

A FRAMEWORK FOR CIRCUMSTANCE:
CHANGING PERCEPTIONS IN THE BUILT ENVIRONMENT

by
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A thesis submitted in partial fulfillment
of the requirements for the degree

of
Masters of Architecture
in
Architecture

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Jordan Lee Leppert

April 2010

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ABSTRACT

In our ever-changing world, the role of architecture and designer is constantly adapting to a new criteria. The principals of design have changed in many ways throughout history, but the constant has always been that designed space is intended for the bodies that will occupy it.

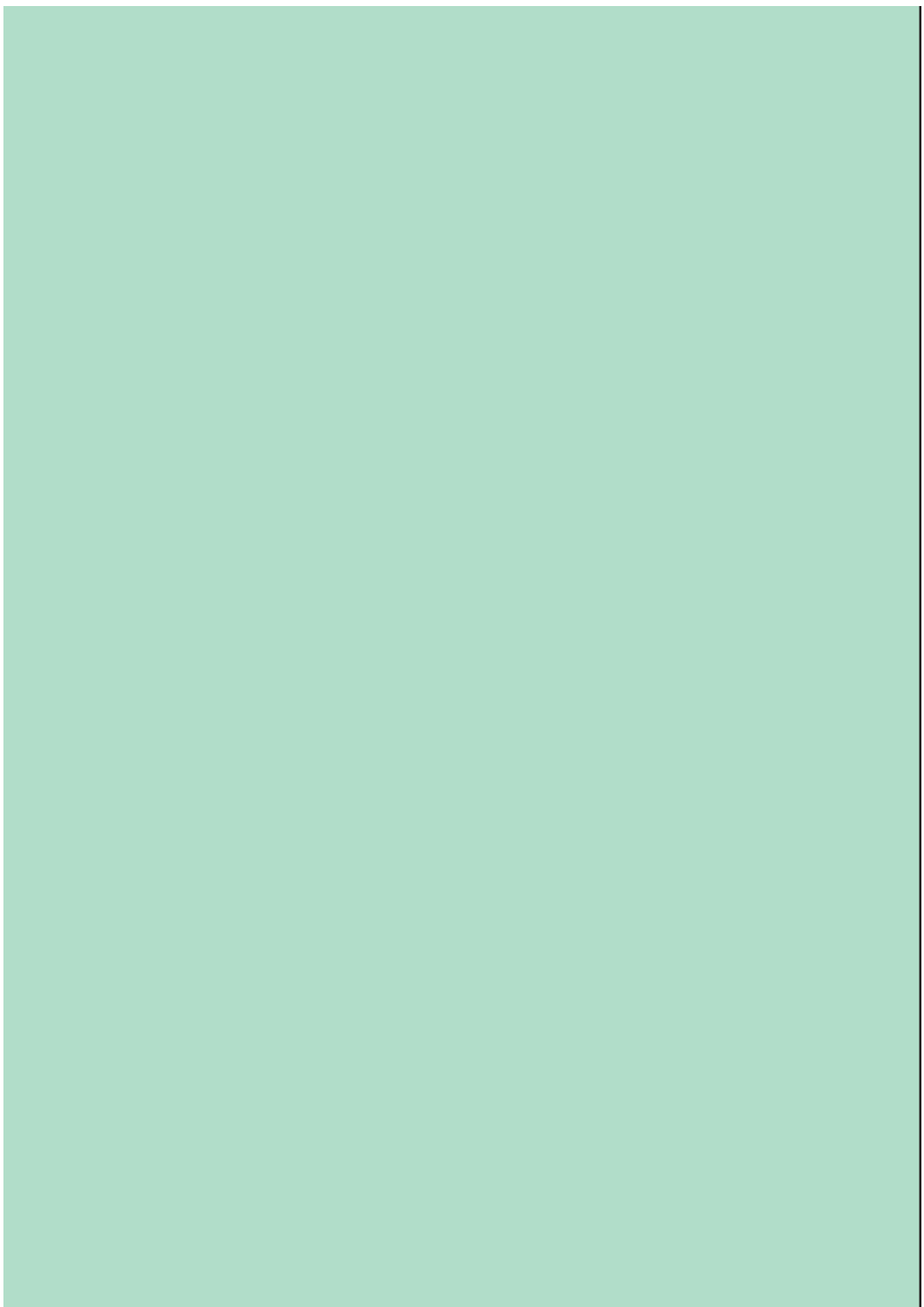
I believe that the understanding of how architecture can affect our state of mind through perception, social understanding and sensory awareness gives us, as designers, the ability to create spaces that surpass an architecture of the time, and create a space that people will identify with and give meaning to.

Thesis Statement

Architecture's ability to affect our state of mind through an acute consciousness of perception, social understanding and sensory awareness gives the designer the ability to instigate a meaningful relationship between people and their designed environment. This relationship between people and the space that they occupy is where the spirit of architecture is found.

Thesis Intent

I will investigate how the insertion of a new architecture in an existing set of conditions has the ability to instigate positive change through proposed interactions.



abstract:

In our ever-changing world, the role of architecture and designer is constantly adapting to a new criteria. The principals of design have changed in many ways throughout history, but the constant has always been that designed space is intended for the bodies that will occupy it.

I believe that the understanding of how architecture can affect our state of mind through perception, social understanding and sensory awareness gives us, as designers, the ability to create spaces that surpass an architecture of the time, and create a space that people will identify with and give meaning to.

Meaningful Architecture is about Human Interaction



Throughout history, Architecture has witnessed many different approaches concerning the built environment, but in many cases the approach and process of the past has become the center of attention. The consideration of the relationship between architecture and the people that use it has gone overlooked, and architecture has become merely an object instead of a catalyst for individual human interaction. As designers, there are times when we will look critically at a building and talk about proportion, materiality, gesture etc. but in many ways we focus on architecture as an object, instead of the importance of these qualities in the relationships between people and the space that they occupy. Presently, within this history, architecture is at a turning point.

"The broadening of the term "architect" parallels a trend within architecture itself- the growing interest, at the end of the twentieth century and the beginning of the twenty-first, not just in buildings but also what happens inside them: programs, events, and the movement of bodies. Architects have become not only the designers of the stage set but also choreographers of human activity." (Tschumi, p.91)

-Bernard Tschumi + Irene Cheng

When looking at architectural literature from the beginning and the end of the twentieth century, the experiential sense of architecture is overlooked by other

ways of understanding architecture. During these periods, the focus was placed on redefining architecture through attributes like process and visual characteristics, and in many ways, the experiential considerations were deemed less important than the intellectual approach.

"There are many forms of this disappearance (phenomenological approach) but the emphasis on the historical inter-textuality of buildings (i.e. the idea that buildings are to be understood first and foremost in terms of their position in the history of Architecture) and semiological approaches to architecture, whether structuralist or deconstructive, tend to push phenomenologically inspired analysis that stress experience to the side. One might call this the "buildings about buildings" movement." (Rush,4)

In this "buildings about buildings movement," the identity of architecture is based on visual characteristics in relation to history, or the theoretical process (for example, postmodern or deconstructive). Without including a deeper understanding of how we interact with space, and how space affects our perceptions and behaviors, architecture will become too focused as an object, and the meaningful relationship between space and people is not considered to the level it should be.

It is in the careful consideration of how space affects the occupant through interaction, and how the architecture affects the occupants' perceptions and behaviors that will create deeper meaning for architecture. With this understanding architecture will become a catalyst for change.

“The task of architecture
is to make visible how
the world touches us”

- Merleau- Ponty

Setting the stage for Possible Interaction



With this understanding between the relationship of space and the individual, we will start to think about what type of interaction is appropriate or desired, and how the built environment can inform and encourage those interactions. The interactions that happen in a specific place will define the quality and value of that place. A strategy for creating meaningful space could be validated through these possible interactions. Examples of these interactions could have to do with the program of the architecture, and how it informs us of the expected behavior. In most cases, specific programs of architecture come with a preconceived understanding about how a space functions and the expected behaviors that are related to that space. (An example would be the function of a museum, and the conduct that is expected while you are there.) With a deeper understanding of interaction and behavior it is possible to elaborate on a program's function and expected behavior so that the experience becomes more unique, instead of generic. With this understanding as a strategy it is also possible to rethink existing conditions and alter the experience and the expected behaviors tied to those conditions. This could bring new meaning and vitalization to places that have gone unutilized, or may have negative connotations. The other places where these types of interactions could happen (and the area that I plan on focusing) are the in-between places. The areas that people in many cases are forced to occupy, but only because of their intended destination. These can be areas that quietly coincide with an individual's daily routine, but do not create any sort of response from that individual, just an area that the individual inhabits, without responding to, or interacting with. (Ex. transitory environments like subway, bus stations,

streetscapes, or as minor as a sidewalk.) These places also come with preconceived understanding about function and behavior, but these in-between spaces are in many regards left over, or disengaging. This interaction between people and their environment is not thoughtful. As people move through these types of the built environment, preoccupied with personal agendas and destinations, it is my hope that well thought-out space could interject pause.



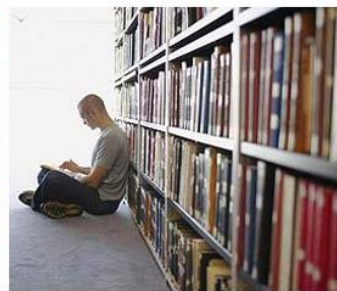
PAUSE



[pawz] Show IPA noun, verb, paused, paus-ing.

—noun

1. a temporary stop or rest, esp. in speech or action:
2. a break or rest in speaking or reading to emphasize meaning



“In a world predicated on movement and flows, the power of architecture may be in its ability to give pause.” *(Tschumi, p.105)*

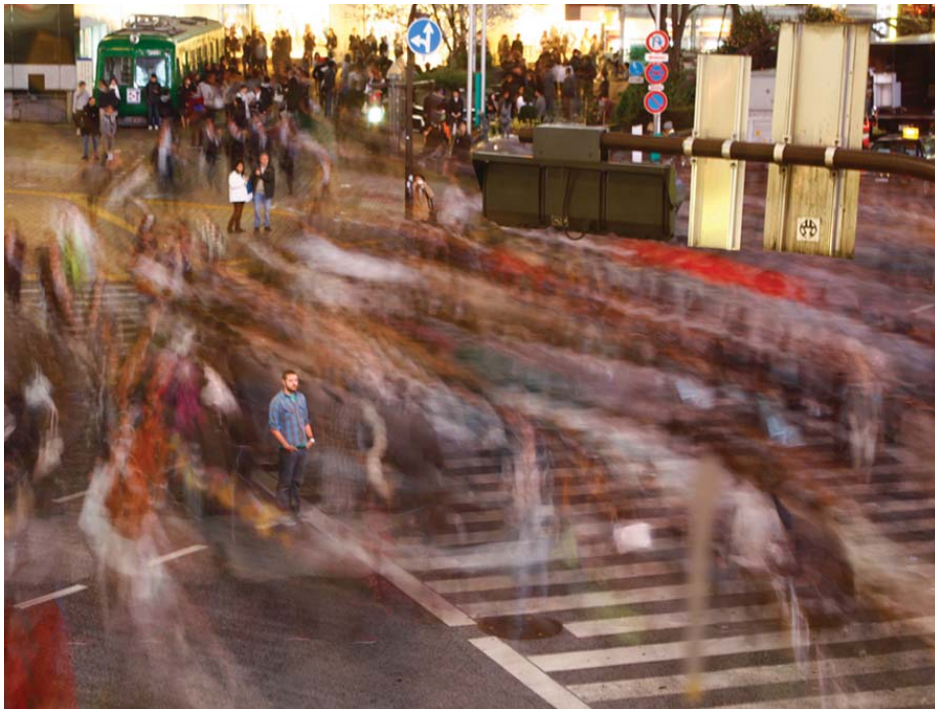
-Bernard Tschumi

Defining Pause

As a recurring element throughout this thesis it is important to define what this “pause” space will entail. Within these pre-existing environments and conditions, the interjected architecture will create moments of engagement. These moments of engagement will be incorporated through the experience of space (sensory perception, physical/social interaction, individual awareness). In these instances the focus will be on how the thoughtful consideration of the interaction between people and space can change perceptions, invite interaction, and alter behavior.



Speeds



Different types of spaces all operate within different parameters. Elements like building program and site help define what the parameters will be. The separation between public and private spaces is one of the more obvious parameters and has a large influence on us as far as how we behave and the level at which we perceive ourselves and our surroundings. Another separation that is found in the built environment is between fast and slow spaces. Speed is not as easily separated as the relationship between public and private, but it is important in regard to how we flow through space, and how we identify our surroundings.

"The precept of the body and the image of the world turn into one single continuous existential experience; there is no body separate from its domicile in space, and there is no space unrelated to the unconscious image of the perceiving self." (Pallasmaa, p.40)

- Juhani Pallasmaa

In much the same sense of how there is no body separate from the space it inhabits, the speed of the body, and the perceived speed of the space are one and the same. A person's speed is influenced by their surroundings, and an environment's perceived speed is dependent on the people that use it. So this relationship between occupant and space is in many ways symbiotic in nature.

