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I, Sarosh Ali, hereby submit this original work as part of the requirements for the degree of Master of Architecture in Architecture (Master of).

It is entitled:
Transitional Design: Connecting Space, People, and Architecture

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Committee chair: George Bible, MCiv.Eng
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TRANSITIONAL DESIGN: Connecting Space, People, and Architecture

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By
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TRANSITIONAL DESIGN: Connecting Space, People, and Architecture

Master’s of Architecture Thesis: Sarosh Ali
Through the decentralization of industry, and the shift from an industrial to a more service based economy, large-scale industry and shipping has moved away from city centers. This shift has left behind postindustrial waterfront sites, where cities have re-centralized away from the water’s edge, with severe rifts between the urban core and the waterfront. This is most evident at the site designed by Daniel Burnham, as a part of the 1903 Group Plan, to be the social, industrial and political center for the city of Cleveland. He envisioned a public space connected to and stimulated by the surrounding civic buildings as well as activity generation from the Union Terminal at the apex of the malls, however this was never completely realized when the transit station was moved to Terminal Tower. The effects of this action coupled with those of deindustrialization led to the current void that exists between the cities’ urban core and that of its lakefront, hindering any efforts for the preservation or use of this historically significant site. This thesis will address that disconnect through a exploration of the historical context, current needs, and future potential by creating a transitional design that will bridge the current void between the urban core and the lakefront. Transitional design within the context of this thesis encompasses the visualization of the space between spaces; the threshold which delineates the transition point from one place to another. Transit stations in the past, specifically train stations, have often served as the iconic gateways or thresholds of cities or towns. As such, architectural experience of transitional space can be best expressed through a design of multimodal transit station where notions of movement and space can be explored at a large and urban scale. The methodology of design will focus on using linear movement forces found in Zaha Hadid’s works particularly in MAXXI and the use of public space and landscape in Wiess Manfredi’s Olympic Sculpture Park and in George Hargreaves master plan for the University of Cincinnati to readdress the Malls as way to bridge the void between the city and its lakefront.
I would like to express my gratitude to my family for their unending support throughout the past six years of my college education. I would also like to thank my thesis committee for their knowledge and expertise and for helping me to explore something that truly interests me. I would also like to thank my friends Nadeem and Urooj for everything they did for me during my frequent visits up to Cleveland for research.
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Figure 1.02: Cleveland Malls designed as a part of the Group Plan by Daniel Burnham in 1903.
1.1 PROJECT

The primary goal for this thesis is to explore the idea of connections, thresholds, and voids, and understanding the role they play in the process of transitioning between spaces. The result of the thesis will be a multimodal transit station located at the site of an existing Amtrak station and will serve as a transitioning point to connect the urban spaces and the lakefront of Cleveland. The role of this transition is to bridge voids both physically and visually that exist in the prominent postindustrial waterfront city of Cleveland and establish a threshold at the convergence of regional and intercity movement. The voids mentioned above are the gaps between various modes of intercity transportation, movement along the malls, and between downtown Cleveland and the lakefront. The Cleveland Malls are public green spaces designed by Daniel Burnham. The idea that this building can help connect some of the fragmented public spaces, public transportation, and pedestrian circulation patterns is fundamental to the selection of a site and development of this project.

The second issue of building as symbol comes from understanding the history of transportation architecture and the role it played in the development of building technologies over the years starting with the industrial revolution, with the rise of iconic train stations to modern airport terminals pushing the limits of design and construction. These buildings represented
our push for faster, bigger, safer modes of transportation in our societies; however as the times change so to must some of our priorities. The architectural field is among other industries striving for more sustainable strategies and methods in how they operate. Sustainable and efficient public transportation has been growing in popularity in recent years and a building of this scale, connecting cities such as Chicago, Detroit, Columbus, Cincinnati, and Buffalo has the potential to expand its impact beyond just Cleveland.

1.2 TRANSITION

“For the rising and falling, advancing and receding, with the convexity and concavity, and other forms of the great parts, have the same effect in architecture, that hill and dale, fore-ground and distance, swelling and sinking have in landscape: that is, they serve to produce an agreeable and diversified contour, that groups and contrasts like a picture and creates a variety of light and shade, which gives great spirit, beauty and effect to the composition.”

Transitions can be defined as the movement, passage, or change from one position, state, experience, etc. to another. It provides a space to adjust from one experience to another or it provides a space to pause before the actual transition. The image on the left shows the transition across the rail tracks but only slight changes to the aesthetics of the bridge provide a colorful experience using stained glass. Even small design elements such as these depending of the circumstances can help to inform the emotional responses and changes in mental state, mood,

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1 Julian Small, Essay on The Architecture of Robert Adam (1728-1792).
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The architectural experience of transitional space can be best expressed through a design of multimodal transit station where notions of movement can be explored at a large and urban scale. The users of a multimodal transit station will primarily be on the move, then how can this or personality of an individual by moving through one space to another. The emotions experienced might involve excitement, or thrill at one end and serenity and calm on the other. This can help provide a strong sense of purpose for design of such spaces. The ability to reduce or enhance certain emotional responses to the building can be controlled by how the question of design is approached. Figure 1.05 shows the current condition of the transitional experience of the site. The almost 50 year old bridge with pealing paint, high mesh fencing, and limited views is the primary connection from the Cleveland Malls to the Browns Stadium and the lakefront. When designing in such a historically significant site it is important to understand the context, history and user groups of the project. The site provides an opportunity to build off of the rich history while bringing into the design new solutions to a problem that has existed for many decades. What should be the converging point for Cleveland’s lakefront, its transportational infrastructure, and its civic center is currently a void that isolates both city and lakefront. What is needed then is a transitional space which would navigate through the various program and spaces to create a truly connected design that is integrated into the city and its infrastructural needs.

Figure 1.05: Cleveland Browns' Bridge

Figure 1.06: Views out to lake from Mall A with a framed view of the lake.
transition between one mode of travel to another mode be made so that it doesn’t confuse or frustrate the users. How can the transition provide sufficient support, clarity, access that are beneficial to the overall design scheme without clustering the transition with unnecessary components? To understand this we must first understand the process of movement and transitions.

“When the flow through different spaces is smooth, the transition is gradual and the thresholds are marked, a building slowly unfolds, revealing more about itself as it is used.”

