United Nations Environmental Council

SADD graduation studio P5 presentation

Student: Qian Li (Chloe), 4118901
Tutor: Engbert van der Zaag,
Hubert van der Meel,
Peter Koorstra
• Concept & Idea
• Materialization of Idea
  • Urban Position
  • Circulation
  • Program
  • Structure
  • Material: Facade, Floor, Ceiling, Roof
• Interior Atmosphere
• Building Technology
Learn from Louis Kahn
Learn from Louis Kahn
Architecture Idea

- Urban Condition. Master plan
- Architectural Program. Functions
Architectural Idea

Architecture Idea

- Urban Condition. Master plan
- Architectural Program. Functions
Architectural Idea

Urban Position. Master plan

Pedestrian Area. Green Belt
Architectural Idea

Urban Position. Master plan

Pedestrian Area. Green Belt
Architectural Idea

Urban Position. Master plan

Connection from City to Coastline
Architectural Idea

Urban Position. Master plan

Connection from City to Coastline
Architectural Idea

Urban Position. Master plan
How to connect the City and Coastline of different height?

7m Height Difference between the City and the Coastline

Architectural Assignment
Architectural Idea

Urban Position. Master plan

7m Height Difference between the City and the Coastline

Architectural Assignment
Architecture Idea

- Urban Condition. Master plan
- Architectural Program. Functions
How to arrange the complicated functions into one building?
Architectural Idea

Architectural Program. Functions

Section

Private

Collective Space

Public
Step 1
Put a several floors' building block on the site, facing the green belt from the city.
Step 2
Cut the block by the zigzag line into 2 volumes
Step 3

Separate the two volumes in the vertical way. The upper part is used for private functions, lower part is for public functions, while in between part is the collective space.
The Green belt from the city continues into the inbetween part of the building and arrives at the public green park at the coast line.
Urban Position. General Plan
General Plan

Public Space of Coastline
General Plan

Continuous Urban Surface
Materialization of the Concept

- Circulation
- Program
- Structure
- Material
The Green belt from the city continues into the inbetween part of the building and arrives at the public green park at the coast line.
Circulation

City

Coastline

Coastline

City

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Step 2

Staircase and service core
Circulation
Step 3

Separate the two volumes in the vertical way. The upper part is used for private functions, lower part is for public functions, while in between part is the collective space.
Plan. Lower Part. Public Function
Auditorium, Chamber, Lounge
Materialization
Program/Function

Plan. Middle Part. Collective Function
Bar, Shop, Entrance hall, restaurant, canteen
Plan. Upper Part. Private Function
Office, Conference hall,
archives, storage, workshop
Materialization of the Concept

- Circulation
- Program/Functions
- Structure
- Material
1. Concrete Rahmen/Frame Structure
2. Steel I Beam
3. Steel Pillars
4. Hollow core slabs
Materialization of the Concept

- Circulation
- Program/Functions
- Structure

- Material
Material

Massive Image I want to achieve for the Upper and lower volumes

Nature Stone

Brick

Printed Pattern Translucent Sheet
Wrap the volume

Step 1. Horizontal Element
Wrap the volume
Step 2. Vertical Element
1. Façade (Vertical/Horizontal)
2. Ceiling and Floor
3. Roof
4. Inner Facade
1. Façade (Vertical/Horizontal)

2. Ceiling and Floor

3. Roof

4. Inner Facade
Material
Climate thinking of facade

South Façade (Horizontal)
Orientation/Ventilation
Material
Climate thinking of facade

East/West Façade (Vertical)
Orientation/Ventilation
Material

1. Façade (Vertical/ Horizontal)
Material

1. Façade (Vertical/ Horizontal)
Materialization
Material: Facade

Horizontal Element  Vertical Element  Insulation Layer  Aluminum Frame Curtain Wall  Concrete Piller & Beam  I-Beam  Aluminum Frame Window  Steel Frame Wall  Horizontal Natural Stone  Vertical Element
1. Façade (Vertical/Horizontal)
2. Ceiling and Floor
3. Roof
4. Inner Facade
Material

2. Connect between Façade and Suspended Ceiling/floor
1. Façade (Vertical/Horizontal)
2. Ceiling and Floor
3. Roof
4. Inner Facade
Interior Atmosphere
Interior Atmosphere

In between part

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Interior Atmosphere

Upper Part

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Content

- Architectural Concept
- Urban Position. General Plan
- Achievement & Improvement of Architectural Concept
  - Architectural Program/Function
  - Structure
  - Material
- Interior Space
- Climate
Climate Ventilation

Winter Ventilation Situation
Climate Ventilation

Summer Ventilation Situation
Climate
Ventilation

Ventilation System
Climate Ventilation

Ventilation System
Climate
Ventilation

1:20 Office section
New York city has a humid climate and enjoys an average of 175 days with at least 0.25mm rainfall or snowfall.

Days of Measureable Precipitation (>=0.25mm)

- January: 20 days
- February: 17 days
- March: 17 days
- April: 14 days
- May: 12 days
- June: 11 days
- July: 7 days
- August: 8 days
- September: 9 days
- October: 16 days
- November: 19 days
- December: 22 days

Typical New York Monthly Snow (inches)

- January: 7.7 inches
- February: 8.6 inches
- March: 5.1 inches
- April: 8.9 inches
- May: 0 inches
- June: 0 inches
- July: 0 inches
- August: 0 inches
- September: 0 inches
- October: 0.9 inches
- November: 5.6 inches
- December: 0 inches

Typical New York Monthly Precipitation (inches)

- January: 4.1 inches
- February: 3.1 inches
- March: 4.4 inches
- April: 4.3 inches
- May: 4.7 inches
- June: 4.6 inches
- July: 4.2 inches
- August: 4.2 inches
- September: 3.8 inches
- October: 3.8 inches
- November: 4.4 inches
- December: 3.9 inches

Source: http://www.nycweather.us/
Climate
Rainwater Collection

Roof Water Drain
Climate
Rainwater Collection

Grey Water Storage
Well Water

Roof Water Drain

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Climate
Rainwater Collection

Roof Water Drain

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