SHOPPING IS EVERYWHERE

SHOPPING IS INVADING PUBLIC LIFE
I shop therefore I am

SELFRIDGES & CO
CONSUMERISM is encouraging the acquisition of goods and services in ever-increasing amounts.
RECREATIONAL SHOPPING

NECESSARY SHOPPING
ECONOMICAL
SOCIAL
ENVIRONMENTAL
In New York City

$92 Billions total retail sales

345k retail jobs
It takes over 30,000 litres to create 1 kg of cotton. 1 cotton shirt uses approximately 2,700 litres of water. Up to 600 litres of water can be required to dye 1 kg of fabric.
In the material society, consumerism is of the cost of excessive resource consumption.
RESEARCH QUESTION

How to make consumerism socially, economically and environmentally sustainable?
Valley of Giants
Midtown Northeast
FIFTH AVENUE
THE INTERNATIONALLY FAMOUS SHOPPING STREET

Valley of Shops
A CONSUMERISM PARADISE
Total grocery retail area: 7790 m²
Total grocery retail area: 7790 m²
Total residents: 53,000
1470 m² per 10000 ppl

City Planning Standard Ratio: (30,000 ft²) 2790 m² per 10000 ppl
RECREATIONAL SHOPPING

NECESSARY SHOPPING
In the material society, recreational shopping is of the cost of extra resource consumption.
RESEARCH QUESTION

How to make consumerism socially, economically and environmentally sustainable?

Can necessary shopping replace recreational shopping as an enjoyable experience?
People

Who is shopping what here?
New Yorker’s Profile

- High income, high purchase power
- Ethnically diverse

- Lack of grocery stores for buying fresh food
- Lack of gathering space which is crucial to build sense of community
Tourism as one of the leading sector in NYC
Shopping is one of the needs of tourists traveling to New York.

**NYC Direct Visitor Spending 2019**

- **Shopping**: 19%
- **Food**: 22%
- **Lodging**: 29%
- **Transportation**: 18%
- **Recreation**: 12%

Source: NYC & Company, 2019 New York City Travel and Tourism Report
Retails on Fifth Avenue

ALL ARE INTERNATIONAL BRANDS AND CHAIN STORES
NYC Tourists Profile

- High population, high purchase power
- Shopping as a need
- Lack of featured shopping experience that is authentically ‘New York’
- Unsustainable consumption from excessive unnecessary shopping
Tourists

Market

New Yorkers
Provide featured shopping experience authentically “New York”

Provide fresh food for daily supply

Increase customer flow

Enhance sense of community

Tourists

Market

New Yorkers
Site
VALLEY OF GIANTS
Fifth Avenue
“The most expensive and elegant street in the world.”
-Forbes magazine, 2018
The buffer zone
The market value of Fifth Avenue fails to sufficiently benefit the buffer zone in Valley of Giants.
Lack of pedestrians

Shops cannot profit and survive

Empty shopfronts on the street

Degraded street image and reduced liveability
SOLUTION

More pedestrian flow  Shops become more profitable  More retails move into the vacancies  Higher liveability of the city
Brief
Functions
Solar Radiation
Current Situation
Current Situation

160 E 56 St
Commercial
12 storeys
Built in 1927
93 years old

914-928 3 Ave
Residential
5 storeys
Built in 1920
100 years old

157/159 E 55 St
Commercial
4 storeys
Built in 1910
110 years old

155 E 55 St
Commercial
13 storeys
Built in 1960
60 years old

E 55th STREET

3rd AVENUE
Lot: 3,800 m²
Maximum Volume

C6-6 Corporate headquarters, large hotels, department stores and entertainment facilities in high-rise mixed buildings are permitted

Commercial FAR 15, Residential FAR 10

Lot: 3,800 m²
Height: 60 m
GFA: 57,000 m²
FAR: 15
Main Programmes

- Community
- Environment
- Tourism
- Shopping

- Market
- Housing
- Green public space
- Hotel
Main Programmes

- Housing
- Green public space
- Market
- Hotel
Main Programmes

Affordable Housing

Hotel

Public space / garden

Market hall

Affordable Housing

Middle income housing

Public space / garden

Market hall
an urban oasis

short stay in an authentic New York home

featured shopping experience

tourists

a community garden

a place to grow their own food

affordable dwelling

daily grocery

residents

PUBLIC/COMMUNITY GARDEN

AIRBNB ROOMS

APARTMENT

FOOD MARKET
Programme ratio

- Affordable housing units
- Middle income housing units
- Circulation
- Lobby
- Shared amenities
- Residents communal terrace
- Storage
- Food court
- Rentable retail units
- Service corridor
- Public accessible terrace
- Market hall
- Parking
- Loading deck
- Market storage
- Equipment
- Fridge room
Ambitions

A FOOD MARKET aims to promote an alternative LIFESTYLE against ever-expanding unsustainable consumerism in our society by making grocery shopping AN ATTRACTIVE AND ENJOYABLE EXPERIENCE that can partially replace recreational shopping.
Design Concept
Publicity
Verticality
Accessibility
Spatial concepts

**Publicity**
- Blurred boundary between the market and urban street

**Verticality**
- A continuous walk to take...

**Recreation**
- ...alongside with diverse and enjoyable shopping experience

**Accessibility**
- Market as big public space with easy access
Staggered floors connected by ramps
Market hall & Service space
Staggered floor
Staggered floor
Interior & external ramps
Interior & external ramps
Residential tower
A recreational experience
Market Street

Publicity  Verticality  Recreation  Accessibility
Authentic New York Shopping Experience

Verticality  Busy  Diversity

Multi-layering
layers of circulation

layers of views

layers of natural lights
Authentic New York Shopping Experience

Fresh local groceries sold by local farmers

Local people come here to shop groceries and meet with each other

No big brands/international chain stores

Casual, temporary, flexible, spontaneous

...
SMALL STALLS

FLEAMARKET

SNACKS & CAFE

PRESERVED GROCERIES

FRESH GROCERIES

LARGE STALLS
Residential tower
Residential tower
Communal garden for every 5 floors
Residents are encouraged to use the communal garden to grow their own food.

