The Path to the Playground

Ludovica Beltrami

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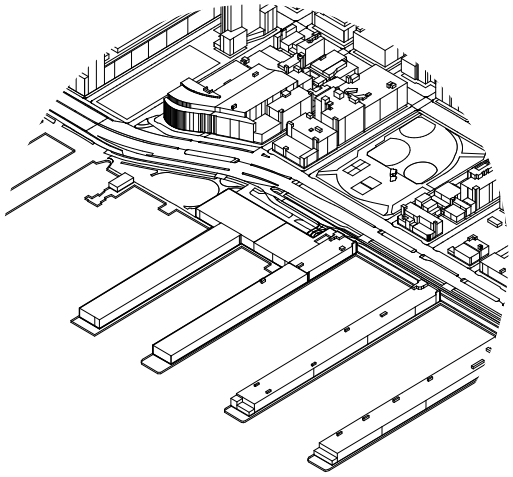
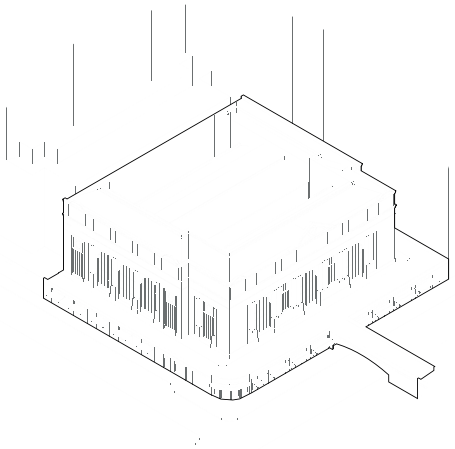
Ludovica beltrami



08.06.01 Upper West side piers



08.06.02 Grand Central Terminal

INTRODUCTION

Historical Background

The deep-water harbour and navigable waterways—crucial reasons why the city was founded on an island in the first place—remain an integral part of urban life and work in New York. Yet, its role has changed drastically throughout history. As the Hudson River was easier to navigate the west shoreline of Manhattan was modified with addition of land fields in order to better serve shipping. The water infrastructure favoured the creation of an industrial area in the west of midtown, as industries located there enjoyed direct access to goods arriving from the train passing through Eleventh Avenue, as well as from ships docked at the piers.

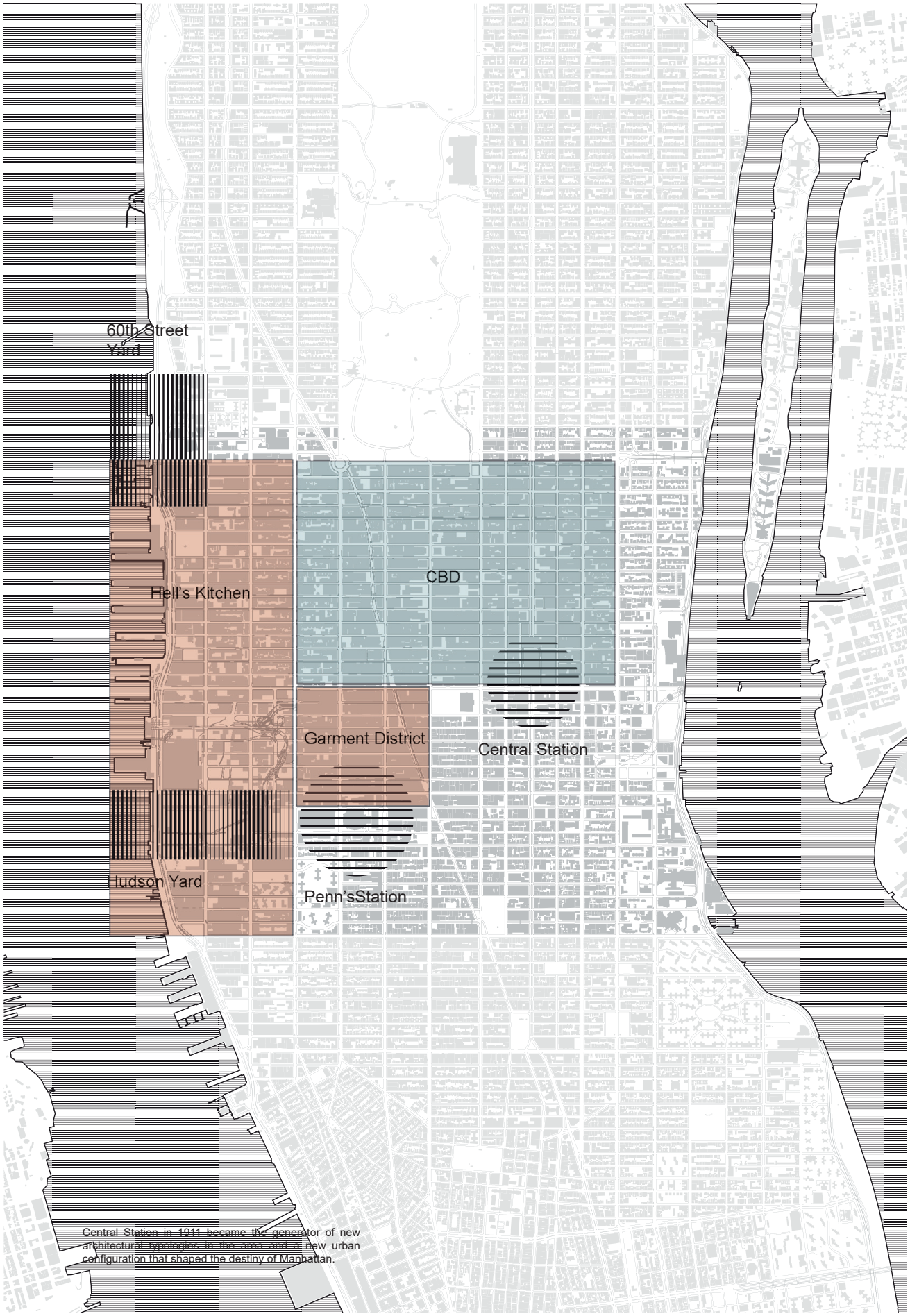
In 1869 the Hudson River Railroad merged with New York Central, diverting passengers to Grand Central Depot on the east side of Midtown and leaving the west exclusively for freight. In 1911, Central Station generated new architectural typologies in the area, leading to a new urban configuration that would shape the destiny of Manhattan. Two contrasting polarities were therefore created between the west and the east side of Midtown. The presence of such two polarities is revealed not only by the architectural presence of the CBD as opposed to the lower blocks in Hell's Kitchen but also by great amount subway lines in the east side as opposed to the west.

In the first half of the 20th century the first two lines of blocks in the west were completely dedicated to industries while the centre of Hell's Kitchen was developed as a residential quarter with tenement housing for the workers. The port and railroad dominated the city's economy and therefore urban centres clustered tightly around the major accessways. Yet New York's role as a commercial port did not survive the advent of containerized shipping in the 1960s[1], when much maritime activity migrated from Manhattan and Brooklyn to New Jersey ports whose large open spaces, rail and highway links were better suited to the mechanized loading, storage, and transportation of heavy containers. Moreover, the growing availability of airplanes and the construction of new bridges and tunnels further diminished the vitality of Manhattan's port areas. The waterfront changed its role and many piers became unused.

However, as city zoning rules remain unchanged, they will with time stymied waterfront development, with much property still designated exclusively for industry in areas where industrial activity has long been in decline, including many sections of the Brooklyn and Queens shoreline[2]. The City Planning Department has only recently started to rectify this problem, for example by allowing mixed-use developments

1 "The Wasted Waterfront," City Journal, December 23, 2015, https://www.city-journal.org/html/wasted-waterfront-12041.html.

2 Ann L. Buttenwieser, Manhattan Water-Bound: Planning and Developing Manhattan's Waterfront from the Seventeenth Century to the Present (New York: New York University Press, 1987), 12.



Central Station in 1911 became the generator of new architectural typologies in the area and a new urban configuration that shaped the destiny of Manhattan.

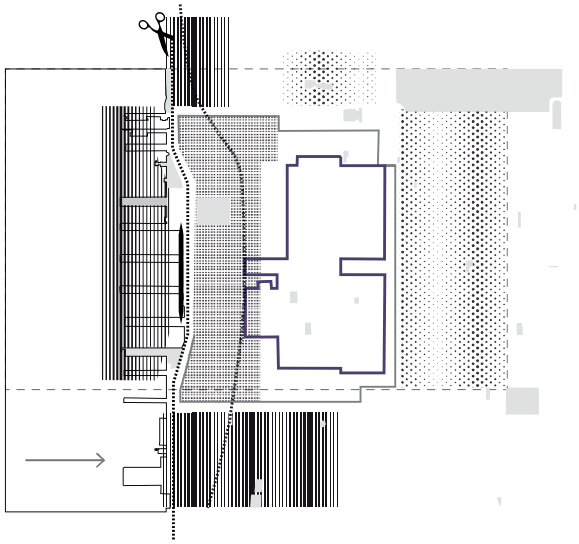
		Hudson River Park Area	Below 59th	Manhattan
Percent Change in Property Tax Base, 2000 to 2015	2000	$283 m	$3.44b	$5.31b
	2015	$937m	$10.72b	$14.88b
	Change	231%	211%	180%
Percent Change in Property Value Base, 2000 to 2015	2000	$16.76b	$97.9b	$173.76b
	2015	$40.24b	$288.77b	$440.02b
	Change	140%	195%	153%

on the piers. New investments encouraged the transformation of the Far West Side, notably with the creation of the Hudson River Park leading New York City to start unlocking the potential of its post-industrial waterfront in an attempt to turn it into a new revenue generator and eventually as the new Playground of Manhattan. The Hudson River Waterfront has seen an increase in property value of approximately $23.5 billion, growing 140% from 2000 to 2015.

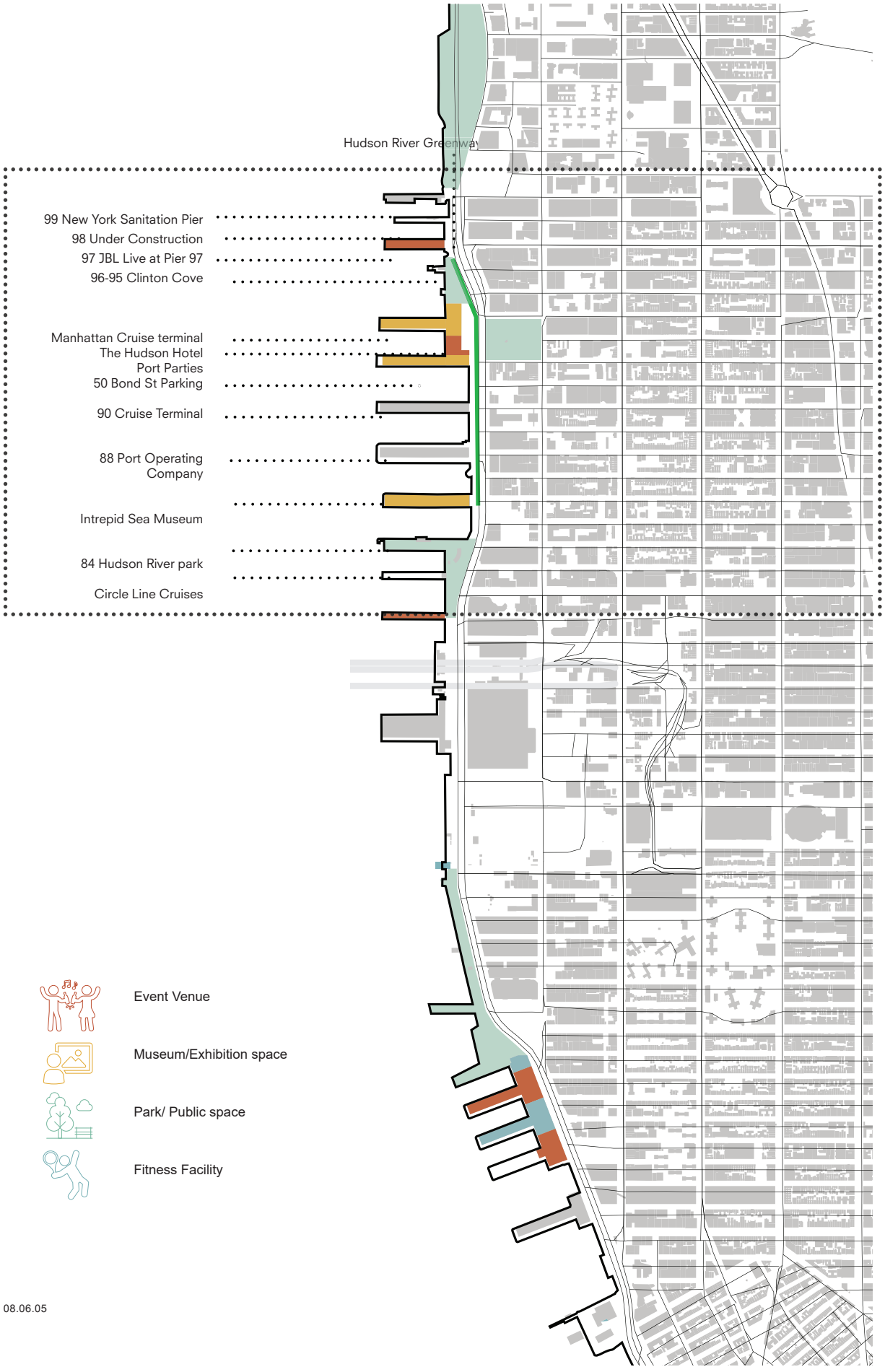
Recent developments have also shaped new important polarities in midtown. Hudson Yard represents an increasingly highly densified area where the direct connection between infrastructure, offices and retail space was considered central in creating a new neighbourhood vision. Similarly, the new development north of the site of Riverside South raises on what once was 60th street freight yard. Such developments, led by the private sector, could mark the start of a waterfront renaissance, unleashing not only the economic, but also the social, cultural, and aesthetic potential of the shoreline, New York's most underused and unappreciated asset.

