tracks



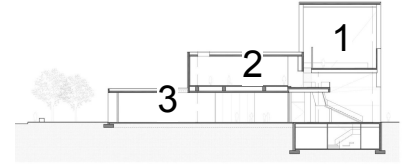
Relationship of
intersection

Architect's Statement

- The geometry and historical context developed into idea of Forking of Time
- The Plane of Present connects 2 facades, Urban Facade & Garden Facade
- Forking of time does not limit to 2 plane axis, involves with vertical axis as well
- Represents different disciplinary of arts developing from the present, at the same time

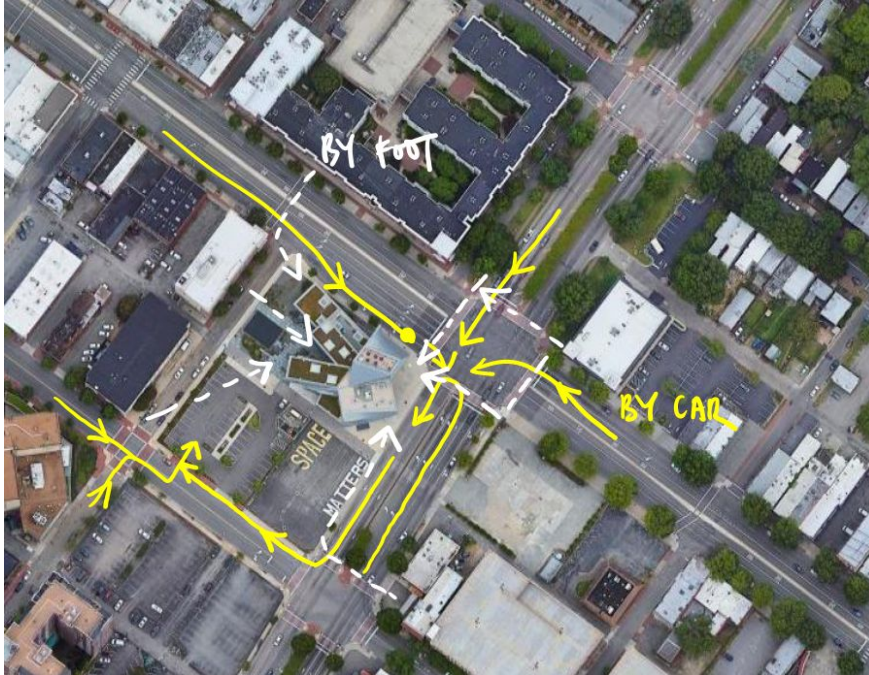


Forking of Time



Accessibility

- ICA has wide accessibility with 2 fronts welcomes the university students and the local community by foot & vehicle
- 2 fronts with 2 different types approach



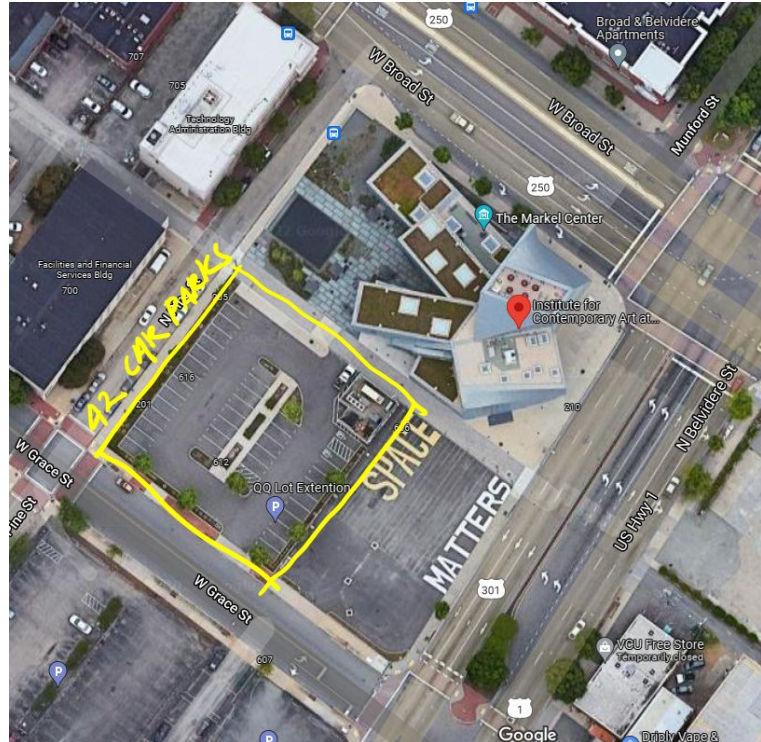
Urban Gateway



Garden Gateway

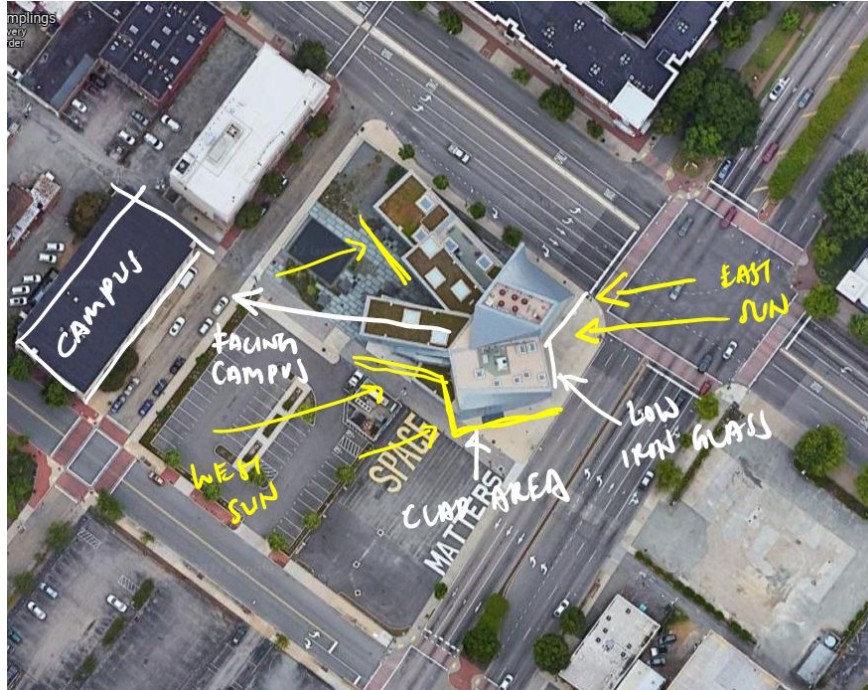
Carparks

- Has adequate land space for parkings without the need of a basement or extra floors