Residents can occupy a small temporary stall to sell the extra food they grow.

Plot size: 3,800 m²
Market: 11000 m²
Residential: 29000 m²
Public roofgarden: 3000 m²
Total GFA: 40000 m²
FAR: 10.5
Design Implementation
Urban implementation
Ground Floor
Ground Floor
Flexible stall system

4800*8000

5000*7000
2nd Floor
Podium Rooftop
Typical tower floor plan
Typical tower communal garden
Vertical Transportation

- Elevators for residents
- Elevators for market customer
- Freight elevators and storage
- Fire escape stairs
Materialization
Copper
Materialization

Copper

- Highly recycled content
- Long life span
- Corrosion resistant
- Low maintenance cost
Materialization
Copper
Podium Section

- Rooftop: 13500
- Second Floor: 9000
- First Floor: 4500
- Ground Floor: 0
- B1: -4500
- B2: -8500
Double glazing with 12mm gap
Aluminum window frame
6mm Copper Alloy cap fixed to L shape Steel profile
12mm Stone pavement
30mm concrete screed with 16mm floor heating pipes
20mm rigid insulation
450 Holedeck concrete waffle slab
accoustic insulation
Steel balustrate fixed to 40mm Steel tube
Timber decking on Steel support
Aluminium box gutter with waterproof membrane
120mm roof insulation
Vapour barrier
6mm Copper Alloy cap fixed to L shape Steel profile
450 Holedeck concrete waffle slab
Acoustic insulation
Vegetation
150mm growing medium
Root repelient
Drainage Layer
Waterproof membrane
Insulation Layer
Vapour barrier
450mm concrete waffle slab
acoustic insulation
air ducts
Section drawing
Residential tower

6mm Copper Alloy cap fixed to L shape Steel profile
Copper cladding panel
120mm wall insulation
12mm phase changing gypsum board
interior carpet
30mm concrete screed with floor heating pipes
20mm rigid insulation
30mm in situ concrete screed
300mm hollowcore concrete slabs fixed to 300mm steel PFC beam
Suspended ceiling
Section drawing
Residential tower

Parallel opening window

- small opening movement with better air circulation
- good acoustic performance
- reducing draughts
6mm Copper Alloy cap fixed to L shape Steel profile
Copper cladding panel
120mm wall insulation
12mm phase changing gypsum board
interior carpet
30mm concrete screed with floor heating pipes
20mm rigid insulation
30mm in situ concrete screed
300mm hollowcore concrete slabs fixed to 300mm steel PFC beam
Suspended ceiling
Structural Concept
Structural Scheme
Podium
Structural Scheme
Podium

steel vertical cores supporting the interior slabs and ramps and provide stability

concrete columns supporting the external ramps
Structural Scheme
Podium
Structural Scheme
Holedeck Waffle Slab

- Lightweight
- Span between 8m to 13m
- Spatial Efficiency
- Easy maintenance
- Low embodied energy
Structural Scheme
Podium
Steel section to floor detail

- 8mm fireproofing laminated Wglass
- Stone pavement
- 30mm concrete screed with 16mm heating/cooling pipes
- 20mm rigid insulation
- 300mm PFC beam fixed to 450mm steel waffle slab
- 20mm fire protection board
Climatization Concept
Climate Scheme
Podium
Standing column well system
Type of geothermal heat pump system that also uses ground water, but relies on smaller amounts inside a very deep well to exchange heat with the surrounding bedrock.

Payback period 12-25yrs
Climate Scheme
Podium

- Fresh air inlet
- Heat recovery
- Heat storage
- Geothermal heat pump
- Exhausted air
- Fresh air intake
- Stack ventilation

- Heat generated by the market fridge
Climate Scheme
Podium
Climate Scheme
Podium

PV cells generating electricity

- Market electricity use (storage etc.)
- Residential electricity use
- Surplus electricity contributing to the grid

Greenroofs help isolate the building, improve air quality and reduce urban heat island effect.
Climate Scheme
Podium

- Rainwater absorbed by the roof garden
- Market cleaning
- Residential usage (toilet flushing etc.)
- Rainwater tank & purification treatment
Climate Scheme
Tower

natural ventilation
+ mechanical ventilation

Geothermal heat pump

Ground Floor

Level 1

Level 2

Level 3

Level 4

Level 5

Level 6

Level 7

Level 8

Level 9

Level 10

Level 11

Level 12

Level 13

Level 14

Level 15

Level 16

Level 17

Level 18

Level 19

Level 20

Level 21

Level 22

Level 23

Level 24

Level 25

Level 26

Level 27

Level 28

Level 29

Level 30

Level 31

Level 32

Level 33

Level 34

Level 35

Level 36
Climate Scheme
Tower

natural ventilation
+mechanical ventilation
Conclusion
A food market provide the local community with fresh groceries
An iconic market provide tourists with unique shopping experience that is authentically ‘New York’
A market that is easily accessible
A market promote a more sustainable lifestyle
A market that is also a public space that is accessible for everyone
Thank you!