Such change has a great impact on our area of research as the transformation of the disused piers into new revenue generators could go along with a redevelopment of the warehouses along the waterfront that will soon become unused. Indeed already new residential and mixed used projects are being constructed in the first two lines of blocks along the waterfront between 59th and 42nd street.

In the future the destiny of this area could be similar to that of the



08.06.04 Highway disjunction between new possible developments


Hudson River Greenway
99 New York Sanitation Pier
98 Under Construction
97 JBL Live at Pier 97
96-95 Clinton Cove
Manhattan Cruise terminal
The Hudson Hotel
Port Parties
50 Bond St Parking
90 Cruise Terminal
88 Port Operating Company
Intrepid Sea Museum
84 Hudson River park
Circle Line Cruises
Event Venue
Museum/Exhibition space
Park/ Public space
Fitness Facility

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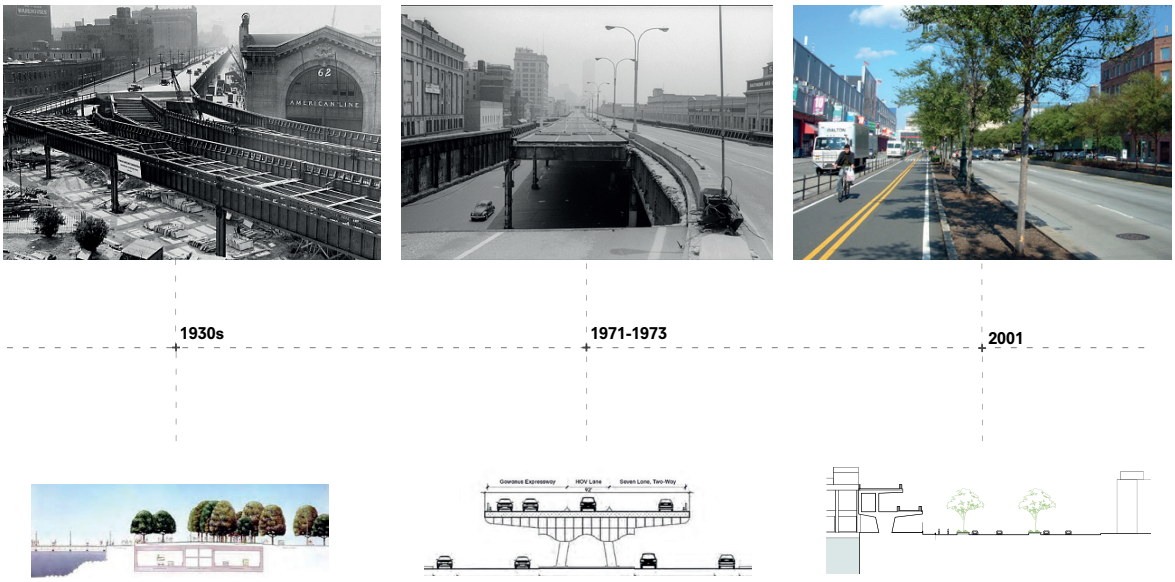
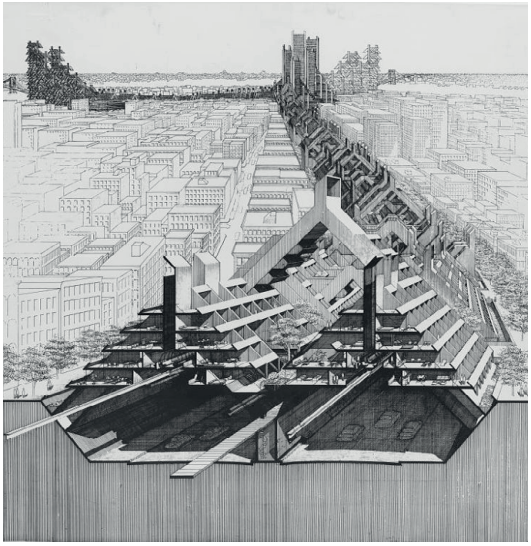


Highway History

Garment District which once was the heart of textile manufacture in New York. Yet global trends have changed the functioning of the fashion industry. Domestic manufacturing has become less competitive and the manufacturing sector has experienced a steady decline[3] . The City has attempted to preserve the local manufacturing by creating the Special Garment District Zoning which places manufacturing use restrictions on the lower floors of the old loft factories while startups and design firms have offices on the upper floors along with residential units.

HOW MOBILITY WILL ANSWER TO THE CHANGES

As mentioned above, planning regulations hinder the re-development of the waterfront in the 1930s, yet another negative factor and impediment for a successful integration of the waterfront with the rest of the neighbourhood is the west side highway that creates air and noise pollution. The construction of such infrastructure in the 1920s sparked city-wide debate, and a number of proposals were put forward to embed the highway in a much more sophisticated and multifunctional transportation system, or alternatively to build it below ground. This project “Wateredge” for example called for 700 acres of land to be created above the freeway, between the Battery and 72nd St, where there would be 85,000 new apartments and a park leaving street-level space free to be used as a recreational area and preventing the separation of the waterfront from the inner city [4].
Eventually it was decided to build an elevated highway system which increased the disjunction between the life in Manhattan and the water. Yet the highway soon started to decay, and finally collapsed in 1971.



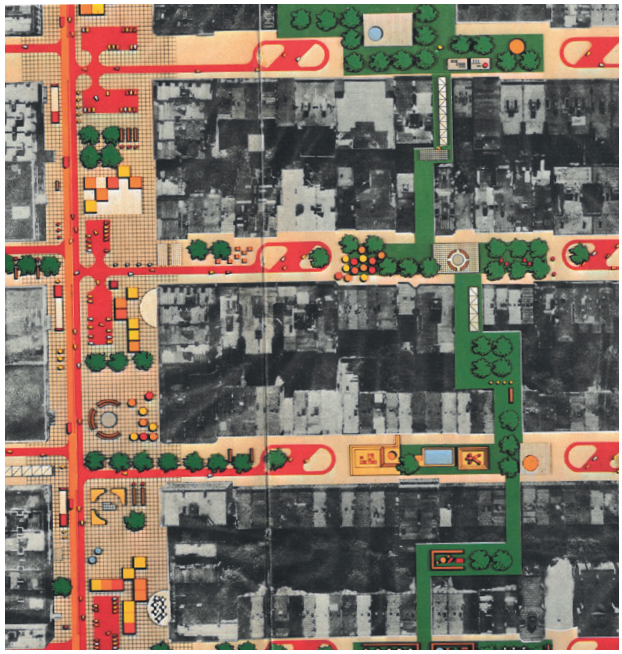
08.06.09 Paul Rudolph alternative for Lower Manhattan Expressway 1974

3 “Is NYC’s Garment District Unraveling?,” Retail Dive, accessed January 29, 2020, https://www.retaildive.com/news/is-nycs-garment-district-unraveling/531912/.
4 Greg Goldin, Sam Lubell, and Daniel Libenskin, Never Built New York (New York, 2016).p.40

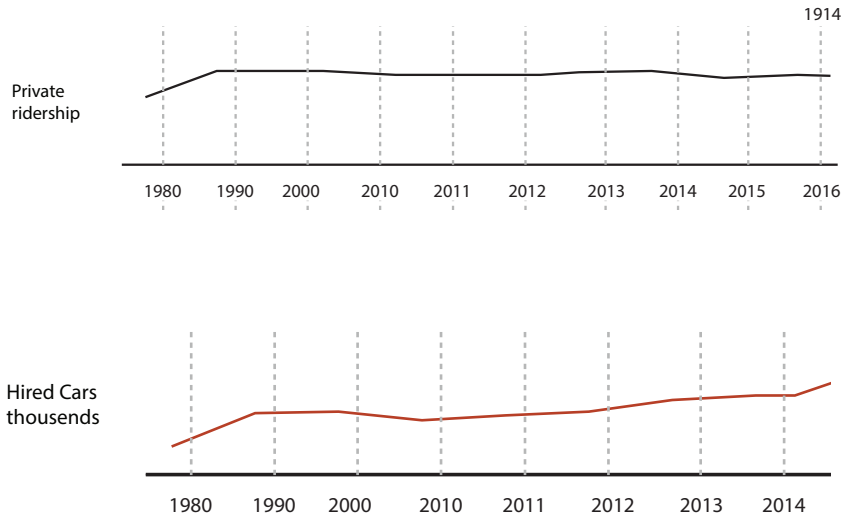
08.06.10 Proposal by Peterson Rich Office 9x18 proposal

08.06.11 Converting Parking into usable area to meet housing demand. Parking space dimensions are easily adaptable to standard HPD/HDC affordable housing unit sizes.

08.06.12



08.06.13 Street cover 40% of the city surface, yet they have been lost as a resource for the people. In 1974 Ulrich Franzen and Paul Rudolph proposed to create new, well-defined neighborhoods by turning avenue and streets into different uses while still leaving 5% of the street area for the car.

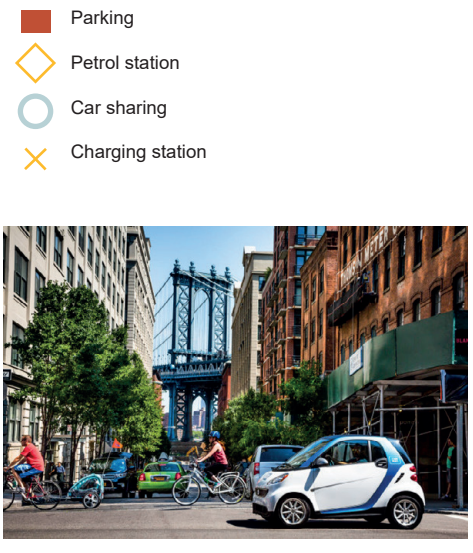


In the 1970s, when the West Side Highway was closed there was a decrease of 53% of the traffic. Such dramatic change demonstrates that the construction of freeways can often contribute to the creation of the traffic jams it purports to alleviate.

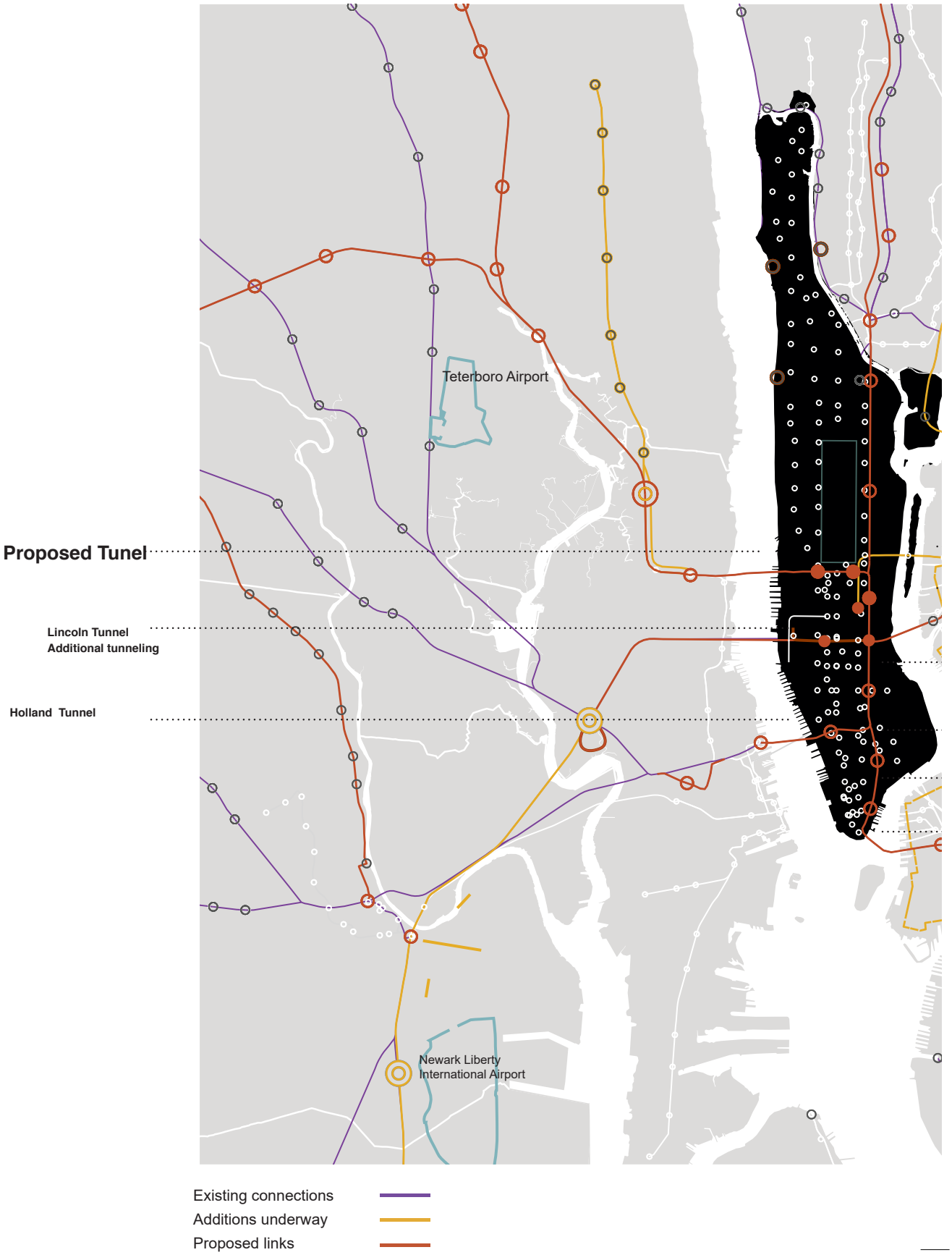
Eventually the construction of the Westside highway was probably more abusive to the city and well being of the people than effective violating he scale and fabric of the city. Despite all evidence the City considered essential to replace this highway with a "bigger and better freeway" named Westway. The project was completed in 2001, twenty-eight years after the West Side Highway's collapse and permanent closure. The 9A highway is today a ten-lanes wide state highway running along the entire length of the waterfront[5].