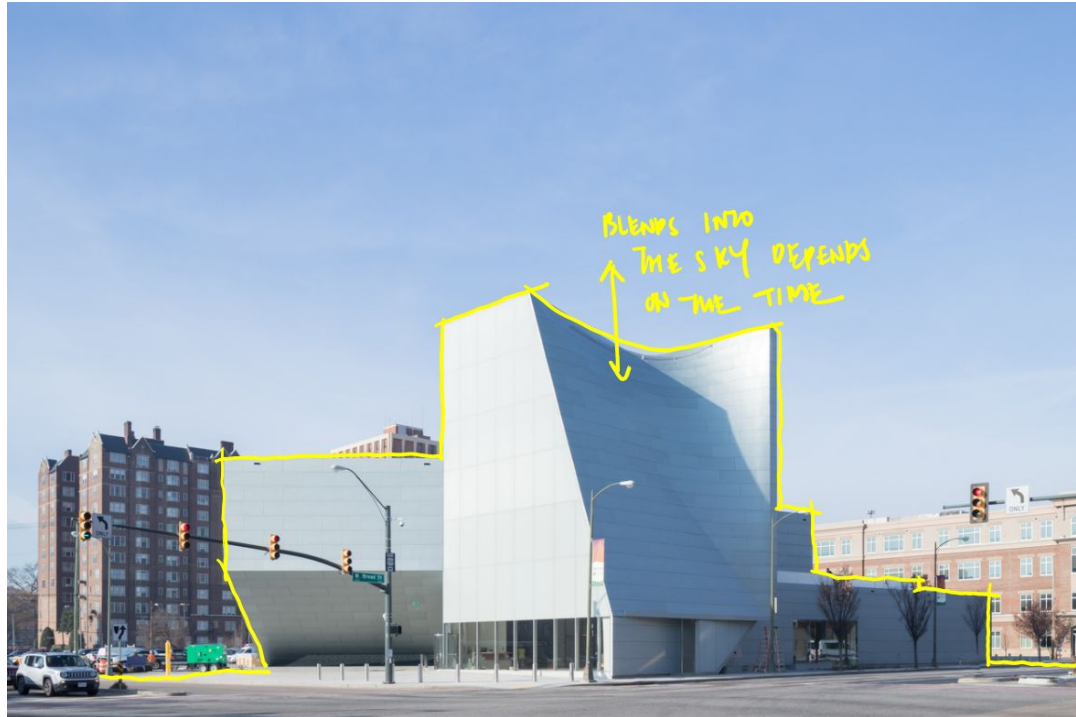
Orientation

- The ICA building filters morning sunlight with low-iron cavity glass wall, blocks the west sun with the cladding finish
- Connects & Engage with local communities & Students



Facade

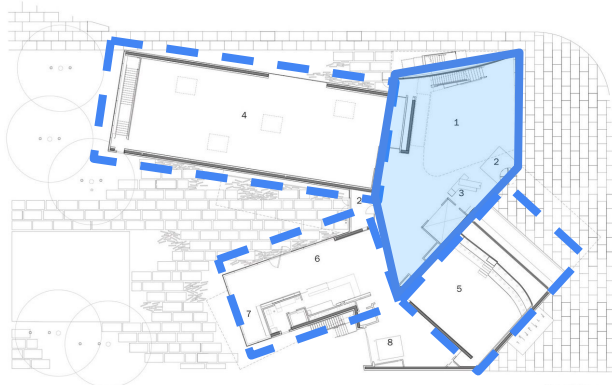
- Preweathered Titanium Zinc Cladding
- ICA blends into the sky depends on time



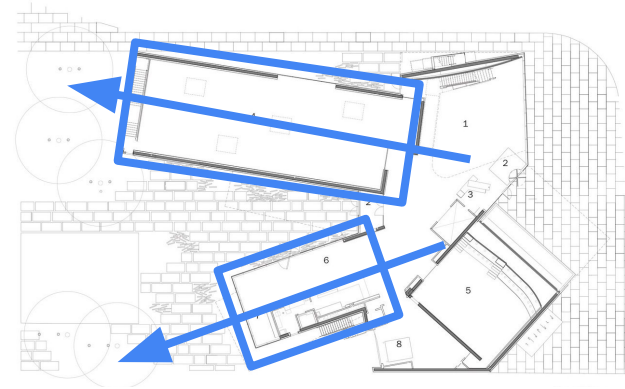
Night View

- ICA emits neutral lighting for displaying its contemporary art works in the galleries

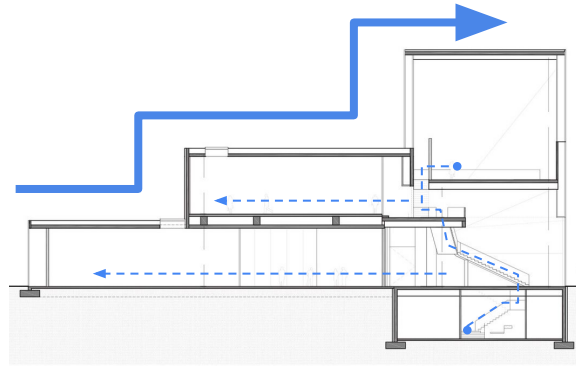




Spine



Linear



Serial Progression

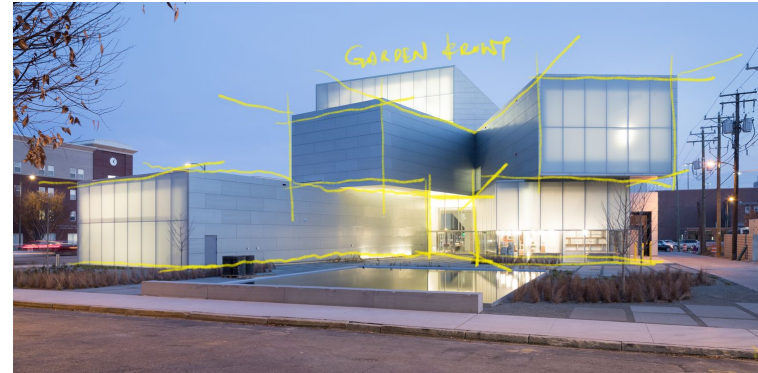
6 Spaces studies : Spine, Linear & Serial Progression

SOT : Civics

- The massing creates a gateway for the local community to visit the building
- 2 main entrances welcomes the university students & communities
- Intended to link Richmond and VCU
- Gives roles to play: Urban role, Relationship between university & Richmond, Relationship of Future



For Community



For Students

SOT : Civics

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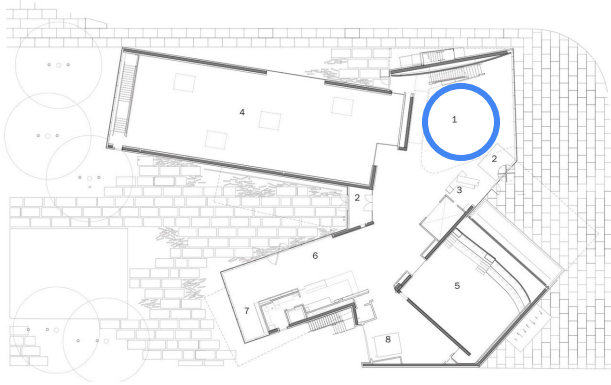
From Urban Front