"Architecture has been tightly governed by the tensions and play between architectures grounded symmetries and the human body's complex, moving equipoise. Architecture has been shaped as a discipline of the solicitous but indifferent symmetrical and grounded space on and in which narcissistic, resourceful, moving beings live." (Tschumi, p. 101)
-Catherine Ingraham

The speed that I am talking about is not the rate at which people move through space, but the level of attention given to their surroundings. The idea of "pause" or slowing space in architecture relates to when a person is more engaged with their surroundings and more open to possible interactions set by that space. Fast space then relates to when people are not engaged or not stimulated by their surroundings, just merely moving through. The interjection of a "pause" space in these "fast pace" places can be a strategy in how meaningful architecture can be created.

Creating a reason for pause allows for reflection, a change in self awareness, and a greater appreciation for their environment.

Different people will interact with space differently, and these changes in speed will be individual to the people that occupy these spaces. There are many factors in how people will be influenced by their surroundings, and in turn how they will react. Some of these influences include: self perception, social perception, and cultural understanding.

For example, a person may become more self aware when in a position he/she is in constant interaction with other people occupying the same space (witnessing themselves in these interactions, unique to human consciousness).



And they may be less self aware when they are occupying a more private space, or a place where they are pulled from the constant interaction with other people, and are just observing public interactions. (The differences in perception depending on the perspective, the observer in comparison to the observed).

Social perceptions can also rely on a person's affiliation with a place. A person belonging to a place will have a much different interaction with and perception of a place than a person who is experiencing this same place for the first time. This familiar vs. foreign perception will also have an effect on the perceived speed of the space.

Finally, "Cultural understanding" touches on how our self, and social awareness changes when exposed to familiar or foreign cultures. For example, a person traveling in a different country may be more attentive to their unfamiliar surroundings due to cultural differences.

This type of example could show how a fast space for one person is actually a slow space for another. Airports are an example of a place where the overlapping of different cultural understandings and perceptions has to function on a unified level. Airports are also an example of a place where the perceived speed of a place is dependent upon scenario. People in airports could be either experiencing slow space or fast space depending upon their agenda.



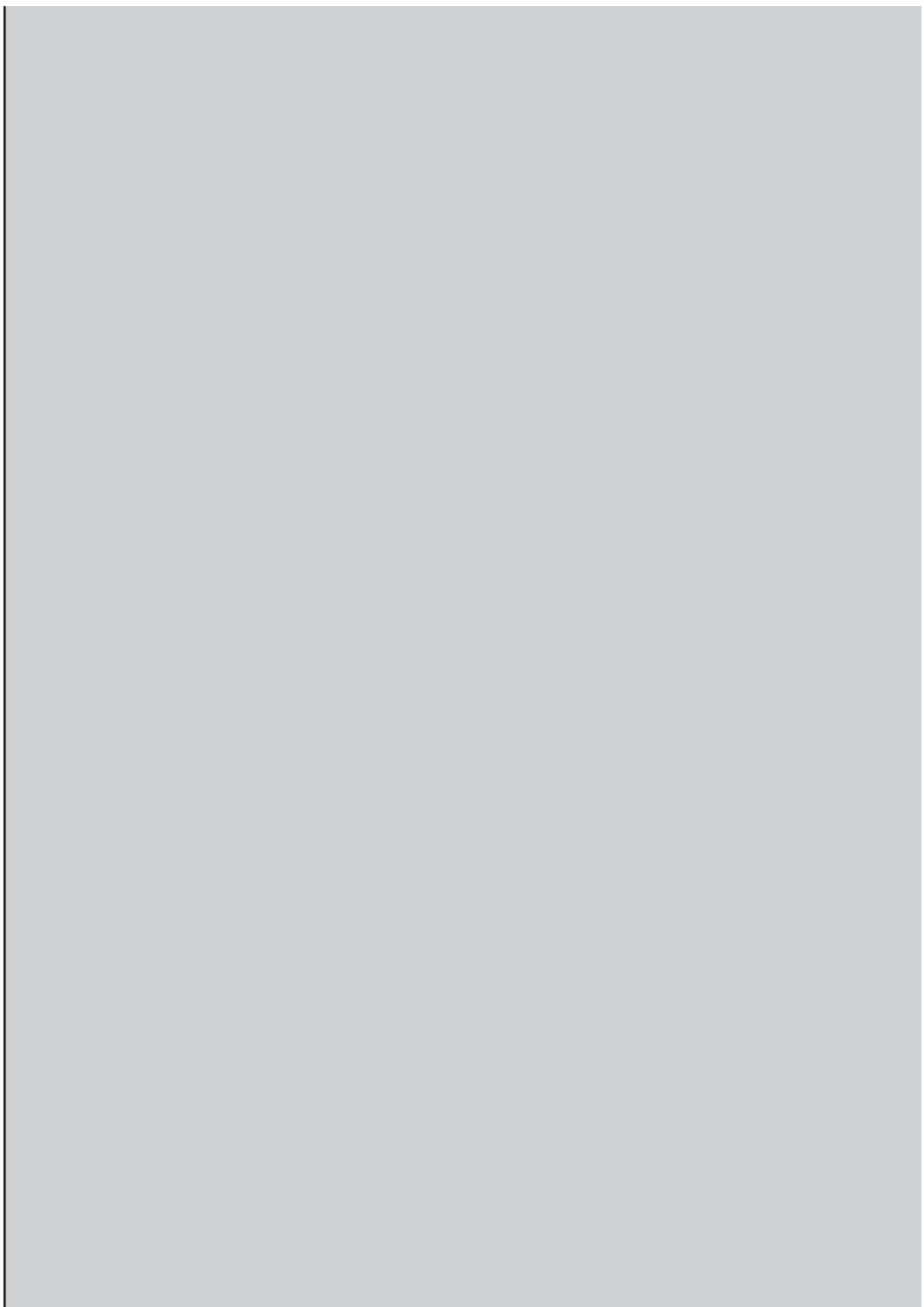


Possible strategies to create changing speeds in architecture:

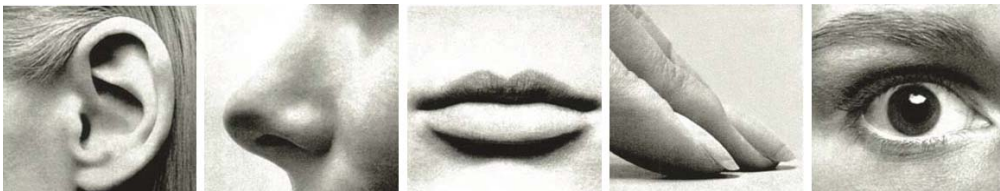
- Inserting an unexpected element, or adjacency into the built environment.

- Creating an opportunity for people to experience something in a new way.

- Allowing objects to become multi-use -Reestablish architectural elements by changing their parameters. (Ex. Can a stairwell become more than a stairwell?)



Architecture as a Full Sensory Experience



It is important that architecture is thought of and assessed as a full sensory experience. Space cannot be understood completely with one isolated sensory understanding, but understood with the senses working in combination with each other. Given this information, if architecture is a full sensory experience, it is important to design with the understanding that all senses must be considered in a multi-faceted, interconnected way.

“space is not there
for the eye only: it
is not a picture; one
wants to live in it...
We reject space as
a painted coffin for
our living bodies.”

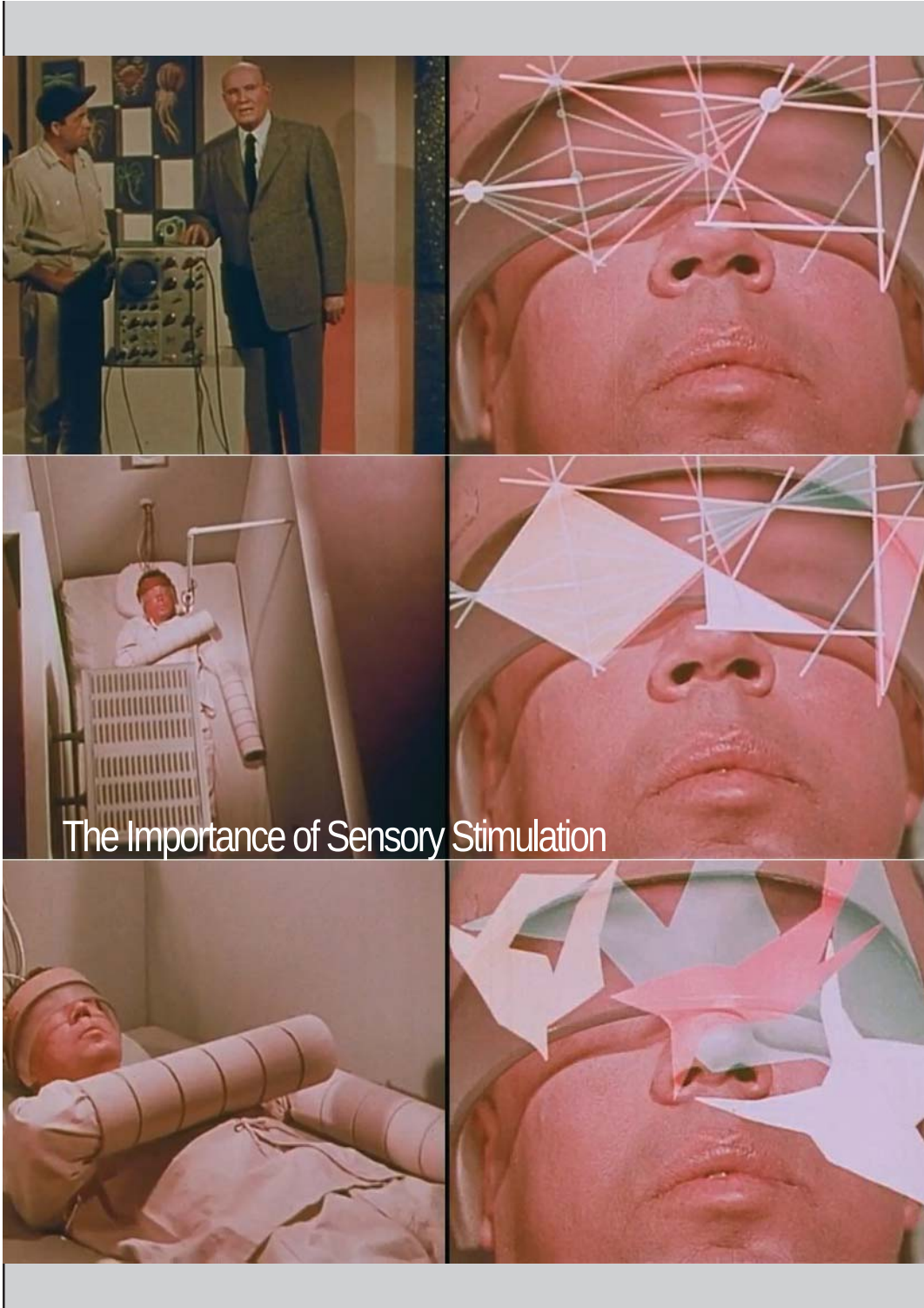
(Bishop,48)

-El Lissitzky

“An architectural work is not experienced as a collection of isolated visual pictures, but in its fully embodied material and spiritual presence.”

(pallasmaa, p.44)

- Juhani Pallasmaa



In our everyday lives we are confronted with a barrage of different experiences, but they all stimulate our minds. Sensory perception is the means by which we take in this stimulation. It is our tool for gathering environmental information, therefore, making it our vehicle for spatial interaction. It is how we are informed by our environment and how we interact with our surroundings. Whether the stimulation we find is overly interactive or mundane, this stimulation is essential to how we interrelate with our environment, and how the perceiving mind functions in general.

The importance of sensory stimulation becomes quite clear when the sources of stimulation are cut off from the perceiving individual. In the 50's and 60's there were a series of psychological tests relating to the effects of sensory deprivation, and this importance in sensory stimulation. In these studies participants were subjected to long hours of isolation. In some of the extreme cases people were placed in a room with no light or sound and were bound to a bed with their arms restrained and their hands placed in large foam mittens to restrict movement and the sense of touch. These studies showed how the lack of sensory input could result in symptoms of psychosis. In a sensory deprivation study conducted recently by the University of Cambridge including 19 health volunteers, found that these effects could be seen in as little as 15 minutes. According to the study without the normal stream of sensory information flooding the brain, many people reported experiencing visual hallucinations, paranoia and even a depressed mood.

"It appears that, when confronted by lack of sensory patterns in our environment, we have a natural tendency to superimpose our own patterns."

—Paul Fletcher, University of Cambridge

Another example of the importance of sensory stimulation is an installation done by the artist Carsten Holler entitled "Lichtwand" (light wall).