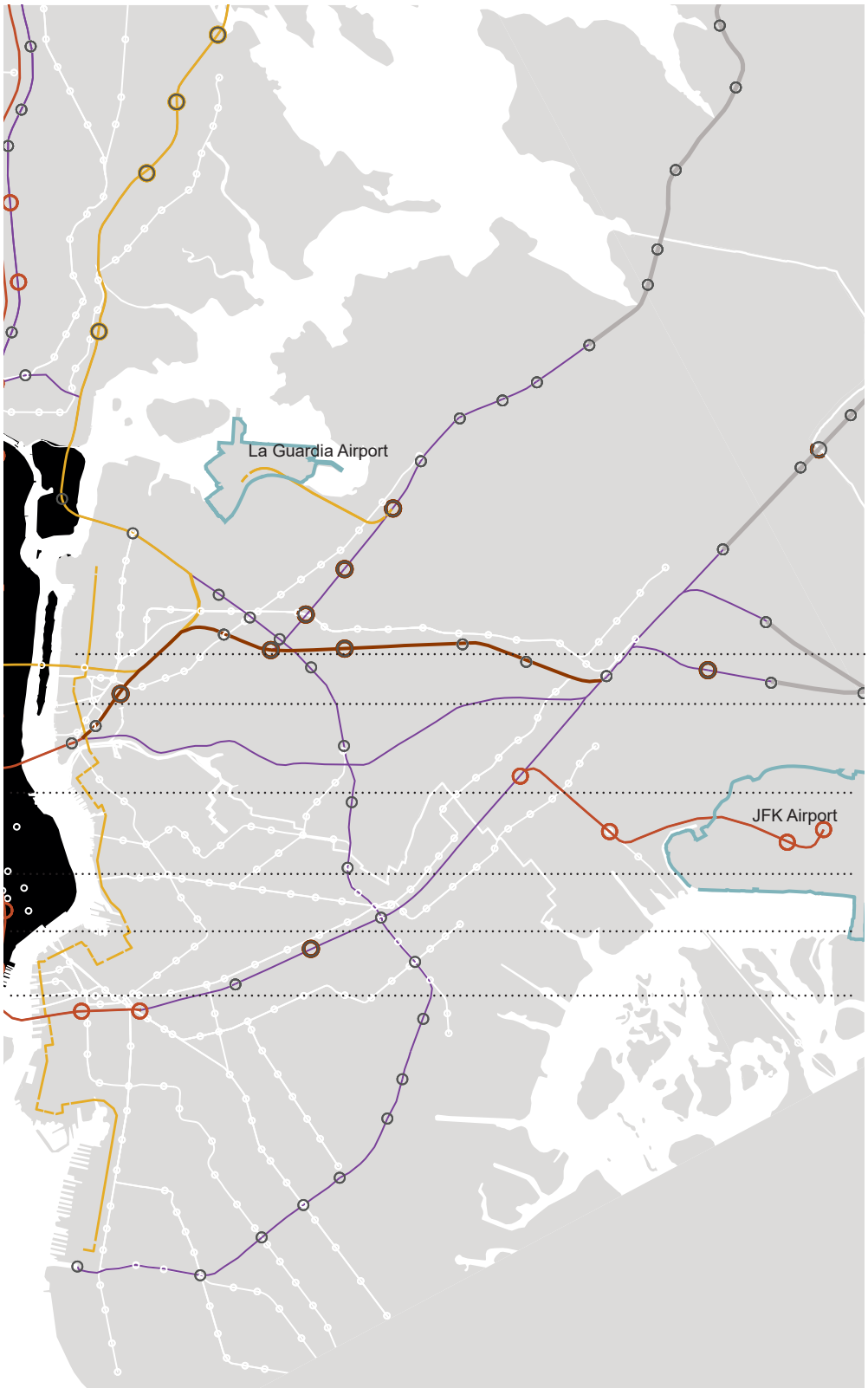
Moreover responding to the boom of cars in the 60s and 70s Robert Moses promoted the creation of a Lower Manhattan Expressway. Foreseeing the risks of the project, Ulrich Franzen and Paul Rudolph investigated a new kind of hybrid transportation system which integrated the infrastructure with the built environment. The study suggested that the conception of new building types should accompany the planning of new transportation networks in order to reinforce the role of the transportation system itself and strengthen its connections to the surrounding urban fabric. Simultaneous consideration of building and transportation, usually conceived as independent and disconnected, was proposed as a new design potential on the assumption that means of transport would increasingly need to be integrated in the urban fabric, further disrupting the sense of place and community, in an eternal hunger for fast connectivity. Franzen and Rudolph also identified ways to reconfigure the disrupting highway into an asset for the city and especially for the adjacent neighbourhood. Their study conceived the highway as a "continuous volume of space in which the transportation system is but one potential and appropriate element. […] To realize the

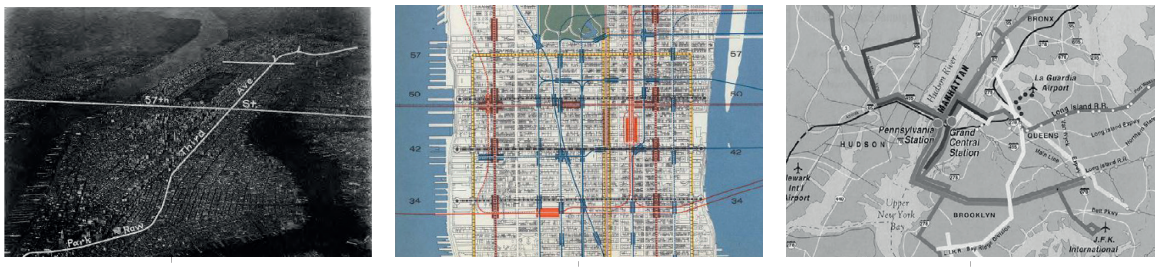
New transportation trends reveal a 30% increase in car sharing and a slight increase in public transport and bikes because of traffic congestions



5 "Removing Freeways - Restoring Cities," accessed January 30, 2020, http://www.preservenet.com/freeways/FreewaysWestSide.html. [10/11/19]


Proposed Tunel
Lincoln Tunnel
Additional tunneling
Holland Tunnel
Teterboro Airport
Newark Liberty
International Airport
Existing connections
Additions underway
Proposed links


La Guardia Airport
JFK Airport
Queen's Borough Bridge
Queen's Midtown Tunnel
Williamsburg Bridge
Manhattan Bridge
Brooklyn Bridge
Brooklyn Tunnel



08.06.16 Regional Plans

opportunities created by modern transportation lines an awareness of three-dimensional potentials above and below transportation line of route is essential." The resulting proposal used the air right and the space beneath maintaining a thoroughly multileveled integrated system. The designers also proposed a reconsideration of zoning so that more efficient multifunctional buildings could be created[6].

The history of such infrastructures and the proposals for alternative ways on integrating them led me to question the role and importance of cars in Manhattan. The noise and Co2 emissions generated by such massive infrastructure transform the space of the waterfront into a hostile and toxic environment which can only be enjoyed through the windows of upscale residential skyscrapers. Is such infrastructure necessary for an efficient flow in Manhattan?

RESPONDING TO THE CHANGE

The area's industrial past and the existence of a freeway resulted in an infrastructural desert in the area of Hell's Kitchen. In the past the area was serviced by an elevated metro line passing by 9th avenue that was demolished in the 1940 and never rebuilt after the great depression and the 8th Avenue A/C/E lines took over the passenger's load.

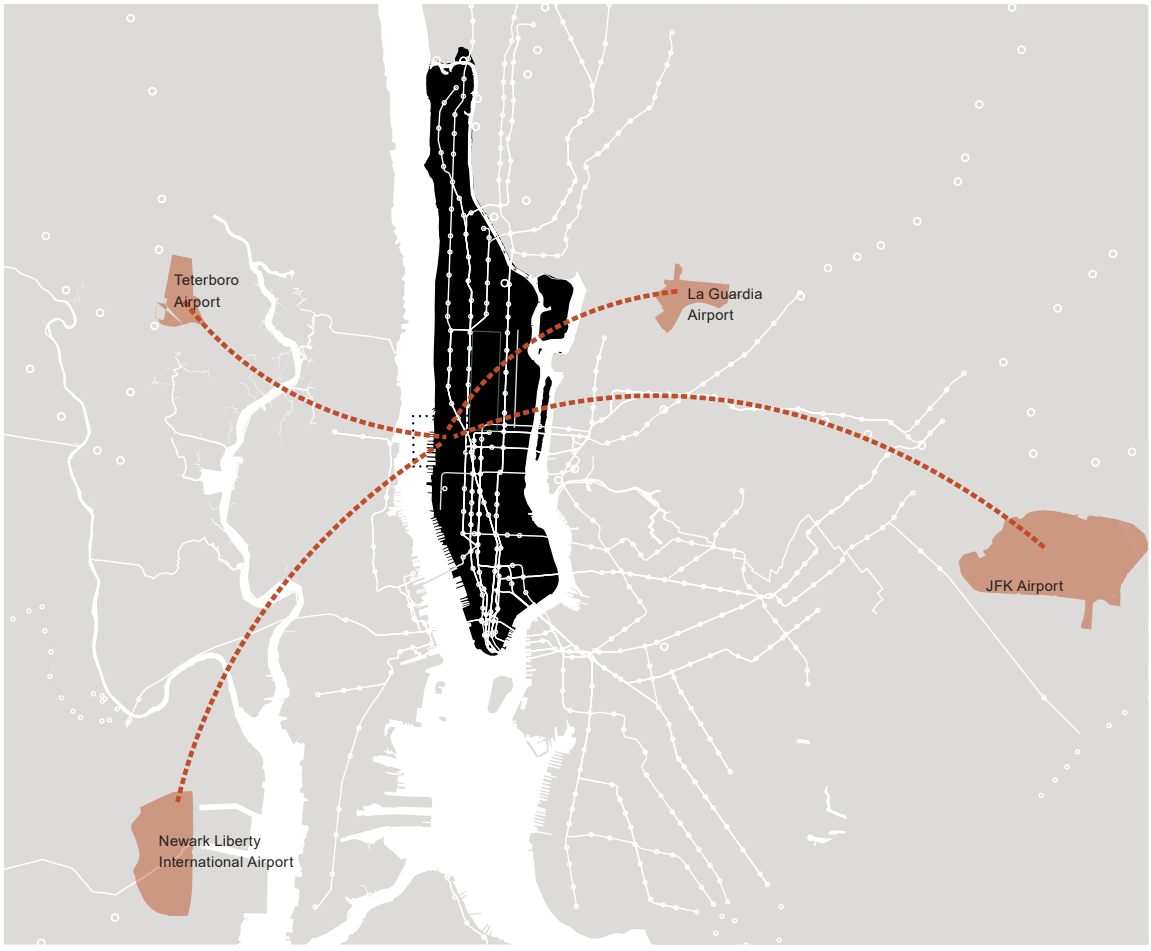
How will this lack of public mobility networks influence the development of Midtown? This is an essential question since the infrastructure for the movement of goods and people has a defining impact on the way we inscribe the territory, and thus on the organization and physical development of cities. Moreover, the city is aiming for a more efficient and sustainable local transportation system. As the MTA is struggling to find funds for the construction of the new lines needed and the maintenance of the existing stations, congestion charges will be introduced in the hope of decreasing traffic intake in the island and generate new investments for public transports. The drastic shift in public mobility necessary to achieve this aim is not yet possible in New York as public transportation systems are already operating well past their capacity. Moreover, as the city expands there is the need not only to focus on better servicing the area in Manhattan but also to expand its network to the region and successfully integrate the two systems. New subcenters have been created in the region. The number of work-bound commuters from New Jersey have been increasing by 27% in the last years due to the development of Princeton and Newburgh. The network therefore needs to be expanded to the larger region in order to better service the core.