From Garden Front

Space Analysis : Pre-function Spaces

- Pre-function spaces introduces with double volume
- Stairs engages people to progress up to more spaces



Space Analysis : Auditorium / Theatre

- ICA - 240 seats
- One Sided seating
- Cladded with cherry wood panels



Space Analysis : Auditorium / Theatre

- ICA - 240 seats
- One Sided seating
- Cladded with cherry wood panels for acoustic diffusing purposes

Opening to allow visitors experience the depths of the auditorium



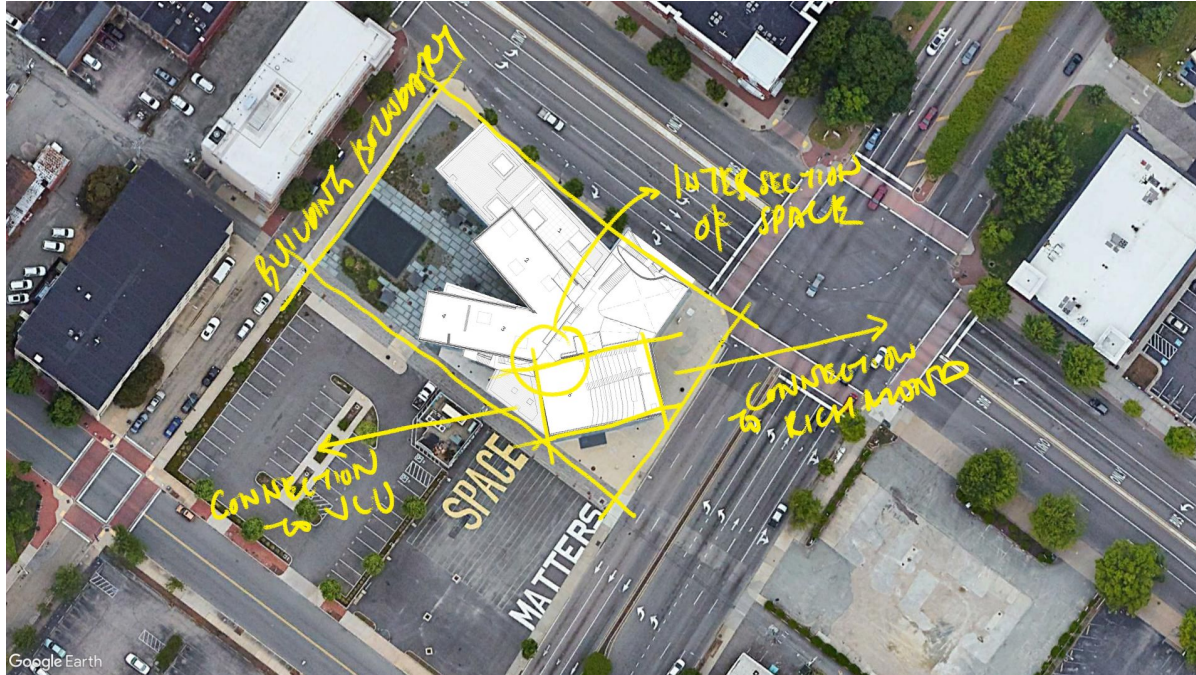
Cherry wood as a soft wood for diffusing sound, prevent echos



Space Analysis : Auditorium / Theatre

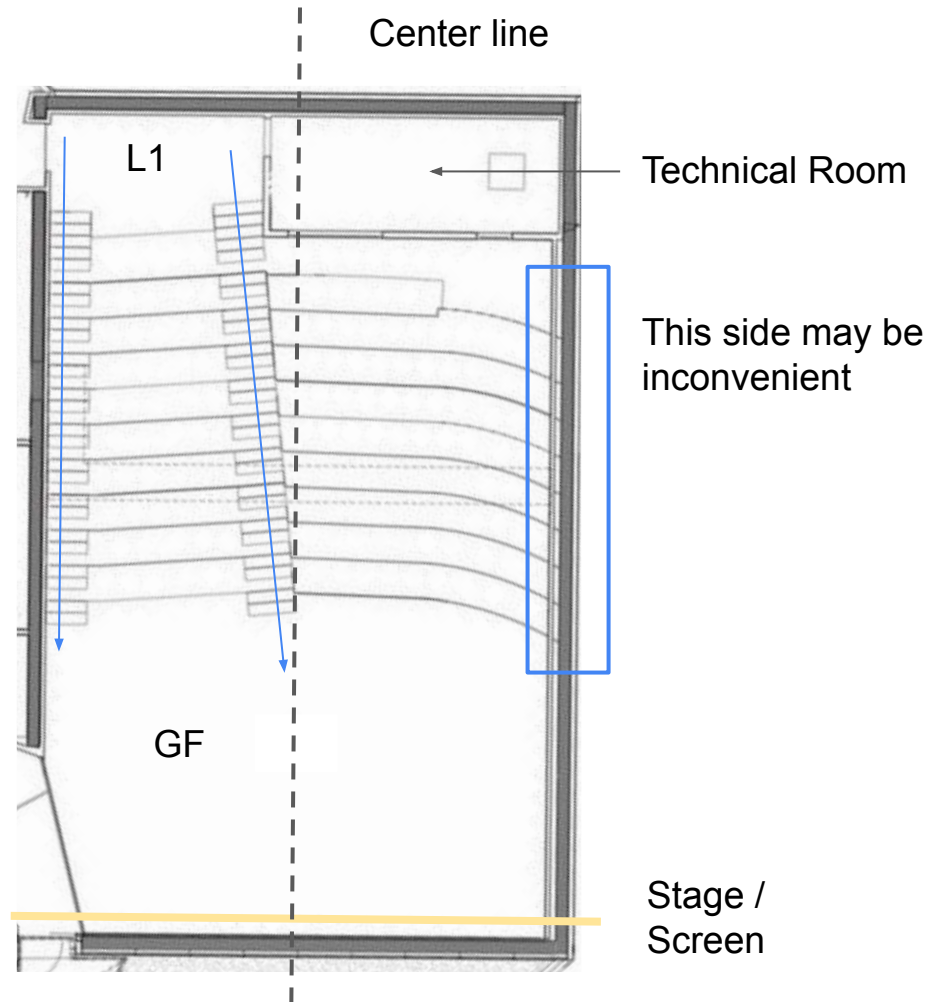
The position & orientation of auditorium comes with a few factors :

- Architect's Intention of forking of time
- An axis to connect context
- Building boundaries