When looking at transitional spaces or movement from one state of being to another there is often the use of the term interstitial to describe this particular state. It is Latin for “between spaces.” Architects or designers often refer to the “interstitial space,” as being neither inside nor outside. Transition within the interstitial space can occur in any condition from old to new, inside to outside, one room to another, or from one level to another.

The process of moving from one space to the next begins with the arrival at the interstitial space. The approach at this point reflects the surrounding context and opens up a passage way to the destination. As one traverses further into the interstitial space it can transform itself slowly into what is required by the adjoining space. Thus, experience of entering a space is crucial in influencing the responses once inside the space. Figure

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1.07 shows the monumentality of a transition that can be achieved by using key architectural elements. If the transition is too abrupt there is no feeling of arrival or of exploration and discovery. The quality of transition is based on its connections, fluidity of movement and functionality of its purpose.

"Using this every transition is unique by situation, disposition, design, as well as, character and volume of people flowing and types of transportation modes."  

This is why the selection of the site at the end of the malls is so vital to understanding the role of architecture and transitional spaces. The site has access to various levels of city infrastructure, historically significant architecture, and public spaces within the city. And currently at the end of the Malls there is a clear lack of transitional space that pays attention to the significance it plays in establishing a experiential response from the users.

1.3 THRESHOLD

The second element of this thesis is the idea of looking at a building as a threshold. According to the Oxford English Dictionary, the literal meaning of the word `threshold' hardly needs any specification: it is the sill of a doorway, which has to be crossed when entering a house. In the context of architecture it typically designates the point at which the pub-

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The public realm ends and the private, one begins. However there is more to the element of a threshold then just the sill of a doorway, because a threshold can also be defined as the beginning of a passage way or the start of an experiential change. A threshold can be a physical construct or a perceived change in the environment. There are several scales at which one can look at a threshold. It can be as small as a door, to a house, defining the change from public to private. It can also be a large iconic transportation station serving as the transitioning point between cities, states, or countries. This thesis will look at the latter definition, and use it to help create a gateway into the social, political center of the city of Cleveland.

“But these symbolic gateways seldom have the physical characteristics of objective doors or gates.”

The above quote by Cooper is referring to the idea of large open public spaces not being seen as gateways, as is the case with the current design of the Cleveland Malls. This resulted from changing the location of the train station from the apex of the malls as designed by Burnham to its present day location within Tower City. This resulted in beautiful views from any part of the malls to the lake but at the same time the frame of view is so large that the effect as gateways or thresholds is lost on the occupants of the space. In An Illustrated Encyclopaedia of Traditional Symbols J.C. Cooper points out that thresholds symbolize a passage “from an outer profane space to an inner sacred space.” A certain boundary line is

5 Cooper, J. C. An Illustrated Encyclopaedia of Traditional Symbols. 1982. 24
6 Cooper, J. C. An Illustrated Encyclopaedia of Traditional Symbols. 1982. 27
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represented by a threshold and in this thesis the boundary is the boundary between the city of Cleveland and the various cities the travelers will be coming from. In literature Cooper notes that some of the more common forms of symbolisms of thresholds occur by the sinking of into water, entering a dark forest or a going through a door in a wall. They all represent a passage from the known into the unknown.

For these reasons the experience of crossing a threshold is so vital to understanding when it comes to buildings such as transportation architecture because they most directly take the idea of the threshold being one point and extending it throughout the entire building. These building types offer the possibilities of creating a threshold and transition that serves not only to move the travelers along, it can also inform them about the destination, its history, culture, and landscape.

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7 Cooper, J. C. An Illustrated Encyclopaedia of Traditional Symbols. 1982. 26
CHAPTER 2: CONTEXT

Figure 2.01: Cleveland aerial view


2.1 HISTORY

The growth and decline of many cities can be directly tied to transportation and trade, Cleveland is no different in this manner. The city was established in 1796 by surveyors of the Connecticut Land Company after their leader, General Moses Cleaveland. However the growth of the city did not take off until improved methods of transportation were introduced to the area. In 1820, only 606 people lived in Cleveland but soon the population of the city would grow dramatically as new modes of transportation made it easier for people and goods to be moved faster and over greater distances. During the 1820s, the Erie Canal helped connect the city with the Atlantic Ocean. Steamboats on Lake Erie allowed for trade between Cleveland and other towns along the lake. Over the next ten years canals were built to improve transportation along the Ohio River, and in the 1850s, railroads were introduced to Cleveland. Railroads allowed the upper class to live further away from where they worked. A trend further expanded upon with the introduction of the automobile in later years. Due to the rapid growth of the industry along the river and lake coupled with the expansion of the railroad industry during these forty years, the population of Cleveland increased from under a thousand to

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more than forty thousand people.\footnote{11} During the late nineteenth century, Cleveland would become an important industrial city due to its location along connecting transportation routes. Railroads were the predominant form of Ohio’s transportation infrastructure until after World War II, when the trucking and automobile industry experienced tremendous growth.\footnote{12} With the introduction of the automobiles and airplanes, along with a surge in the economy the city’s population peaked at almost one million people in 1950s.\footnote{13} Cleveland has since experienced a continued decline not unlike many other industrial cities of the “rust belt.” However through efforts at the local scale and revitalization efforts in areas such as the flats, and the Euclid corridor there has been an increase in the urban population over the past 5 years.\footnote{14}

2.2 DANIEL BURNHAM’S GROUP PLAN

In 1903, Chicago architect Daniel Burnham and the Group Plan Commission designed the Mall as the centerpiece of a Beaux-Arts civic center framed by neoclassical civic and government buildings. The composition was to have been capped at the north end by the city’s principal

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train station, which would have pumped people and traffic throughout the space. By 1930, most of the Group Plan district was built, including Cleveland City Hall (1916), the Cleveland Public Library (1925) and Public Auditorium (1922). Unfortunately for the Mall, residents voted in a 1919 referendum to build the city’s main train station in the Terminal Tower complex at Public Square, thus depriving the Mall of its capstone and primary activity generator.

The Group Plan designed by Daniel Burnham, Arnold Brunner and John Carrère was largely implemented by the City of Cleveland and in 1911 was expected to be, “...the most spacious and most beautiful public square, or rather mall, in the United States...a spacious mall, enclosed by handsome buildings representing every phase of Cleveland’s public life.”

A decade before the Cleveland Group Plan was adopted, Burnham had successfully organized the design of a grouping of buildings for the 1893 Chicago World’s Fair. People were enamored with the “white city” of the 1893 Exposition. The “City Beautiful Movement” swept the country and caused the construction of new public buildings in the Beaux Arts style across the United States.

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16 Make No Little Plans: Daniel Burnham and the American City. Dir. Judith McBrien. 2010. DVD.
Despite the decision not to complete the original plan’s Union Station at the northern end of the Mall, the Cleveland Group Plan is the most completely implemented of any of the great city plans devised by Burnham after the World’s Fair. The Group Plan Commission’s report included the following passage:

“The development of the buildings on each side of [the Mall] may be very difficult, if not impossible, to control. We have, however, every reason to hope that by city ordinances, by public spirit and general interest in the matter, these buildings can be developed on coordinate and harmonious lines, so as to form a great vista, and an imposing and monumental architectural background. One or two mistakes on the part of selfish interests, which it may be difficult to control, would destroy much of the effect. It would seem, however, of the greatest importance that the city should, if possible, acquire all the land facing on the Mall, when purchasing the rest of the property needed for this improvement, and that it then should dispose of it under well-defined restriction, so as to obtain perfect harmony in the development of the architecture.”  

It is worthy of note that Clevelanders were promised in the 1903 report, a

“…view of the lake from the northerly end of the waiting room of the railroad station and from the Park on the lakefront…wholly unobstructed by any objectionable foreground…Extending along the lake front a beautiful quay with trees and parkings…thus preserving unto the City of Cleveland…a waterfront park of sufficient dimensions for all practical purposes of recreation and of public service…”

Though the promises or design goals that were set forth were not all fulfilled the mall still provides a space for the leisure use of Clevelanders. However, as time passed the action of moving the train station from the end of the Malls to Tower City proved to be more costly than expected.

The train station provided both the primary activity of the space but also shielded the space from the harsh environmental forces of the winter lake effect.

2.3 LAKEFRONT CONNECTION

After years of thinking of the waterfront as a contaminated, industrial area, highways and massive infrastructure were built, ultimately separating city and Lake. Now, through the decentralization of industry, shifting to a service economy and effects of globalization, most large-scale industry and shipping has moved away from city centers. Cleveland, Ohio is a city that represents the problems of post-industrial cities. Over time, industry polluted the water which sustained it, to the point where cities re-centralized away from the water’s edge, creating severe rifts between the urban core and the water. Figure 2.10 shows the extent of pollution left behind by the heavy industry and manufacturing.21 These sites have slowly been abandoned because of the decentralization of industry, and the shift from a manufacturing based to a service based economy. By using the transit station to mediate between isolated pockets of spaces and programs and creating green and pedestrian links it is possible to re-connect the fragmented city. Cleveland is one of the rust-belt cities which has been defined by its industrial heritage. This city represents the issues associated with both the expansion of industry, for example pol-

CONTEXT

Figure 2.11: Northbound FDR Drive, New York, a common practice of moving infrastructure to the water’s edge. 1998

Figure 2.12: Stuttgart underground station Ingenhoven Architects.

...context...

Multimodal passenger transport involves more than one mode of transport of passengers. Airports today have facilities for automobiles and rail or bus connections to the nearby cities. Then there is also the local bus systems which help serve train or subway stations and sometimes extend to the local or regional airports. A major goal of modern intermodal or multimodal passenger transport is to reduce dependence on the automobile as the primary mode of transportation and promote the increased use of public transport. This goal of this facility is not only to provide access...
to multiple modes of transportation but to do so in an efficient manner so as to support the use of public transportation over using automobiles.

There are several types of transportation transitions seen in today’s cities the goal for this thesis is to help bring them together to connect some of the existing modes of transportation in Cleveland Ohio with some new more sustainable modes. The building would have to serve functions of connections such as park and ride facilities where parking lots connect to public transport allowing people to leave their cars and take a bus, rail system, or carpool to their destination. Park and rides are generally located in the suburbs of large cities. There is also the connection to bus lines from trains allowing people a greater access to parts of the city that cannot be reached via trains. Another way towards intermodalism is to extend subway and rail service to major urban airports. Currently the heavy rail lines connect to Cleveland Hopkins Airport via Tower Terminal. This design would take advantage of the proximity of Tower Terminal to the selected site as a connecting point to link the high speed rail with the airport. Another element of the multimodal transit stations is the Taxi and rental cars who may continue to play a significant role in providing door to door service between Airport or Train station and other points of travel throughout urban, suburban, and rural communities.

In recent years, an increasing emphasis has been placed on designing facilities that make such transfers easier and more seamless. These are intended to help passengers move from one mode (or form) of transport-
A multimodal transit station is a building type that has been gaining significant ground over the last couple of decades especially in Eastern Europe and now making its way to more prominence in the US. This type of building is designed to help synthesize various methods of transportation into one central hub from which the connections to these various modes of travel are made easier. The benefits of such a system are produced in the reduction of energy consumed by eliminating inefficient transitions between one mode to the next while also potentially reducing the overall travel time by cutting time between transitions. The multimodal transit station will connect high speed rail, Greyhound, Megabus, intercity buses, local transit and pedestrian transportation at one location. Because of the location of the project and its goal of connecting not only cities but also people in downtown the building will have to also respond its unique urban condition with heavy emphasis on pedestrian circulation. When designing a project such as this it is important to understand exactly the user groups with whom you will be involved and to what degree of priority and hierarchy is given to each mode.

2.5 REGIONAL TRANSIT

There are currently two primary projects that are part of the dis-
discussions going on about the future of mass transit in Ohio, the Ohio Hub, and 3C is Me. Both of these projects could have immediate and long term impact that is so large that various agencies all the way up to the federal level are involved in one way or another. Currently departments such as the Environmental Protection Agency (EPA) Department of Energy (DOE), Housing and Urban Development (HUD), and Transportation (DOT), all have investments in public transportation and city infrastructure at various levels. At times it is only through joint collaboration amongst these agencies that projects such as Ohio Hub may be realized or even explored. The purpose of these agencies varies to some extent but the leading agencies most directly involved in the project, the Department of Transportation states the following as their mission statement:

“Serve the United States by ensuring a fast, safe, efficient, accessible and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future.”

Transportation improvements provide user benefits in terms of time and costs savings, as well as convenience, comfort and reliability.

“User benefits include: a reduction in both travel times and costs that users receive; benefits that users of other modes receive as a result of lower congestion levels; and resource benefits such as savings in airline fares and reductions in emissions as a result of travelers being diverted from air, bus and auto to the regional rail system.”

According to the Ohio Hub proposal package there is a very clear

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25 Conway, H. McKinley. The Airport City: and the Future Intermodal Transportation System. 1978. 41
CONTEXT

outline of how the introduction of a high speed rail would interact with the existing trains and tracks. To a considerable extent, the potential passenger rail system would use existing, privately held railroad rights-of-way and in some cases, passenger and freight trains would co-mingle on the same tracks. Therefore, the approach to planning a passenger rail service has to be sensitive to the railroad’s existing capacity and operational needs. Clearly, the most important goal in planning the Ohio Hub is to enhance mobility and increase transportation system capacity by improving the railroad system for passenger and freight trains. The underlying planning objectives for improving the railroad infrastructure are: (Ohio hub report)\textsuperscript{26}

- To separate freight from passenger operations where possible and to minimize the number of locations where freight and passenger trains must co-mingle on the same tracks
- To improve railroad fluidity and operational efficiency and to expand railroad capacity at those locations where freight and passenger operations must co-mingle on the same tracks
- To utilize low density or abandoned rail rights-of-way where appropriate
- To improve safety, remove impediments to efficient rail operations, increase operating speeds and expand line capacity sufficient to accommodate both freight and passenger needs

These will be important goals to keep in mind when designing the transit station and also keeping the goals of the city and its lake front connection in mind.

2.6 INTERSTATE TRANSIT

The second phase of the Ohio Hub and perhaps the most feasible is the 3C corridor using a high speed rail line. The 3-C corridor connect-

Figure 2.17: High speed train by Bombardier Sifang can travel up to 200 mph, China.

\textsuperscript{26} Ohio Hub Study: Technical Memorandum and Business Plan. 2007 62-75
Context

The 3-C corridor connecting Cleveland, Columbus, and Cincinnati is an attractive travel market because it has large end-point populations and many intermediate cities along the route. The concentration of people along the line also provides a reasonable directional passenger flow. These factors along with a high proportion of business travel, lack of competitive air service and the prospect of serving multiple commuter markets boosts the projected ridership as well as the corridor’s revenue yields.\(^{27}\) In all network options, the 3-C corridor has the highest projected volume factors with the greatest revenue potential.\(^{28}\) The study concluded that this corridor should be implemented first. Therefore, 3-C development is Ohio’s obvious first priority.\(^{29}\)

The DOT has also awarded 2.4 billion dollars towards the development of high speed passenger rail services to 54 projects in 23 states. However the same level of support is not always shared at the local government level. In Ohio the 3C “Quick Start Plan” currently being funded by the federal government as a part of the “Recovery Act,” has been given $400 million to get the project going.\(^{30}\) However the current governor John Kasich has been openly opposed to the program and is hoping to shut it down. Recent articles in the Cleveland Plain Dealer have mentioned that his appeal to the President of the United States has been met with resistance and there is a possibility of the funding being pulled if he...

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27 Ten-year Transit Development Program. Cleveland 1994. 3-4
28 Ten-year Transit Development Program. Cleveland 1994. 6
29 Ohio Hub Study: Technical Memorandum and Business Plan. 2007 63
30 Ohio Hub Study: Technical Memorandum and Business Plan. 2007 74
is to pursue his course of action of eliminating the program. Because of the unpredictable nature of government policies this thesis will look at understanding the project under the premises of having strong government support at both federal and local levels.

## 2.7 LOCAL TRANSIT

Locally this project will aim to connect the RTA lines as well as taxi, cyclists, and pedestrian travelers. The existing bus routes only cross over to the lake front 3 to 4 times a day, whereas with the cycle of bus traffic within the city they are constantly running. The green and blue trolleys for downtown are an efficient way of moving people around the main core of the city but they do not loop around to the Browns Stadium, Cleveland Science Center or the Rock and Roll Hall of Fame. (See Page 58) This is missing out on potentially helping to bring more activity to the lake front. The design of the multimodal transit station with take into account the local public transportation and in bringing those elements together it will also help to push for a greater connection to the lakefront.

## 2.8 SOCIO-POLITICAL CONTEXT

When looking at the socio-political context it is important to refer to the project mission because this is where building as a symbol for the future comes in. The success or failure for this design in the real world would have a lasting impact on the economy of not only Cleveland but also for the greater part of Ohio, because a project such as this has many people involved and large amounts of tax payer money involved. So if the build-
CONTEXT

Figure 2.22: During the automobile expansion in the mid century the site was actually covered in parking.

Figure 2.23: Cleveland Browns’ fans tailgating before a home game along the edges of the lakefront which are currently covered in parking.

ing becomes a marketing tool for the clients, referring to politicians local and federal who have supported the project, then it stands to reason that the design and building should stand for an ideology that is greater than just the transient politicians involved. It should stand for what the people of Cleveland and of Ohio are moving towards as they look to the future of their city and state.

This project will serve as the first look traveler will get coming into Cleveland and it needs to show through its design the changes that are taking place in the ideology of the city, the push for sustainability, push for better public spaces, and a push for connecting the various unique districts in downtown Cleveland. The primary users of the project will be people traveling between cities and states on either a high speed rail or via buses. The local transit services will remain as they are currently organized and arrive at Tower City and Public Square. This same transit line currently runs though the Amtrak and future multimodal transit station on the weekends taking people directly to the lake front. This way the movement of people using the building for travel, and the people using the building as a part of the malls transitioning to the lake front is kept separate and both can be responded to accordingly.

The benefits of this building will be felt directly by retail businesses that are replacing the harbor and freight docks that are being moved further east away from downtown Cleveland. The proposal calls for large new retail and mixed used development on the lake front and currently
there are only two pedestrian bridges, between W 6th street and E 13th street that connect people in downtown with destinations on the lake front. One of them being a bridge for cars with sidewalk and the other makes people cross a narrow street where cars are coming off of the shoreway at 40-50 mph. As a part of the transit station design the malls will be integrated into the design, using precedent such as the Olympic Sculpture park in Seattle and Millennium Park in Chicago, so that they help facilitate the movement of people across the train lines and the shoreway through a continuation of the malls themselves. Because the location and scope of the project, understanding the cultural context is integral to the programming process because only then can the design be informed by the needs and wishes of its clients, users, and architectural exploration.

Figure 2.24: Two women sitting along the boardwalk around the Rock and Roll Hall of Fame and the Science Center.
CHAPTER 3: PRECEDENTS

Figure 3.01: Zaha Hadid’s Contemporary Art Art Centre in Rome, MAXXI.
3.1 MAXXI

The Maxxi completed in 2010, was designed by Zaha Hadid as a museum in Rome, Italy. The design is quite fascinating in that she uses the two prominent grids that exist on the site as a catalyst for manipulating her forces lines which she then uses to derive both form and movement within the museum. The process is one that would work in the current situation with the Cleveland Malls but with some key differences. The underlying influences of the grids are what pushes Zaha in her designs and the interaction of two different grids helps to create that dialog within her building design. However for the Cleveland Malls there is essentially just one grid, that of the city, and then there is a unorganized cluster of large infrastructure and buildings on the lakefront. So for this situation the central forces driving the design are not based upon existing grid systems but instead focus on the juxtaposition of the movement patterns and the established hierarchy of views and paths laid out by Burnham.

In looking at her process the next step is to create site analysis models using a similar method of design has Zaha but the key difference is in the source of the influences. These can be found in the appendix section. These diagrams help to not only inform the general movement that is being documented but also proposed as a way to move from city to lakefront.

DESIGN PRECEDENTS

3.2 OLYMPIC SCULPTURE PARK

One of the key similarities between site at Cleveland and that of Seattle is that they are both post-industrial waterfront cities. There exists a disconnect, from its waterfront by transportation infrastructure similar to the train tracks and Cleveland Shore way found in Cleveland. The design by Wiedess Manfredi called for a continuous constructed landscape that would transform the cities relationship with its lakefront by rising above the existing infrastructure and merging seamlessly from city to water though a transitioning park. 32

The park unfolds as a continuous Z-shaped landscape that wanders from the city to the bay while simultaneously hiding and revealing various parts of the infrastructure below. They keep the space active by bringing in other program activities to help generate pedestrian interest. The diagonal forms help to create a sense of infinite views as the path winds its way down almost 50 feet topographical change. This is quite similar to the one face at the site of the Malls. The singular movement of people is beneficial for several reasons. First it helps to establish a hierarchy to the movement and circulation of the users. Second the singular path of movement also helps to compress the areas programmed along one path ensuring a greater number of people to experience the spaces as a whole.

3.3 SIGMA SIGMA COMMONS

Sigma Sigma Commons is a multipurpose amphitheater, landscaping, and public parks spaces designed to host a variety of performances and university events. The space is located at the center of campus, the amphitheater is integrated into the campus pedestrian pathway system, emphasizing its role as a campus crossroads and meeting place. The site uses a historic creek and the connection to Cincinnati’s Native American past to design serpentine pathways juxtaposed with angular forms that create a variety of unique experiential spaces. Stone bleachers, grass terraces and sloping planes accommodate audiences of up to 2,500 people, while encouraging daily use as a casual gathering space.

One of the key advantages of this design method is the creation of a every changing visual and physical experience as one transitions from one part of the site to another. They undulating landforms create obstacles and opportunities for the user of the space.

3.4 INTERNATIONAL PROJECTS

For his Stadelhofen Railway Station (fig 3.09) project in Zurich, Calatrava paid great importance to the movement of the pedestrians and the vehicles. The station accommodates multiple movements and articu-
lates several functional transportation components. Indeed, the paths and passageways within the station are intertwined like a smooth flowing circulatory system, directing different types of movement. 35 The highly regulated movement of the trains on the ground level coexists with that of pedestrians ascending and descending the stairs and escalators that’s cross the shopping mall under the tracks.

In any level of design speed of the observer affects the experience of space. It can change dramatically from driving a car to riding a bicycle. As the speed increases, the space narrows down into a corridor ahead of us, weakening our awareness of what lies behind or beside. Apart from implying movement through geometry, Calatrava gives maximum importance to directional orientation which is a critical requirement for serving hurried travelers. Rather than orientating movements of travelers using signs within an undistinguished enclosure, or a “universal space, as many designers of contemporary terminals chosen to do, Calatrava channels and informs crowds through the configuration of the building itself. This explains the size and the strong sense of direction given to the elements of the complex and justifies the rhythmic repetition of structural members as they relate to the movement of the crowds. 36

35 Alexander Tzonis, Santiago Calatrava- Poetics of movement. 1999. 44-51
36 Alexander Tzonis, Santiago Calatrava- Poetics of movement. 1999. 116-118
3.4 ALEWIFE STATION

Alewife Station, located at the intersection of Alewife Brook Parkway and Cambridge Park West in Cambridge, Massachusetts, is a local multimodal transportation station. It opened on March 30, 1985. 37

Facilities include:
- A 2733-space multi-level "park and ride" garage
- Bicycle parking for more than 174 bicycles.
- A Zipcar location in the employee parking area
- Connections to the Minuteman Bikeway
- A retail area with food and services such as dry cleaning

The project also called for works of public art commissioned by the city, including carved benches in the passenger pickup area. There was little near the site of the Alewife station besides a largely abandoned industrial park, a chemical factory and protected wetlands. Following principles that came to be known as transit-oriented development, the City of Cambridge zoned the area immediately near the station for high rise buildings. Over the next 20 years, a mini-city developed with office and research and development buildings, along with high rise housing. 38

3.6 SOUTH STATION

South Station, New England’s second-largest transportation center, located at the intersection of Atlantic Avenue and Summer Street in Dewey Square, Boston, Massachusetts, is the largest train station and intercity bus terminal in Greater Boston. It is a prominent train station in the northeastern United States and serves as a major multimodal domestic transportation center, connecting the Greater Boston region and the Midwestern and Northeastern United States.

While the station handled 125,000 passengers each day during World War II, after the war passenger rail declined in the U.S. The station’s proximity to the water in the earlier days and its connection to the airport now help make this a successful example of a multimodal transportation building. Also the station first opened carrying both passenger trains and freight. As early as its opening the station had accommodation for bicycle users introducing the idea of park and ride using the methods of the time. More information is located in the appendix.

CHAPTER 4: SITE ANALYSIS

Figure 4.01: View from Mall B looking south towards Mall A. 200 Public Square dominates the views and establishes a linear hierarchy for the site.
4.1 SITE CONDITIONS
Looking at figure 4.03 the site can be analyzed for some of its physical features in order to help inform the design. The site is situated in the urban context of downtown Cleveland and is off of Lake Erie. This proximity to the lake presents many design opportunities as well as environmental issues that will play an important role in determining strategies utilized for the site and building. There is an existing Amtrak station on the site that is operational however it is currently on an “island” between the steep grade change from the Malls to the rail lines and the Lakefront Shoreway. The adjacent buildings are of medium density and height and serve primarily the civic sector. There are large parking lots to both the east and west of the site as well as a parking garage under Mall B which will have to be addressed if any changes to circulation and movement of people and vehicles take place. To the south west corner of the site there is currently a proposal for a medical mart which will incorporate not only most of the block but also deal with improvements and renovations needed for the convention center underneath Mall B and C. There is also talk of expanding the Amtrak station in order to meet the new demand for people traveling to the medical mart. The following page looks at the primary views from and into the site from the highlighted streets in figure 4.06.
4.2 ENVIRONMENTAL CONDITIONS

Using the information from the climate consultant the design for the transit station will need to specifically address the human comfort element considering that it is comfortable only 3.2% of the time. And the surrounding vegetation is small shrubby and trees that do not reach nearly high enough to help provide shade in the summer or act as a wind barrier in the winter. Looking at figure 6.15 it can be seen that though a majority of Ohio is not suitable for harnessing wind power the location of Cleveland is actually in an small area in the northeast part of Ohio which is excellent for using wind power. This is due in large part to the micro environment from the lake. The site is located in climate zone 1 using the charts found in Lechner and also looking at some of the site conditions that may occur to varying degrees as shown in the two diagrams in figure 6.16 showing lake effect as it relates to wind, and valley effect. These are actually critical when looking at the environmental conditions of the site and what makes it hospitable one day in unbearable the next. There are several skyscrapers within a quarter mile of the site and at various points in the season could cast shadows over a majority of the site. The diagrams from Climate consultant figure 6.18 show the wind diagrams for each of the months of the year. This will be a major concern for the project because a large focus is on creating public space that blends into the transit station and crosses over to the lake side. The harsh winds in the winter will have to be addressed in the design.
Figure 4.02: The site is located in north east Ohio on the edge of Lake Erie and part of the Great Lakes industrial cities. It is downtown Cleveland the largest city in Cuyahoga County, Ohio USA.
Figure 4.03: General proposed site is outlined. The site is located between the civic heart of downtown Cleveland facing Lake Erie to the north and the Malls (A,B,C), and what will soon be mall D which will cover the distance between the malls and the space above the rail lines below.
PHYSICAL FEATURES

Figure 4.04: Over all area of site showing topographical changes.

Figure 4.05: Bing Birds Eye
PHYSICAL FEATURES

Figure 4.06: Bing Birds Eye
The above images show views from the shoreway looking back at the city in Figure 4.06, the view from the edge of Mall C looking towards the lake, Rock and Roll Hall of Fame, Cleveland Browns Stadium, and the Great Lakes Science Center.
VIEWS AND APPROACHES

Experiential sequences of approaches to the site by automobiles and trains (in red). These routes are the primary approaches to the site outside of foot traffic across the Malls. As the pictures indicate there is lots of open space on the site but this also becomes a problem when dealing with environmental issues in the next section.

Figure 4.10: Major approaches

Figure 4.11: View of Mall C West

Figure 4.12: View of Mall C East
Figure 5.01: Jardins Wilson, Plaine Saint-Denis, France is a project which takes hiding infrastructure to a different level with the complete isolation of the public realm above and the movement of traffic below.
The programming will have to look at movement patterns in and around the site looking at all of the various approaches, views, accessibility, visibility, etc. To ensure that the program fits the project is a major part of the design process as it is the foundation on which to build a successful design response. The first step is to break down the activities that the users of the project will encounter into three major categories: Arrival, Waiting, and Departure. Each of these categories will then be broken down into various activities by three main users: Travelers, Visitors, and Staff. Finally the user will be subdivided into the mode of transportation that they will be using: Rail, Bus, Car, Foot. Depending on the user the sequence of events for the four activities will change accordingly and will help to design the building with each user in mind. Arrival covers everything that users will go through as they arrive at the station using the various methods listed below. The waiting portion will be similar for most people because the activities that they will do will depend upon the amount of time that they have till their mode of transportation arrives. And lastly the departure phase will cover what the process for the various users to leave the building would be. As this is a transit station there will constantly be an influx and departure of people. The users are travelers, people traveling from out of the city or state and are going through Cleveland to another city. The visitors are traveling to Cleveland as their final destination via the vari-
ous modes of travel stated. And lastly the staff would be everyone that would be a part of the logistical, and managerial aspect of the transit station.

While each individual transportation provider may have their own sales staff and counter spaces, the ticket sales for all multi-modal programming will be in one location. The VIP waiting lounge will be a secure waiting room with access granted only to those with memberships. Rental car pick up and drop off should happen either on-site or on the North Coast Harbor side of the multi-modal transit facility. The commuter bike program permits enough space for indoor bicycle parking for 100 bicycles, separate men & women locker rooms, check in- reception, bicycle repair shop, and two closed administrative office. If the long term spaces are not provided for on-site, convenient handicap access must be provided from the parking lot entrance level of the multi-modal transportation center to the parking facility serving the transportation center.

The program should explore innovative planning strategies that further the discussion around transportation, public space, and the role each will play within the transit facility. While detailed rail planning is incredibly complex, the thesis will propose infrastructure planning solutions that solve basic problems on a conceptual/schematic level.
CONCLUSION

So what conclusions can be drawn from doing such a thorough analysis process, well looking at the example provided in figure 19 where LMN Architects are proposing a change to the malls that does not address so many of the environmental issues that are prevalent and cause the site to be under-used and under-appreciated. It is only through vigorous analysis of the site that your design can address the necessary issues. I believe that what is needed is a sheltered environment that captures the essence of the site and its importance to a social center for the city but takes advantage of its ability to be more than just an open space between an urban environment. The possibilities of the site demand that a new method for transitioning the downtown circulation into the lakefront needs to happen to take advantage of the views and prime real estate. The current plans for the development of the lakefront are not taking into consideration the transition between downtown and the lakeside and the existing infrastructure has to improve while new methods need to be introduced. This is where the idea of a Mall D comes into play one that extends beyond the rails and into the open space between the science center and the stadium.
Figure 6.01: Looking back from Voinovich Park at the Cleveland skyline.
Figure 6.02: This diagram starts to look at the major infrastructure around the site at a city scale mapping out highway, train, and local street access.
Figure 6.03: Mapping out highway traffic patterns for daily commuters. The information was gathered from ODOT Ohio Department of Transportation.
EXISTING CONTEXT

Figure 6.04: Though the paths are difficult to see the city recognizes the potential and existing uses by cyclist. Using this information the site can explore various methods of transportation.
Figure 6.05: There is ample public transportation at the site and also weekend rail service to the lakefront. The trollies run regularly in the downtown loop creating opportunities for people to park outside the city and use public transportation to move through it.
EXISTING CONTEXT

Figure 6.06: Primary Vehicular Circulation

Figure 6.07: Major City Blocks
FIGURE 6.08: Balance of green space to built space

FIGURE 6.09: Key places around the malls
EXISTING CONTEXT

Figure 6.10: Access to Cycle Lanes

Figure 6.11: Traffic Volume
EXISTING CONTEXT

Figure 6.12: Zoning Information

Figure 6.13: Public Transportation
Cleveland Population and National Rank

Figure 6.14: Population Data
Figure 6.15: Looking at the map above it can be seen that though a majority of Ohio is not suitable for harnessing wind power the location of Cleveland is actually in an small area in the northeast part of Ohio which is excellent for using wind power. This is due in large part to the micro environment from the lake.
Figure 6.16: The site is located in climate zone 1 using the charts found in Lechner and also looking at some of the site conditions that may occur to varying degrees as shown in the two diagrams above showing lake effect as it relates to wind, and valley effect. These are actually critical when looking at the environmental conditions of the site and what makes it hospitable one day in unbearable the next.
Figure 6.17: Looking at the shading chart above and in the future utilizing a 3D model would help to best understand the shading conditions of the site. There are several skyscrapers within a quarter mile of the site and at various points in the season could cast shadows over a majority of the site. This information will be compiled with the completion of a site model and adjacent building models.
Figure 6.18: The above diagrams from Climate consultant show the wind diagrams for each of the months of the year. This shows how dramatically the direction and speed of the winds can change and how that affect the site leads to inhospitable situations in the winter. This will be a major concern for the project because a large focus is on creating public space that blends into the transit station and crosses over to the lake side. The harsh winds in the winter will have to be addressed in the design.
# Sequential Movement

## Arrival Sequential

<table>
<thead>
<tr>
<th>Rail</th>
<th>Bus</th>
<th>Car</th>
<th>Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>arrive at station</td>
<td>arrive at bus drop off</td>
<td>arrive at parking garage</td>
<td>arrive at building entrance</td>
</tr>
<tr>
<td>collect luggage</td>
<td>collect luggage</td>
<td>find parking</td>
<td>pick up tickets</td>
</tr>
<tr>
<td>welcome center</td>
<td>pick up tickets</td>
<td>pick up tickets</td>
<td>pass security</td>
</tr>
<tr>
<td>wait for ride</td>
<td>pass security</td>
<td>pass security</td>
<td>browse shops</td>
</tr>
<tr>
<td>leave station</td>
<td>browse shops</td>
<td>wait for train</td>
<td>wait for train</td>
</tr>
<tr>
<td>wait for train</td>
<td></td>
<td>leave station</td>
<td></td>
</tr>
</tbody>
</table>

| (Travelers)           |                                   |                                         |                                           |

<table>
<thead>
<tr>
<th>Rail</th>
<th>Bus</th>
<th>Car</th>
<th>Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>arrive at station</td>
<td>arrive at bus drop off</td>
<td>arrive at parking garage</td>
<td>arrive at building entrance</td>
</tr>
<tr>
<td>collect luggage</td>
<td>collect luggage</td>
<td>find parking</td>
<td>pick up tickets</td>
</tr>
<tr>
<td>welcome center</td>
<td>pick up tickets</td>
<td>pick up tickets</td>
<td>pass security</td>
</tr>
<tr>
<td>browse shops</td>
<td>pass security</td>
<td>pass security</td>
<td>browse shops</td>
</tr>
<tr>
<td>get food and drinks</td>
<td>browse shops</td>
<td>wait for train</td>
<td></td>
</tr>
<tr>
<td>leave food and drinks</td>
<td></td>
<td>leave station</td>
<td></td>
</tr>
<tr>
<td>leave station</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| (Visitors)            |                                   |                                         |                                           |

<table>
<thead>
<tr>
<th>Rail</th>
<th>Bus</th>
<th>Car</th>
<th>Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>arrive at station</td>
<td>arrive at bus drop off</td>
<td>arrive at parking garage</td>
<td>arrive at building entrance</td>
</tr>
<tr>
<td>collect luggage</td>
<td>explore downtown and lakefront</td>
<td>find parking</td>
<td>explore downtown and lakefront</td>
</tr>
<tr>
<td>welcome center</td>
<td>browse shops</td>
<td>explore downtown and lakefront</td>
<td></td>
</tr>
<tr>
<td>browse shops</td>
<td>get food and drinks</td>
<td>browse shops</td>
<td>get food and drinks</td>
</tr>
<tr>
<td>get food and drinks</td>
<td></td>
<td>get food and drinks</td>
<td></td>
</tr>
<tr>
<td>leave station</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>explore downtown and lakefront</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Sequential Movement

<table>
<thead>
<tr>
<th>Rail</th>
<th>Bus</th>
<th>Car</th>
<th>Foot/Bicycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>-arrive at station</td>
<td>-arrive at bus drop off</td>
<td>-arrive at parking garage</td>
<td>-arrive at building entrance</td>
</tr>
<tr>
<td>-clock in</td>
<td>-clock in</td>
<td>-find parking</td>
<td>-clock in</td>
</tr>
<tr>
<td>-visit kitchen/lounge</td>
<td>-visit kitchen/lounge</td>
<td>-clock in</td>
<td>-shower/clean up</td>
</tr>
<tr>
<td>-start working</td>
<td>-start working</td>
<td>-visit kitchen/lounge</td>
<td>-visit kitchen/lounge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-start working</td>
<td>-start working</td>
</tr>
</tbody>
</table>