Already in the past regional plan of 1930, 1960 and 1996 it was envisioned the need to create new connections with New Jersey. In the last regional plan such needs become crucial as the existing Lincoln tunnel has been damaged during Hurrican Sandy and needs to be closed for repairs. In the fourth regional plan additional rail tunnels from Union City, NJ, to 57th Street in Midtown were planned to provide the next trans-Hudson capacity expansion after Crossway in Hudson Yard reaches full capacity. New tunnels at 57th Street would go along with the restoration of passenger service on the West Shore line, the underground line passing below Hell's Kitchen now used for freight. The added tunnel will pass underneath the area of interest and cross with the Empire connection converted line, creating a new node of infrastructure in Midtown[7].

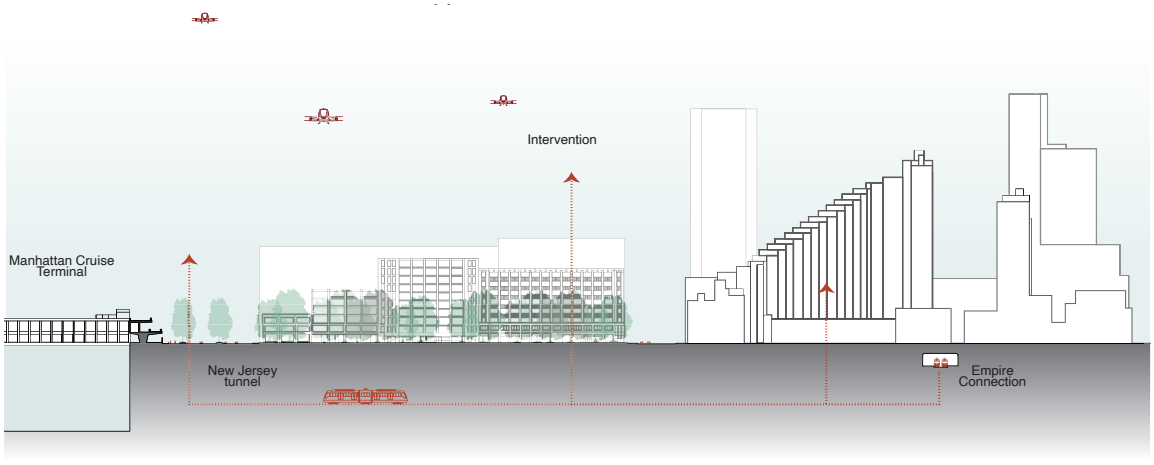
Yet also the means by which the people enter Manhattan have been changing, the total number of transit riders to and from Manhattan has been rising since 1995, and the number of cars has concurrently declined. Such decline is in part due to the rising popularity of car

6 Peter; Ulrich Franzen & Paul Rudolph Wolf, The Evolving City: Urban Design Proposals (Whitney Library of Design/The American Fereation of Arts, 1975). p.30

7 The Fourth Regional Plan, "Trans Regional Express: Transforming TheRegion" December 10, 2019, http://fourthplan.org/reports/trans-regional-express-transforming-the-new-york-regions-commuter-rail-system-into-an-integrated-regional-rail-network.

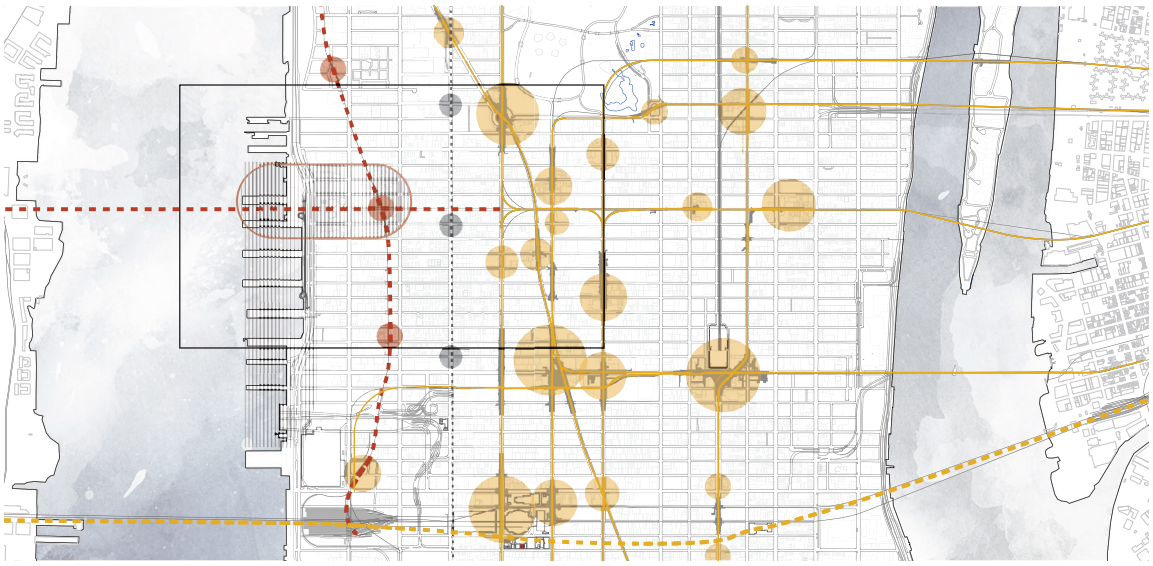


08.06.17 Drone Regional Network



Intervention

08.06.18 Diagrammatic section of the site



Exisitng metro
Porposed Metro
9th elevated demolished metro
Proposed metro stations
Site

With the electrification of the underused freight line ad the a tunnel to NJ the project links the west of midtown with the entire region

sharing as commuters tend to use public facilities and move to a car-sharing system when travelling in the island. In the last decade car-sharing programs have multiplied in New York City leading 23 to 32 % of carshare members to give up their personal vehicle since joining the sharing service. Is such shift indicative for the new way mobility will be implemented in cities?

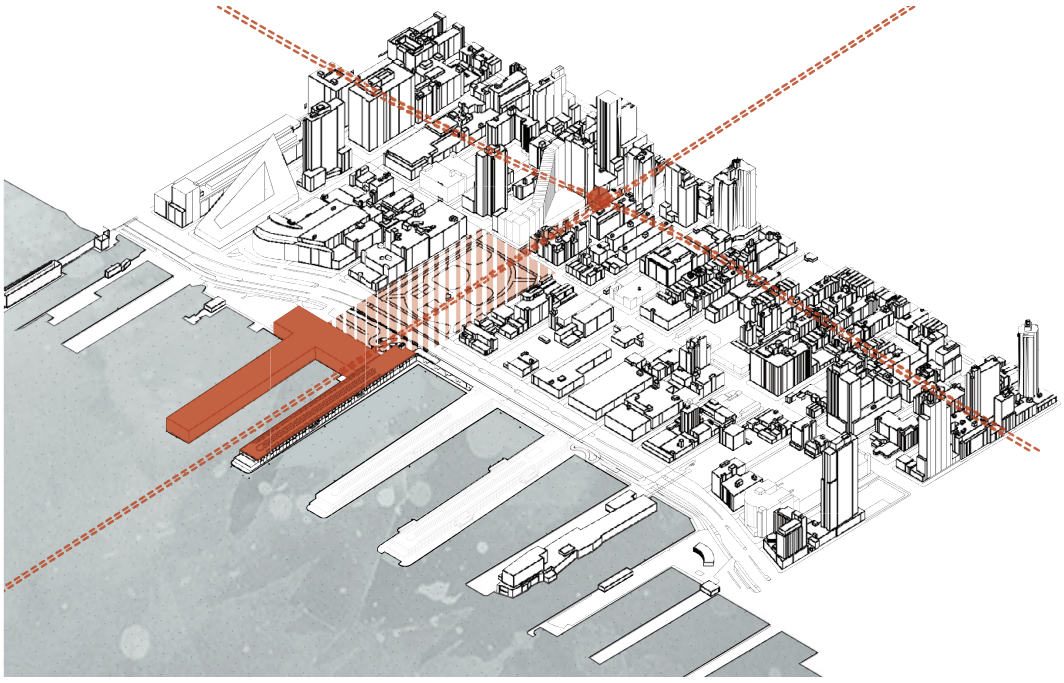
Moreover in order to respond to the needs of the ever changing Metropolis of New York and successfully integrate the new node in the network we should also consider the way New Yorker move around today hoping to make an accurate prediction on how they will move around tomorrow. Now Midtown presents a heavily congested grid. Yet recently there has been a decrease in the use of taxy and personal cars as technology leads us to use new shared mobility systems. Indeed, companies like uber are studying the network of metropolis in order to create a smart ecosystem of transportation. They are also investing in the possibility of integrating new mobility systems such as uber air, envisioning shared drones arriving directly to the core of midtown. Already in the past visionaries thought of integrating air mobility directly to the core of cities like New York and London. Such in designs by William Zeckendorf in 1945 and San'Elia in 1914 that connects together station and air mobility. Yet if in the past such projects translated in utopic visions, nowadays this could become a reality as several companies such as Ehang, Airbus and Boeing are investing in the development of drones and intend to development of a skyport in Midtown.

The decrease in personal car use has already altered the landscape of the neighbourhood. Parking lots in the area have become redundant and have been substituted by new developments, mainly luxury/ upmarket residential condos.

Both inhabitants and visitors experience the urban landscape as traffic, transportation systems, and throughways. Not acknowledging the design potential of such urban landscapes curtails the creation of more sustainable urban forms. Cars take up an amount of ground surface often disproportionate to the number of users travelling in them. Space is thus taken away from further densification or recreational areas for the city. In the area of research such space amounts to 800 000 m2 (including parking lots). Streets cover around 40% of the city's surface, yet they are often lost as a resource for its dwellers. If this space could in part be retrieved and dedicated to functions other than car traffic, neighbourhoods could seek to become more well-defined. Streets could have multiple functions, creating a local sense of place. Therefore, if now finally the car is decreasing its imposing role in the way we get around in the cities, it is essential to promote such changes with an adequate public transportation network and sharing facilities.

CONCLUSION

In order to service the area we could suggest to electrify the existing freight line passing underneath the site and creating three additional metro stations. This line will cross with the added tunnel proposed by the municipality of New York in the last regional plan creating a new node in the grid. Because of its proximity to the waterfront such moment could also function as a new gateway for the developing waterfront while essentially diminishing the impact of the highway in the area. The proposed node due to its proximity with the Manhattan Cruise Terminal could be ideal location also for the integration of new transport systems such as air mobility that is receiving a lot of investments in



08.06.20 Additional node in Midtown connecting with the Cruise Terminal Axonometry

recent years creating an ecosystem of transportation.

Eventually the question to be asked is if Manhattan will still play such an important role in the future of New York or if the region will expand creating new subcentres outside the area. New transit connections support a mutually beneficial relationship between New York City and the constellation of other cities developing in the region which are becoming centers of prosperity.

A new hub in our area of research would be an essential step for an homogeneous development in Midtown. It would offer a comprehensive solution to the needs of the area, as it could bridge over the Highway and function as a new developments on the waterfront while linking them with the inner district.

The Hub is fundamentally a space where all transportation systems are brought together to facilitate rapid interchange and interconnected with elevator and escalator systems of surrounding buildings and public open spaces. This creates a large-scale interchange and complex of connected buildings on a large scale. Eventually in our era the hub is the modern alternative to the plaza which traditionally served as the urban gathering space. As such node of mobility are more accessible, they become the perfect locations for different programs and meeting point in the neighborhood. The Hub as an area of great use can function as an extension of nearby existing institutional and educational activities and can therefore provide a resource for both the community and the city.

The unprecedented speed and ease of mobility that shaped global cities, together with the incessant and immediate flow of information and images through the internet challenge both the established spatio-temporal reality and the role of sociology in the contemporary world[8]. Our quest for progress tars down spatial barriers, in a continuous conquest of space that eventually results in the speeding up of the pace of life and in the need for instant connections on a local and global level.

8 David Harvey, The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change (Oxford [England] ; Cambridge, Mass., USA: Blackwell, 1989), 242

IMAGE REFERENCE

08.06.01 Ludovica Beltrami, 2019, Upper west side Piers axonometry
08.06.02 Ludovica Beltrami, 2019,Grand Central Axonometry
08.06.03 Polarities Mapping Midtown
08.06.04 Ludovica Beltrami, 2019, diagram Highway disjunction between new possible developments
08.06.05 Ludovica Beltrami mapping of piers redevelopments
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08.06.13 Ulrich Franzen and Paul Rudolph, 1974 , The Evolving City: Urban Design Proposals

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08.06.14 Ludovica Beltrami Mapping, 2019
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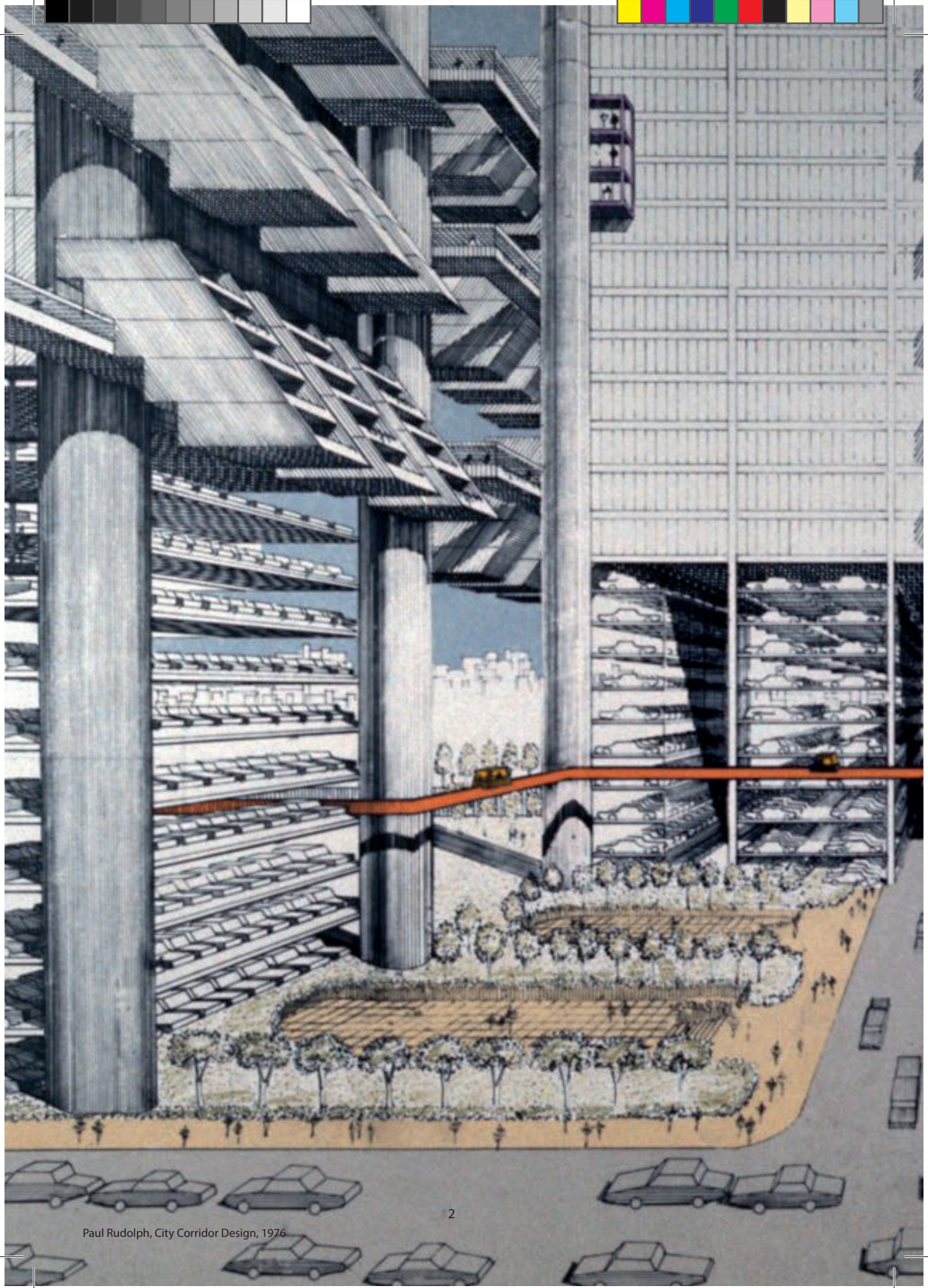
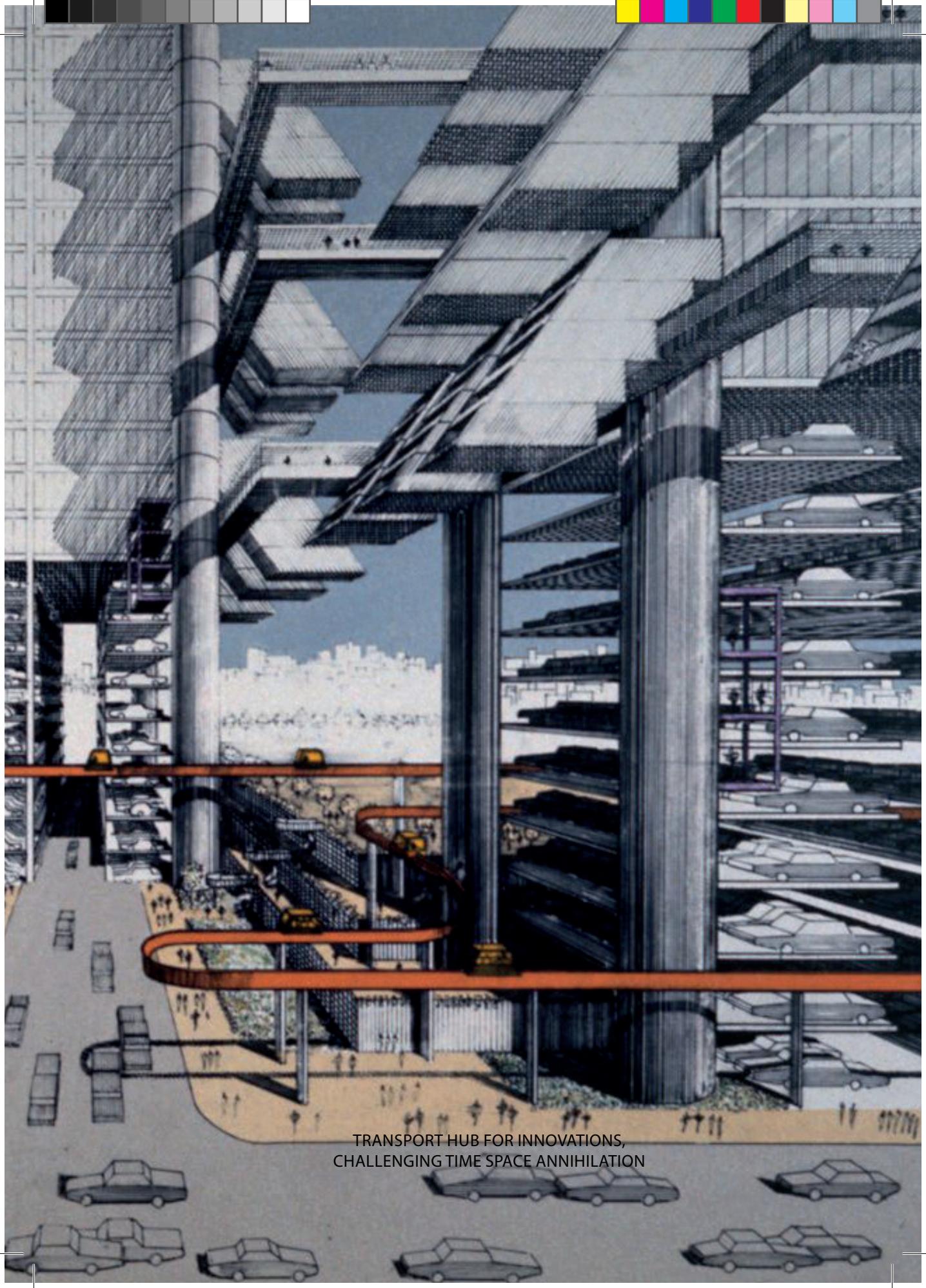


Paul Rudolph, City Corridor Design, 1976



TRANSPORT HUB FOR INNOVATIONS,
CHALLENGING TIME SPACE ANNIHILATION

The Path to the Playground Design Brief

"The nomads traditionally studied by ethnographers have a sense of place and territory, a sense of time and of return. This nomadism is thus different from the metaphorical nomadism of our current mobility; that is, "overmodern" (surmoderne) mobility. The meaning of "over" in the adjective "overmodern" or "supermodern" has to be read in the sense that it has in Freud's and Althusser's expression "overdetermination," where it indicates the profusion of causes in a particular phenomenon that complicates the analysis of its effects. Overmodern mobility expresses itself in the movements of population (migrations, tourism, professional mobility), in immediate general communication and in the traffic of products, images, and information. It corresponds to the paradox of a world where we can, at least in theory, make everything without moving and while moving all the time."[1]

PRESENT AND FUTURE POSSIBILITIES FOR THE AREA

The site is located in De Witt Clinton Park in the Upper-West Side of Midtown Manhattan. The context of the site is exemplary precisely because it presents a multitude of artefacts that document the history of the waterfront. Yet the area presents a very weak relationship with its shoreline, which is mainly occupied by private entities -The New York City Cruiseship Terminal- and by intrusive infrastructure -New York State Route 9A.To successfully push for an urban reconnection of the west waterfront to the rest of Midtown three steps need to be undertaken:

-Rezoning of the industrial blocks along the waterfront between the highway and 11th Avenue, superseding industrial activities with commercial and residential uses bringing population closer to the waterfront. The regulation of scope and density in the area needs to be modified changing the current maximum FAR of 4. This will possibly also relieve Hell's Kitchen from its pressure on the housing market.

-A new infrastructure above the 9A Highway will be introduced running along the Hudson from 42nd to 62nd street. The 9 lanes highway will be reduced in its with to 5 lanes and buried underneath a 9'berm increasing the access to the waterfront creating also new areas for program and recreation, mitigate air pollution and noise. Such berm is also acting as a defensive line against flooding due to climate change which is expected to have a great impact on the area.

PROJECT OBJECTIVE

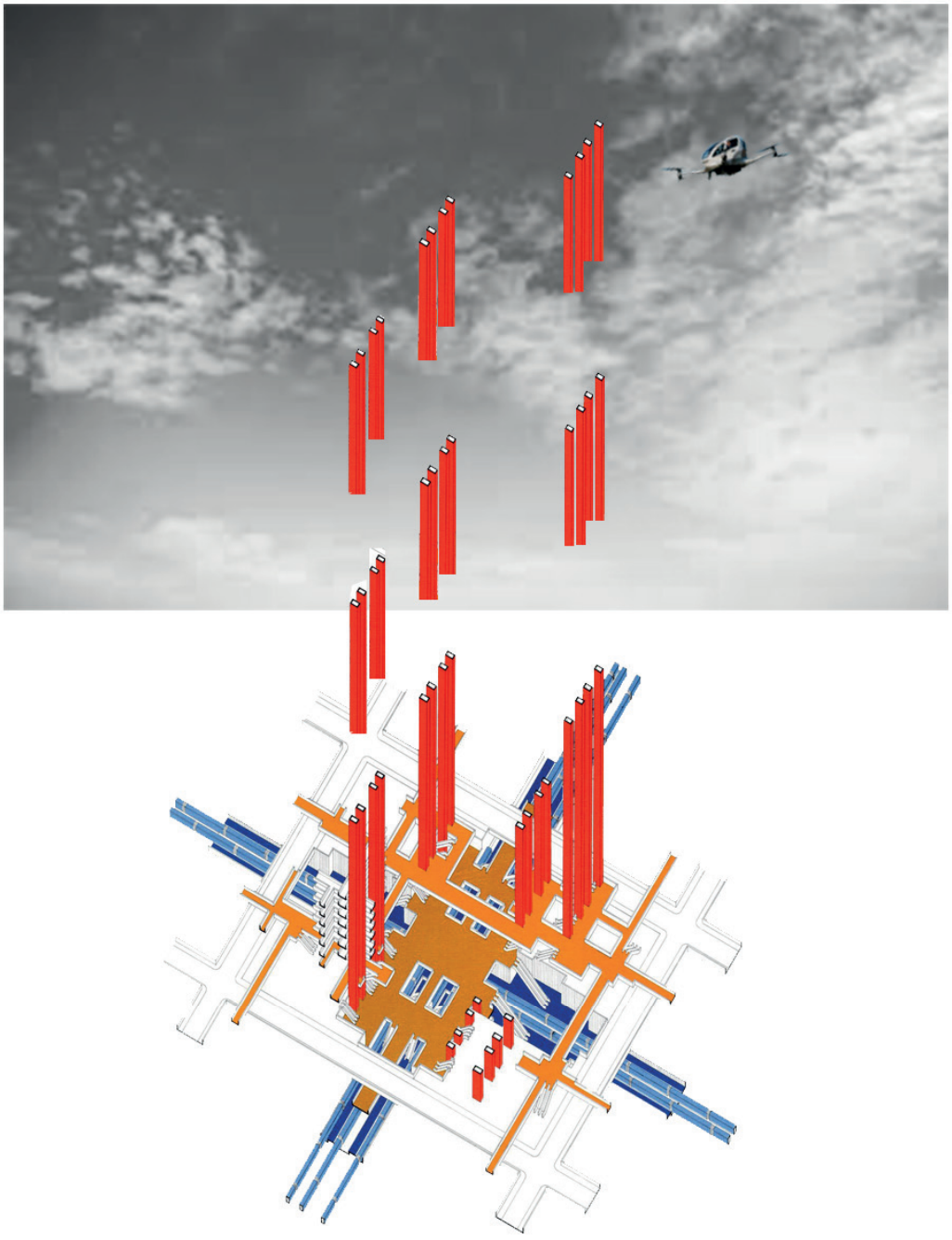
In the past there was an elevated metro line passing by 9th avenue that was demolished and never rebuilt after the great depression. Now the area is underserviced by public transport yet in order to strive for a new development it needs to be efficiently connected with the rest of Midtown.

The old freight line passing underneath the area, the Empire Connection needs to be electrified and turned into a metro line with the creation of three new stations: Riverside South, De Witt Clinton Park and 45th street.

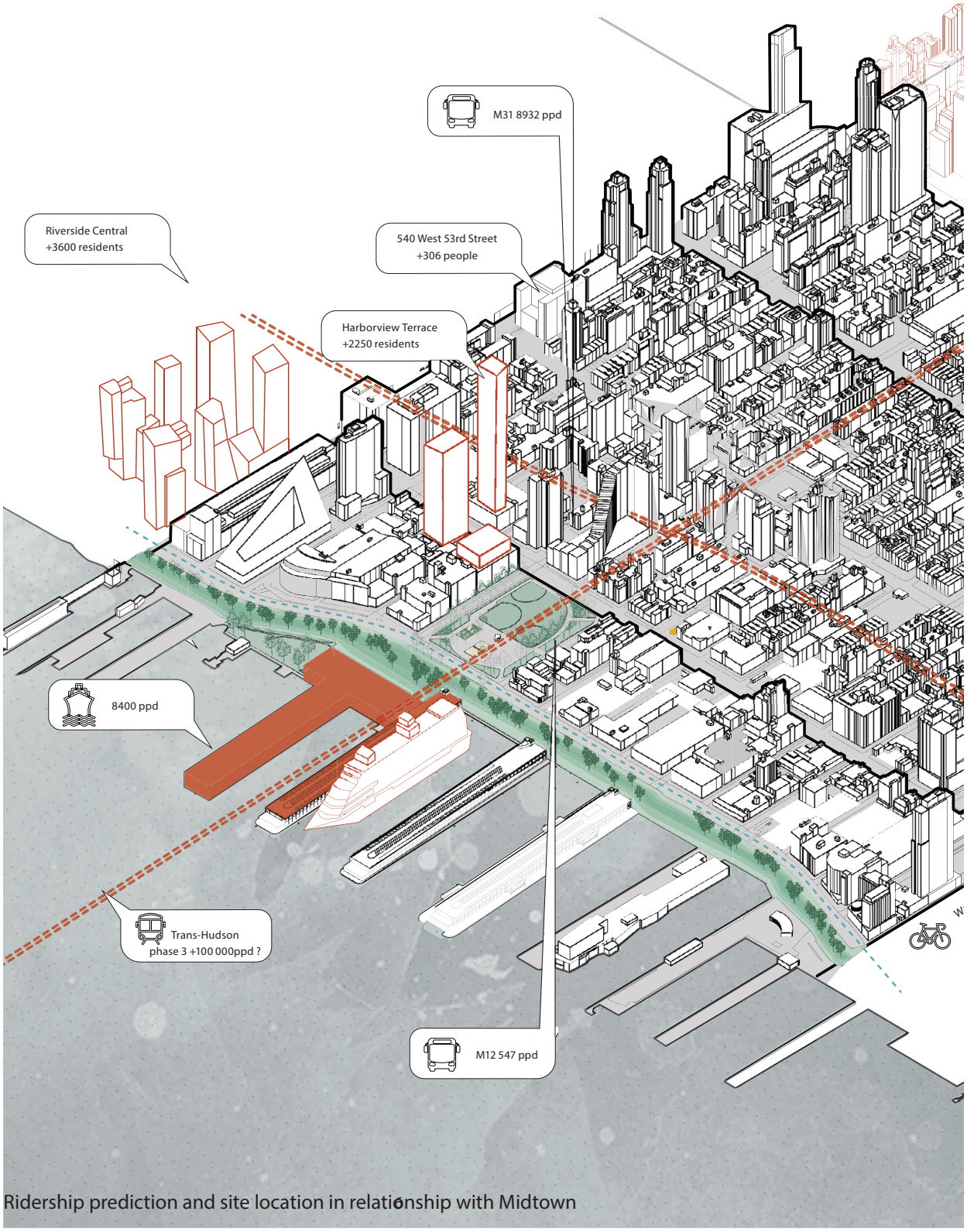
Yet as the city expands the network needs to be expanded to the larger region. In the last regional plan the need to create new connections with New Jersey become crucial as the existing Lincoln Tunnel is damaged and need to be close for repairs. Such new link with New Jersey will cross underneath De Witt Clinton Park and must to be linked with the proposed metro line creating a new node in proximity of the Manhattan Cruise Terminal on the waterfront. The existing public transport in the areas such as two bus stations with a daily ridership of M12 547 ppd and M31 8932 ppd and the Cuise Terminal with 8400 ppd will have to be integrated with the new underground networks.

The project needs to act on a urban level merging with the new green infrastructure above the 9A Highway.

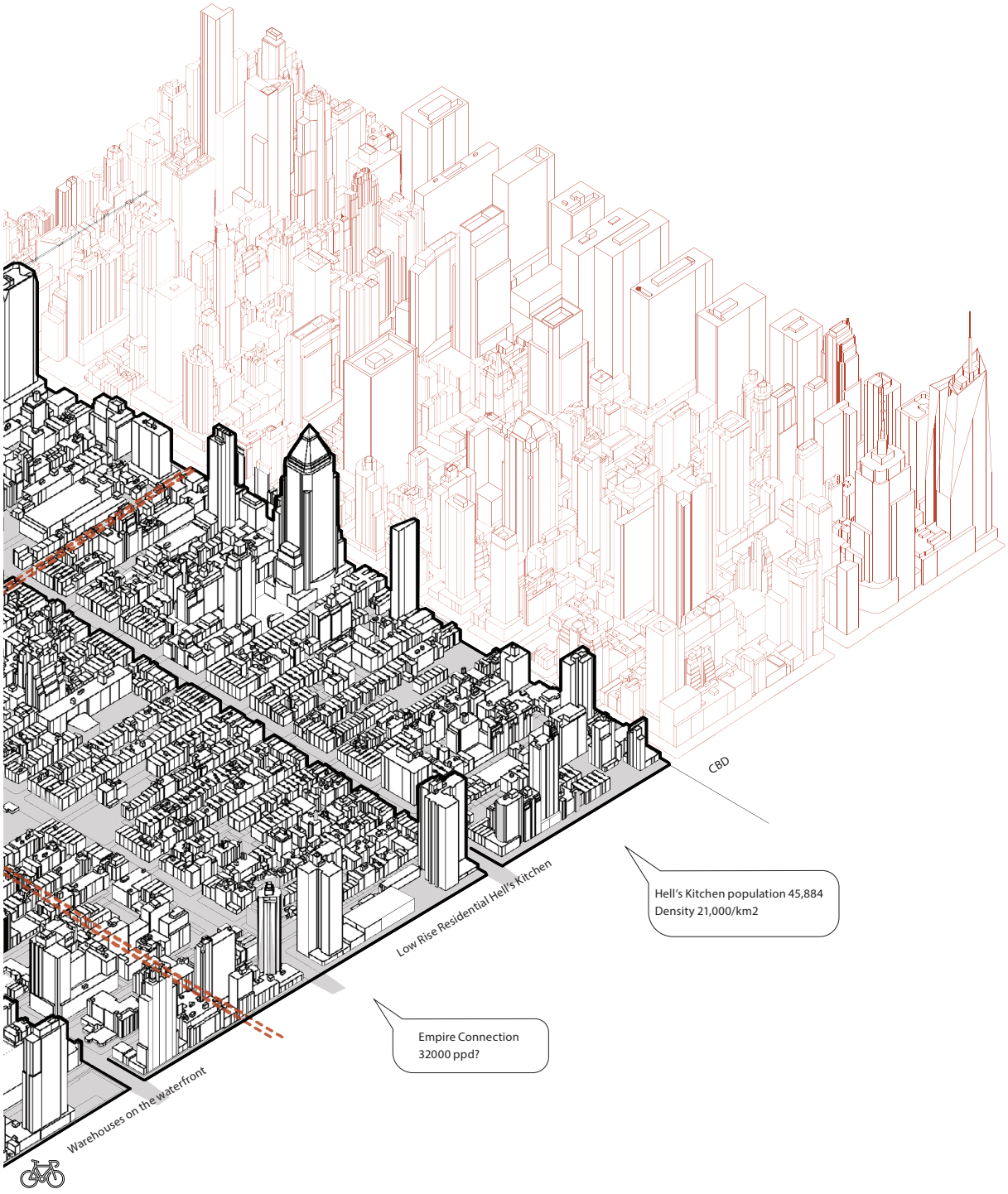
Now Midtown presents a heavily congested grid. Yet recently there has been a decrease in the use of taxy and personal cars as



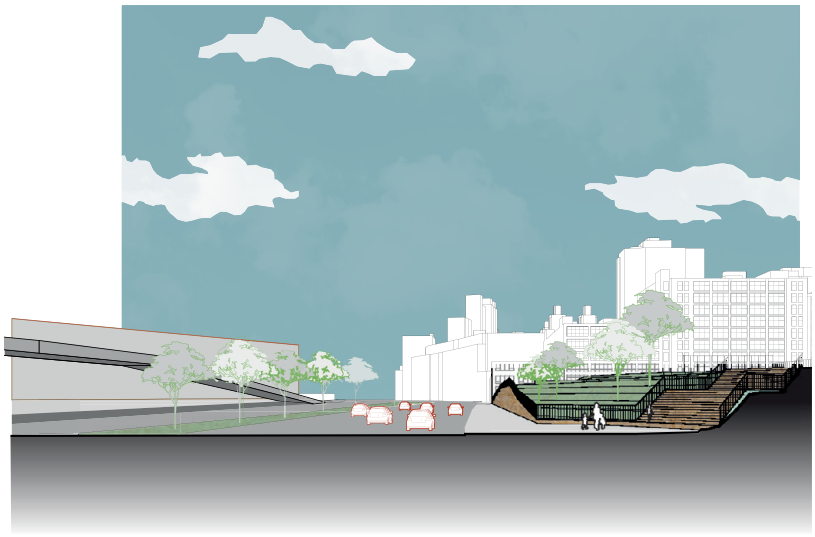
Reaching the sky
The Skyport



Ridership prediction and site location in relationship with Midtown


CBD
Hell's Kitchen population 45,884
Density 21,000/km2
Low Rise Residential Hell's Kitchen
Empire Connection
32000 ppd?
Warehouses on the waterfront

Existing conditions Erie Canal Playground Rock Exotic Terrace



Existing conditions De Witt Clinton Elevated from the Highway

technology leads us to use new shared mobility systems. Indeed, companies like uber are studying the network of metropolis in order to create a smart ecosystem of transportation. They are also investing in the possibility of integrating new mobility systems such as Uber air, envisioning shared drones arriving directly to the core of midtown. The City decided that De Witt Clinton Park is the idea location to integrate also this new means of transportation as it is not surrounded by tall buildings and is in the proximity of the Cruise Terminal allowing therefore direct connection between air, ground and water mobility.

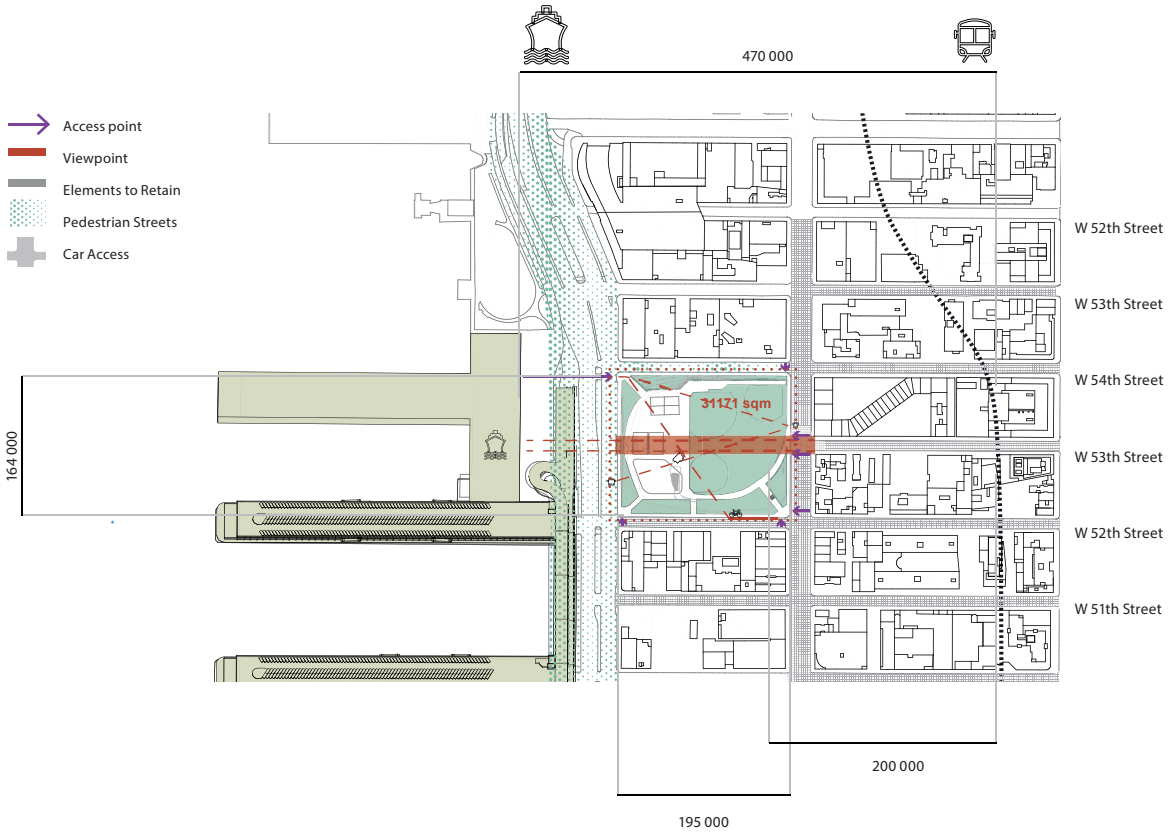
SITE CONDITION AND INTEGRATION

The site presents some challenges in the connection of the underground metro line Empire Connection and the Cruise Terminal as the distance between the two is of 470 m.

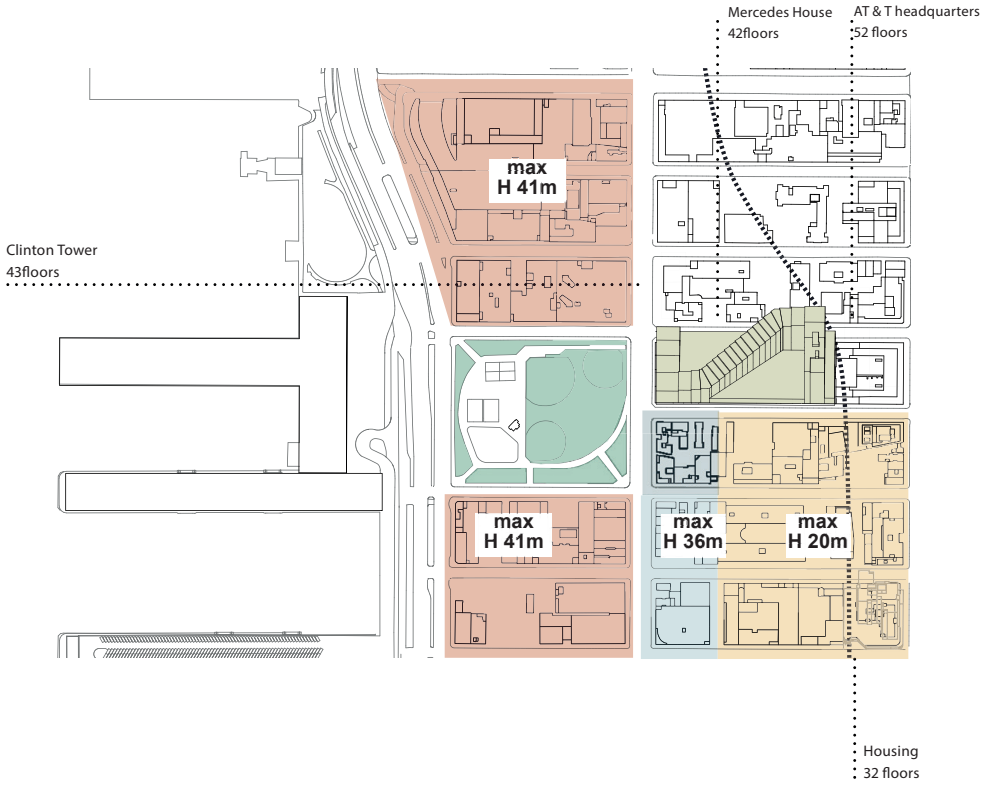
The buildings around the site are quite low making exception for the Mercedes apartment block on its east side. By regulation the maximum height of the building around is of 41m by planning regulations yet future developments strive to span higher.

Rules for the location of the intervention on the site:

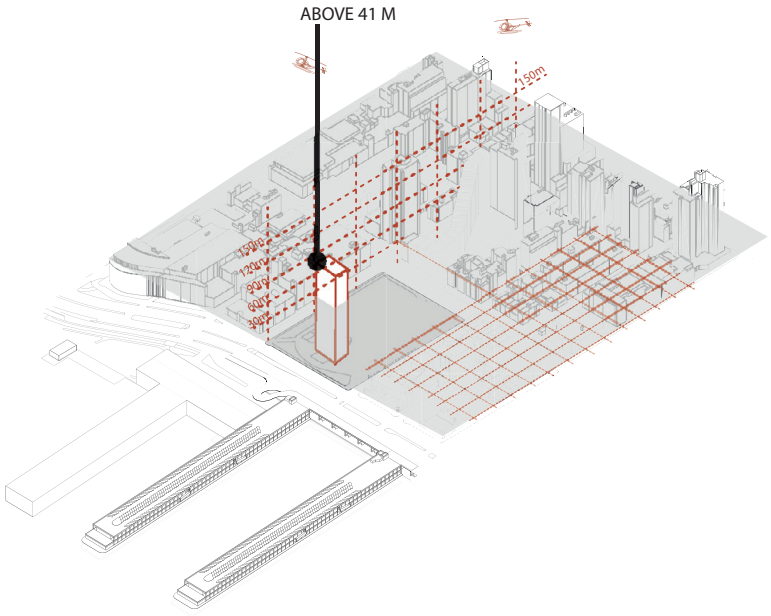
- The building shouldn't obstruct the view of the Mercedes apartments on the north-east side
- Should span higher than 41 m in order to ensure more secure landing on its roof and less disturbance to the neighbouring buildings.
- It also needs to connect with the cruise terminal- this could result in an urban gesture which will also direct the flow of pedestrians towards the building by merging the new structure with the park.
- The building is located in line with West 53rd street as it function as an infrastructural node. Through it's position it assumes great



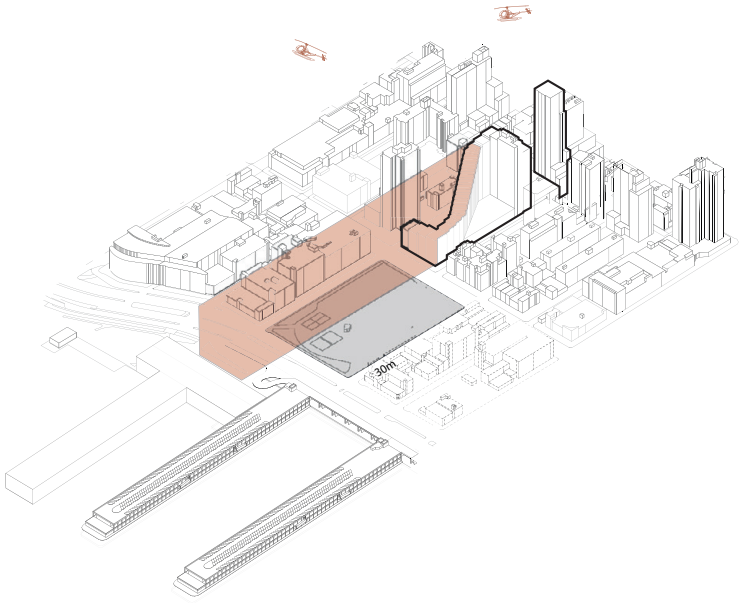
Site Challenges



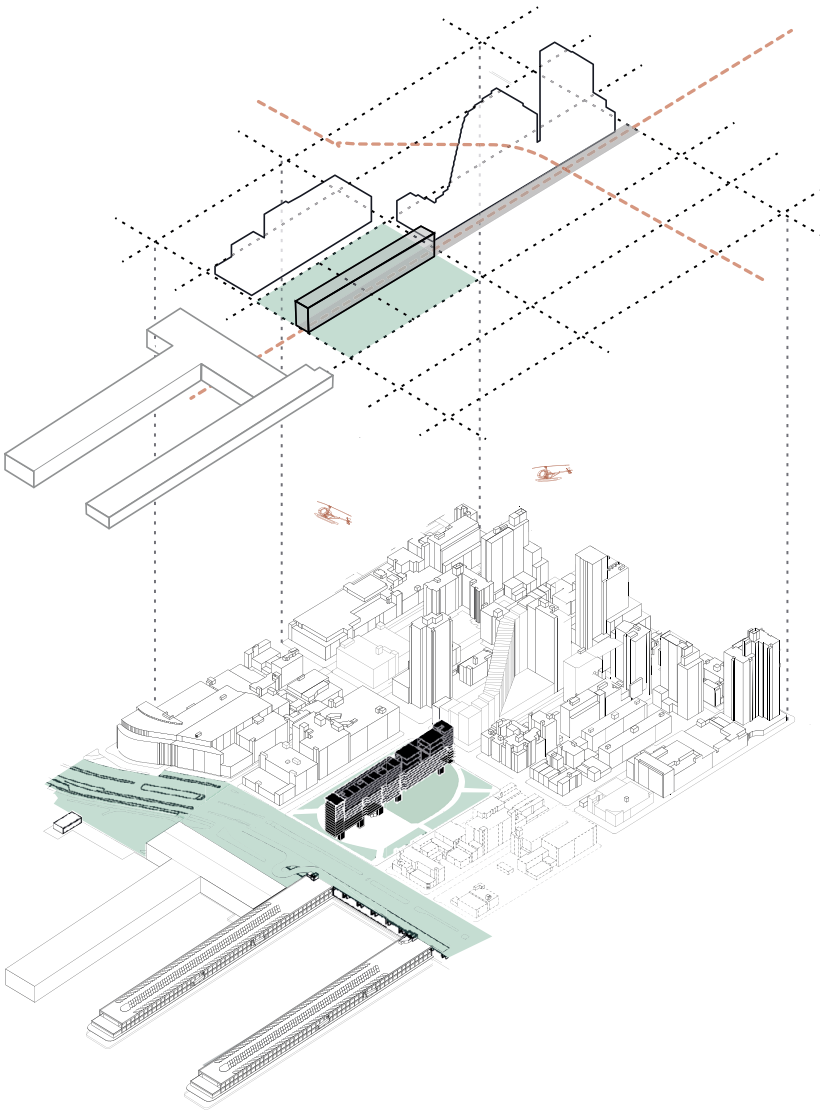
Height Regulations

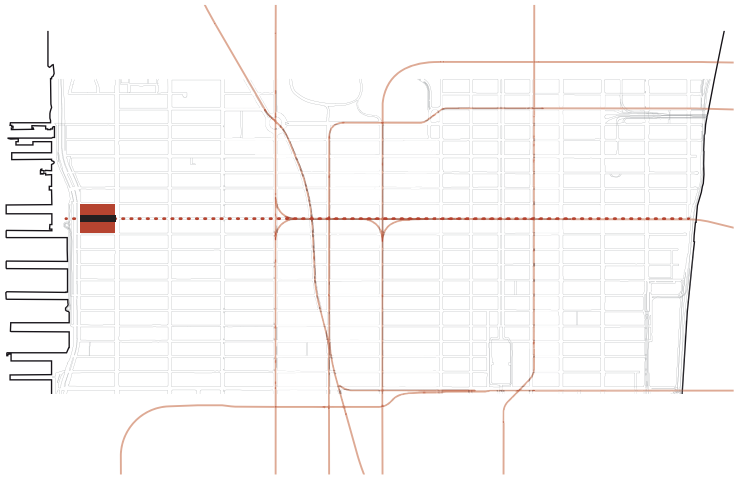


Height from the Buildings

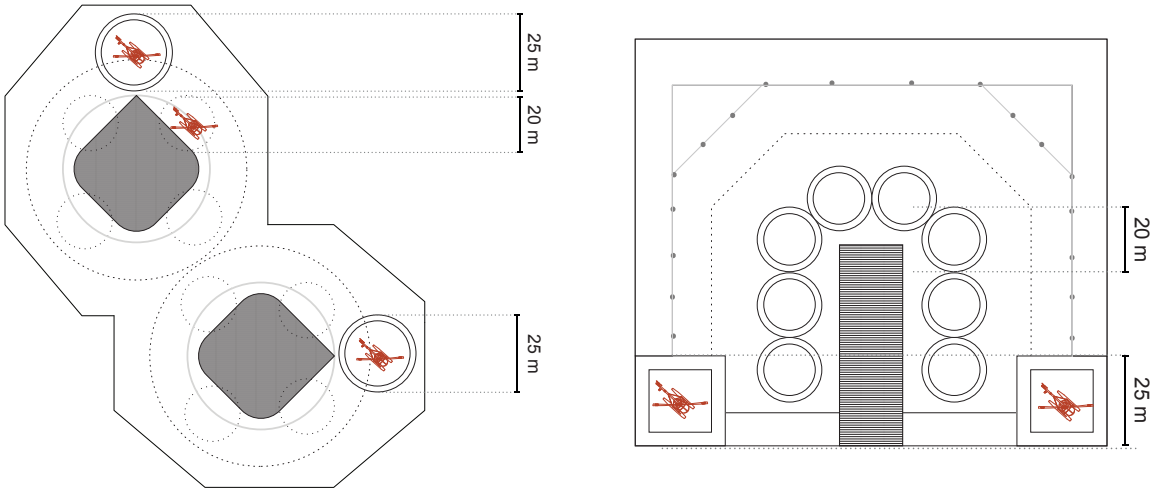


Leaving View Clear





Building Reaction to the grid. In line with 57th street



Skyport Landing investigation

visibility from Midtown East.

PROGRAM REQUIREMENTS

Metro

In designing the metro lines the character of the existing subway lines in New York is to be considered as the client, the MTA, has its own design identity. The ridership calculation was the result of a prediction of the existing transport that are intertwining on the site, the new developments and its proximity with the CBD.