This installation is comprised of a long wall in an open area covered with several thousand intensely-bright flashing light bulbs that create a full assault on the retina of the viewer. The bulbs flash incessantly at 7.8 Hz- a frequency that is synchronous to that of brain activity. The overwhelming amount of information gives this installation the capability of inducing visual hallucinations in the viewer. This is an example of how an intense isolation and the over stimulation of a sense can also instigate symptoms of psychosis. With this information it is obvious the importance of a stimulated environment, but also that a balance between the senses will allow for an enriched experience of how we perceive the world around us.





The Body, Our Vehicle to Perceive the World

per_cep_tion



[per-sep-shuh n] [Show IPA](#)

—noun

1. the act or faculty of apprehending by means of the senses or of the mind; cognition; understanding.
2. immediate or intuitive recognition or appreciation, as of moral, psychological, or aesthetic qualities; insight; intuition; discernment: an artist of rare perception.
3. Psychology. a single unified awareness derived from sensory processes while a stimulus is present.

I confront the city with my body; my legs measure the length of the arcade and the width of the square; my gaze unconsciously projects my body onto the side of the cathedral, where it roams over the moldings and contours, sensing the size or recesses and projections; my body weight meets the mass of the cathedral door, and my hand grasps the door pull as I enter the dark void behind. I experience myself in the city, and the city exists through my embodied experience.

(Pallasmaa, p.40)

- Juhani Pallasmaa

We are in a constant relationship with our surroundings. Our state of mind is changing and responding to what our environment presents us with. Through our sensory understanding of place we are assigning value to the spaces we occupy. Our body becomes a tool for interpretation, thus allowing us a greater understanding of our environment: a measuring stick to the world the individual relates to.

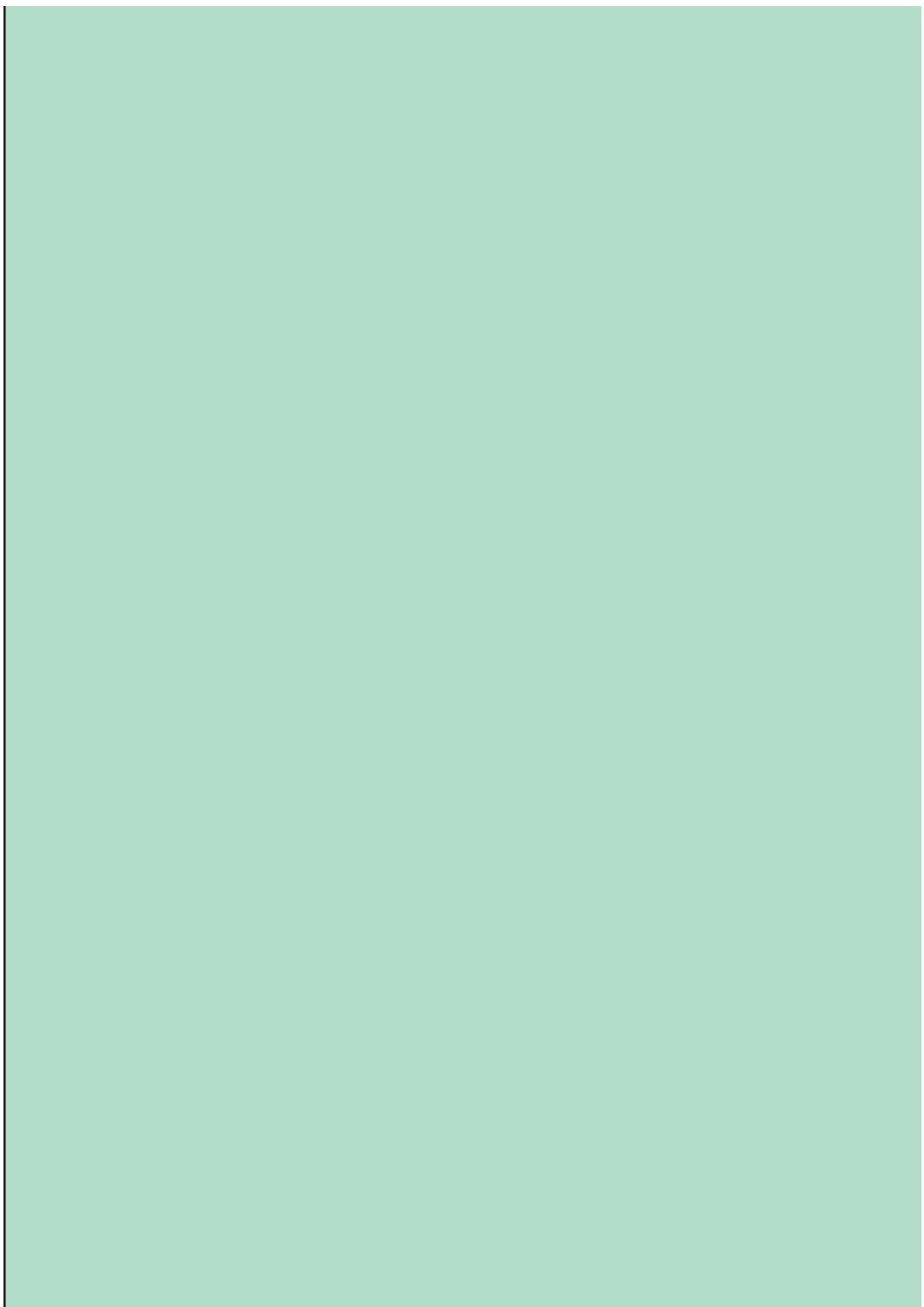
"Architecture is our primary instrument in relating us with space and time, and giving these dimensions a human measure." (Pallasmaa, p.14)

- Juhani Pallasmaa



There are many individual attributes that affect the way we perceive and react to the world around us. Self perception, Social perception, cultural understandings, and preconceived understanding of space and their expected behaviors guide and influence our interactions with architecture.

Our perceptions and behavior are continually responding to our environment. The way we react and changes in our perception are constantly adapting to the world around us. The levels at which we perceive our surroundings are dependent on how space changes our sensory understanding of that place. The level of sensory awareness allows us to remember, or give meaning to place. All places have the ability to impact us simply through affecting our bodies while we move through them, but the level at which that space interacts with our sensory understanding gives that space more meaning to us. Understanding how architecture can affect our state of mind through an acute awareness of sensory information gives us, as designers, the ability to create spaces that surpass an architecture of the time, and create a space that people will identify with and give meaning to.



The Role of Technology in Sensory Perception

In our technologically advancing world we are constantly being bombarded with updated information and new ways of getting that information. Television, internet, hand held mobile devices, and a constant stream of information from these elements are a part of the everyday life. The amount that we see and take in is exponential in comparison to what was common in the past, but in this changing world vision has taken the lead in how we perceive our surroundings and suppressed our other senses in this understanding. Technology has played a vital role in this imbalance of sensory perception. With technologies inherent way of being a visual interaction, and its rapid advancement, it is no wonder that we rely on our eyes more in the modern world than any other sense. The consequence of this imbalance is directly related to our relationship with our surroundings and to the level at which we perceive both the world, and ourselves.

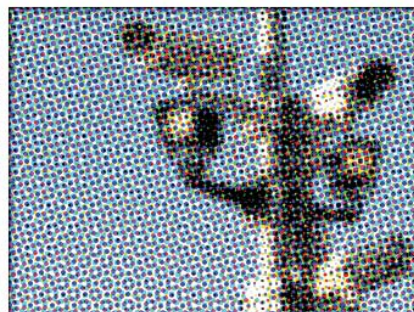
"Detachment and solitude in the technological world today, for instance, may be related with certain pathology of the senses. It is thought-provoking that this sense of estrangement and detachment is often evoked by the technologically most advanced settings, such as hospitals and airports."(pallasmaa,p.19)

- Juhani Pallasmaa

In these most technologically advanced of settings we can find ourselves lost in the visually overbearing atmosphere, and without the stimulation of our other senses in combination with vision, we are held at a distance from the environment that we are interacting with. This passive sensual relationship can create a

feeling of detachment and alienation. This relationship with many current technologies also has the ability to affects the level at which we perceive our self. This difference in self awareness could be seen if one was to examine the difference between, for example, a person walking through a forest in comparison to watching the evening news on the television. In the scenario of a person walking through the woods, there are many attributes that focus, inform and guide this individual through the forest. The careful placement of each footstep on the uneven ground, the sound of one's weight pressing against forest floor. The constant refocusing of the eyes from elements that are in close proximity, and at great distances. In this scenario the body moves with a continuous sensory interaction with the environment it occupies, and this increases our level of our self-awareness. On the other hand when the thinking of alterative example, there is no constant interaction and the level of one's self awareness is lowered.

tech alienates and distances us from our surroundings and each other. It also lowers our level of self-awareness



Well designed environments should make us more aware (self + surroundings)

We use our body as a measuring stick for the world. We relate the world to ourselves through the way we perceive it. We understand space by how we move through it and interact with it. For these reasons the built environment makes us aware of ourselves. An essential property of the human mind is its ability to be conscious of itself. Understanding the relationship between the mind and the body, and the body and space proves the importance that space has in our lives.

"The sense of self, strengthened by art and architecture allows us to engage fully into the mental dimensions of dream, imagination and desire. Buildings and cities provide the horizon for the understanding and confronting of the human existential condition. Instead of creating mere objects of visual seduction, architecture relates, mediates and projects meanings."
(Pallasmaa, p.11)

- Juhani Pallasmaa

Allows us to think, imagine, dream

Architecture also has the ability to make us more aware of our surroundings by influencing how we experience or perceive a place. This awareness can also cue us into the role we play in a specific place. The importance in a person's awareness of their surroundings is that if the designer can heighten this awareness, it is possible to instill a greater value.

“our bodies and movements are in constant interaction with the environment; the world and the self inform and redefine each other constantly. The precept of the body and the image of the world turn into one single continuous existential experience; there is no body separate from its domicile in space, and there is no space unrelated to the unconscious image of the perceiving self.” (Pallasmaa, p.40)

- Juhani Pallasmaa

With all the elements that have been discussed, whether it is how we experience or perceive our built environment, architecture's ability to instigate interaction, or how these experiences have the ability to change our awareness, the underlying theme in these elements is with this level of understanding of people and the space they occupy the designer is given the ability to create thoughtful architecture that holds meaning with the people it is intended for. The simple gesture of instilling a moment of pause, or focus in people to engage with their surroundings is the threshold to a deeper element of meaning, not in architecture as an object, but its implications between people and space.

Program

There are many examples of architecture that through thoughtful intention have become much more than the simple housing of the program that occupies the space. In some cases this level of thought in design helps validate the program. Two examples that come to mind are: St. Ignatius chapel by Steven Holl, and the church of light by Tadao Ando. In both of these examples the experience that the built environment creates is above and beyond the function of the building, and in turn is important to the program.

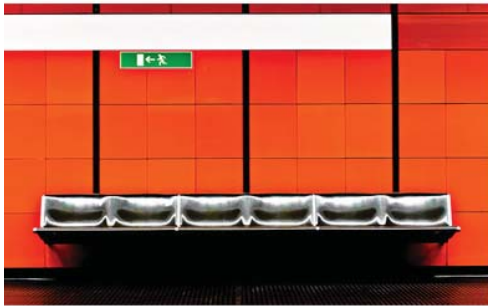
My hope is that with this type of thoughtful design, the forgotten or in-between spaces could also hold value to the people that occupy them. If it is possible for this level of architecture to impact a person through their experience in a place such as a church, imagine if that effect could happen in a place that people interact with on a daily basis, or a place that is generally taken for granted. Instilling an unexpected moment of engagement in people, changing a person's perceptions, and designing the environment so that it will invite interaction is the underlying intension of my proposed program. I plan to create pause space through a series of designed public spaces that will



allow for this engaged experience, and an altered perception in the people that will interact with these spaces. My hope is that through this additional programming of an in-between space, people will engage their surroundings and find value in an area that was once thought to be tertiary and unimportant. It may even become a destination place, instead of an area where interaction is solely because of its location as an in-between.

Site In transit

With the intentions that I have set out: of instilling an unexpected moment of engagement in people and their surroundings, changing a person's perceptions, and designing an environment so that it will invite interaction, there are a few strategies in selecting the right environment. The space that I believe will be most fruitful in the exploration of this thesis will be a place that is considered a fast-paced space, where interaction is constant, and there is an existing condition with preconceived ideas relating to the expected behavior. The area that I plan to look specifically at is the areas that live in the in-between. The areas that people in many cases are forced to interact with, but only because of alternative agendas (The transitional spaces). In most cases these places are looked over, or thought of as tertiary, a means to the completion of destination or a task at hand. In my experience with these type of environment It is very characteristic for people to "turn off, or tune out" their surroundings and simply move through. I believe that this type of place is a prime location to insert a new architecture that will change the perceptions of place to its occupants.





