UN-HQ

DESIGNING FOR DIPLOMACY - PROCESS
North Lawn Building, NYC
Veronica Duborgh Hellebergshaugen NTNU 2015
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>FDR</td>
<td>Franklin D. Roosevelt East River Drive</td>
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<tr>
<td>GA</td>
<td>General Assembly</td>
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<tr>
<td>HQ</td>
<td>Head Quarters</td>
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<tr>
<td>NYC</td>
<td>New York City</td>
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<tr>
<td>NLB</td>
<td>North Lawn Building</td>
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<tr>
<td>ODMU</td>
<td>Overseas Development Management Unit</td>
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<tr>
<td>SG</td>
<td>Secretary-General</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNDC1</td>
<td>United Nations development programme</td>
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PROCESS

The process book contains selected work from the whole process after delivering the Pre-Work up until submitting the project.

It tries to keep an order relating to the timeline of the work but jumps around at times.
WATERFRONT DEVELOPMENT

Seeking to be a healthier city the NYC planning department released A Greener Greater New York. The main content of the document is that the city will focus on the environmental development both for the city and its inhabitants.

The city is working towards reducing carbon emissions 80% by 2050.

When Sandy hit Manhattan in 2012 the lower parts of the city were completely flooded and the work started towards planning a waterfront system to prepare for a similar event happening again. The idea of a green border around the whole of Manhattan started emerging. BIG has been given the task to develop further on the project as you can see in the illustrations below.

The main goals relating to the North Lawn project is:

ACCESS TO PARK WITHIN A 10 MINUT WALK ALL OVER MANHATTAN CONNECT FRAGMENTED EXISTIN PARKS
BICYCLE ROADS
WATERTAXI
INCREASE FACILITIES
INCREASE RECREATIONAL ZONES
VISION PLAN EAST RIVER WATERFRONT

Battery Park
East River Park
C. Schurz Park

PLAN YC
A GREENER, GREATER NEW YORK

DESIGN TRUST FOR PUBLIC SPACE
Exerted from waterfront development presentation, see link.
Waterfront connection plans.
From a Greener Greater New York

Water redirection in front of the UN structure, relating to the waterfront walkway
FURTHER PLOT ASSESSMENT

Traffic Flow

Current FDR

FDR view from North access
BLAST ISSUES FURTHER STUDIES

The diagram shows the pressure wave from a car bomb if it would be blown up by the border of the plot. The UN only relates to car bomb issues because of the stronger force that would be applied by a larger bomb.
SOLAR STUDIES

The United Nations North Lawn Site is generally exposed to direct sunlight throughout the year in the morning and noon hours throughout the year. However the low winter noon sun position casts long shadows of the Secretariat Tower onto the North Lawn. As the sun sets in the evening, neighboring buildings cast shadows onto the UN campus and North Lawn throughout the year.

Spring / Fall
The spring and fall seasons expose the north lawn to unobstructed direct light during the morning and noon hours. There are moderate shadows from the secretariat and surrounding buildings until the evening, where the North Lawn is cast in raking shadows by neighboring buildings to the west.

Summer
The summer season exposes the North Lawn to the most dynamic range of lighting conditions. At noon, the high sun position produces minimal shadows. While during early morning and late evening hours, the summer sun position can throw light onto even north facing surfaces.

Winter
The winter season exposes the North Lawn to low light angles and the shortest number of sun hours. At noon, the low sun position casts long shadows of the Secretariat tower onto the North Lawn. During the early morning and late evening hours, the sun position does not throw any direct light onto north facing surfaces.
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CONNECTION UN STRUCTURES
CURRENT FLOW UN
GREEN PROJECTS AT THE UN

The UN is currently engaged in a urban garden project at the moment situated between the conference building and the Canteen/Library. This project will be moved to the roof of the new office structure. Relating to the UN’s engagement in the sustainable goals.
### OFFICE SPACES

<table>
<thead>
<tr>
<th>Service</th>
<th>Area</th>
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<tbody>
<tr>
<td>ENTRANCE</td>
<td>2400 SQM</td>
</tr>
<tr>
<td>VISITOR AREA/EXHIBITION SPACE</td>
<td>5000 SQM</td>
</tr>
<tr>
<td>LOBBY/AUDITORIUM</td>
<td>2000 SQM</td>
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<tr>
<td>LIBRARY/RESOURCES</td>
<td>4000 SQM</td>
</tr>
<tr>
<td>LANGUAGE TRAINING</td>
<td>2000 SQM</td>
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<tr>
<td>CONFERENCE ROOMS</td>
<td>4600 SQM</td>
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<tr>
<td>CAFETERIA</td>
<td>2400 SQM</td>
</tr>
<tr>
<td><strong>IT/ BUILDING SUPPORT</strong></td>
<td>2400 SQM</td>
</tr>
<tr>
<td><strong>MECHANICAL ELECTRICAL PLUMBING</strong></td>
<td>5000 SQM</td>
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**TOTAL BUILDING**

80 000 SQM
PUBLIC

SEMI-PUBLIC

PRESS BUSINESS +

DELEGATES +

EMPLOYEES
The program was laid out in scale to figure out the possibilities on the plot.
VOLUME EXPERIMENTATION

A volume experimentation was conducted in a scale of 1:2000 relating to the plot and a 47st street axis. Dividing the clay into two parts, the grey containing the office volume the other the rest of the program.