**Waiting for transportation (all same)**

<table>
<thead>
<tr>
<th>Rail</th>
<th>Bus</th>
<th>Car</th>
<th>Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>-explore downtown and lakefront</td>
<td>-wait in bus stop (don't have time for exploring city as buses come very frequently)</td>
<td>-browse shops</td>
<td>-no waiting just leave when you want</td>
</tr>
<tr>
<td>-browse shops</td>
<td></td>
<td>-get food and drinks</td>
<td></td>
</tr>
<tr>
<td>-get food and drinks</td>
<td></td>
<td>-leave with ride</td>
<td></td>
</tr>
</tbody>
</table>
# Sequential Movement

## Departure

<table>
<thead>
<tr>
<th>Rail</th>
<th>(Travelers and Visitors)</th>
<th>Car</th>
<th>Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>-arrive at bus drop off</td>
<td>-collect luggage</td>
<td>-collect luggage</td>
<td>-collect luggage</td>
</tr>
<tr>
<td>-collect luggage</td>
<td>-wait for bus at pick up location</td>
<td>-walk to parking garage</td>
<td>-leave station</td>
</tr>
<tr>
<td>-pick up tickets</td>
<td>-leave station</td>
<td>-leave station</td>
<td></td>
</tr>
<tr>
<td>-pass security</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-browse shops</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-wait for train</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-leave station</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## (Staff)

<table>
<thead>
<tr>
<th>Rail</th>
<th>Bus</th>
<th>Car</th>
<th>Foot/Bicycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>-clock out</td>
<td>-clock out</td>
<td>-clock out</td>
<td>-clock out</td>
</tr>
<tr>
<td>-wait for train</td>
<td>-wait for bus at pick up location</td>
<td>-walk to parking garage</td>
<td>-leave station</td>
</tr>
<tr>
<td>-browse shops</td>
<td>-leave station</td>
<td>-leave station</td>
<td></td>
</tr>
<tr>
<td>-leave station</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# PROGRAM SPACES

<table>
<thead>
<tr>
<th>Waiting Area for Amtrak/High Speed Rail (Approximately)</th>
<th>15,000 SF (Seating for 200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiting Area for Commuter Rail/Waterfront Line (Approximately)</td>
<td>7,500 SF (Seating for 100)</td>
</tr>
<tr>
<td>Ticket Sales Area</td>
<td>10,000 SF</td>
</tr>
<tr>
<td>VIP Waiting Lounge</td>
<td>5,000 SF</td>
</tr>
<tr>
<td>Visitors Center</td>
<td>5,000 SF</td>
</tr>
<tr>
<td>Retail/Food Vendors</td>
<td>15,000 SF</td>
</tr>
<tr>
<td>Rental Car Desks (2 Separate Offices)</td>
<td>4,000 SF</td>
</tr>
<tr>
<td>Commuter Bike Facility</td>
<td>2,000 SF</td>
</tr>
<tr>
<td>Restrooms</td>
<td>1000 SF</td>
</tr>
<tr>
<td>Administrative</td>
<td>1000SF</td>
</tr>
<tr>
<td>Utilities</td>
<td>10,000SF</td>
</tr>
<tr>
<td>Security</td>
<td>500SF</td>
</tr>
<tr>
<td>Back of House</td>
<td>1500SF</td>
</tr>
<tr>
<td>Circulation</td>
<td>10,000SF</td>
</tr>
</tbody>
</table>

**TOTAL: 90,000 SF**

**RAIL PLATFORMS**

- **RTA Waterfront Line Platform #1**
- **Regional Commuter Rail Platform #2**
- **Intercity High Speed Rail Platform #3**
- **Intercity High Speed Rail Platform #4**

**Rail Tracks Served:**

- **RTA Waterfront Line Tracks 1 & 2 (Platform #1)**
- **Regional Commuter Rail Tracks 3 & 4 (Platform #2)**
- **Intercity High Speed Rail Tracks 5 & 6 (Platform #3)**
- **Intercity High Speed Rail Tracks 7 & 8 (Platform #4)**
- **Industrial Rail Tracks 9 & 10**

**Transportation Services:**

- **Greyhound**
  - (12) 70’ Bus Bays
- **Megabus**
  - (1) 70’ Bus Bay

**Parking Spaces:**

- (1,050) Parking spaces
  - (1,000) Long Term
  - (40) Short Term
- (10) Spaces for Curbside Pick Up / Drop Off Bus

**Other:**

- (10) Taxi Stand
- 1000 SF
- 1000SF
- 10,000SF
- 500SF
- 1500SF
- 10,000SF
RELATIONSHIPS: VERTICAL PROXIMITIES

Outdoor Green Space

Landscape Equipment

Outdoor Green Space

Administrative Offices

Restrooms

Concierge

Bar

VIP Lounge

Pick Up

Vallet Services

Drop Off

Coat Rooms

Luggage Drop Off

ATM

Security Check Point

Entrance Lobby

Tickets Pick Up

Souvenir Shops

News Stand

Retail Shops

Internet Cafe

Operations Management

Emergency Services

Restrooms

Kitchen

Garage Parking

Laundry Services

Janitorial Services

Equipment Storage

Security Room

Electrical Room

Repair Shop

Mechanical Rooms

Station Platforms

Tracks
Figure 6.19: These are sectional studies trying to explore all methods of how building can meet ground when there is a significant elevation drop, and how to bridge gaps which in my case would be across the shoreway.
Figure 6.20: Abstract explorations of form connectivity and expression
Figure 6.21: These diagrams start to map out the information that I have gathered in my research and use it to derive motivated lines of movement and gathering. Looking at various studies from figure ground, elevations, street views, etc these studies are starting to help define a design process that will ultimately lead to a successful project.
Figure 6.22: Browns Bridge and proposal

Figure 6.23: Site used as Parking in the 1950s

Figure 6.24: Union Terminal
Figure 6.25: This rendering shows the proposal by LMN Architects for the redesign of the Malls. One of the main concerns with this proposal is the lack of input from the environmental conditions to their response to the site. The same problems of inhospitable wind and shelter conditions still exist in the new proposal. This is why looking at the mall and surrounding areas with a focus on designing for the client and for the appropriateness of the environmental conditions.
Figure 6.26: Schematic Design
Figure 6.27: Schematic Design
Figure 6.28: Schematic Design
Figure 6.29: Schematic Design
BIBLIOGRAPHY


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