Proposed Program

With the nature of this location, the goal is to select specific types of program that would create a possible “lapse” or moment of engagement, in turn changing the perceptions of the people that use these places. With an existing transit system space, I decided that the inserted program would include:

1. Transportation Hub/ (Public Space)
2. Restaurant/ Café/ Bar
3. Book Store/ Gathering Space (Event)
4. Park/ Playground/ (Public Space)

With the collective insertion of these elements In comparison to one another, and activity of the streetscape and transit system, I believe this would create an opportunity to change perceptions, and activate the existing space in a new way.

Proposed Program Requirements

Informal public space	3,000 S.F.
Restaurant/ Café	5,200 S.F.
Dinning area	2,000 S.F.
Bar	1,500 S.F.
Kitchen	800 S.F.
Storage	400 S.F.
Restrooms	500 S.F.
Book Store/ public space	5,000 S.F.
Book Shelves	2,500 S.F.
Reading areas	500S.F.
Coffee Bar	500S.F.
Register/ Storage	1,500 S.F.
Restrooms	500S.F.
Playground/ Park	8,000 S.F.
Flexible green space	5'000 S.F.
Playground	2,500 S.F.
Event space	500 S.F.
Subway platform	1,000 S.F.
Event Space	200 S.F.
Circulation	600 S.F.
Restrooms	200 S.F.
Circulation of building	25% of total interior

Code Analysis

Occupancy Classifications

- assembly (A-1, A-2, A3)
- Mercantile (group M)

Special requirements

- Atrium must have sprinklers and have shorter egress distances

Type of Construction

- Type 1 –A (table 602.2)

Allowable Height and Area

- Unlimited Height/ Floor Area (table 503)
- no setbacks

Fire Protection Systems

- Group A-3 Automatic Sprinkler Systems
- Smoke and Heat Vents
- Building Materials are to be non-combustible
 - Structural Frame- 3 Hr
 - Load bearing Walls-3 hr
 - Non-Load bearing Walls-n 1 hr
 - Floor construction- 2 hr
 - Ceiling Construction- 2 hr

Means of Egress

- General means of egress (Sec.1003)
- Occupant loads (Sec. 1004)

Minimum Number of Exits (Sec.1018.1)

- | | |
|---------------------|-----------|
| 1-500 occupants | = 2 Exits |
| 501-1,000 occupants | = 3 Exits |
| >1,000 occupants | = 4 Exits |

Exit Access Distance Traveled (Sec. 1015.1)

- Type A – 250 ft. with sprinkler

Accessibility

- Path of Travel (Sec. 4.3, 4.4, 4.5 4.7)
The path of travel should be no smaller than 36 inches in width

Ramps (Sec. 4.8)

- Slope of ramp should not exceed 1:12 ratio
- All ramps exceeding 6ft in length will have railings on both sides
- 5ft of landing will be given for every 30 ft of ramp

Entrance (Sec. 4.13, 4.14)

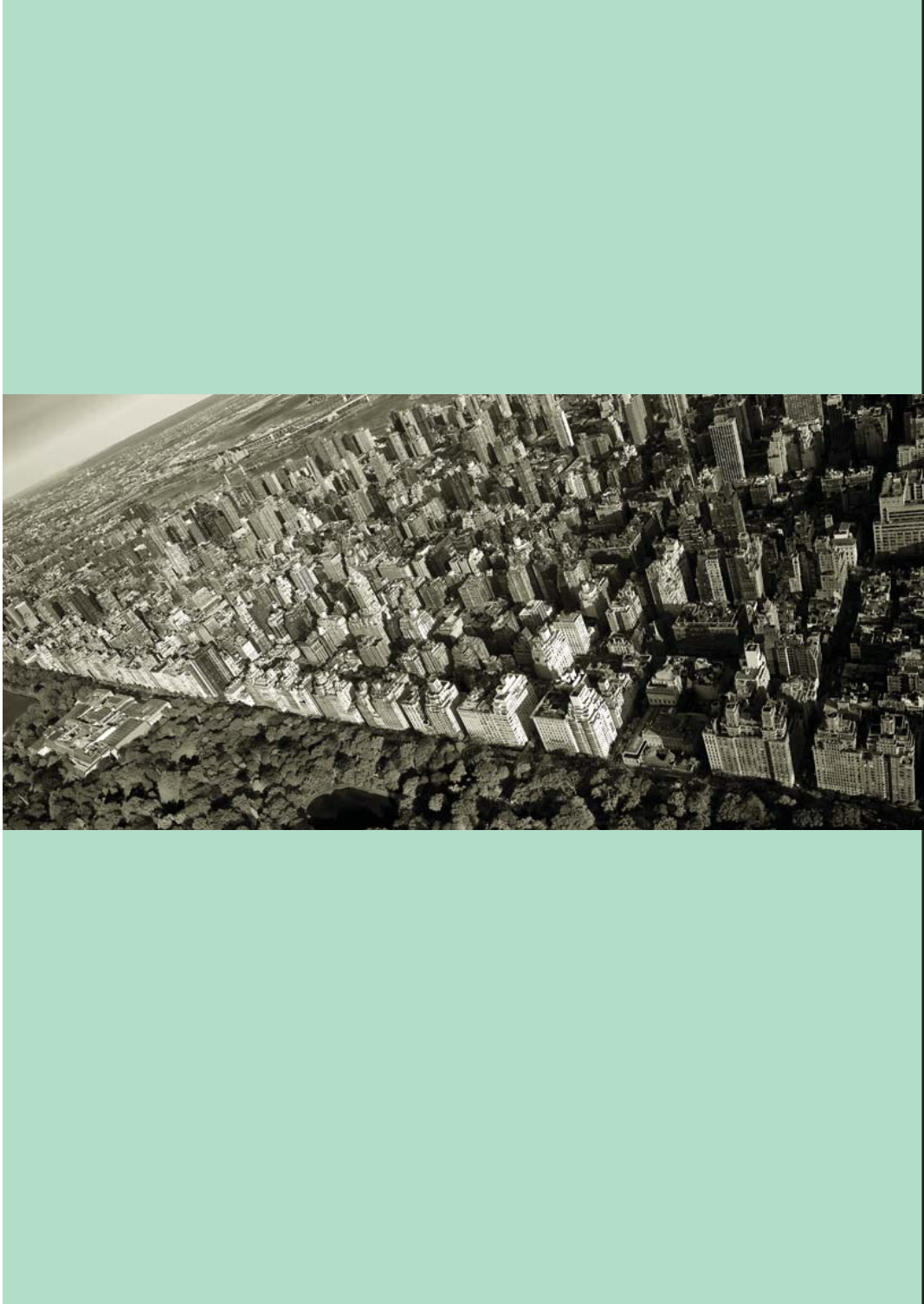
- At least one entrance will not have stairs
- Entrance will be at least 32 inches in width
- There will be at least 18 inches of clear wall space on the pull side of the door

Vertical Circulation (Sec. 4.3)

- There will be ramps, escalators, or elevators to all levels of the facility

Restrooms (Sec. 4.1, 4.2, 4.13)

- Doorway should be at least 32 inch in width
- Travel path between all fixtures should be at least 36 inches wide
- There will be at least one stall per bathroom that has 5ft X 5ft clear floor space

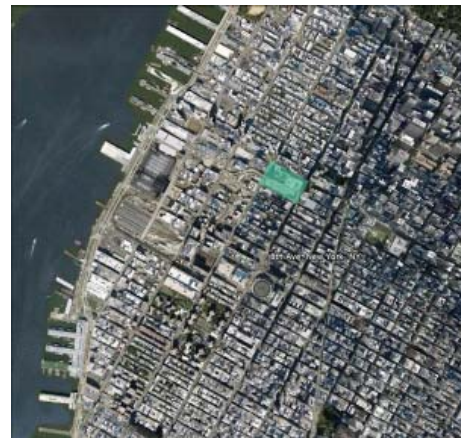


Site Analysis

Site Analysis

The specific site selected for the exploration of this thesis is located in midtown Manhattan. Manhattan is a place that seems to be in a constant motion, the city that never sleeps. The density of interaction that happens in Manhattan is unlike anywhere else in the United States. Manhattan sees the highest densities on a day to day basis in comparison to the other 4 boroughs of New York City, while at the same

time containing the smallest percentage of land. The location I am looking specifically at is the area that extends out from the Port Authority transit station on 42nd and 8th of midtown Manhattan. This location was of great interest to me because of the amount of people that frequent it each day. In many cases this area is a part of daily routine for people that live and work in the city, but it is also a place that visitors and tourists funnel through for the first time. In many ways this location is an important threshold to



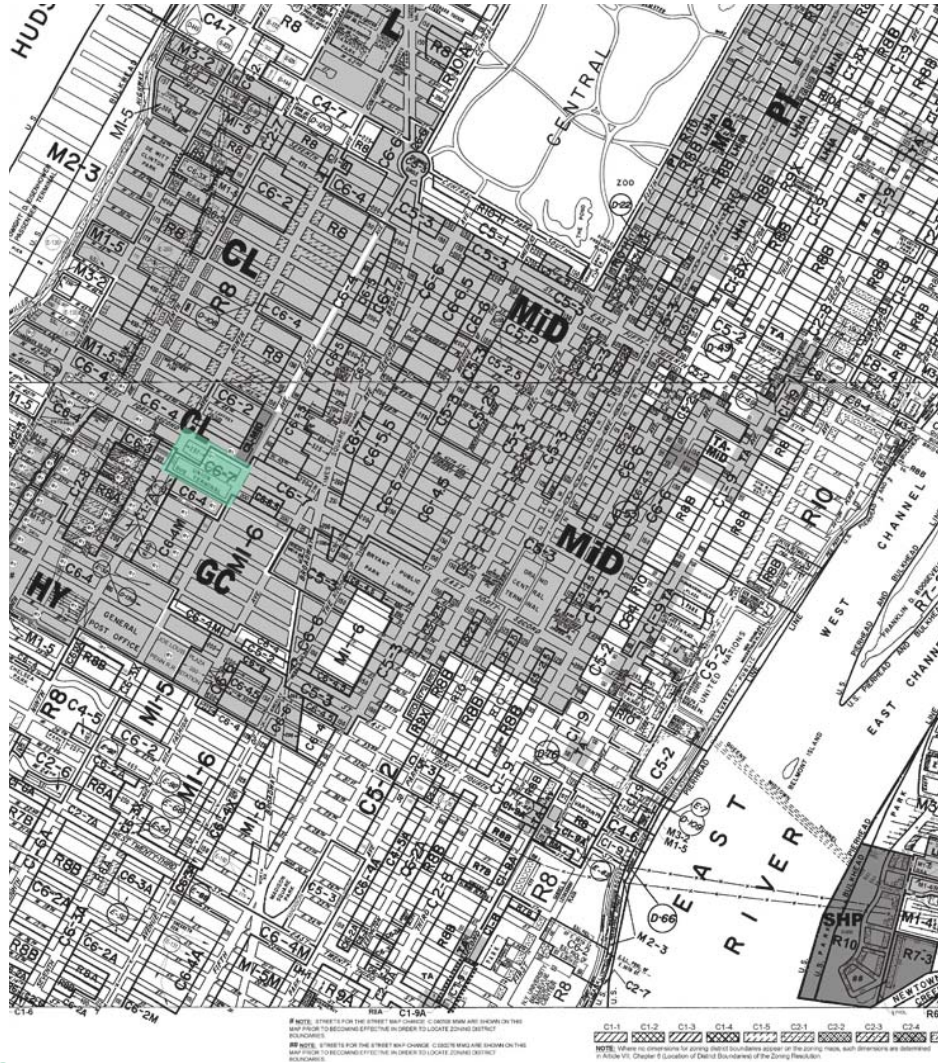
the heart of Manhattan Island. I believe this makes for a unique place where the pursuit of thoughtful space would impact both the people who use this area on a day to day basis as well as those experiencing it for the first time. The Port Authority station is a place where most people flow through as a means to a destination. The experience that occurs at the Port Authority Transit Station varies from people exiting out into the street, using the immediate facilities of the station, or in many