The main focus of the exercise was relating to the existing scale of the UN compound to start creating a shape.
The studies were translated into a 3D model to compare with the exact size and relations to the plateau.
I decided to continue on a tower shape.
MID SEMESTER REVIEWS

For the mid-semester review I continued with a shape relating to some guidelines given from the plot, also challenging the Blast Zone. The criteria developed were:

MAINTAIN THE CONNECTION BETWEEN MANHATTAN AND EAST RIVER

USE EXISTING LINES FROM THE UN COMPLEX

CHALLENGING THE 50 M PERIMITER
FEEDBACK

The main feedback received at the mid semester related to the aspect of the Blast issue, up until that point I was struggling how work my design around this criteria. Fighting against the idea of having to build a 30 meter solid wall. Advice was given to embrace this criteria as a design guideline to use as an opportunity to actually be allowed to make a closed facade to the road and put all the functions in this part of the structure.

The relations to the iconic structure was discussed and the importance of respecting the existing compound.

BACK TO THE DRAWING BOARD

After the Mid-semester, I threw away the proposed project and started over to define the main principles of the project. The following aspect were defined:

47st street axis throught the plot

Creating UN Plaza

Relating to the future green waterfront

Re-Use the old FDR space
MAIN GUIDELINE ASPECTS FOR THE DESIGN
PRESERVING 47ST STREET VIEW LINE & GREEN PASSAGE
CREATE WATERFRONT ACCESS
WORK WITH UN PLAZA
RE-USE OLD FDR SPACE
RELATIONS TO EXISTING STRUCTURE
SCENARIOS

BACKGROUND

To more concrete decide what kind of structure is suitable for the site four scenarios are drawn up to explores the possibilities and restraints also creating a boundary for the project.

The scenarios explore the relations to the 47ST connection, green spaces on the plot, relations to the existing structure + original design, blast issues and connection to the surrounding buildings on Manhattan.
High rise in blast stone

High rise slab between 46th and 47st street

Closed

High rise slab facing river carved by 47st street

Low structure working with the large plot. Moving the green to the top of the structure.
SCENARIO ONE

This scenario explores a high rise slab between 46st and 47st street relating to the original design from Le Corbusier and Niemeyer moved from it´s original position to keep the 47st street line open and move away from the blast sone issues.
POTENTIAL

- Stays inside the 50m blast zone
- Preserving the forest and green space.
- Creating a plaza between the structures as proposed in the original design.
- The narrow slab will create good daylight conditions for the office spaces inside the building.
- Relates to the current compound and embraces the existing design.
- Relates to the Manhattan grid.
- Doesn’t block too much of the view.
- Possibilities to play with the facade both in patterns and materials. Creating a flagship building highly visible from the East River.

CONSTRAINTS

- It’s situated close to the current compound. Creating a tight space in between the new structure and the entrance to the GA.
- Too similar to the original design, doesn’t challenge the possibilities of the site.
- Gives little back to the public.
- Has to relate to air rights.
- Blocks the view for the building on the corner of 47th street.
STRUCTURE AND FACADE SKETCHING

Scenario: Utterly

Height (Tall)

Apert

LAV (Short)

Conceptual guidelines

East River
INSPIRATION/REFERENCE

Henwah HQ, UNSTUDIO, Seoul

DC1, Dominique Perrault Architecture, Vienna

Original Design Proposal, Niemeyer + Corbusier
SCENARIO TWO

High rise situated in the blast zone with closed facades the first 30 meters facing the roads. Challenging the blast zone and using the restriction as a design aspect.
POTENTIAL
- Preserves the plaza and gives way to a massive amount of green space on the plot.
- Interesting to explore the opportunities given by using the blast stone as a design criteria.
- Possibilities to explore different design options for a closed facade.
- Keeps the 47st street path free.
- Relates to the high rise trend on Manhattan.
- Gives way for future development on the plot.
- Challenges the original design.