Union Square that presents a similar ridership to my station with 108,000 ppd during weekdays and 140,855 during weekend. Important is to look at such station problems and limitations for the flow of passengers such as not enough vertical circulation, not equally distributed along the platform as well as structural columns on the platforms pushing passengers too close to the yellow line.

Comparing this station with its typical New York subway features with the dimension of 34 street Hudson Yard, last station built in New York, we can see how the latter presents a larger platform of 10.3m by 178m and no obstructing structure as well as more vertical circulation at the end and at the center of the platform which should be set as minimum dimensions for the design.

In terms of character for the tunnel Kálvin tér Station in Budapest by PALATIUM Studio built in 2014 should be taken into consideration as it helps set other dimensions such as the floor to ceiling height that doesn't oppress the user from 13,9m to 31,8m tall[2].

As already mentioned the station needs to become part of the larger network and follow the design principles of the MTA, yet the client wants with this project to establish a new relationship between the users and the underground world in order to revamp its image as in the past years it has suffered of bad criticisms from the users. Three new stations developed in Paris for the Gare Sensuelle La Gare de Saint Denis by Kengo Kuma, Pont de Bondy Metro Station by BIG + Silvio d'Ascia and Sofia Metro Line and Station by ShaGa Studioas should be taken as reference[3]. They ensure clear circling circulation, natural light intake and they create public spaces above and within it successfully integrating with the urban context with a strong presence on ground level.

Skyport

The skyport will become part of a network linking the four airports around Manhattan Teterboro Airport, Newark Liberty International Airport, JFK Airport, La Guardia Airport to the core of Midtown. Vertical efficient circulation needs to quickly connect passengers to the ground and underground realm.

It is essential to properly proportion the dimension of the essential elements such as the landing deck for the drones. As there are no built precedents for the design of the skyport the architect should look at the requirements for a started helicopter landing and how typical landing are organized with lounge and passenger areas in urban harbors.

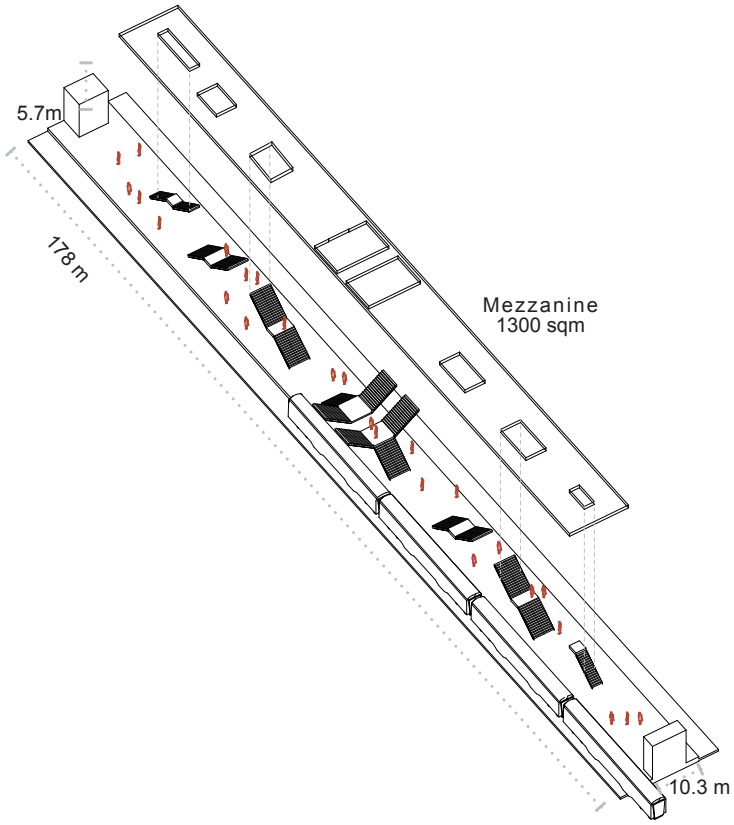
Finally looking at the imagined projects submitted for Uber could be indicative in order to create an idea in terms of program relations and materiality.

The program links together the ground and the sky.

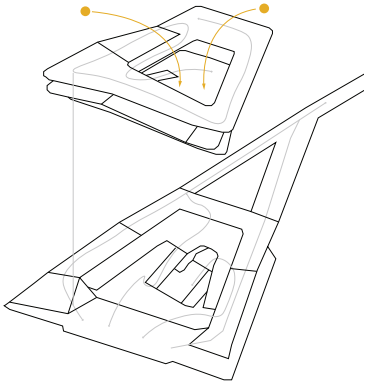
On the ground the client requires 630 sqm of showroom, 1350 sqm of parking, 225 smq of lobby, 580 sqm or retail space, 900 sqm of electric bike hub for a total of 4500 sqm.

On the top levels of the building the client requires 7300 sqm of drone parking, 3160 sqm of landing deck with at least 4 landings, 700 sqm of queuing lounge, 1500 sqm of additional resting lounge, changing facility an restrooms, 1422 smq of sky control, 1800 smq of drone drivers lounge for a total of 15800 sqm.

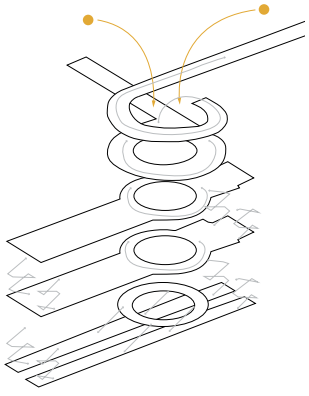
The prototypes for the new drone that are being developed are of a



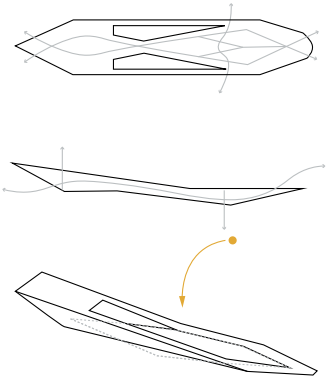
Platform minimum dimensions



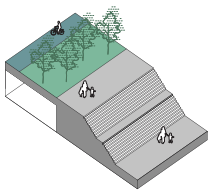
Gare de Saint Denis- Kengo Kuma
-Natural light intake
-Merging with the city
-Encircling circulation
-Creates public open space



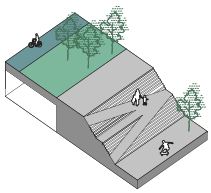
Pont de Bondy Metro Station- BIG + Silvio d'ascia
-Natural light intake
-Merging with the city
-Encircling circulation
-Creates public open space



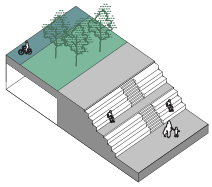
Sofia Metro Line and Station- ShaGa Studio
-Natural light intake
-Merging with the city
-Fluid circulation
-Creates public open space



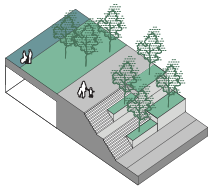
Grand Stairs



Fluid Ramp



Amphitheatre



Stepped Landfill

Dealing with the 9m barns access from the site of intervantion

maximum of 7x10 m for Buscopters and 4m by 4m for personal use drones. As the building will becomes part of a network in Midtown and in the Region it will need also parking spaces for the drones. The parking facilities should be designed so that passengers can enjoy beautiful views on the Hudson River. The façade should be highly transparent for the drones to be visible from outside and therefore allow the drivers to immediately direct to an empty parking intake.

Additional program in the moment of transition

The program linking together the underground and the sky responds to the needs of the mobile society. Indeed, new fast mobility systems have pushed for the creation of a more mobile way of working as well as promoting tourism around the world. As new fast means of transport will be integrated in the urban context is necessary to discover how they could be implemented efficiently while at the same time create the scenarios for social interaction.

Shifting the way we work from a linear to a more networked structure new coworking spaces are part of a world network and therefore are to be located in moments of high connectivity in the city. The Building should provide flexible rooms for meetings and personal office use as well as lounges suggesting an informal working environment and Kitchen and dining facilities of a minimum of 4x4 m per floor. Meeting rooms should have a range of dimensions 3.5x5m minimum to 10x5 m maximum all sound insulated. Overall the building should provide 3500 sqm of open office space, 420 smq of touch down, 1540 sqm private office spaces, 1400 smq of kitchen and dining areas, 3500 sqm of meeting rooms of different dimensions, 980 smq of relax areas and additionally at least one childcare facility of 960 smq and an event space of 2520 smq fro a total of 14000 sqm. The Coworking environment should present flexible floor plans and informal atmosphere, the level of privacy of the different rooms should be carefully considered and positioned accordingly in the building.

As the offices are part of a network the workers and clients as well as the people using the skyport by coming from the airport may need a short stay accommodation. In recent years a new typology of hotel has been developing characterized by shorter stays, smaller rooms and more meeting and communal facilities. The Pod hotel will have a maximum sqm of 6000 smq with 76smq of puclic/foyee, 2432 sqm of guestroom, 900 smq of health center, 1900 smq of meeting facilities, 1400 sqm of service+ shared facilities.

The city is growing in population and needs to host 200 000 new housing built in New York. Each of the building part of the masterplan therefore will need to accommodate a certain amount of housing. Therefore the building will need to accommodate at least 19700 sqm of housing.

CONCLUSION AND ARCHITECTURAL AMBITIONS:

The building needs to:

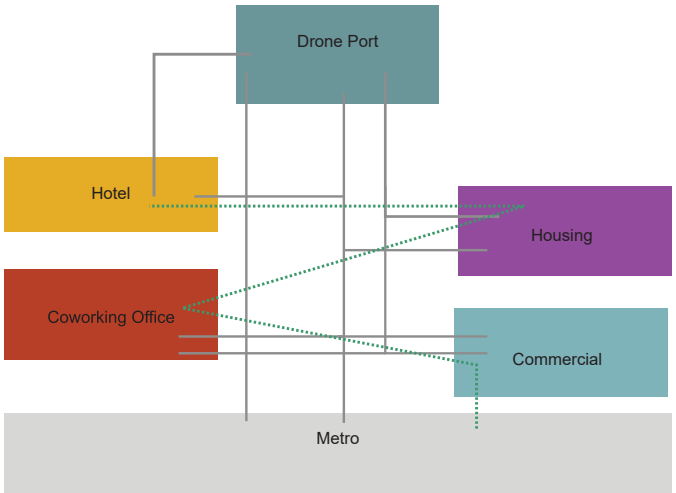
- Present a transparent bottom integrating green inside the building, implementing the creation of internal garden rooms as the one in the Ford Foundation Building.
- be visible from the CBD essentially becoming a landmark
- merge with the park and surrounding on a urban level integrating the existing transport modes and efficiently connect them with new ones.

-Effectively connect with the 9 m green infrastructure above the 9A Highway.

- Such integration could result in the creation of external terraces and a promenade around the building providing a slower circulation at the bottom opposite to the fast circulation linking the metro to the skyport.
- -the integration with the park could also translate in terms of program with the creation of additional spaces for recreation.

To conclude the building needs to answer the needs of the growing metropolis by integrating different means of transportations in an efficient way, activating the waterfront by creating a new node that bridges between the park and the city and provided flexible meeting spaces.

Impression of the building on site



Relation between the program. Slow and Fast Circulation

Sky

Ground

Annihilation of Space and Time due to shift faster mobility systems
leading to the compression of our perception of the world.

ng Program

SKYPORT

7300 sqm
Drone parking

3160 sqm landing deck

700 sqm queuing lounge

1500 sqm lounge restroom

1422 sqm sky control

1800 sqm drone drivers lounge

15800 sqm

+

PODHOTEL

76 sqm public/ foyee

2432 sqm guest room

900 sqm health center

1900 smq meeting facilities

1400 sqm service+shared

6000 sqm

+

HOUSING

2150 sqm high end

6100 sqm 1 unit

4500 sqm unit housing

4600 sqm 3 unit

1500 sqm communal

300 sqm lobby

12700 sqm

405 sqm office

900 sqm bike hub

580 sqm retail

225 sqm lobby

1350 sqm parking

630 sqm Drone showroom

4500 sqm

+

METRO

800 sqm retail

240 sqm cafe to go

1080 sqm Operation

324 sqm Vertical Circulation

3600 sqm Circulation

2500 sqm Platform

12000 sqm

CO-WORKING

3500 sqm open space office

420 sqm touch down

1540 sqm private office

1400 sqm kitchen and dining

3500 sqm meeting rooms

980 sqm relax area

960 sqm childcare

2520 sqm event space

14000 sqm

Sources

1
Augé, Marc Per Un'antropologia Della Mobilità. Milano: Editoriale Jaca Book Spa, 2010. p.3

2

"Budapest Underground Line M4 - Kálvin Tér Station / PALATIUM Studio," ArchDaily, October 24, 2014, http://www.archdaily.com/559104/budapest-underground-line-m4-kalvin-ter-station-palatium-studio/. [12/02/2020]

3
Manuela Triggianese and Roberto Cavallo, Stations as Nodes: Exploring the Role of Stations in Future Metropolitan Areas from a French and Dutch Perspective | BK BOOKS (TuDelft Architecture and the Built Environment, 2018). p.97