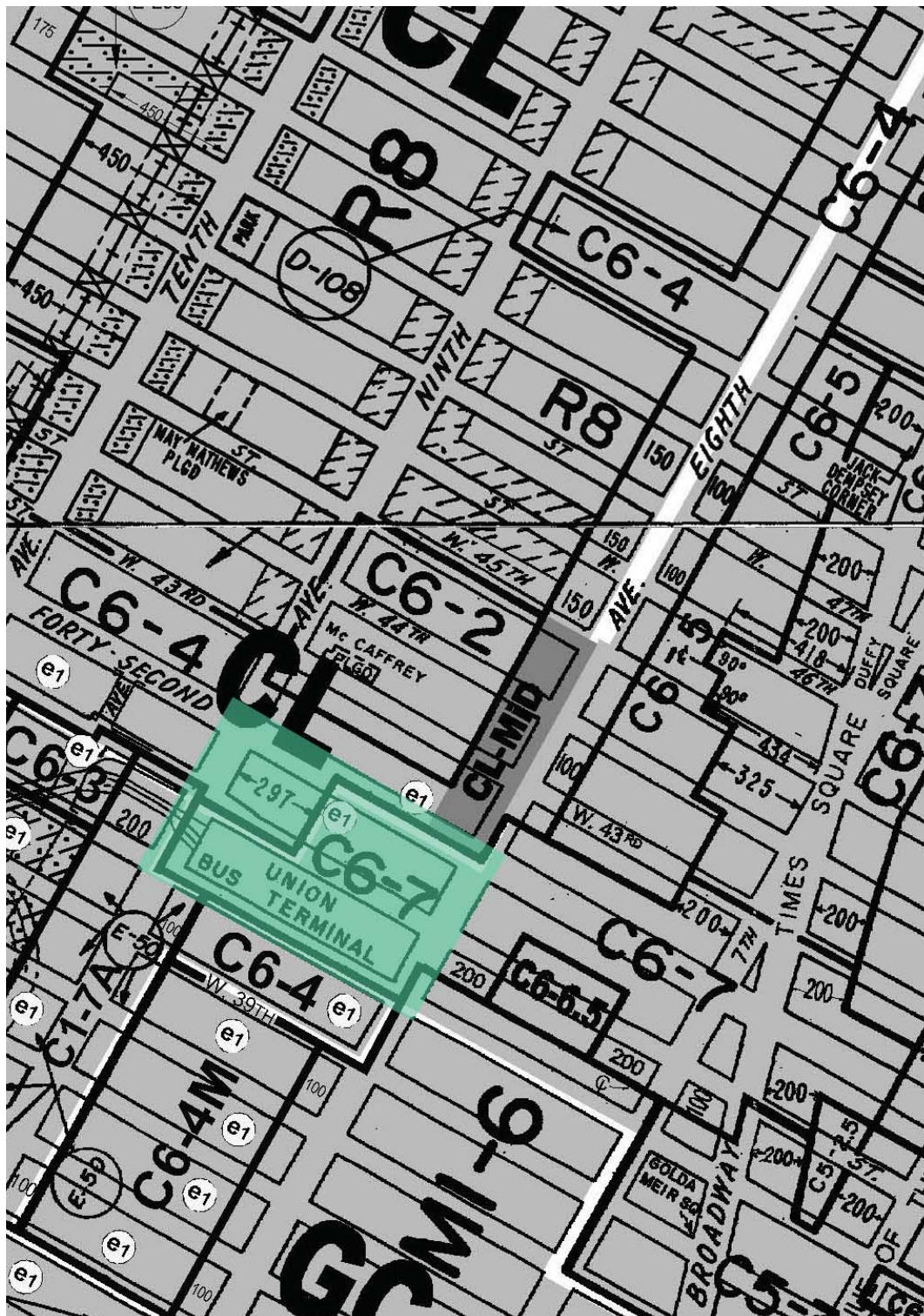
cases just walking from one platform to another to change trains. In this regard the Port authority station is home to a variety of different types of interaction, but in most regard it is considered an in-between space.



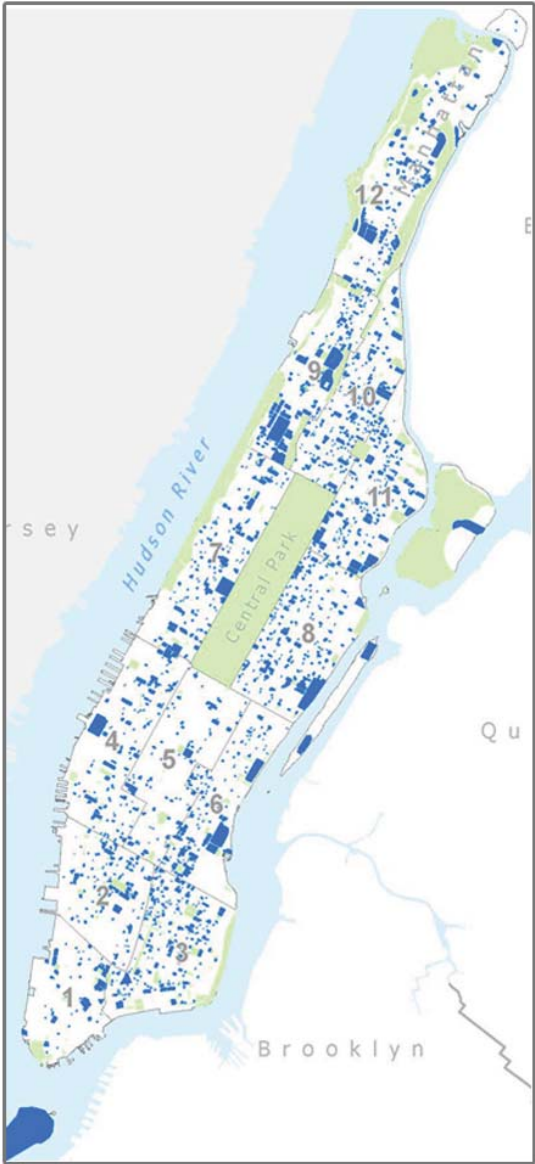
zoning

R- RESIDENTIAL
C- COMMERCIAL
M- MANUFACTURING





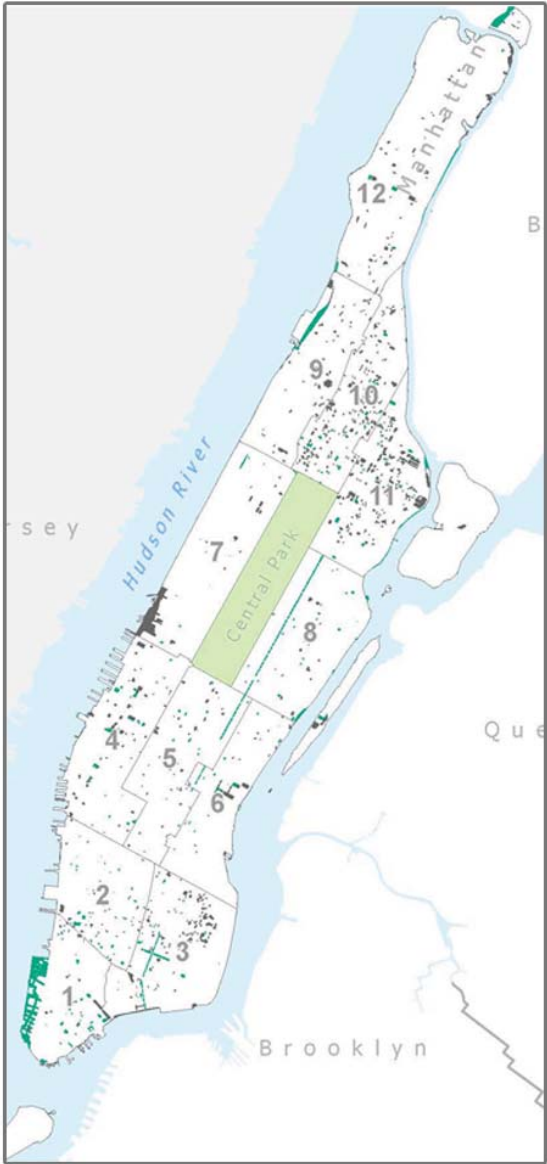
Land Use



Use	Lot Area in Acres	Percentage of Borough
Open Space / Recreation	2,708.1	24.9%
Public Facilities / Institutions	728.4	6.7%

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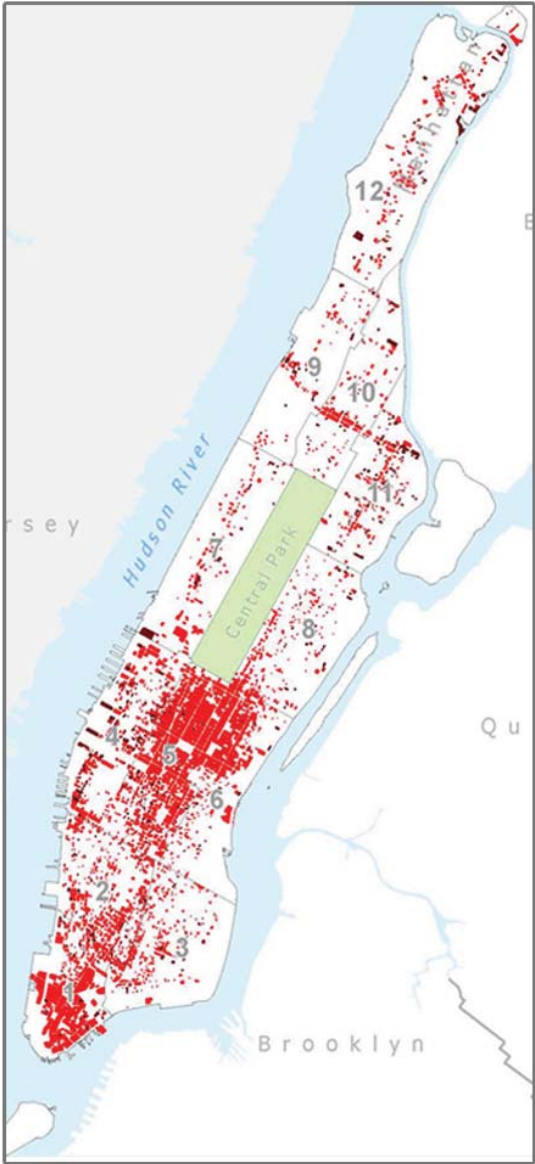
Source: NYC DCP MapInfo 07C



Use	Lot Area in Acres	Percentage of Borough
Vacant Land	359.3	3.3%
Miscellaneous	207.8	1.9%

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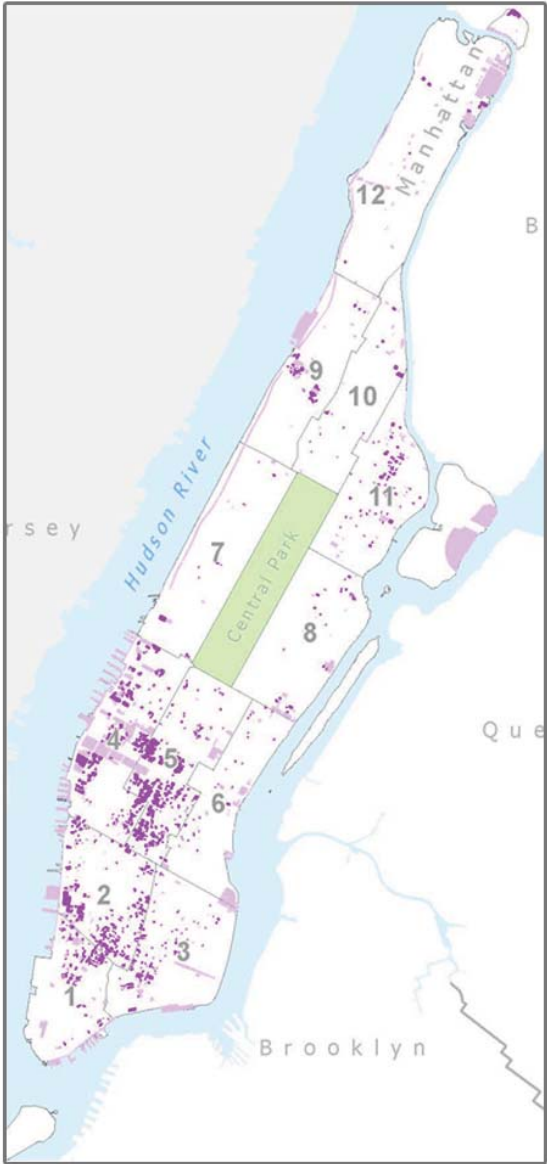
Land Use



Use	Lot Area in Acres	Percentage of Borough
Commercial	1,131.4	10.4%
Parking	168.8	1.6%

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Source: NYC DOT MapRATTO™ 07c



Use	Lot Area in Acres	Percentage of Borough
Industrial / Manufacturing	237.3	2.2%
Transportation / Utility	728.4	6.7%

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2007 Primary Land Use: New York City by Borough