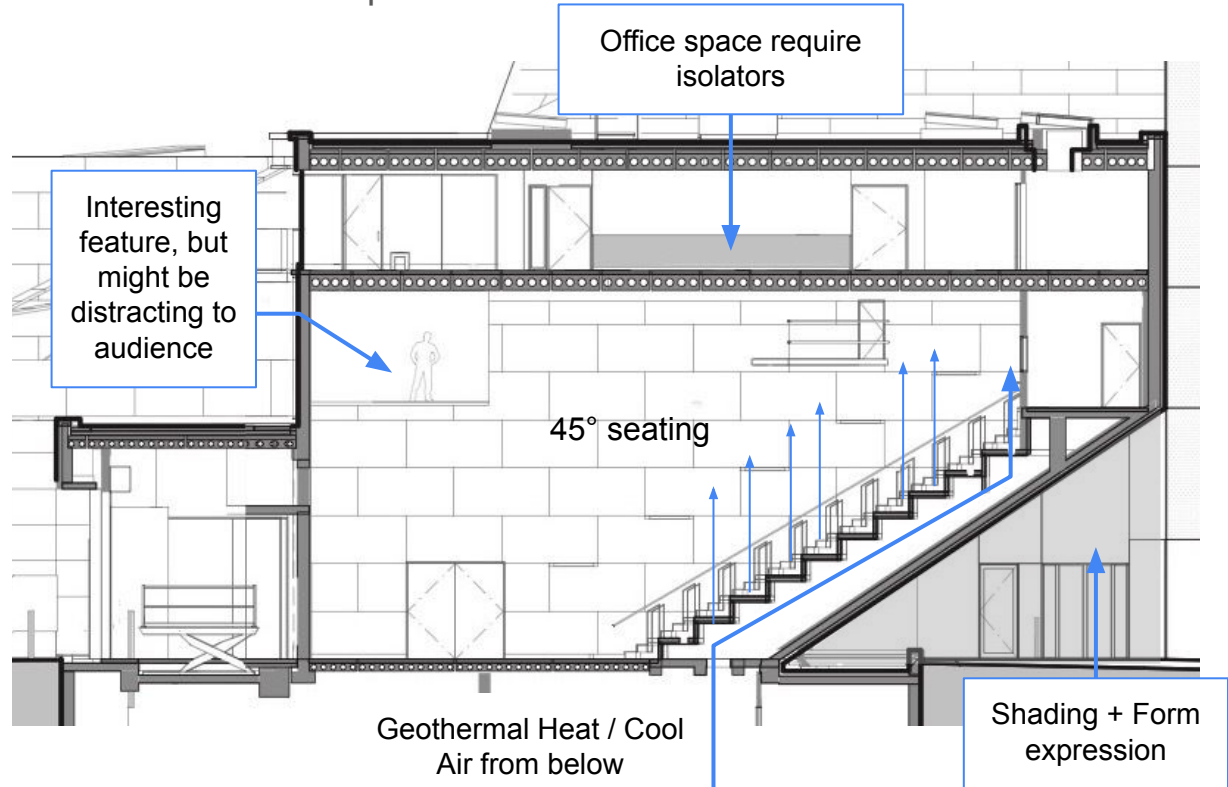
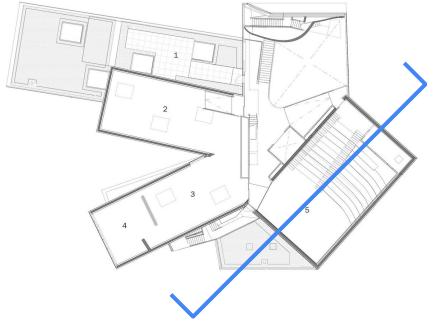
Space Analysis : Auditorium / Theatre

- Linear, one sided arrangement
- Accessible from the top most area and the lowest area
- Most circulation focuses on 1 side, might be inconvenient for people sitting at opposite side
- Technical Room could be more aligned to the centre to have more immersive experience for the technical team



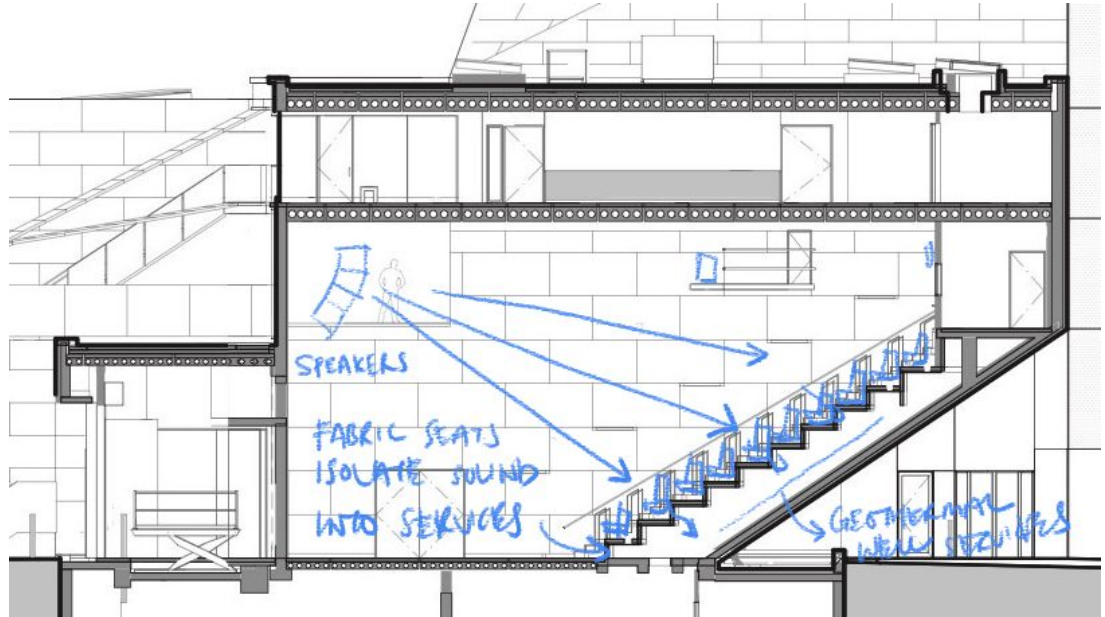
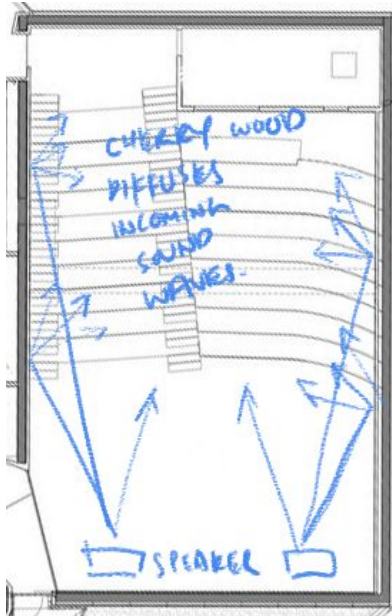
Space Analysis : Auditorium / Theatre

- Space under seats turns into outdoor Shade for entrance
- Geothermal wells circulating constant ground temperature to the space
- Office above require sound insulation from footsteps