CONSTRAINTS
- Blocks the view of the residential Trump Tower.
- Air right issues.
- Large distance to the HQ.
- Gives little back to the public.
- Difficult to connect to the existing underground system of the current HQ.
- Stands alone.
CLOSED FACADE OPPORTUNITIES

Stacking Green by Vo Trong Nghia

Hiroshi Tomoko

Beauteous Unique Home Designs

TOWER SKETCHES
INSPIRATION/REFERENCE

House in Oike, Matsuama Architects

Bergbaum Museum, DBM

House by MooMoo

Library in Alexandria, Snøhetta
SCENARIO THREE

High rise slab facing the East River, pierced by 47 street creating a sea side connection through the platform. Staying inside the blast zone challenging the existing slab in the current UN complex.
POTENTIAL

- Faces the river creating a new East River facade.
- Relates to the 47st street connection.
- Preserves a large amount of green space on the plot.

CONSTRAINTS

- Enters the blast sone.
- Might give a massive amount of glare to 47st street.
- Blocks the view of several buildings and 47ts street.
- Does not conversate with the existing HQ.
- Doesn’t create a common plaza.
- Diverges from the Manhattan gridd.
- Creates structural issues.
STRUCTURAL SKETCHES / PASSAGeways

Naoshima Art Museum, Tadao Ando
INSPIRATION/REFERENCE

AROS Art museum, Smidht Hammer Lassen, Århus

Ole Scheeren-The Axel Springer HQ

BIG Architectsm Technology centre Taiwan
SCENARIO FOUR

Low structure preserving a large amount of the platform, re-using old space FDR space and connecting to the existing UN complex. Focus on getting light into the area. The platform is cut through by 47st street to create a connection between the city and the East River.
POTENTIAL

-Digg the structure down to work around the blast sone.
-Create green roofs.
-Does not disturb the surrounding buildings.
-Relates to the public.
-Enhances the 47st street axis and opens the Manhattan grid.
-Connects the UN to the city.
-Opens up the facility and creates a transparency.
-Challenges the original design.
-Work with creating atriums to preserving good lighting option.
-Preserves the UN plasa.
-Integrates into the existing structure.
-Re-uses old FDR space.

CONSTRAINTS

-Flood issues
-Daylight struggles.
-Moves into parts of the blast sone.
CLOSED WALLS / DAYLIGHT INTEGRATIONS OPTIONS

Low Line, The Low Line Lab, NYC

Naoshima Art Museum, Tadao Ando, Naoshima

EWH Womans University, Dominque Perrault Architecture, SEOUL
INSPIRATION / GREEN SPACE / CLOSED WALLS

HoUSING KOREAM, TACAU ARCHITECTS

AERONAUTICAL CULTURAL CENTRE, EL PRAT

SOU FUJIMOTO ARCHITECTS, HOUSE O (2007)
SCENARIO 4- FURTHER STUDIES

MANHATTAN

1ST AVE

NEW STRUCTURE

WATERFRONT WALKWAY

42ND STREET

- CHRYSLER BUILDING
- GRAND CENTRAL
- TIMES SQUARE

48ND STREET

- ROCKEFELLER CENTRE
- TIMES SQUARE

HAMMARSKJOLD PLAZA

UN Plot overview

1ST AVENUE
In order to connect the new north lawn building to the existing compound studies for the connections were made. This to be able to use the new building in a design to restructure the existing relations.

Several different connections were defined relating to the user of the paths. Here portrayed as visitor, staff/delgate & service.
Volume experiments with the chosen scenario was conducted, relating to the amount of program and the pathways.
GLASS FOLLOWING PATHWAYS
RELATIONS TO ORIGINAL DESIGN

Looking at the original design it was clear that it intended the podium to connect with the waterfront in order to create a public plaza.

Le Corbusiers original plan also layed out a public garden on the roof of the General Assembly.

Original sketch, UN Historical Archive
ATRIUM DESIGN TEST

The volume connected to the Blast zone area has a North wall that’s completely closed. This creates a need for daylight. Studies were made using 7m lines to punch out different holes in the roof.

After testing out different design and floor plans, the version with three atriums was selected to optimize the use of the plans in accordance with the daylight testings.
MODEL DEVELOPMENT

Making the site model in 1:1000. To see the
Water diversion
REFERENCES

SHUTTER FACADES

GRASS ON UN PLAZA

RAMP/STAIRCASE

Lindbergatelier , Nickl & Partner Architekten
PRINT RESOURCES

The Architecture of Diplomacy:
Building America’s Embassies (ADST-DACOR Diplomats & Diplomacy)
-July 1, 1998, Jane C. Loeffler

INTERNET RESOURCES:

Manhattan waterfront development

East midtown Waterfront
http://www.nycedc.com/project/east-midtown-waterfront

Blast Issues information
https://www.wbdg.org/resources/env_blast.php#funda

PEOPLE

Jack Howard- Head of department
United Nations ODMU

Steffen Wellinger- Guidance Teacher
Associate Professor NTNU