	One- and Two-Family Houses	Multi-Family Residential	Mixed-Residential & Commercial	Commercial/ Office	Industrial / Manufacturing	Transportation / Utility	Public Facilities & Institutions	Open Space	Parking Facilities	Vacant Land	Misc. Lots	Total
Bronx												
Lot Area (Acres)	3,730	3,247	557	932	784	556	2,384	6,428	399	911	916	20,845
% of Borough	17.9%	15.6%	2.7%	4.5%	3.8%	2.7%	11.4%	30.8%	1.9%	4.4%	4.4%	100.0%
Brooklyn												
Lot Area (Acres)	8,706	6,279	1,336	1,203	1,833	1,583	2,340	13,039	635	1,353	324	38,632
% of Borough	22.5%	16.3%	3.5%	3.1%	4.7%	4.1%	6.1%	33.8%	1.6%	3.5%	0.8%	100.0%
Manhattan												
Lot Area (Acres)	146	2,564	1,373	1,131	237	728	1,266	2,708	169	359	208	10,890
% of Borough	1.3%	23.5%	12.6%	10.4%	2.2%	6.7%	11.6%	24.9%	1.6%	3.3%	1.9%	100.0%
Queens												
Lot Area (Acres)	19,187	5,694	846	1,723	1,853	6,251	2,380	10,451	655	2,867	1,248	53,156
% of Borough	38.1%	10.7%	1.6%	3.2%	3.5%	11.8%	4.5%	19.7%	1.2%	5.4%	2.3%	100.0%
Staten Island												
Lot Area (Acres)	10,319	917	167	1,051	884	2,358	2,903	6,340	184	5,473	210	30,807
% of Borough	33.5%	3.0%	0.5%	3.4%	2.9%	7.7%	9.4%	20.6%	0.6%	17.8%	0.7%	100.0%
New York City												
Lot Area (Acres)	42,080	18,701	4,279	6,041	5,592	11,477	11,273	38,966	2,042	10,964	2,906	154,330
% of City	27.3%	12.1%	2.8%	3.9%	3.6%	7.4%	7.3%	25.2%	1.3%	7.1%	1.9%	100.0%

Note: Lot Area excludes lots with missing dimensions.
Source: Department of Finance, modeled by DCP for condominiums and Parks, 2007

Land Use

2007 Primary Land Use: New York City by Land Use Type

	One- and Two-Family Houses	Multi-Family Residential	Mixed-Residential & Commercial	Commercial/ Office	Industrial / Manufacturing	Transportation / Utility	Public Facilities & Institutions	Open Space	Parking Facilities	Vacant Land	Misc. Lots	Total
Bronx												
Lot Area (Acres)	3,730	3,247	557	932	784	556	2,384	6,428	399	911	916	20,845
% of City Land Use	8.9%	17.4%	13.0%	15.4%	14.0%	4.8%	21.2%	16.5%	19.5%	8.3%	31.5%	13.5%
Brooklyn												
Lot Area (Acres)	8,706	6,279	1,336	1,203	1,833	1,583	2,340	13,039	635	1,353	324	38,632
% of City Land Use	20.7%	33.6%	31.2%	19.9%	32.8%	13.8%	20.8%	33.5%	31.1%	12.3%	11.2%	25.0%
Manhattan												
Lot Area (Acres)	146	2,564	1,373	1,131	237	728	1,256	2,708	169	359	208	10,890
% of City Land Use	0.3%	13.7%	32.1%	18.7%	4.2%	6.3%	11.2%	6.9%	8.3%	3.3%	7.2%	7.1%
Queens												
Lot Area (Acres)	19,187	5,694	846	1,723	1,853	6,251	2,380	10,451	655	2,867	1,248	53,156
% of City Land Use	45.6%	30.4%	19.8%	28.5%	33.1%	54.5%	21.1%	26.8%	32.1%	26.2%	42.9%	34.4%
Staten Island												
Lot Area (Acres)	10,319	917	167	1,051	884	2,358	2,903	6,340	184	5,473	210	30,807
% of City Land Use	24.5%	4.9%	3.9%	17.4%	15.8%	20.5%	25.8%	16.3%	9.0%	49.9%	7.2%	20.0%
New York City												
Lot Area (Acres)	42,090	18,701	4,279	6,041	5,592	11,477	11,273	38,966	2,042	10,564	2,986	154,330
% of City Land Use	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Note: Lot Area excludes lots with missing dimensions.
Source: Department of Finance, modified by DCP for condominiums and Parks, 2007

Site History

The Port Authority bus station was originally built on the block between 40th and 41st st in December of 1950. This bus stations was built to become a central station to accommodate all of midtown Manhattan. From this first building, the Port Authority station has seen many remodels and expansion but the largest came with the addition of the

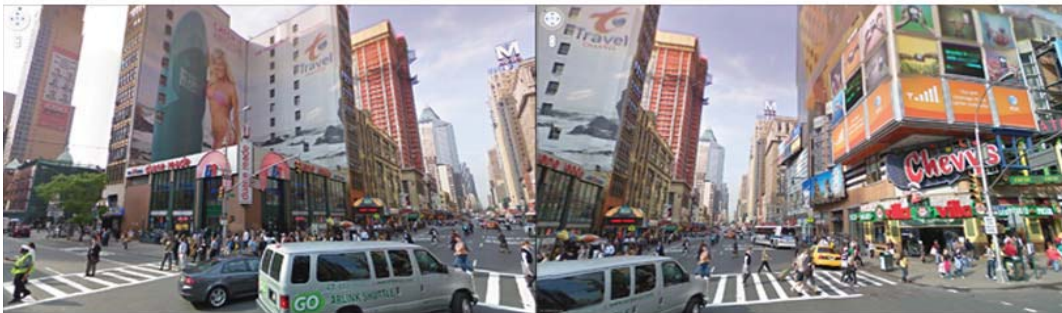
north wing in 1979. This expanded the station to what it is today, occupying the blocks between 40th to 42nd streets and creating a through street that divides the first level in half. From this point the bus terminal was and still is the largest bus station in the United States, and the busiest in the world by volume of traffic. Currently the Port Authority bus station accommodates on average 200,000 people daily. The people that flow through the halls of the Port Authority bus terminal are commuters as well as people arriving



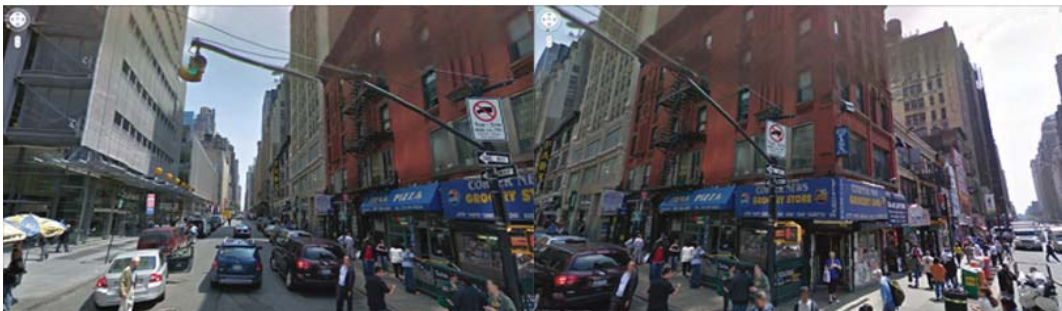
to Manhattan from national bus lines such as greyhound and Peter Pan. In combination with the bus lines, and the subway that runs beneath the Port Authority station, New York has the highest rate of public transportation use in the nation.



Corner of 42nd and 8th Ave

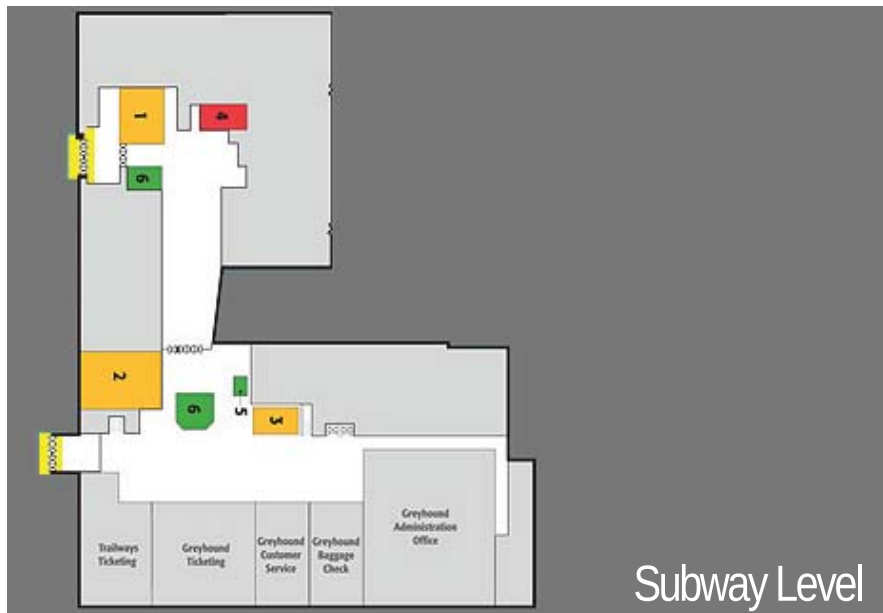


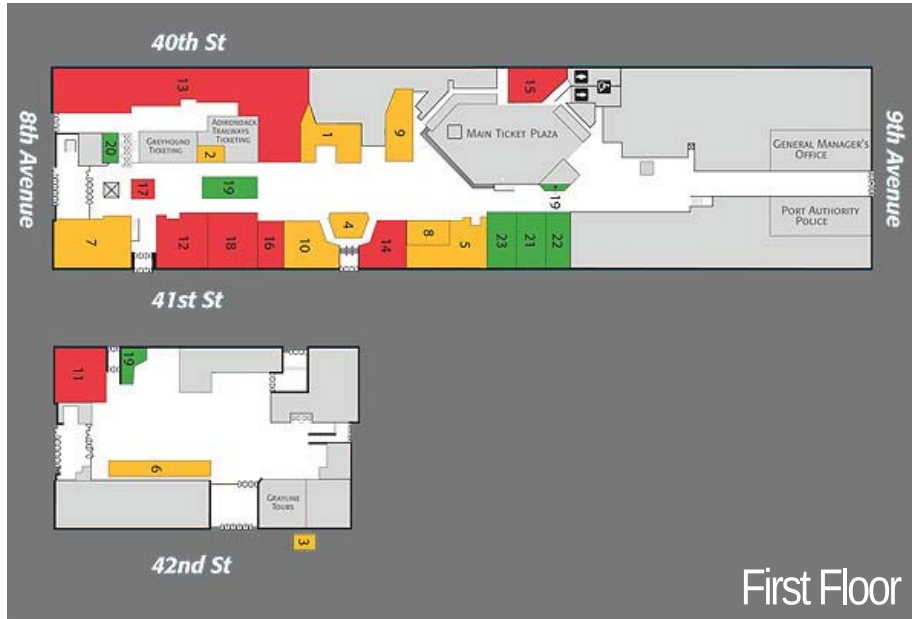
Corner of 40th and 8th Ave





Port Authority Station





Transportation



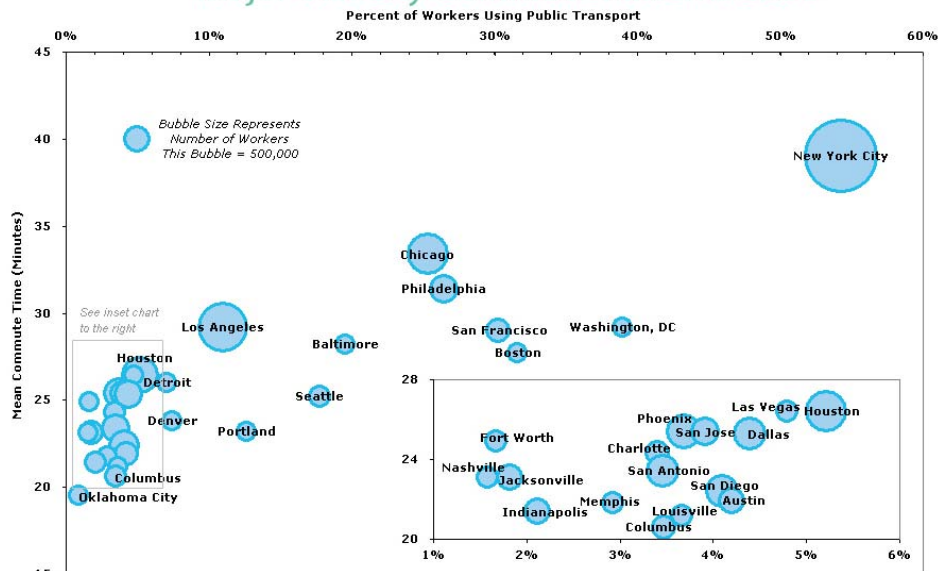
-New York has the largest subway system in the world.