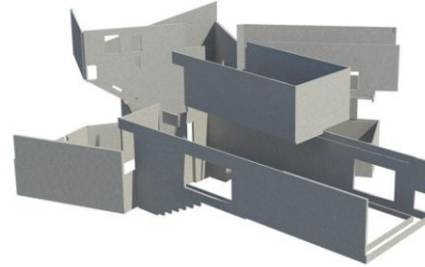
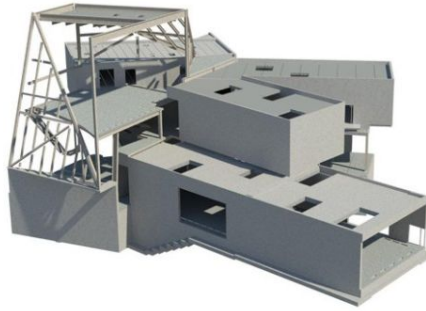
Acoustic Analysis : Auditorium / Theatre

- Cherry wood acoustic panels scatters the incoming sound waves to prevent echos
- Fabric seats are isolators which prevents sound waves travel into the structure, creating vibrations that affect the spaces below



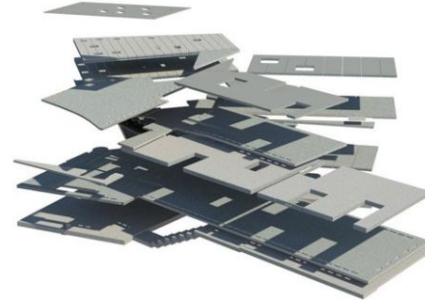
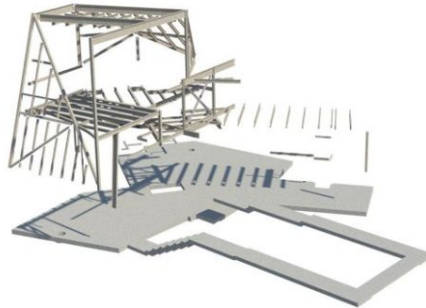
Structure Analysis

- Uses 3 super structures from Cast In-situ RC, Prefab RC, & steel framings
- Technology innovation and limitless



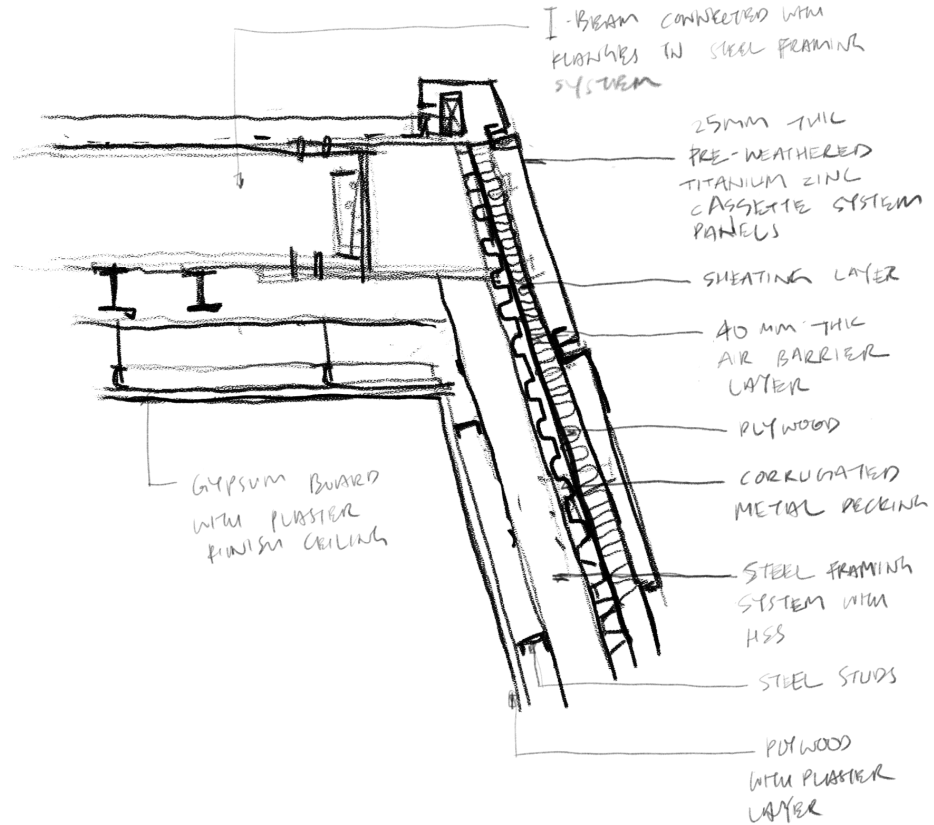
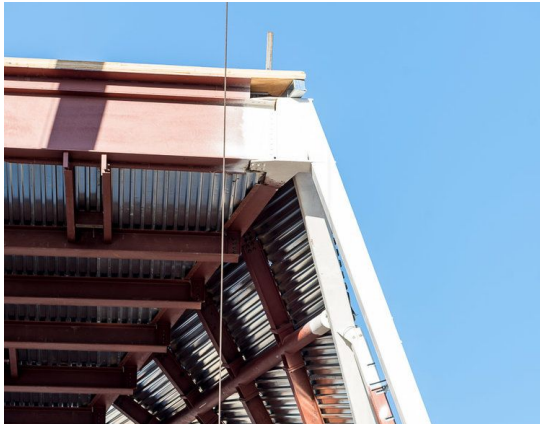
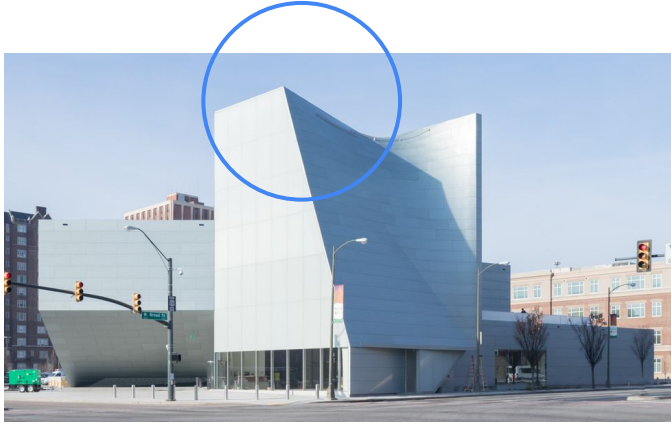
Cast In-situ RC
Walls