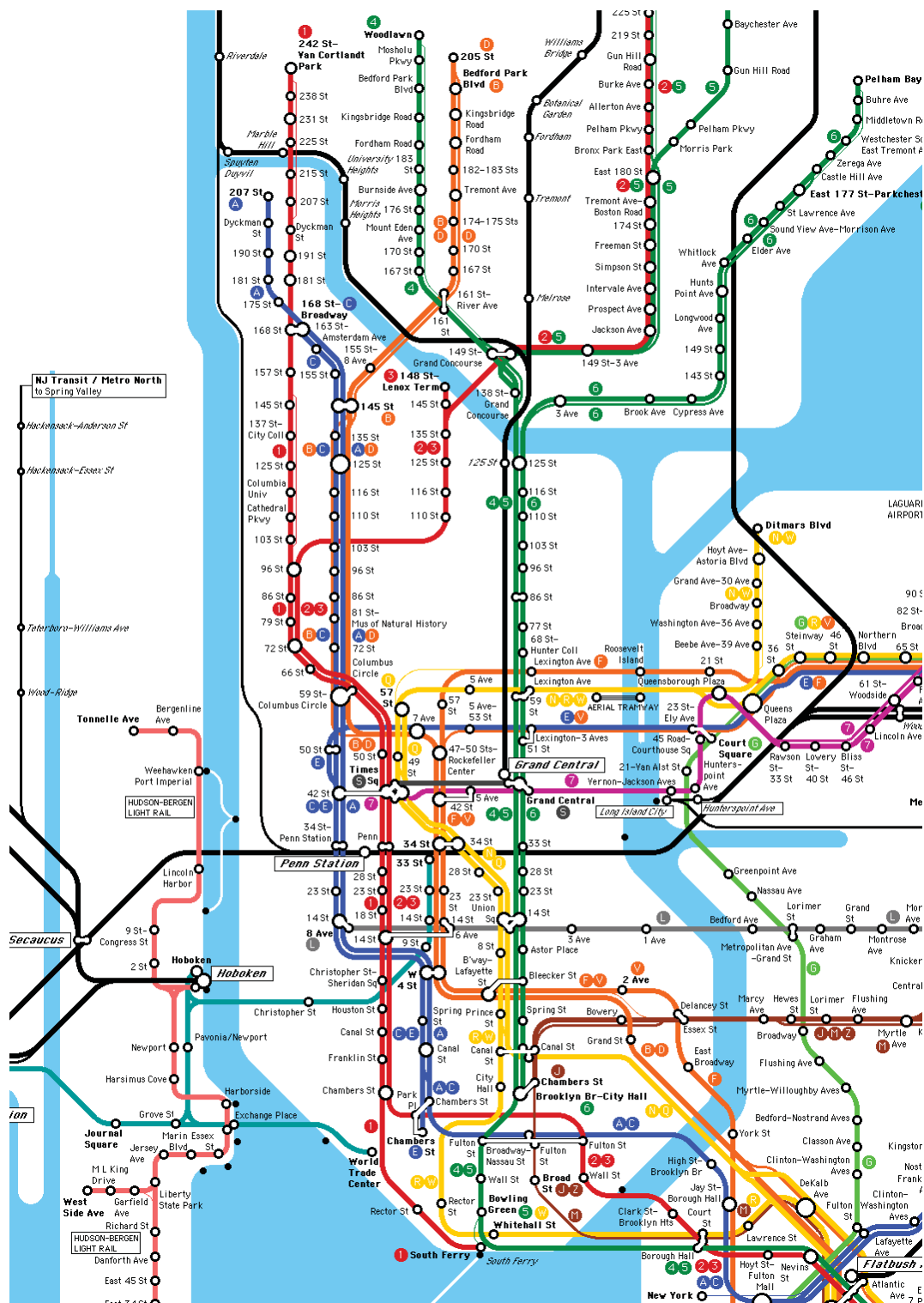
-More than ten million new Yorkers commute daily.

-1.3 million People commute to work in Manhattan – that's nearly doubling the borough's population.

-New York has subway lines that run 24 hours

Major U.S. City Commute Patterns 2006





New York Climate Data

New York, NY climate is warm during summer when temperatures tend to be in the 70's and very cold during winter when temperatures tend to be in the 30's. Although this difference in temperature from season to season does not seem drastic, the radiant heat reflected off of New York's buildings, and the wind-chill makes the perceived temperature feel severe.

The warmest month of the year is July with an average maximum temperature of 82.50 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 22.70 degrees Fahrenheit.

Temperature variations between night and day tend to be fairly limited during both summer and winter seasons. This difference can reach a swing of 15 degrees Fahrenheit in a 24 hour period.

The annual average precipitation at New York is 46.33 Inches. Rainfall in is fairly evenly distributed throughout the year. The wettest month of the year is May with an average rainfall of 4.48 Inches.

Average Temperature

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max °F	36.4	39.5	47.6	58.0	68.4	77.2	82.5	81.0	73.9	62.8	52.2	42.0	60.1
Mean °F	29.6	31.8	39.8	50.1	60.6	69.9	75.3	73.7	66.0	54.9	44.9	35.0	52.6
Min °F	22.7	24.0	32.0	42.2	52.8	62.5	68.0	66.3	58.1	46.9	37.5	28.0	45.1

Average Rainfall

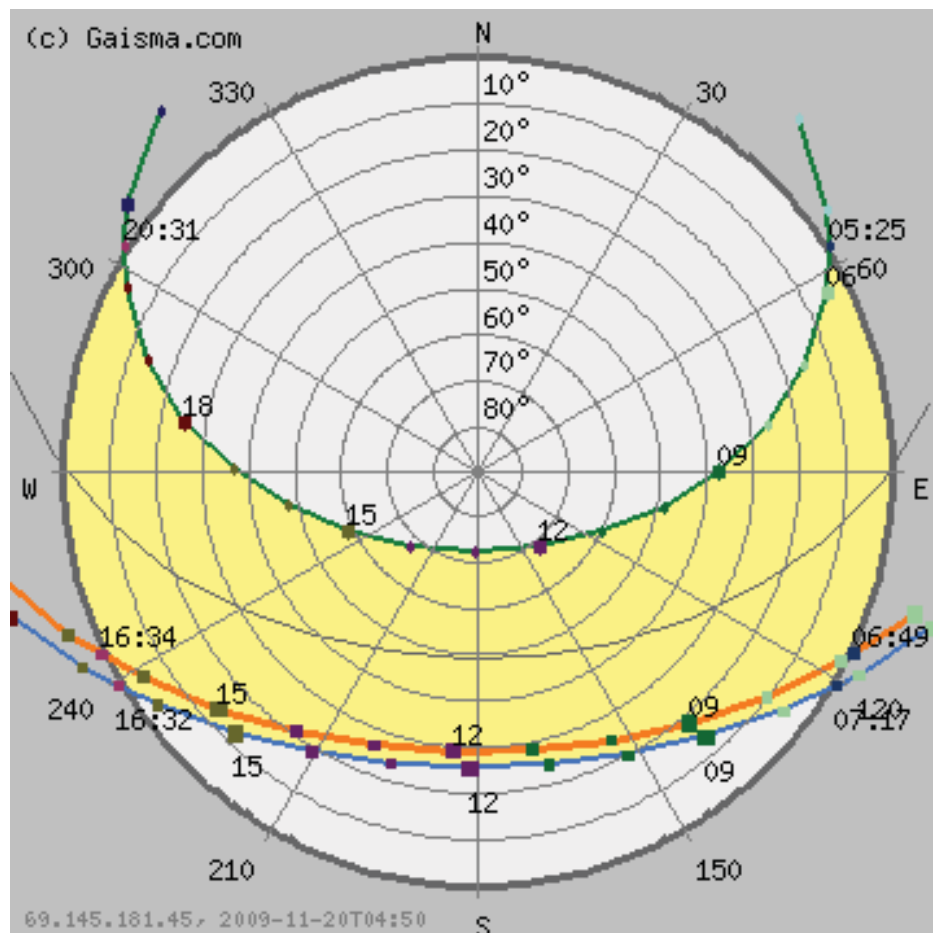
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Inch	3.69	2.94	4.08	4.06	4.48	3.45	4.17	4.05	4.05	3.50	4.00	3.86	46.33



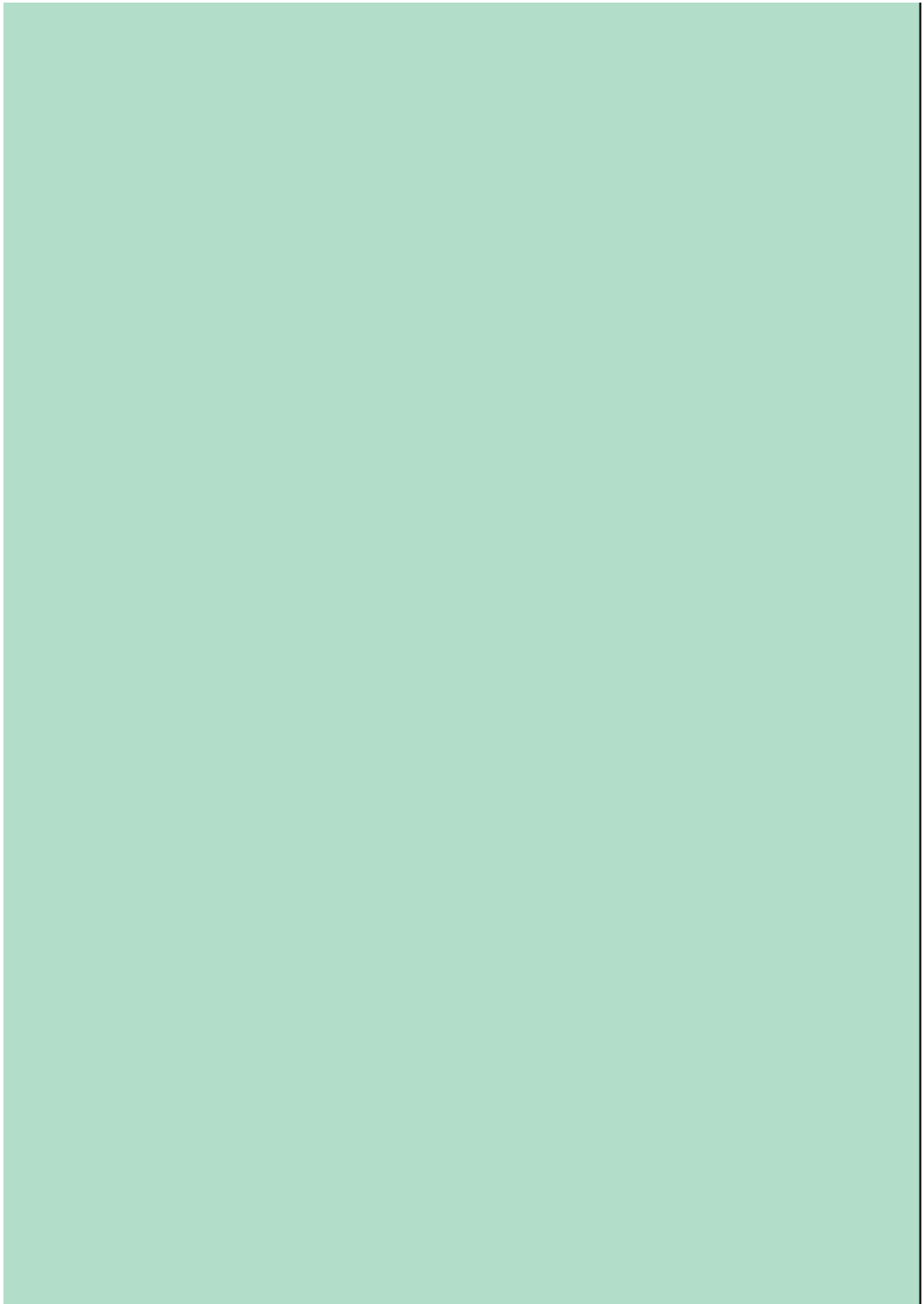
New York Solar Data

New York has a latitude of 42 degrees North. The sun cycle that occurs in this area is not unlike that of Bozeman. The difference is in the density of the built environment of Manhattan. On average New York sees 107 sunny days a year. On these days the majority of the morning and afternoon sunlight is blocked by the blocks of tall buildings. The street scape

is left in long shadows until the time when the sun is high enough overhead to get down into the low cracks of the city.







Case Studies:

Brasserie

Diller Scofidio + Renfro
Restaurant, The Seagram Building,
New York, NY.

The Brasserie restaurant is located on the first floor of the Seagram Building in New York. The Seagram Building is considered to be the quintessential modernist glass tower. Ironically the location of this restaurant in the Seagram building is sunken into the stone base of the building with no clear views or connection to the street. This created an opportunity for Diller Scofidio + Renfro to play with this connection to the street. Instead of glass being the window to the activity of the street, Plasma screens and live feed video cameras act as a virtual window.

Along with this, the restaurant also uses this technology to highlight the ritual of "making an entrance". A sensor above the main entrance triggers a snapshot of the patron entering, which is then projected on the plasma screens behind the bar. This introduces the patron before they make their grand entrance down the extended glass staircase and into the center of the dining area.

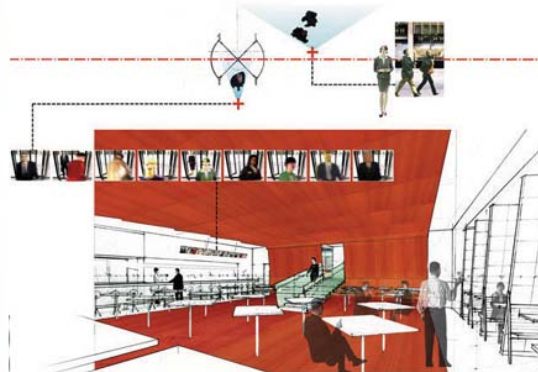
Notes:

-Using Alternate responses to understood relationships, such as glass and transparency provokes a reason for the individual to take pause, or take note of a change in perception.