Steel Frame
Systems



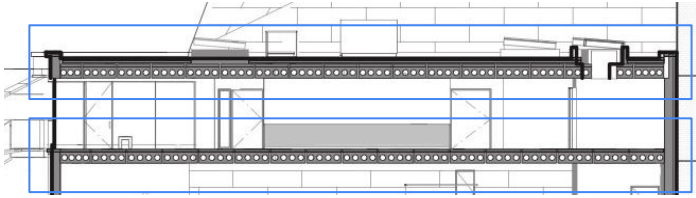
Prefab
Composite
Slabs

Structure Analysis : Sectional Details & Connections



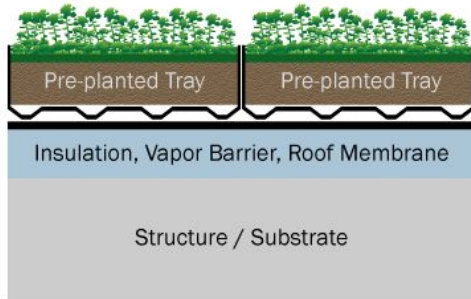
Structure Analysis : Long Spans

- Composite hollow core slab
- Hollow Steel sections
- W-profile beams



Rainwater discharge analysis

- ICA's green roof reduces rainwater runoff.
- The remaining water is discharged from the gutter openings that created stains



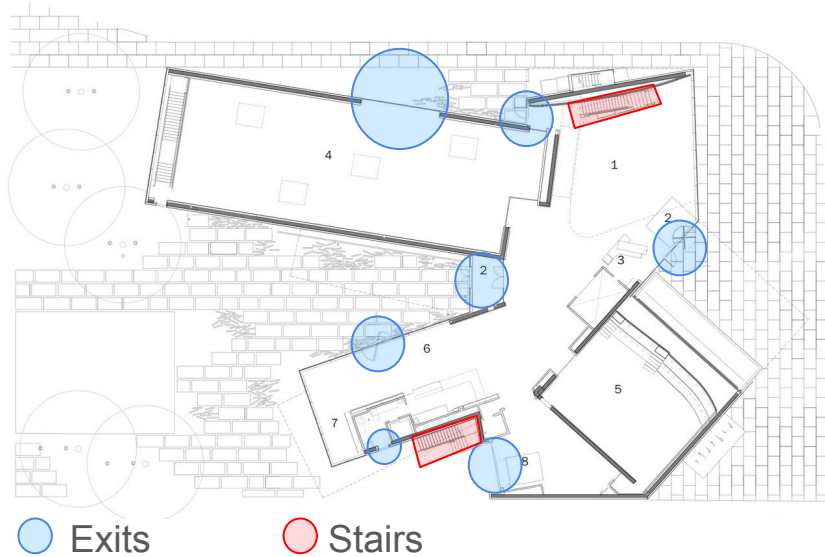
50mm -
120mm
thk

Extensive
green roof
design



Fire fighting Analysis

Circulation : ICA has a clear plan for easy escape during fire

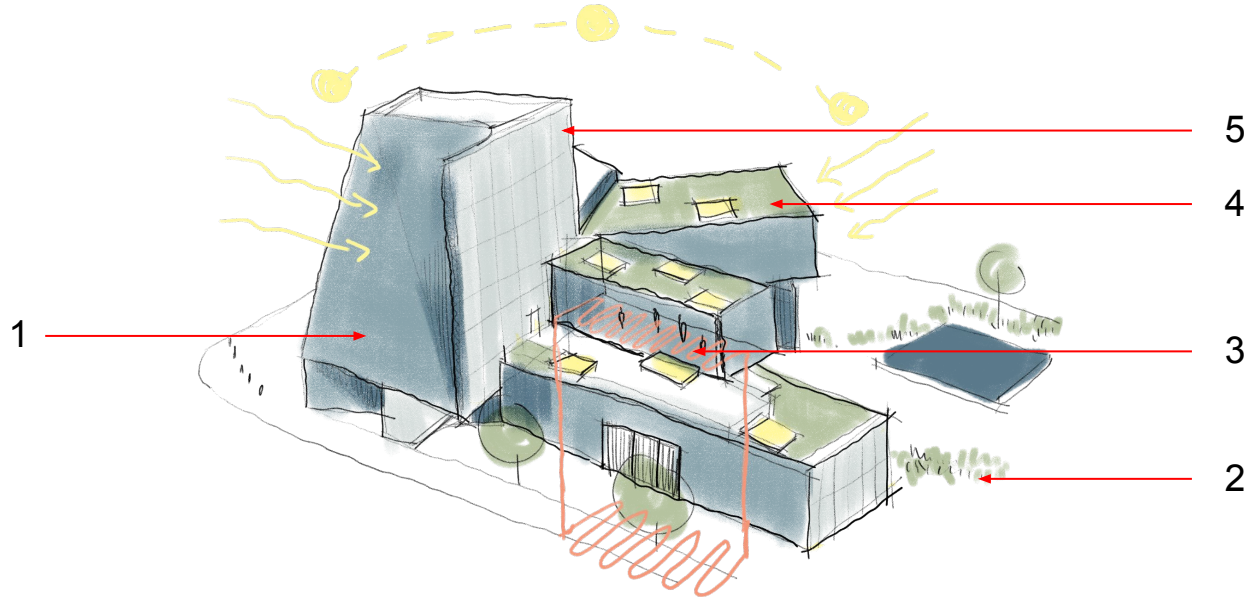


Structure Protection : Intumescent Coatings (Paint-like Coating)



Sustainable Features : ICA

1. Recyclable Titanium Zinc Panels with 40% recycled content
2. Landscape design with native species plant and Pennsylvania Bluestone
3. Geothermal Wells for radiant floor system
4. >8000 sqft extensive green roof reducing stormwater runoff & insulate building
5. East- and west-facing translucent cavity walls to modulate light and reduce solar load



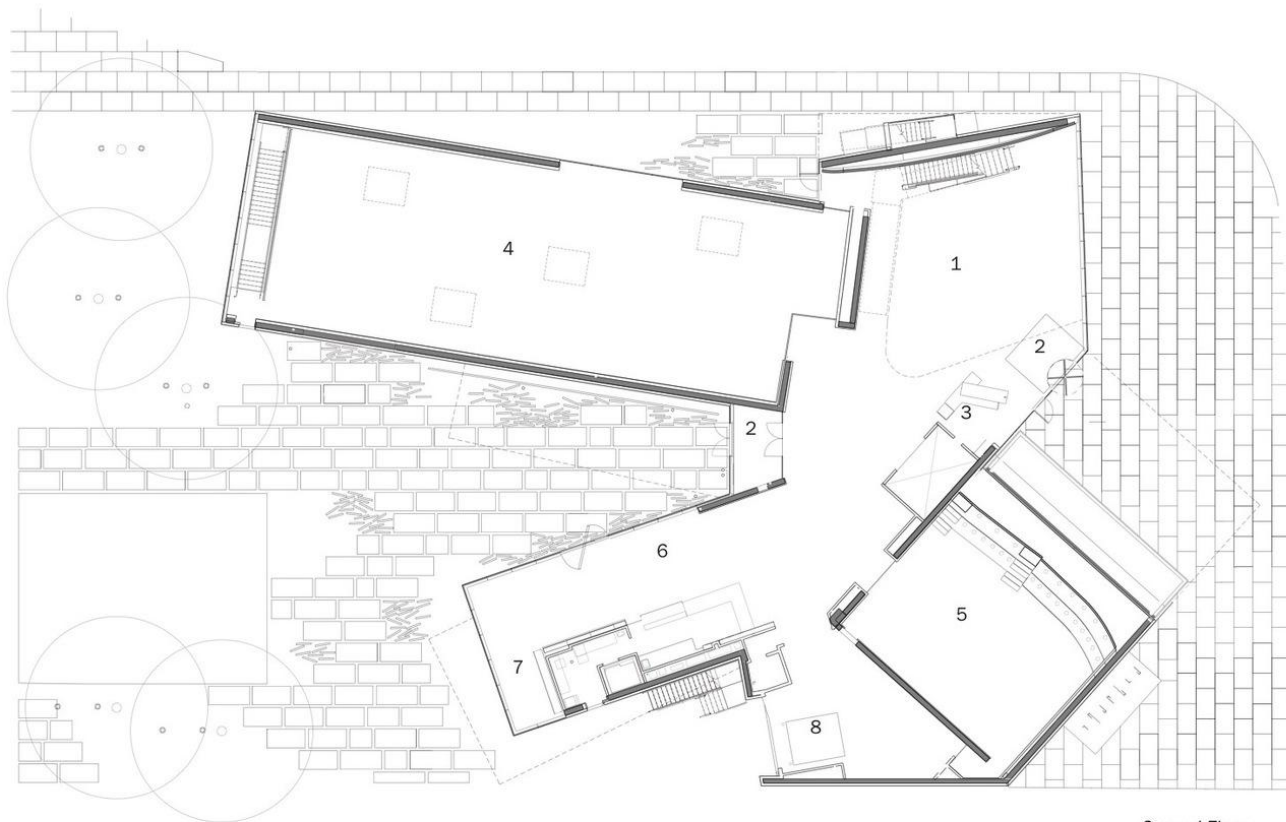
Summary : Strengths & Weaknesses

Strength	Weakness
<ul style="list-style-type: none">- More approachable building due to urban context	<ul style="list-style-type: none">- Less serene environment and not enough greens
<ul style="list-style-type: none">- Great use of technology innovation in construction + sustainability	<ul style="list-style-type: none">- Rainwater discharge design
<ul style="list-style-type: none">- Clean aesthetics with playful space and volume	<ul style="list-style-type: none">- Auditorium arrangement and details
<ul style="list-style-type: none">- More variety of programs	<ul style="list-style-type: none">- Complex construction details require more skillful labours

A photograph of a modern building with a glass and metal facade at dusk. The building has a prominent triangular section on the left. In the foreground, there is a paved area with some light trails from vehicles. A horizontal white line is positioned below the main title.

Engagement

VCU & Richmond



- 1.FORUM
- 2.ENTRY
- 3.RECEPTION
- 4.GALLERY 1
- 5.PERFORMING SPACE
- 6.CAFE
- 7.BOOKSHOP
- 8.LOADING DOCK

Ground Floor

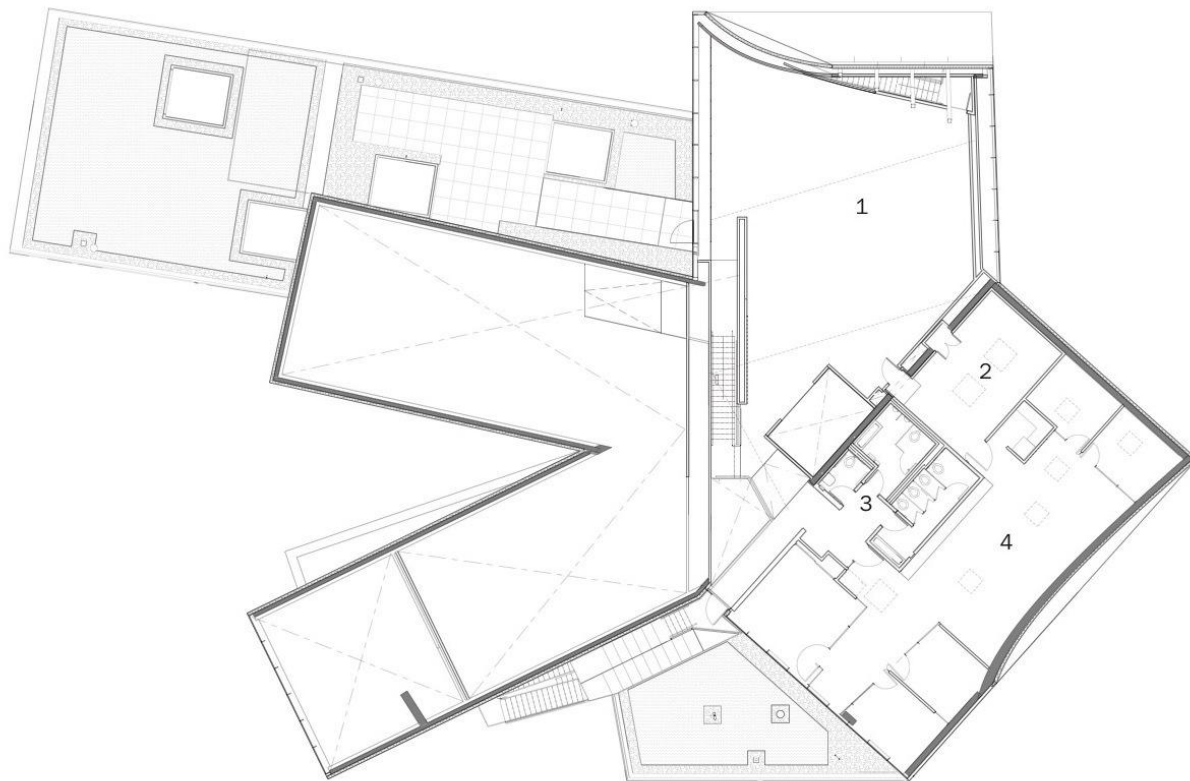




- 1.SCULPTURE TERRACE GARDEN
- 2.GALLERY 2
- 3.GALLERY 3
- 4.CLASSROOM
- 5.PERFORMANCE SPACE

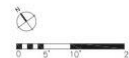
Second Floor

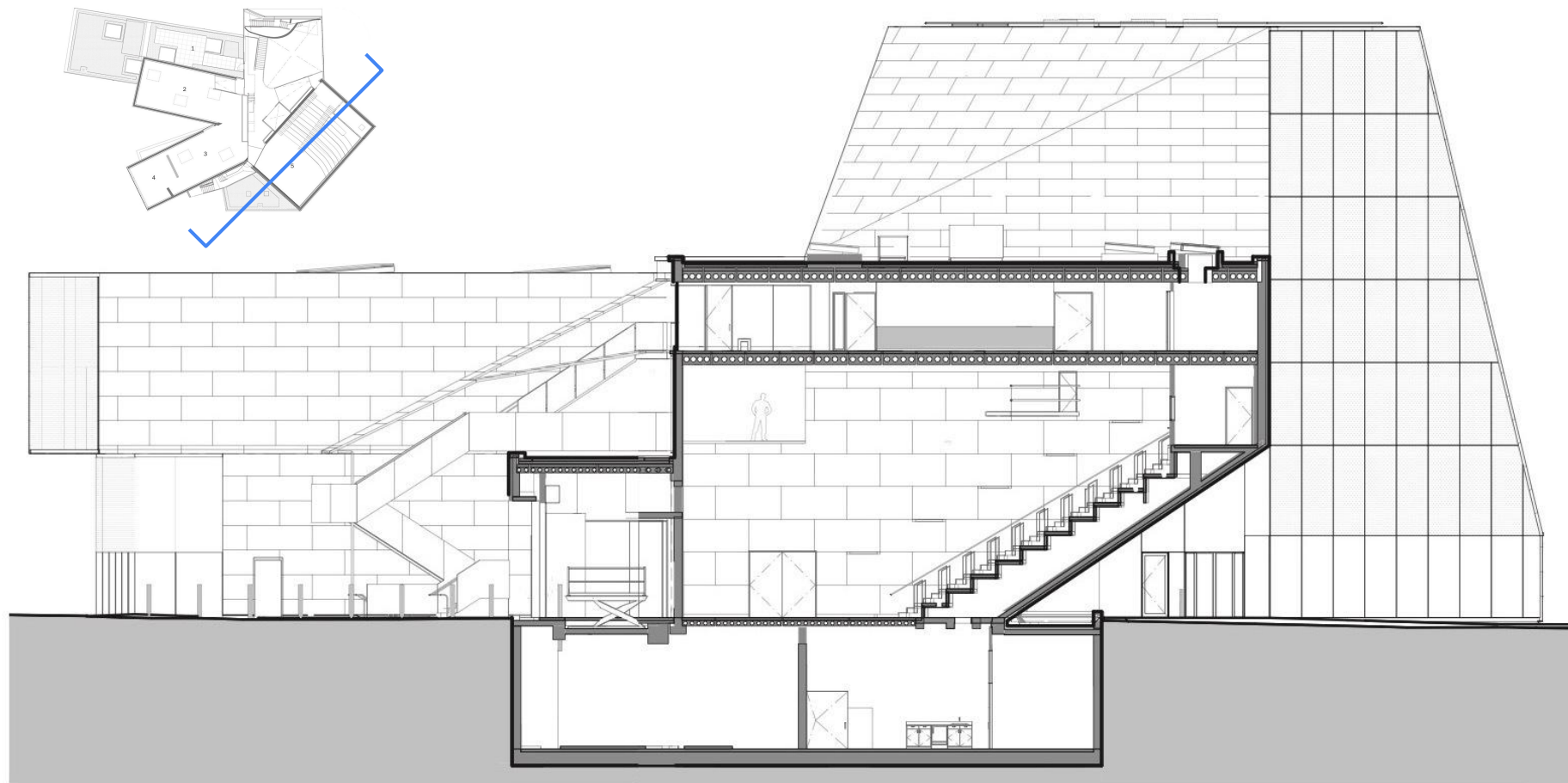




- 1.GALLERY 4
- 2.MEETING ROOM
- 3.WC
- 4.ADMINISTRATION

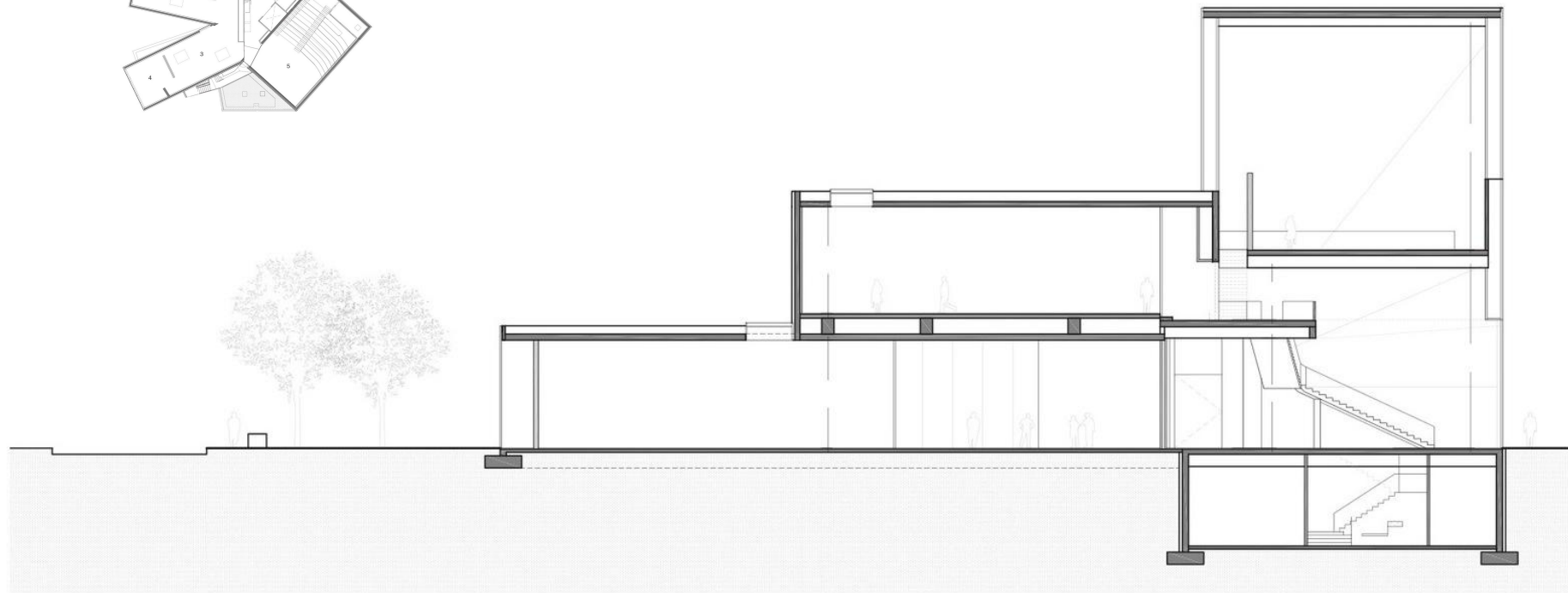
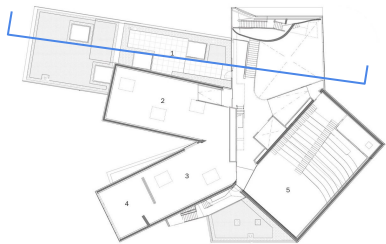
Top Floor





Sectio b-b'





Section c-c'