-Taking the idea of ritual of space, or preconceived understanding of space (program) and the behaviors that are expected gives that designer an opportunity to enhance those rituals, or change and create new rituals.

-Technologies place in changing perception.

-The insertion of a new architecture in existing conditions



Creative Arts Center

Diller Scofidio + Renfro
Brown University,
Providence, RI.

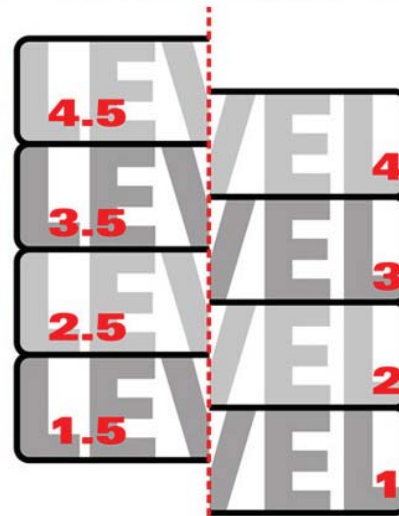
The Creative Art Center On the campus of Brown University is designed is a way to promote interaction between the arts. The floor plates in the creative arts center are cut and situated so that the building is made up of six half levels. With this sectional arrangement, each floor is given a view into two adjacent floors and a unique perspective onto the different arts that happen within this building. The circulation of this building is also used for the promotion of creative interchange. The landings of the stairwell open up into “living rooms”, where people are allowed to collect and interact.

Notes:

-Because of the mix in program, and and the sectional arrangement and relationship between these programs, the architecture creates opportunities for interaction, and cross pollination between disciplines.

-The level changes creates a beautiful arrangement for passive voyeurism. because it is a half view looking up and down people are more likely to look on in comparison to if these people were sharing the same plane and eye level. The level change allows observers to be detached from their subject.

- I think this idea of passive/active surveillance changes self awareness in the people in these spaces. I believe these changes in self-awareness create a possible change in behavior.



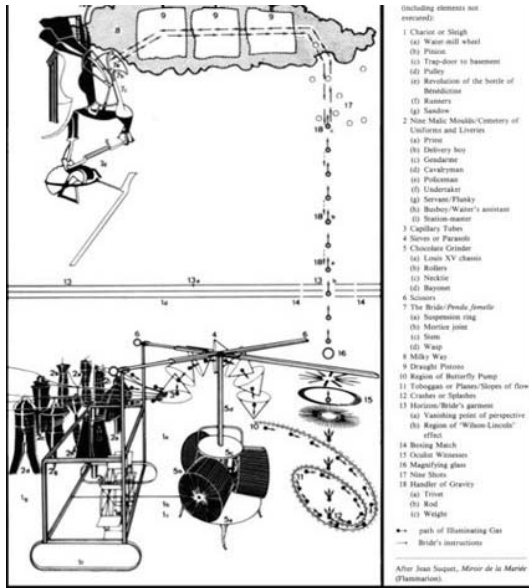
Large Glass + Given

Marcel Duchamp

“The play of correspondences and reflections between the assemblage and the Large Glass is upsetting, and it presents itself on a visual plane as well as the textual-The notes of the Green Box and those of the White Box are the verbal bridge between the two works. In both cases, the mere looking at the painting or the assemblage is turned into the fact of viewing-through...in one case, through the obstacle of the door, which finally becomes the line of vision leading us to the landscape with the woman and the waterfall: in the other, through the glass on which the composition is painted and which, by reason of its very transparency, becomes the obstacle of our vision. Reversibility: seeing through opaqueness, not-seeing through transparency. The wooden door and the glass door: two opposite facets of the same idea. This opposition is resolved in an identity: in both cases we look at ourselves looking. Hinge procedure. The question “what do we see?” confronts us with ourselves.”(Paz, 1978)

Notes:

- LARGE GLASS focuses on this idea of subjectivity in the abstract. The interpretation is up to how the viewer perceives it.
- GIVEN focuses on the emotion provoked from the view, and how the view is set up.
- Both of these examples use levels of self awareness in the overall experience and interaction between the object and the viewer.



1. Large Glass
2. Given



Richard Serra

“promenade” Exhibition at the Grand Palais

“Promenade” is a multiple piece installation that creates a landscape of steel. Much like the majority of Richard Serra's work, this sculpture's creates an environment that the viewer lives in, and relates themselves to. This Installation was part of the Monumenta Art Series which asks leading artists to engage their art with the massive space of the Grand Palais. Serra's “Promenade” disrupts the viewer's relationship to the architectural setting and offers a unique experience designed to challenge their perception of balance and gravity.

Notes:

- Creates possible pause and challenges perception
- Introduction to an unexpected interaction
- space that invites interaction



Prada Transformer

Rem Koolhaas + OMA

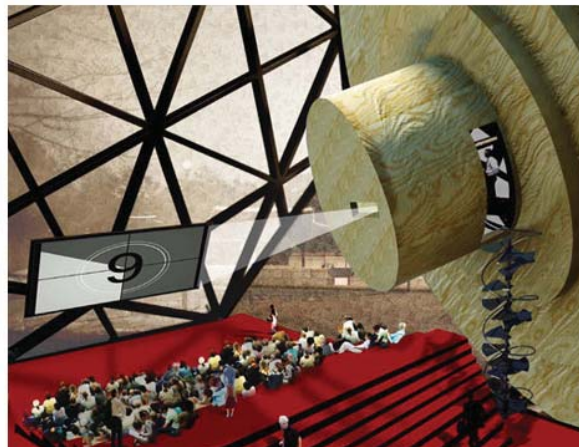
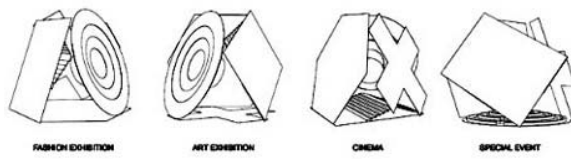
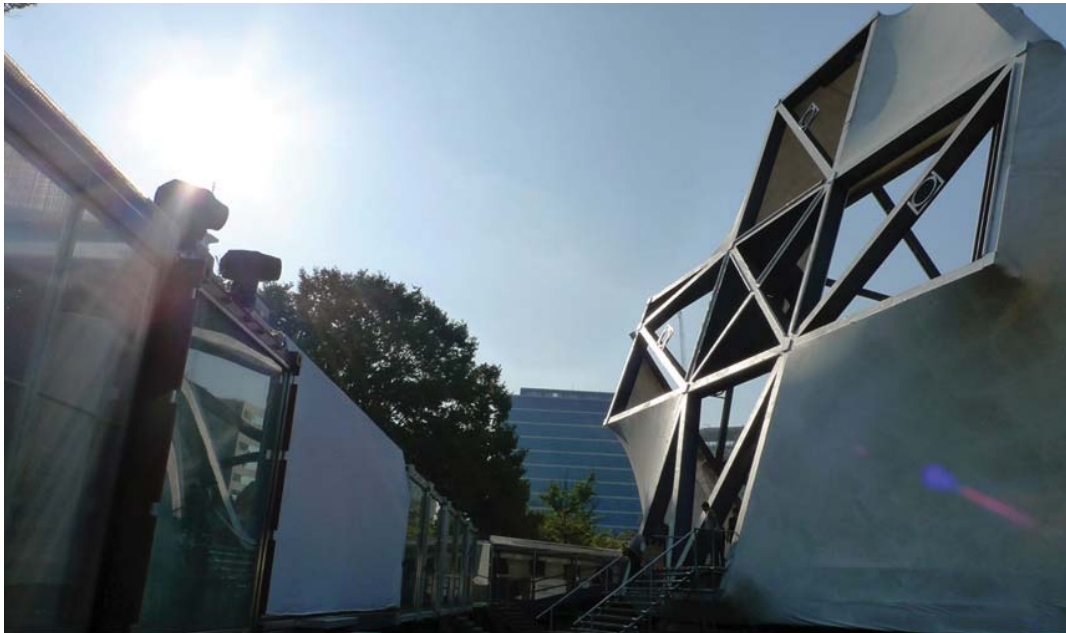
The Prada Transformer is a temporary structure that was designed by Rem Koolhaas + OMA to host a series of events that will be taking place in Seoul, South Korea. This structure has four different configurations that will accommodate four programmatic functions. By simply raising the transformer and rotating it, the Prada transformer transforms into a: fashion exhibition, art exhibition, cinema, and special events.

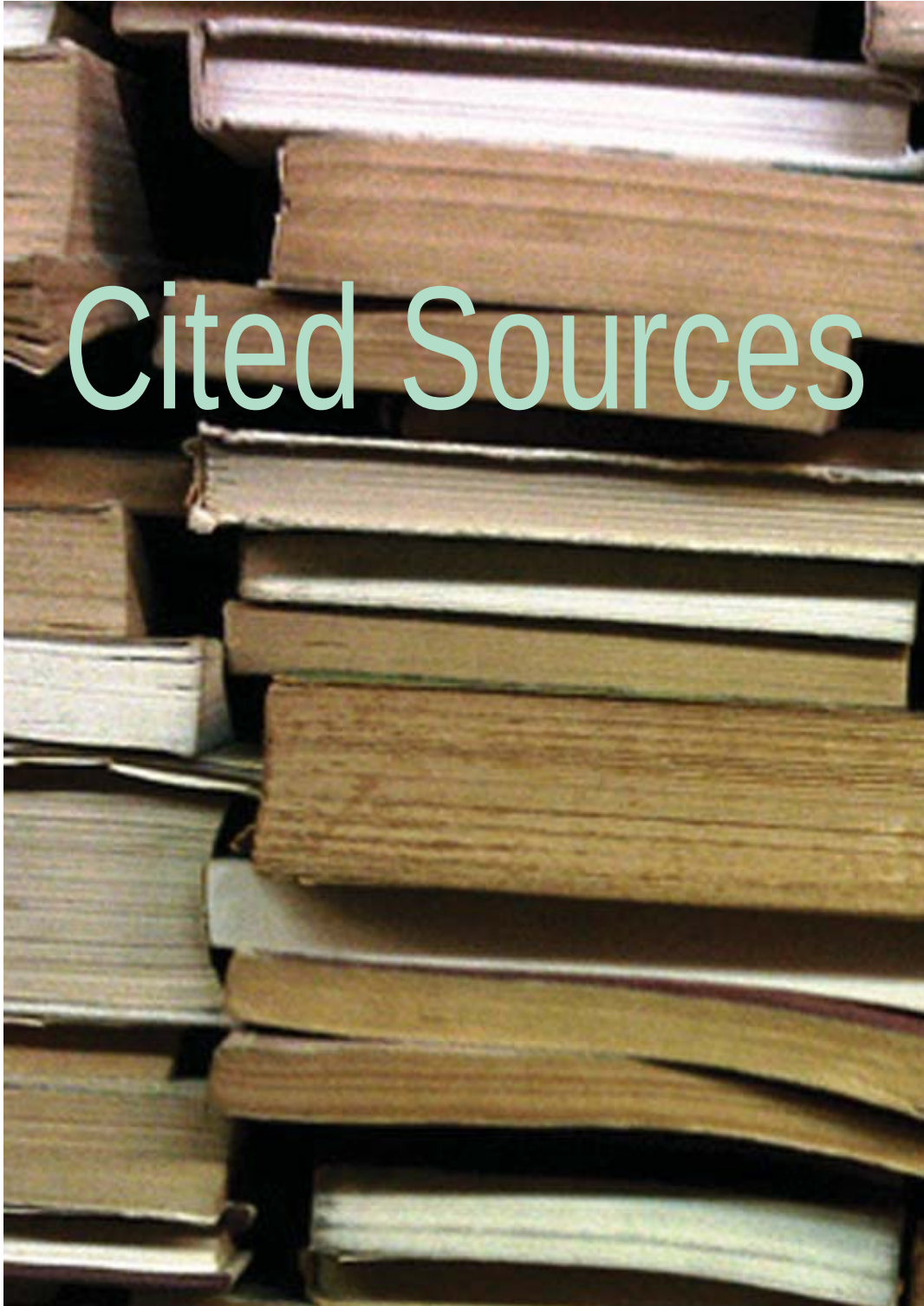
'the interesting thing about this building is the acknowledgement of the transformer as a dynamic organism, opposed to simply a static object, which arbitrarily fits program. prada transformer helps add an extra dimension regarding the treatment of this typology by allowing it to be moulded in real time, depending on the specific programs it intends to facilitate inside.'

— rem koolhaas

Notes:

- space that invites interaction
- The insertion of a new architecture in existing conditions
- Creates possible pause and challenges perception
- Introduction to an unexpected interaction





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Notes: