Un-CONVENTIONally Miami

Thomas Zelenak

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Abstract

Convention centers have been around for almost a century and a half, well at least the name has been, and from this they have evolved from structures that we would see as minor buildings into massive structures that are a central hub for tourism in many cities. This analysis looks into this evolution of the building type throughout time as well as how they are integrated into the city context, with keeping in mind the necessities that the building type requires in terms of space and programming to function properly. Following the analysis, how the concepts that have been discovered can be implemented and utilized to design a different evolution of the building type that can be assimilated into cities, more or less site specific, and how it relates to that city in a different way than the previous designs have.

What Is A Convention Center?

What exactly is considered a convention center? To get to a point of analyzing what is wrong with them and how they have developed we must first understand what a convention center is identified as and where they have come from. Literally a convention center is defined to be: a large civic building or group of buildings designed for conventions, industrial shows, and the like, having large unobstructed exhibit areas and often including conference rooms, hotel accommodations, restaurants, and other facilities(1). When looking at this definition there is a realization that a convention center is not just a building utilized for one purpose, but many. Also that this kind of situation can be accomadated by not just one massive structure including all the necessary program, but a series of structures that serve the same purpose to work in conjuction with each other.

So there needs to be an understanding on where convention centers came from, when they came about and what made them what they are today. In the mid-1800s there was not a building type called convention centers just yet, however, there were Exhibition Halls, which is something that is a key component in convention center design. So with that thought, exhibition halls can be seen as the first convention centers. Keeping that in mind, throughout the 1800s there were many world's fair events that consisted of many exhibition halls that worked in conjuction with each other, and from the defintion of the term convention center, these world's fairs can also be seen as some of the first convention centers. Each world fair was a combination and collaboration of many architects coming together designing a series of buildings for a very large event of many people for an exhibition or convention.

Crystal Palace, London, England, Joseph Paxton. 1851

Philadelphia Convention Hall, Philadelhia, Pennsylvania Philip H. Johnson. 1931

(1) http://dictionary.reference.com/, LLC, 2012

In coming to this realization, a timeline can now be drawn and analyzed. This timline can begin with a certain point with some of most influential exhibition halls. Then how buildings have starting to be called convention centers, why the term was used and how the first convention centers had looked. Then with the advancements in technology and materials, how the building was able to be transformed into something much larger and monumental that could arise to become something that is a pinnacle spot for the city. However, with the scale of the building growing, how that relates to it's location and setting in the city that it is placed.
The analysis begins in the 1800's with the exhibition halls and continues through into the current convention centers.

Precedent Study Timeline

1850

1851

(4)

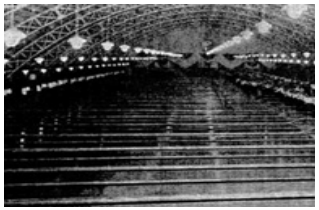
The Crystal Palace
London, England
Joseph Paxton

1874

(5)

Northern Liberty Market
Washington D.C.
James H. McGill

1893



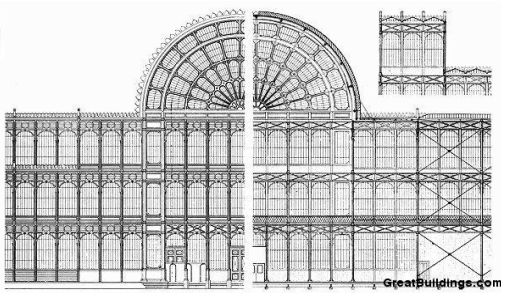
(5)

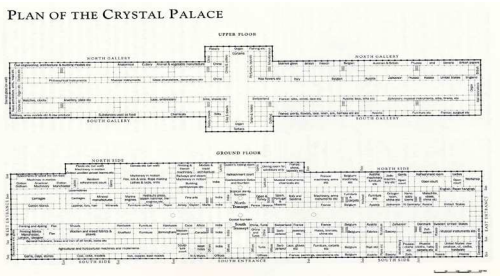
Northern Liberty Market
Washinton D.C.
James H. McGill

1931

(6)

Philadelphia Convention Center
Philadelphia, Pennsylvania
Philip H. Johnson

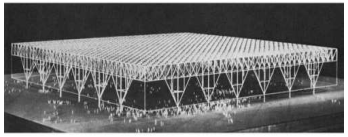




(4) http://www.greatbuildings.com/buildings/Crystal_Palace.html, Crystal Palace, Artifice Inc., 1994-2012.
(5) http://www.dcconvention.com/Venues/ConventionCenter/UniqueSpaces.aspx, Explore the rich history of the Walter E. Washington Convention Center and our nation's capital while enjoying fun facts about our venue and past events, Events DC, 2012.
(6)Woolley, John T.; Gerhard Peters. "Remarks in Convention Hall, Philadelphia. August 29, 1964". The American Presidency Project. Retrieved 2008-12-30.

1953 | 1960 | 1979 | 1999 | 2013

(7)



Convention Hall, Chicago Project

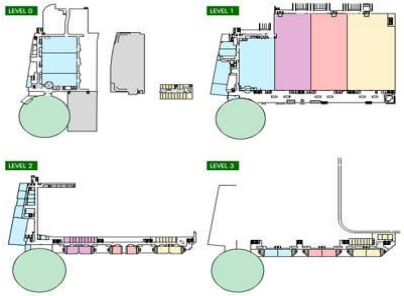
Mies Van Der Rohe

(8)

Cobo Hall

Detroit, Michigan

Gino Rosetti

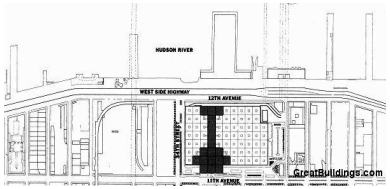


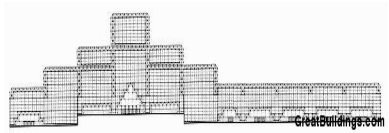
(9)

Javits Convention Center

New York City, New York

I.M. Pei



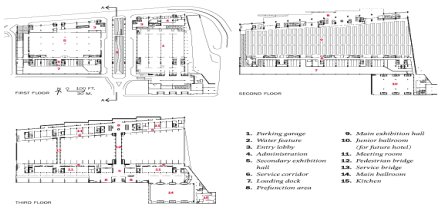


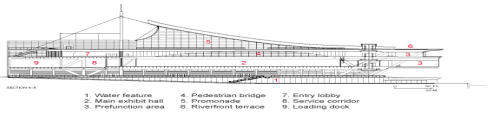
(10)

David L. Lawrence Convention Center

Pittsburgh, Pennsylvania

Raphael Vinoly Architects





(7) Spaeth, David A., “Mies Van Der Rohe”, Rizzoli, New York, NY, 1985.
(8) Gray, Kathleen and John Wisely (March 31, 2009).Oakland lures, but 2010 auto show stays at Cobo. Detroit Free Press. Retrieved on April 10, 2009.
(9) Walter F. Wagner, Jr. “A Vast Space Frame Wraps New York’s Convention Center Like A Taut Fabric”, Architectural Record. Mid-August 1980. Vol. 168 Number 3
(10)http://archrecord.construction.com/projects/bts/archives/civic/04_lawrenceConvention/overview.asp, David L. Lawrence Convention Center, McGraw-Hill Companies Inc., 2012.

Starting in 1851 with the Crystal Palace by Joseph Paxton. This structure was on a massive scale of glass and iron in Hyde Park, London. It was built for the Great Exhibition of 1851 so after some time it was brought down, but built in a modular fashion that have the spaces built up with modules of a certain size that twists and rotates, so that makes the building up into a series of smaller spaces that open up into larger spaces(4).

The next building to identify is the Northern Liberty Market by James H. McGill in 1874. This was a building that was 324 x 126 x 84 ft., in Washington D.C. Originally a market used for selling goods, converted and later renames in the 1880s to get the name Convention Center. Built with no interior columns, supported by enormous iron and steel trusses with a curved roof. This structure was designed to be a large space for many people to come to at one time that can all be in the same room without having an obstructed view anywhere by columns(5). In 1893 a second floor was added to seat 5,000 people and built specifically to address conventions and hold this gathering of people(5).

Now at this point there is a slight gap in time to the next convention center that I am going to talk about which is the Philadelphia Convention Hall, by Philip H. Johnson. This building was originally a municipal building that was later changed into a convention center that was designed to hold the capacity of 15,000 people(6). So we see the trend in the rise in amount of people needed for the conventions as well as a trend in using other buildings and changing them into convention centers, by applying the techniques of exhibition halls and utilize a large central space supported by smaller spaces.

In 1953 Mies Van Der Rohe had made a proposal for a Convention Center in Chicago, and he designed it as a massive structure that was 720 x 720 ft. This structure, which was very large in scale, had a very large footprint to it. This footprint was to be placed in a very dense area of Chicago. This placement would have had a direct contrast with the surrounding context considering the dense surroundings to this massive building.(7).

Another one to address is the Javits Convention Center by I.M. Pei. This Convention Center is a series of buildings on a 22 acre site, 1.1 acres of which are outdoor public spaces to travel around. One thing to also identify for this building is that Convention Centers have begun to use the technology and advances in building forms to open up the structure(4). Previously convention centers were large opaque buildings that closed themselves off to the surrounding context, however Javits, built in 1979, was built using a space frame and opened itself to the outside, especially by utilizing the outdoor public space(9).

So in a similar fashion the David Lawrence Convention Center by Vinoly Architects in 1999, was a bridge like structure that had an extensive use of glass to bring in as much light as possible from the outside(10).

(4) http://www.greatbuildings.com/buildings/Crystal_Palace.html, Crystal Palace, Artifice Inc., 1994-2012.
(5) http://www.dcconvention.com/Venues/ConventionCenter/UniqueSpaces.aspx, Explore the rich history of the Walter E. Washington Convention Center and our nation's capital while enjoying fun facts about our venue and past events, Events DC, 2012.
(6)Woolley, John T.; Gerhard Peters. "Remarks in Convention Hall, Philadelphia. August 29, 1964". The American Presidency Project. Retrieved 2008-12-30.
(7) Spaeth, David A., "Mies Van Der Rohe", Rizzoli, New York, NY, 1985.
(8) Gray, Kathleen and John Wisely (March 31, 2009).Oakland lures, but 2010 auto show stays at Cobo. Detroit Free Press. Retrieved on April 10, 2009.
(9) Walter F. Wagner, Jr. "A Vast Space Frame Wraps New York's Convention Center Like A Taut Fabric", Architectural Record. Mid-August 1980. Vol. 168 Number 3
(10)http://archrecord.construction.com/projects/bts/archives/civic/04_lawrenceConvention/overview.asp, David L. Lawrence Convention Center, McGraw-Hill Companies Inc., 2012.

Inherent Problems With Convention Centers

A few issues that have arisen through the research that show inherent problems with convention centers and the first is the issue that no matter the size of the convention center that is built, the city believes that it is either too small or too large. If the convention center is too small then the city is unable to book the extremely large events that could be the greater tourist attraction, whereas if the convention center is too large then the city begins to doubt whether or not they are going to be able to fill the center all year round and begin to worry if they are going to start losing money on the structure.

The second issue, which is going to require more statistical proof is that convention centers, from a general standpoint, do not make money, most Convention Centers do not make enough revenue to offset the operating costs. They primarily lose money on their own, however they end up getting back into the green or break even when they receive a major chunk of taxes that cover the costs. There was a study done for Illinois Convention Centers looking at their profit to loss margin for 1989(11). Within the study, there were 13 convention centers that were addressed and from those 13, four of them broke even and only two made a profit, the rest were in the red, one as bad as -750,000 dollars. The analysis of this information showed that most convention centers do not make money no matter what, but it also showed that the only convention centers that were privately owned, either made money or broke even. There were two privately owned convention centers and the rest were owned by the city, and the ones owned by the city primarily lost money. Now in looking at this the wonder as to why this is, and the reasoning was that publicly owned convention centers just try to fill their calendar without much care as to what it is, whereas privately owned convention centers are owners who want to make money so they actually fill the calendar with events that are going to bring in a profit.

The last issue being the impact of the scale of these structures with the surrounding context. With the growing scale of convention centers, and the desire to have them in major cities throughout the world a problem arises with fitting them into the urban fabric. Much like in the design of Mies Van Der Rohe's convention center, the massive footprint of the convention center being in direct contrast with the surrounding context's density creates a disconnect with the urban fabric. Even though it becomes something that is easily identifiable in the area, there is a lack of relationship with the city itself. The appearance of the center does not reflect the opposite side of the street and changes the nature and view of the area without regard to how it can better relate. This is something that happens in many cities, and not just in this example of Chicago. So there is a question of how to address the surrounding context and relate to the urban fabric with these massive structures without disregarding it and possible harming the nature of the context.

(11) Mills, Edwin S., "Should Governments Own Convention Centers", The Heartland Institute, January 21, 1991.

Utilizing this information, an interest had sparked into looking at where the financing for these convention centers have been going and why in many cases money is lost and not earned, considering these are buildings that are greatly desired by many cities. So the research lead to the financial reports of a few convention centers that are in different situations and under different ownership. The results, using specific examples for the general trends, were that the Washington Convention Center had made less revenue than there were operating costs and most of the cost went to employees and so forth, but the main thing to identify is that most of the debt that came into play was that throughout the year there was a depreciation of the loan for the structure that accounted for well more than half of the debt for the year. The only way that this debt is covered is by many different taxes being given to the Convention Center to cover that depreciation and costs of the year so that it may operate again next year(12). So the only thing that saves the publically owned convention centers is the taxes paid by the people given to it. Whereas privately owned convention centers like the San Diego Convention Center come close to breaking even or make a little bit a profit, or sometimes even losing money some years, without the help of taxpayers(13). Understanding this information, and looking into it has shown that there is not much that can be done in terms of changing the building type in nature to assist in the structure of the loans, but there is something to be merited by the fact that privately owned centers turn a profit more often than that of publically owned ones.

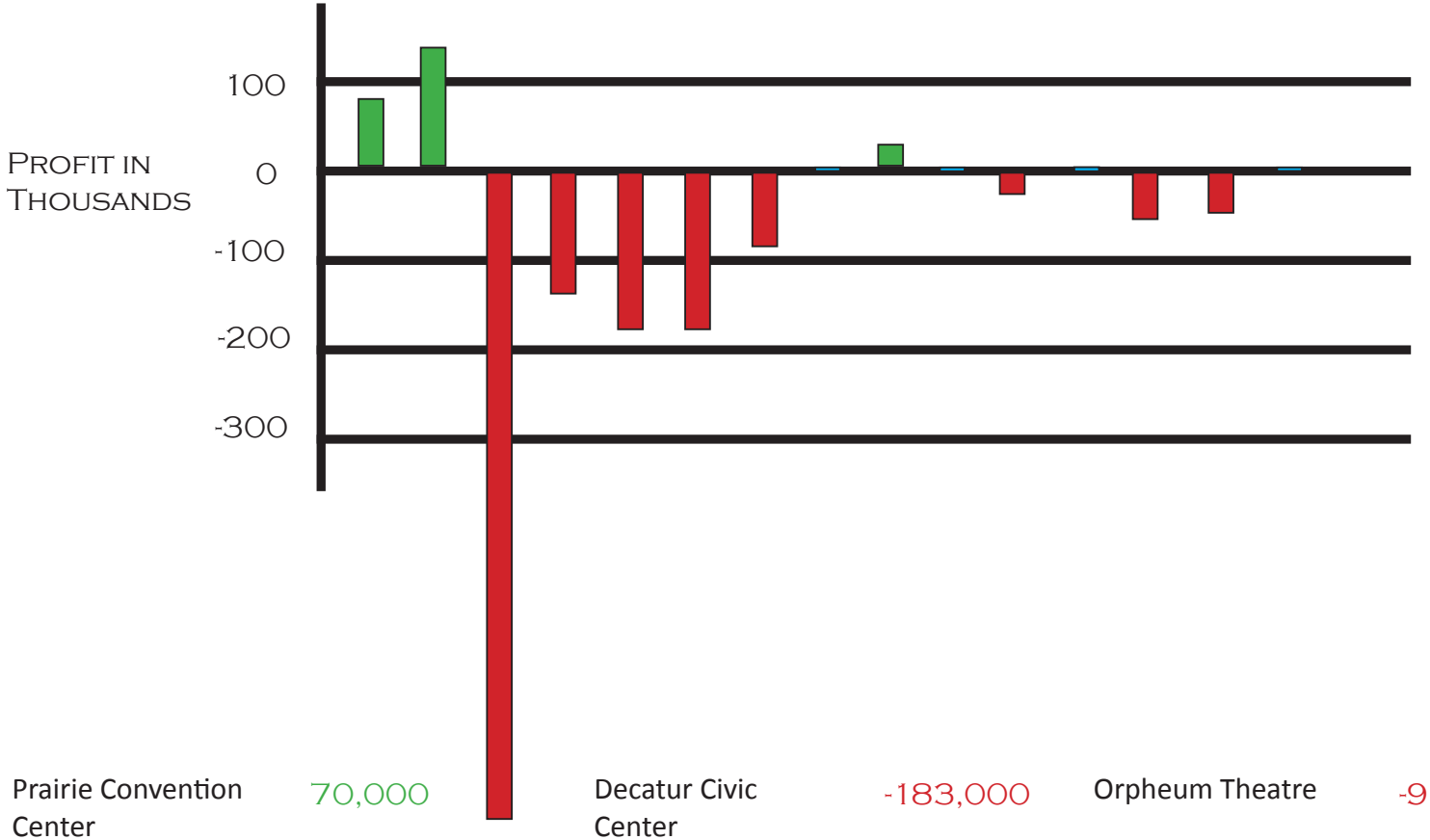
This information is displayed on the next two pages, the first being a graph that represents the profit in thousands of multiple convention centers in Illinois for the year of 1989.

The next is a complete breakdown of where the costs are going for a publically owned convention center in Washington D.C., and a privately owned one in San Diego. This highlights where the main costs are in each case through multiple years and how that reflects the profit that they make throughout the year.

(12) Washington Convention Center Authority, “Impact”, 2006 Annual Report.

(13) San Diego Convention Center Corporation, “Basic Financial Statements and Independent Auditor’s Report”, For the Year Ended June 30, 2010.

Convention Center Profits In Illinois in 1989 (11)



Prairie Convention Center	70,000
MetroCenter	130,000
Peoria Civic Center	-750,000
Paramount Theatre	-125,000
Decatur Civic Center	-183,000
Rialto Theatre	-83,000
The Egyptian Theatre	Even
Sandwich City Hall	18,000
Herrin Civic Center	Even
Orpheum Theatre	-9,535
YWCA Community Center	Even
Community Center	-20,000
Shoemaker Community Center	-25,000
Rochelle Community Center	Even

(11) Mills, Edwin S., "Should Governments Own Convention Centers", The Heartland Institute, January 21, 1991.

Financial Reports (12)/(13)

	Operating Revenue		Operating Expenses			Non-operating Revenues and Expenses			Increase in Net Assets
	WCCA	2002							
Building Rental	$4,002,000	44%	Personal Services	$12,077,000	59%	Dedicated Taxes	$53,874,000	112%	
Electrical	$1,675,000	19%	Contractual Services	$5,580,000	27%	Interest Income	$244,000	1%	
Telecommunications	$1,209,000	13%	Depreciation and Amortization	$472,000	2%	Bond Interest and Issue Cost	$0	0%	
Audio-Visual	$0	0%	Occupancy	$1,775,000	9%	Transfer to tourism			
Food Services	$1,717,000	19%	Supplies	$311,000	1%	Responsibility Centers	-$6,060,000	-13%	
Misc.	$468,000	5%	Misc.	$387,000	2%				
Total	$9,071,000			$20,602,000			$48,058,000		$36,527,000
	WCCA	2003							
Building Rental	$5,150,000	55%	Personal Services	$14,139,000	31%	Dedicated Taxes	$58,905,000	147%	
Electrical	$1,305,000	14%	Contractual Services	$10,399,000	23%	Interest Income	$1,002,000	3%	
Telecommunications	$862,000	9%	Depreciation and Amortization	$14,123,000	31%	Bond Interest and Issue Cost	-$13,154,000	-33%	
Audio-Visual	$141,000	2%	Occupancy	$5,887,000	13%	Transfer to tourism			
Food Services	$1,431,000	15%	Supplies	$570,000	2%	Responsibility Centers	-$6,793,000	-17%	
Misc.	$476,000	5%	Misc.	$152,000	0%				
Total	$9,365,000			$45,270,000			$39,960,000		$4,055,000
	WCCA	2005							
Building Rental	$8,668,000	53%	Personal Services	$12,315,000	21%	Dedicated Taxes	$77,490,000		
Electrical	$1,859,000	11%	Contractual Services	$10,912,000	19%	Interest Income	$1,843,000		
Telecommunications	$1,011,000	6%	Depreciation and Amortization	$27,795,000	48%	Parking Lot Revenue	$0		
Audio-Visual	$316,000	3%	Occupancy	$5,721,000	10%	District Demolition & Parking	$0		
Food Services	$4,105,000	25%	Supplies	$514,000	1%	Bond Interest and Issue Cost	-$26,205,000		
Misc.	$390,000	2%	Misc.	$773,000	1%	Marketing Agencies Payment	-$8,705,000		
						Parking Lot Expenses	-$8,888,000		
						Loss on Sale of Fixed Asset	-$16,000		
Total	$16,349,000			$58,030,000			$35,519,000		-$6,162,000
	WCCA	2006							
Building Rental	$7,971,000	49%	Personal Services	$11,959,000	20%	Dedicated Taxes	$79,707,000		
Electrical	$2,093,000	13%	Contractual Services	$12,053,000	21%	Interest Income	$3,519,000		
Telecommunications	$1,126,000	7%	Depreciation and Amortization	$27,999,000	48%	Parking Lot Revenue	$1,416,000		
Audio-Visual	$357,000	3%	Occupancy	$5,406,000	9%	District Demolition & Parking	$10,000		
Food Services	$4,071,000	25%	Supplies	$552,000	1%	Bond Interest and Issue Cost	-$26,095,000		
Misc.	$495	3%	Misc.	$627,000	1%	Marketing Agencies Payment	-$9,476,000		
						Parking Lot Expenses	-$6,516,000		
						Loss on Sale of Fixed Asset	$0		
Total	$16,113,000			$58,596,000			$52,555,000		$10,072,000
	San Diego Conve	2008							
Building Rental	$13,055,190		Salaries and Benefits	$21,517,300		Interest Income	$709,358		
Ancillary Services	$12,064,660		Services and Supplies	$11,645,263		Interest Expense	-$176,268		
Food and Beverage	$7,638,342		Depreciation and Amortization	$2,403,385		Loss on Disposal of Capital As	-$8,274		
Contributions From Ci	$4,339,198		Production Expense	$581,368		Phase III Expansion/Due Diligence			
Facility Restoration Fe	$613,860					Other Income	$742,310		
Production Revenue	$508,004								
Other Revenue	$50,003								
Contributions - Donati	$8,000								
Contributions - Grant	$40,000								
Total	$38,317,257			$36,147,316			$1,267,126		$3,649,854
	San Diego Conve	2009							
Building Rental	$11,624,954		Salaries and Benefits	$23,165,958		Interest Income	$288,785		
Ancillary Services	$10,785,527		Services and Supplies	$10,090,628		Interest Expense	-$123,786		
Food and Beverage	$7,265,052		Depreciation and Amortization	$2,425,783		Loss on Disposal of Capital As	-$71,067		
Contributions From Ci	$4,122,238		Production Expense	$401,958		Phase III Expansion/Due Dilig	-$2,086,516		
Facility Restoration Fe	$714,242					Other Income	$579,224		
Production Revenue	$347,245								
Other Revenue	$37,270								
Contributions - Donati	$6,500								
Contributions - Grant	$0								
Total	$34,903,028			$36,084,327			-$1,413,360		-$2,451,802

The Publicly owned Convention Centers in Washington do not seem to make revenue through the means that they are designed for, in fact they lose more many than anything else. The money that they lose are made up through taxes paid for by the state from the tax payers. However it seems that most of the money lost is through depreciation and loan structure as opposed to means of supplies or employment.

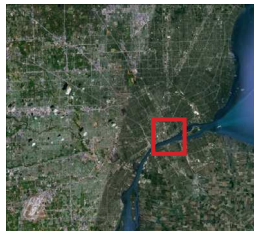
The privately owned Convention Center in San Diego seem to stay right around even from the revenue to expense alone. This is something to look at considering that they do not recieve the taxes to cover their losses, they are more profit driven.

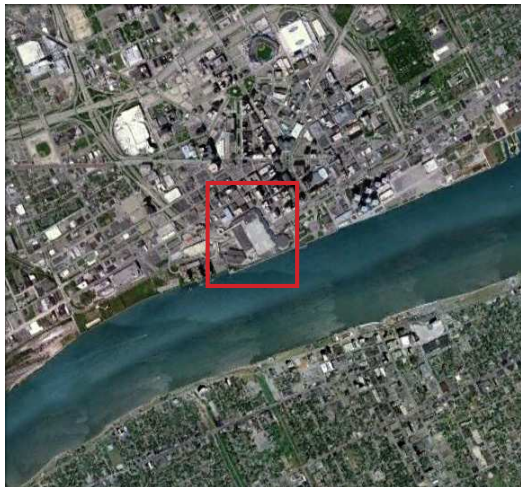
(12) Washington Convention Center Authority, "Impact", 2006 Annual Report.
(13) San Diego Convention Center Corporation, "Basic Financial Statements and Independent Auditor's Report", For the Year Ended June 30, 2010.

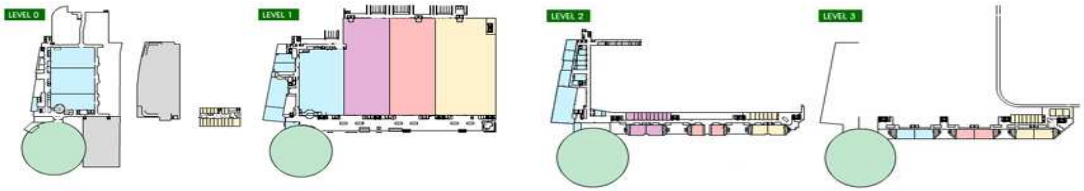
Site Selection

Following this analysis, there was a need to focus looking at these structures not from the financial standpoint, but closer at the relationship it has to the city. This in case, depending on the solution, it could assist in the financial problem, however that was no longer a main focus. With the decision on where to focus this thesis, an understanding had to be realized that wih the nature of relating to the surrounding context and addressing the city in the design of a convention center, each one would be site specific. The design of a convention center in one way make work wonderfully in one city, but the possibility of it being universal is slim. Understanding this showed that the next step to take would be to choose a site that would accurately represent what is being analyzed. The top two selections were Cobo Hall in Detroit, Michigan and The Miami Beach Convention Center District in South Beach. Cobo Hall has been going through a lot of financial issues and is currently in the process of redesigning and refurbishing the building(14). Considering this and noticing that downtown Detroit has a very dense surrounding and many populated areas near and in it allowed it to be an adequate site to look at.

Cobo Hall, Detroit, MI



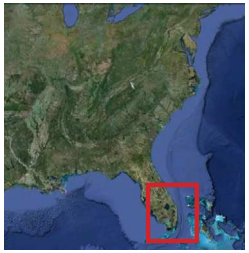


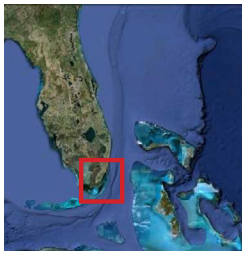


(8) Gray, Kathleen and John Wisely (March 31, 2009).Oakland lures, but 2010 auto show stays at Cobo. Detroit Free Press. Retrieved on April 10, 2009.
(14) http://www.cobocenter.com/about_us/renovation_update, “Renovation Update”, Constand, Tom.

Miami Beach Convention Center District, FL

In Miami Beach, the city is looking to have the block that the convention center is located on completely redesigned. This convention center district consists of multiple buildings that have a multitude of programs. The RFQ, Request For Qualifications, which is a document that the city issues to show criteria for those wanting to submit a design for a new development, gives the strict guidelines and details that the city wants to address(13). Similarly like Cobo Hall, this convention center in Miami Beach is surrounded by a dense urban fabric that at first look seems to be in direct contrast with the surrounding context. Also, considering that Miami Beach is a very busy city that runs 24 hours a day, this site and master plan of the new design could be an ideal spot to address the issues that has been analyzed.





(15) City of Miami Beach, “For The Development of the Miami Beach Convention Center District”, RFQ # 22-11/12

Miami Beach Site Analysis

When addressing both of these sites and looking at both of them a bit further in depth considering the issues with each of them and how this analysis could dive into each of them, the focus was directed towards Miami Beach. The reasoning being that, since Cobo Hall is already reconstructing the design as well as it is something that is already built dealing with mainly renovations there is limited room for redesign to address the issues this analysis has lead to. Conversely, the Miami Beach convention center is to be completely overhauled and the entire site to be redesigned. Starting at the RFQ will give a set of guideline to work with on what the city would like for the site to become, and where the analysis can derive the issues and solve them directly. With the interpretation of the RFQ, a realization was made that the city had wanted to add more program to the site and seemed to want another mega structure that would give another situation like the one in Chicago. Seeing the similarities between the two assisted in the decision to go forward with this site considering that it will allow the issues derived from the analysis to be addressed directly, mainly concerning the realtionship to the dense surrounding context and the integration into the city.

From this selection there was a necessity to analyze the area, not just the Convention Center District, but the entire surrounding city. The site is specifically in South Beach, in the West center of the island. This allowed the analysis to stretch from the east coast of the island to the west coast, stretching slightly north and south of the site as well. From this there could be a better understanding of the entire city as well as the immediate surrounding context so that the new design can reflect the city as a whole.

The area in general has a very dense nature, each building has a decently smaller footprint that allows for many different structures to be built on the same block. So they are tightly packed next to each other allowing multiple programs to span the entire city. The heights of these buildings vary minimally throughout the island, with the exception of a few in the inland that are much taller than the rest. The coastal structures are mainly hotels that are grand in scale in terms of height, however they still keep a relatively small footprint to allow for more of them to be built on each block.

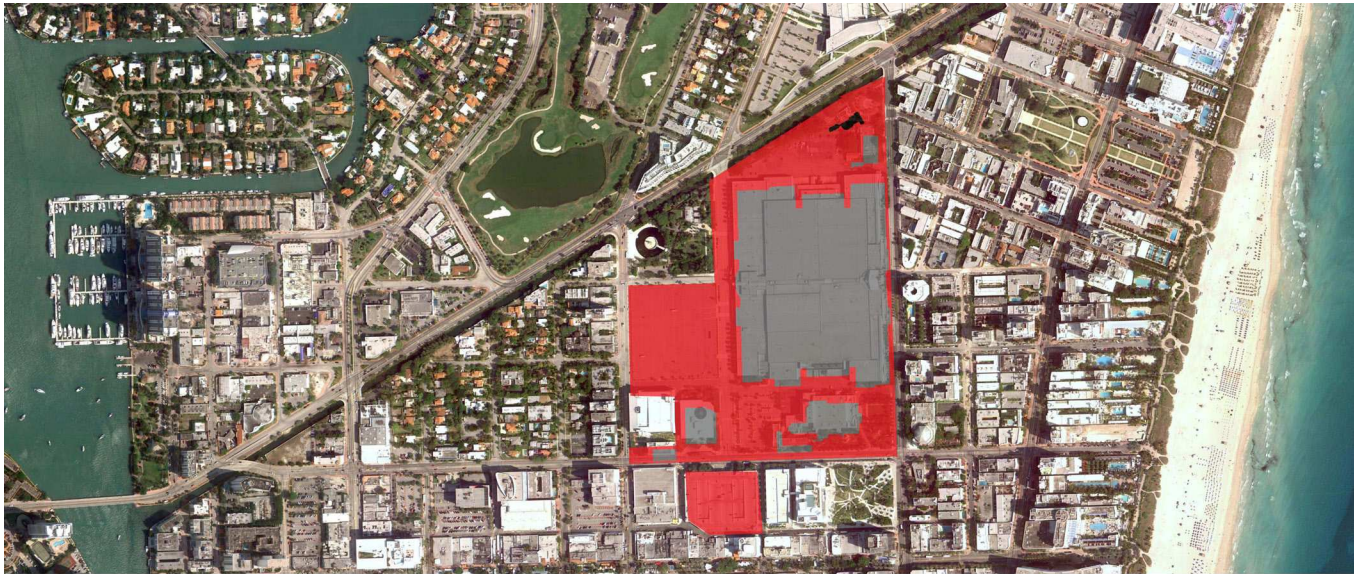
In comparison to the convention center that is built there now, all of these footprints that are in this area are drastically smaller than that of the convention center. Keeping this in mind when addressing the RFQ, and how the city is asking to add more program to the site and consolidate some of the programs with each other, an even greater structure that would be necessary to contain of all this may not be the best course of action through the analysis shown in addressing surrounding context.

This surrounding context is special in the way that surrounding the convention center district are historical districts on each side, so a relationship to those could bring a greater sense of the city back to the site to relate at a much higher level.

Also, there is a canal that runs through the island that borders the north side of the site that could be utilized in the master plan bringing more of the island into the design.

The diagrams on the next four pages begin to show where this analysis came from and show each part individually.

Proposed site



Land Use

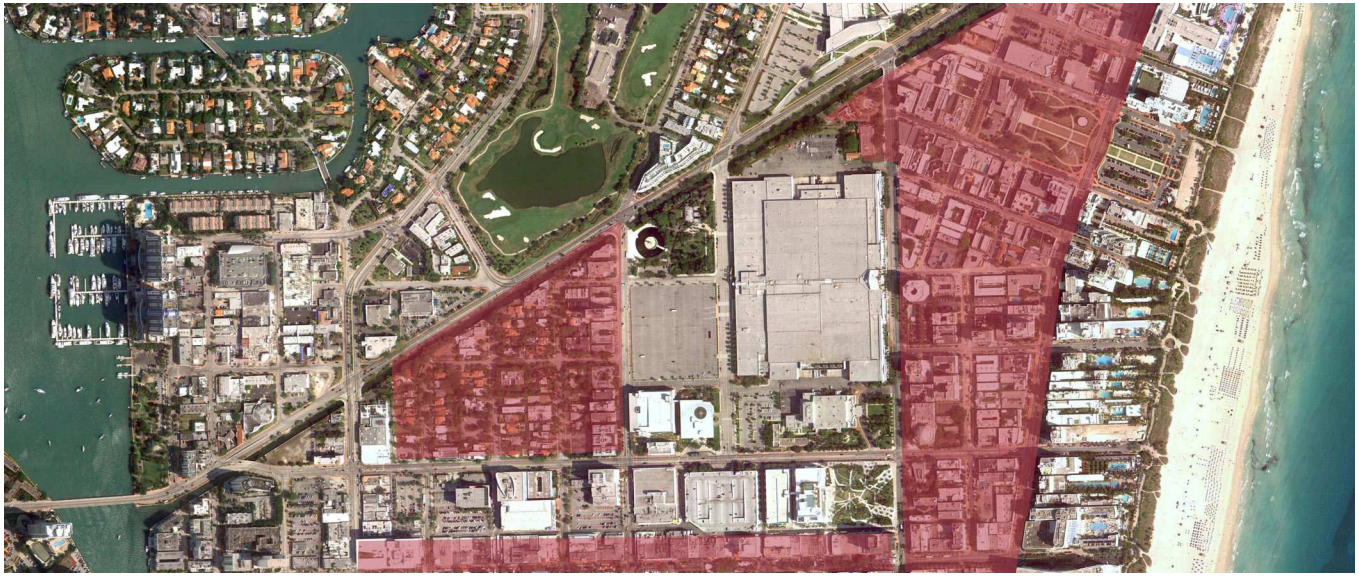
	Green Spaces		Parking		Civic
	Residential		Commercial		Institutional

Figure Ground/Building Heights

1 Floor
2-3 Floors
4-5 Floors
6-10 Floors
11-20 Floors
Planted Trees

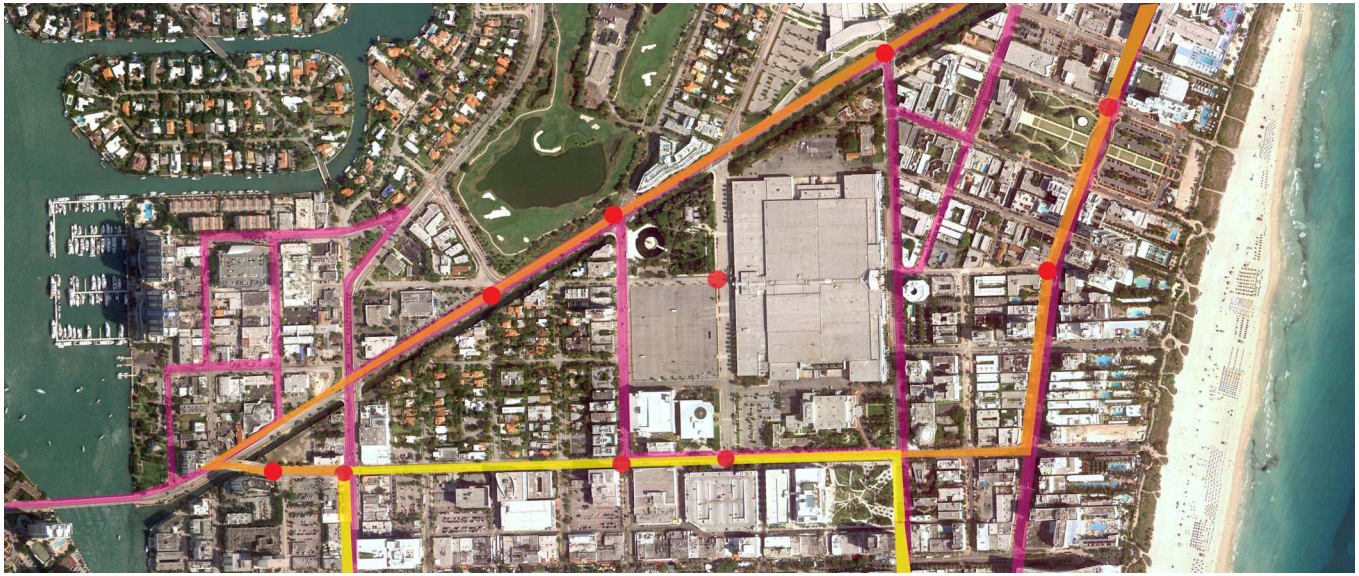
Section

Historic Districts



Other sites to integrate into Design

Transportation



Regional Light Rail

Local Light Rail

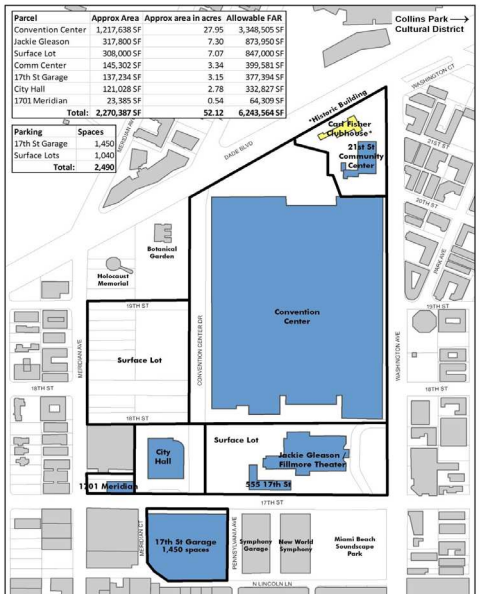
Bus Routes

Bus Stops

Within the analysis a plan was found to implement a light rail system throughout all of Miami including the Beach. This proposal has been delayed until 2016 where it will be looked at again, because there was not enough funding to address it when it came about. However, this system consists of two parts, one being the regional light rail that will go from Miami to Miami Beach going along the main roads, then the addition of the local light rail that will stay on Miami Beach and take people around the Beach while they are there(16). Considering that this is a plan that is going to be re-addressed at a later date, the plan for this will be taken into account for the new master plan for this site. Especially since this plan will allow for easir pedestrian transporatation throughout the city, as well as having key stops that are right on the boundaries of the convention center district and one right at the convention center itself. This is something that can be utilized to benefit the design to a greater level.

(16) http://www.thetransportpolitic.com/2009/11/04/rebuilding-connections-in-miamis-urban-core/, "Building Connections in Miami's Urban Core", Freemark, Yonah, November 4, 2009.

Convention Center District Analysis



Parcel	Approx Area	Approx area in acres	Allowable FAR
Convention Center	1,217,638 SF	27.95	3,348,505 SF
Jackie Gleason	317,800 SF	7.30	873,950 SF
Surface Lot	308,000 SF	7.07	847,000 SF
Comm Center	145,302 SF	3.34	399,581 SF
17th St Garage	137,234 SF	3.15	377,394 SF
City Hall	121,028 SF	2.78	332,827 SF
1701 Meridian	23,385 SF	0.54	64,309 SF
Total:	2,270,387 SF	52.12	6,243,564 SF

Parking	Spaces
17th St Garage	1,450
Surface Lots	1,040
Total:	2,490

Existing Site:

1. Ownership
2. Miami Beach Convention Center
3. The Fillmore Miami Beach at the Jackie Gleason Theater
4. Parking Garage
5. Surface Lots
6. City Offices
    a. 1700 Convention Center Drive
    b. 1701 Meridian Street
    c. 555 17th Street
7. Carl Fisher Club House
8. 21st Street Community Center
9. Internal Roads

Expansions Including:

1. Ballroom - 60,000 sf
2. Breakout Meeting Space - 100,000+ sf
3. Outdoor Function Space
4. Executive Conference and Business Center
5. Food Court/Concessions
6. 800 Room Hotel Space
7. Possible Addition of Retail/ Commercial or Residential Use

Existing Site:

1. Ownership	
2. Miami Beach Convention Center	1,217,638 SF
3. The Fillmore Miami Beach at the Jackie Gleason Theater	317,800 SF
4. Parking Garage	1,450 Spots
5. Surface Lots	1,040 Spots
6. City Offices	
a. 1700 Convention Center Drive	110,400 SF
b. 1701 Meridian Street	34,570 SF
c. 555 17th Street	12,690 SF
7. Carl Fisher Club House	Not to be touched
8. 21st Street Community Center	145,302 SF
9. Internal Roads	Some may be shut down

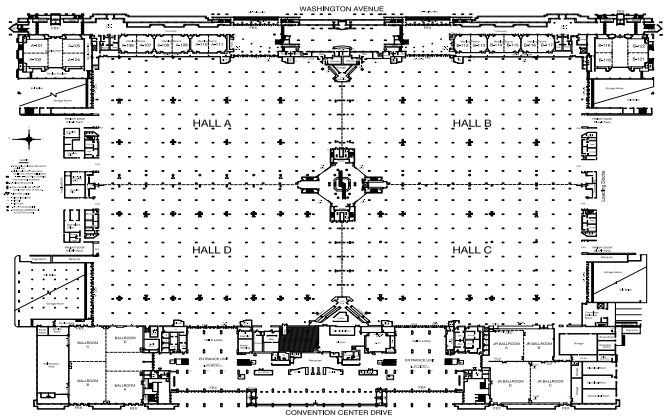
Including the additions that need to made to the site there is a total of 2,243,473 SF of space needed for all the activities. The site itself has an available space of 2,619,147 SF. So with that in mind there is sufficient space on the site to fit everything but it would be a tight fit. Therefore it might be more favorable to expand into the surrounding area that is not marked by the RFQ as possible site enhancements.

Programmming

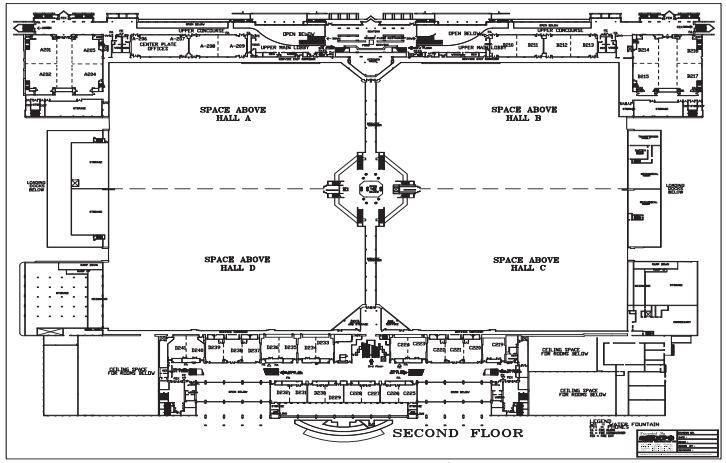
Looking at the criteria from the RFQ and analyzing the site context for what programs are on the site as well as what needs to be added, the next step is to look at the programs to see how they relate to each other and how they can be assembled together. This required looking at how the convention center there is arranged first.

Miami Beach Convention Center

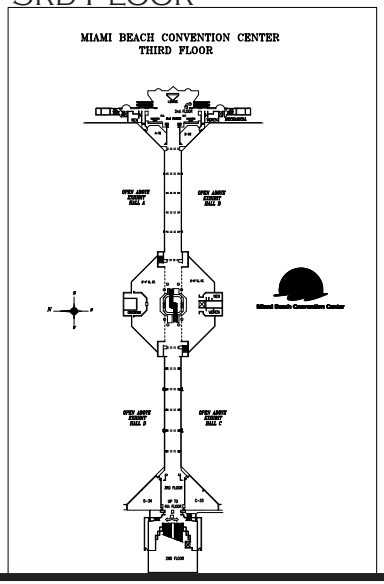
1st Floor



2nd Floor



3rd Floor



When analyzing the setup that the current convention center has, it is seen that the primary spaces are the exhibition halls in the center. Each of them are connected allowing them to be opened up to each other creating a larger space for much larger conventions.

Surrounding the exhibition halls on the first floor are meeting spaces and utilities on two sides, whereas on the other two sides there is the loadings docks for the trucks dropping of convention supplies. These drop offs are larger areas that are pivotal to the success of the supplying of the halls.

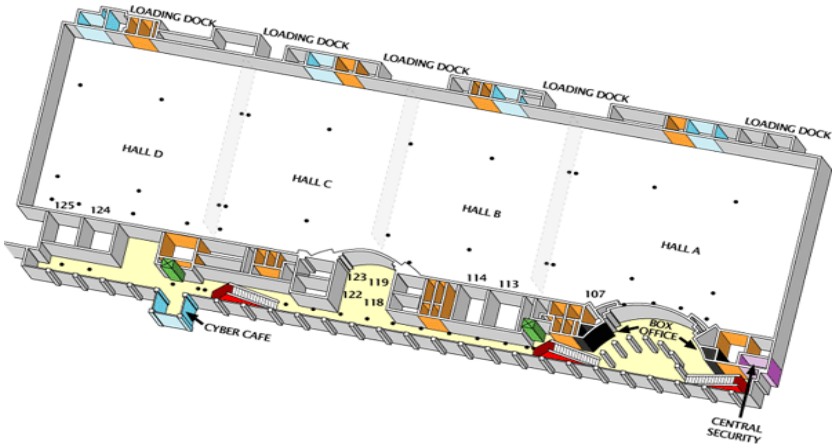
The second floor is primarily meeting space and utilities, this keeps all the exhibition halls on the same floor to be easily connected.

The third floor is just a pathway that is hanging above the rest of the rooms that consists of lounging areas and utilities.

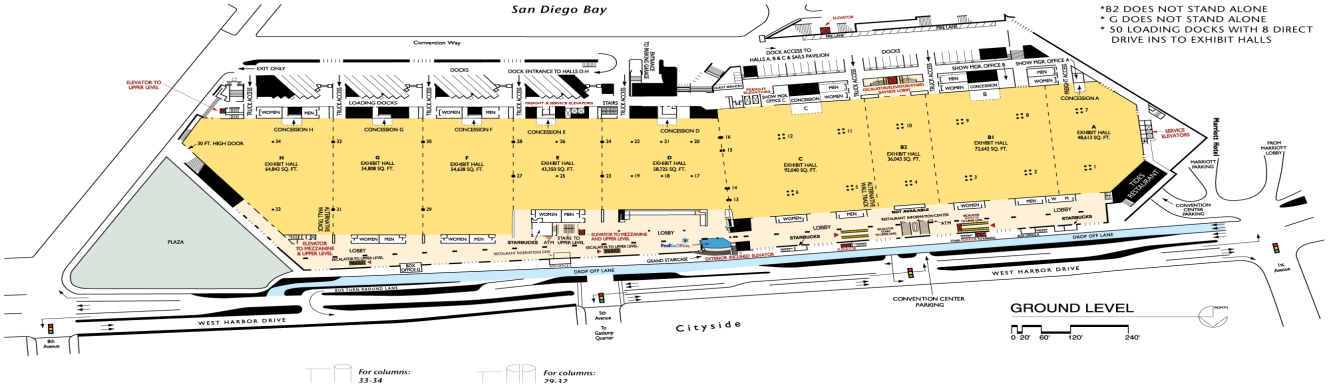
Looking at this setup can start to give an idea on how the programs that go into a convention center relate to each other as they work in the same building.

(17) http://www.miamibeachconvention.com/100/FloorPlans.asp

After looking at the setup that the Miami Beach Convention Center had utilized for it's design, other layouts had to be looked at to get a sense of a standard on how certain spaces relate and how the layout can be manipulated for different areas.
For instance, in the floor plans to the right the layout of the exhibition halls is different than that of the Miami Beach ones.
The top plan is that of the Ft. Lauderdale Convention center. This plan uses a simple box form much like the Miami Beach Convention Center, however the layout of the exhibition halls is linear.(18) They are lined up next to each other which allows them all to be opened up to each other again, but this allows the form of the building to be thinner and longer.

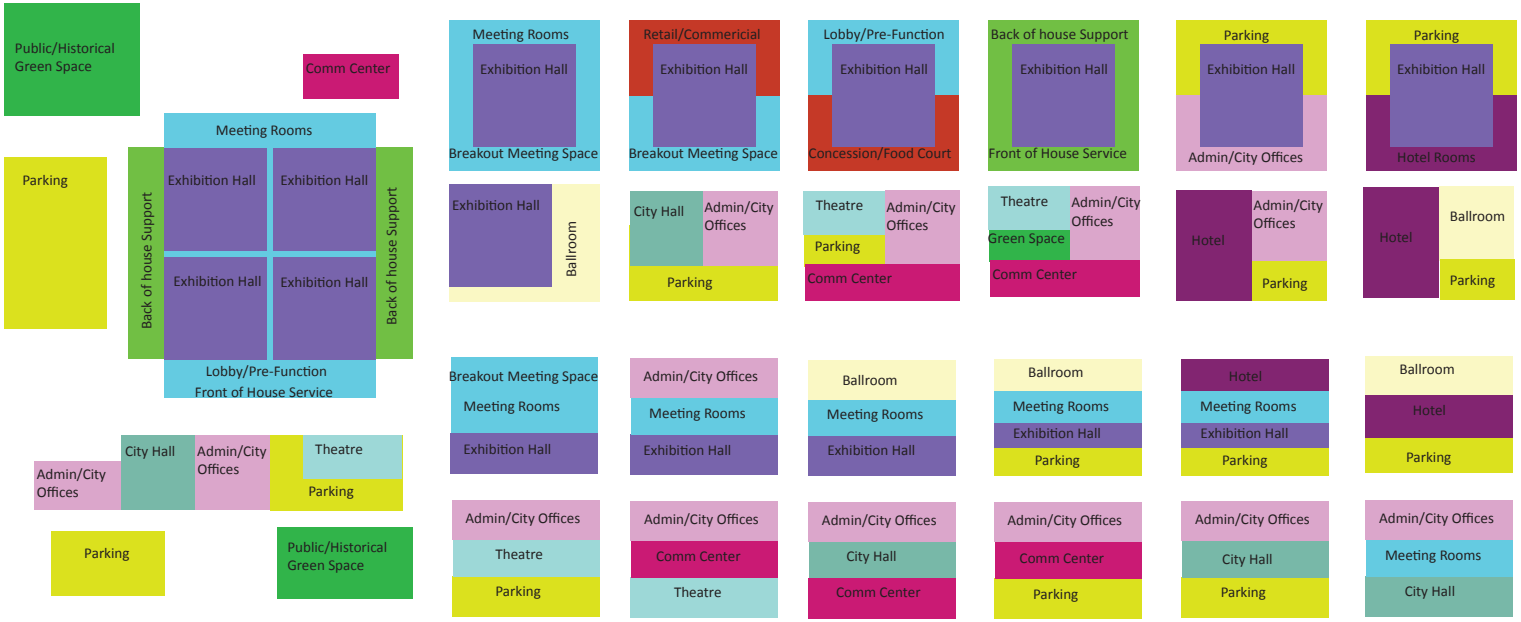


The next convention center is the one in San Diego, and much like the one in Ft. Lauderdale, it is set up in a more linear fashion.(19)
When looking at both of these it is assesed that the linear setup allows for the additional program to be run all along the sides of the halls and still allows ample space for the drop offs to fill the halls.
There is a possible downside to this setup though, this being the travel time to walk from one end to the other. The more narrow and longer the convention halls get, the longer distance visitors have to walk to see everything, where as in the Miami Beach Convention Center, all the halls are centralized.

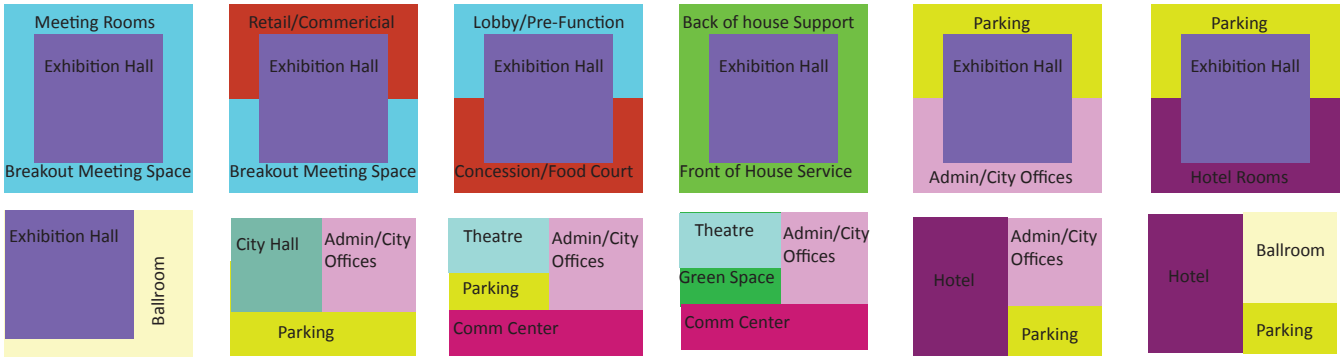


(18) http://www.ftlauderdalecc.com/convention-center-floor-plans.htm
(19) http://www.visitsandiego.com/facilityinformation/groundlevel.cfm

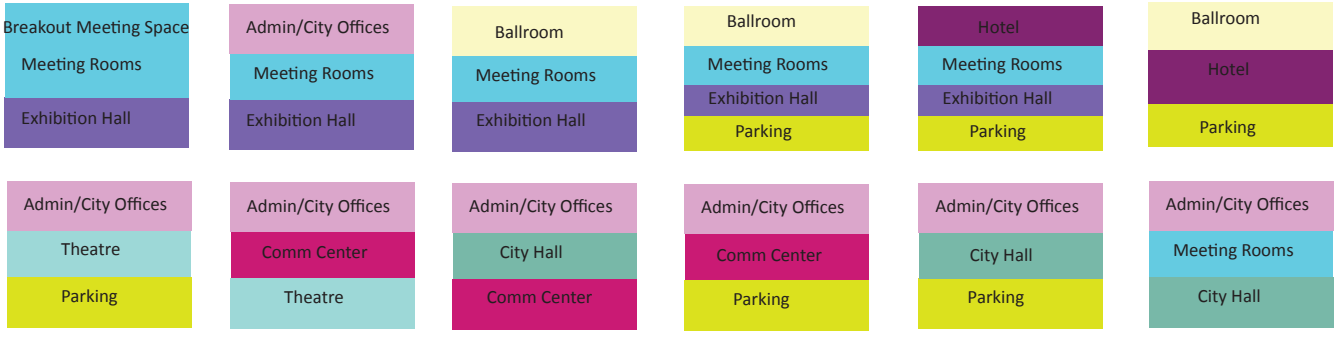
After looking at the adjacencies of these convention centers, and knowing the programs that are necessary to fufill the requirements of the RFQ, now is the time to look at how the each of the programs can work in conjuction with each other and how they can be set up next to each other.
Since there are a multitude of programs that need to be accounted for in this site, an understanding of the relationship between them needs to be explored to know what will work best in proximity to others.
This is where adjacency diagrams have come into play, simple set ups as a vingnette and a test to get an idea on placements in both plan and section, horizontal and vertical.



These adjacencies are looking at the way the site is set up now, diagram on the left. The top two lines are looking at adjacencies in plan, and the the bottom two lines are adjacencies in section.
The way the site is set up now, the exhibition halls are surrounded by multiple programs with parking sporadically placed around the area. Other programs that are not directly tied to the convention center are primarily to the left with no real connection to them.
The excercises that have been tested in plan and section show how some of these programs can be intertwined to suit multiple functions at once to eliminate some of the separation that exists now.



The plans utilize a similar effect of surrounding the exhibition halls with relating program, much like the precedents looked at previously. These programs consist of meeting space, lobby, concessions, services and utilities. However it also looks at some of the configurations of the other programs that exist on the site, such as city hall, community center, green space, offices, parking and the addition of the hotel that is asked for.



Keeping in mind that this endeavor will not just be a horizontal one, looking at these spaces in section can show how some of these programs can be stacked and coupled to work vertically. The addition of the ballroom and hotel make for a tricky set up in some considering the scale of those that are necessary, as well as if parking can be added to these structures to eliminate the surface parking that is on the site that takes up a great deal of space that could be utilized for more program.

Urban Fabric Strategy

After exploring the possible adjacencies and programs that are necessary, there is a point where an exploration of not just the site but the surrounding context needs to be addressed. This the the primary issue that needs to be resolved in terms of the research found from the precedents early on in the study. So addressing the program of the surrounding context and the relationship of them to the site becomes pivotal.

Land Use

Green Spaces
Parking
Civic
Residential
Commercial
Institutional

Looking again at the land use map, it can be seen that the site is primarily surrounded by residential areas to the East and West. These areas are the historical districts that are made up of aparments and hotels to accomodate the great number of tourists coming into the city. The dense nature of these neighborhoods create a street front that is ever changing as someone drives down the road, whereas driving down the road next to the convention center, all that is seen is one long wall that spans for hundreds of feet.

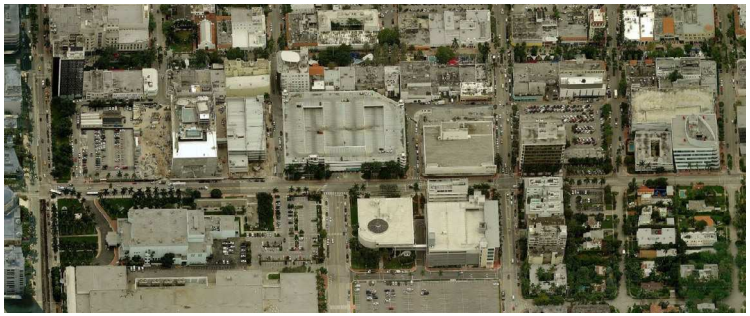
To the North there is more residential areas, however to the South and some to the East, there are a multitude of commercial buildings that create a similar dense fabric that the residential areas do.

These programs seem to be just surrounding the block and don't integrate themselves with it, as if the site is a separate entity that is on it's own.

Surrounding Context

North Side

South Side



East Side

West Side

Actually looking at the surrounding context in a real photo helps give a better sense of the density of the surroundings, especially on the East and West sides. From this is can also be seen how the street context is drastically different from looking at one side of the street to the side of the street with the convention center on it. To the North there is more residential and a school that is a bit larger scale than the rest of the surrounding context but is still relating in some ways that keep them from sticking out too much. The South has primarily the commercial structures and a parking structure that are still dense in nature considering the nature of the context even though they are larger than the residential buildings.

First Design Schemes

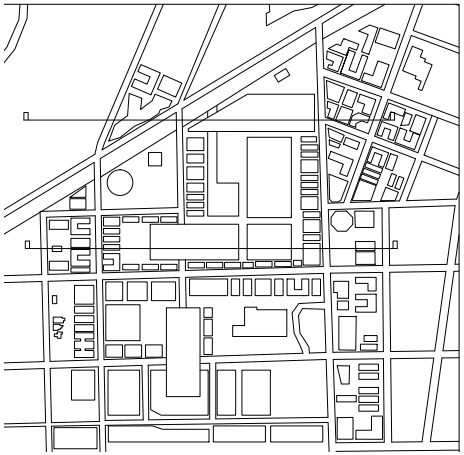
Now that the surroundign context has been looked at in a thorough nature in terms of the program and the density, as well as having looked at the programming situation, at this point multiple schemes were developed on how to arrange the site, and how to arrange the buildings.
Each scheme looks at different issues that can resolve certain problems, however they each keep certain aspects similar that are consistant in addressing a certain problem.
Each of these schemes are looked at and developed only to a massing standpoint, where the details are not worked out just yet, this study to identify how certain designs fit into the context in terms of scale and density.

Scheme 1

Scheme 2

Scheme 3

Scheme 4



Scheme 1

This first scheme was to just address the overwhelming amount of program that needs to be on the site. This is a possible set up that could appear if all of the program was lumped together into a mega structure that spans almost the entire site. Not addressing the form in terms of a design standpoint, but just looking at it in terms of the size of the footprint in contrast to the rest of the context.

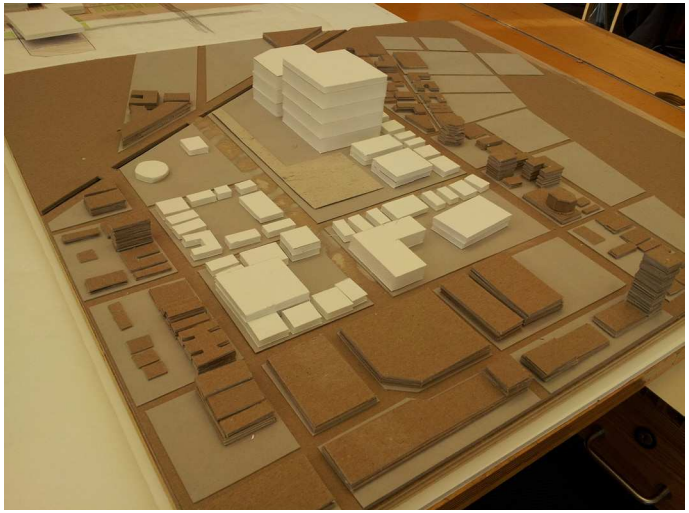
This is a one of the ways that the RFQ had been interpreted in terms of combining all of the programs and adding more to them.

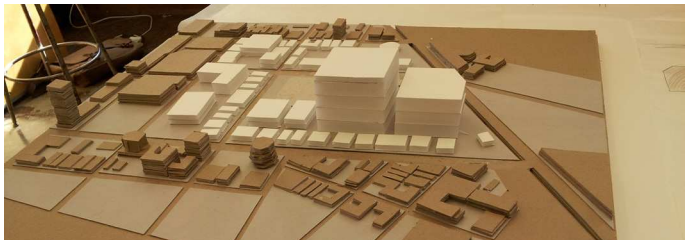
In this particular arrangement, it does not address some of the issues that were brought up earlier in the analysis and actually amplify them from the current design of the site.

There is an even smaller connection to the surroundings and the street section, vision from one side of the street to the other, is dramatically different. This difference is looking at the density to one side and a solid wall for hundreds of feet to the other. In terms of the analysis and issues to be addressed, this design will not be adequate to be successful.

Scheme 2

This next scheme was designed as an exploration of building the programs on top of each other creating a skyscraper.
This design also had brought in the surrounding programs and designs into the site to the extent that the boundary of the convention center district is blurred with the rest of the area. This is shown by how the residential areas bleed into the site from the left side of the sight and commercial from the right.
With the integration of the commercial from the right, there is a barrier that is separating the larger footprint of the convention center from the street front. This was done with the intention of keeping the consistent street front of the rest of the area. In this way a relationship is developed with the surrounding context such that it doesn't seem like a separate entity, but still identifiable.
There is also an elimination of the surface parking that is on the site and consolidates it into a couple parking structures that cover a smaller footprint, but still allowthe amount of parking necessary.



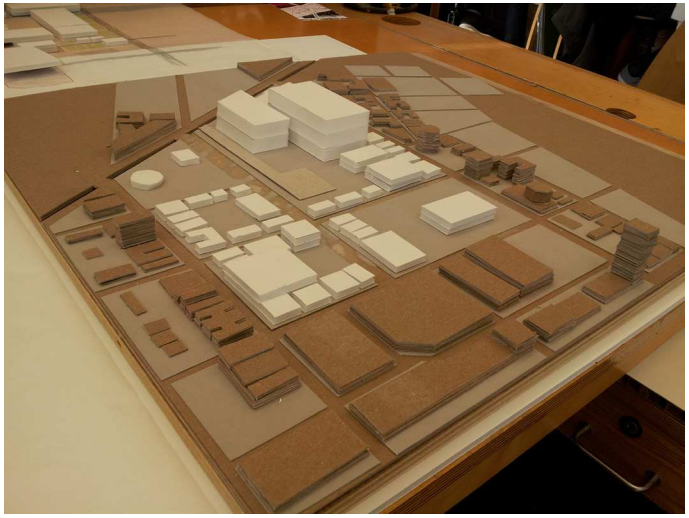


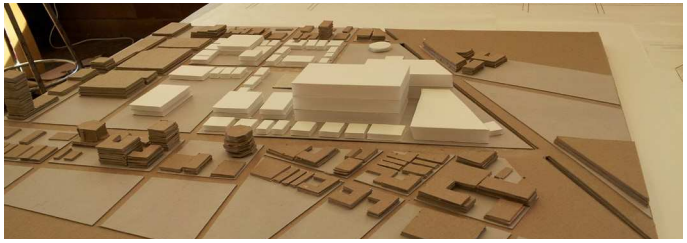
Another addition to this design for the plan of it, is to bring the canal into the site. Cutting out the canal to involve it with the convention center on a greater level to centralize green space for the exhibitions as well as bringing in a water feature that could be utilized for other exhibitions.

This deisgn had some qualities that seemed to work well, and had potential, however not every aspect was right just yet. Looking at the massing of the design on the site it appears that bringing in the surrounding program to bleed the boundaries has been successful as well as keeping the consistency of the street view. However when looking at the vertical scale of the convention center itself in terms of the surrounding context, it seems to be problematic. It attracts the eye because of the grand nature of it, but the size alone is over 200 feet larger than any building in the area. So from this idea, there needed to be a further breakdown of the program into further separate entities to lower of the vertical scale. Also, there could be structural problems with stacking so many exhibition hall on top of each other.

Scheme 3

For scheme three, a consistency was kept for the ideas of bringing in the surrounding context to bleed the edges of them, which had seemed to be successful in the previous design, so it will be carried through the designs.
Also, the canal was kept in the design for the possibilities it brings for the outdoor spaces and possible water features it can produce for the exhibitions, however in this case it has been scaled down to a smaller size to allow the breakdown of the convention centers, so that they can spread more throughout the site.
For the convention centers, the skyscrapers have been separated into three buildings. This way it can address the problem that the scale of the skyscrapers in the vertical direction were so overwhelming in comparison to the area.
So in this case the vertical scale is smaller, however the horizontality of the structures has started to expand to allow the smaller section. With this though, the great horizontality is still hidden from the street view, again trying not to dominate a street view.





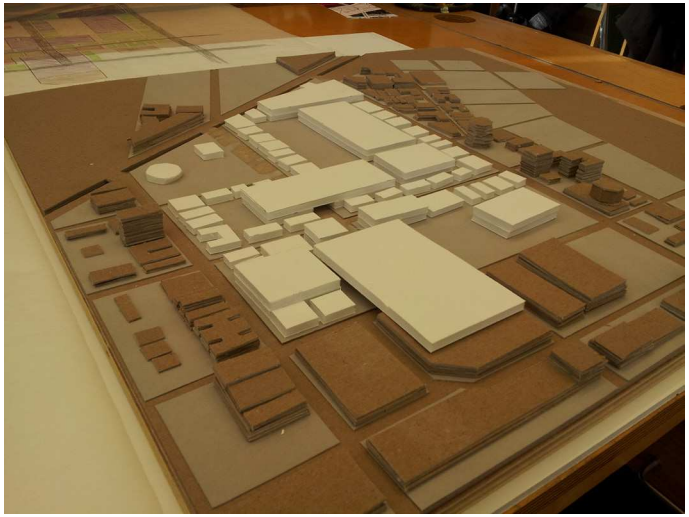
When addressing this case in how it appears in the model from the massing stand point, it is of a more reflective quality to the surroundings than the skyscraper model. However, separating the programs and structures into three instead of the two still has some issues. These issues are similar to the skyscraper model in terms of the fact that it still seems a little out of scale vertically. There is still merit to the design in terms of the hiding of the horizontality of the long faces, but there is still a chance to break this up even further.

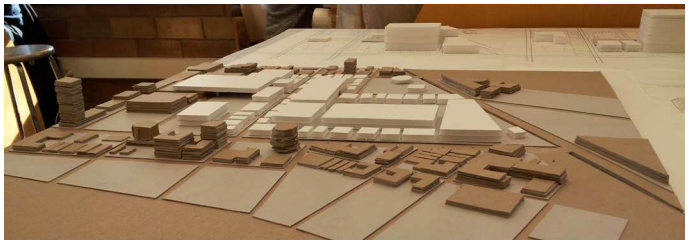
This is the type of design that as it was analyzed and placed in the model, it appears that it could be a more than adequate design for a convention center, however in this context, in this city, maybe not as successful as it could be somewhere else. It was at this point that there was a clear realization at how the design of these structures and placement is really site specific, which was an important realization to further the possibilities of benefitting this city for this particular master plan that is being designed.

With that in mind, there was one last major massing scheme that was designed that continued to break this apart even further and really spread it out throught the entire district instead of just one section of the site.

Scheme 4

This last scheme was developed again using some of the same standards from the previous ones. Those being bringing in the residential from the left and commercial from the right and south ends to bleed the edges of the district.
Also, the same size canal from scheme 3 was kept seeing as though it was at a more appropriate scale to the site and could benefit the site most without becoming too large, however without being too small.
The dramatic change to this design was that the vertical scale of the exhibition halls has been reduced siginificantly. This has allowed each of the structures to spread throughout the entire district in an effort to link the whole area together instead of just one corner of the area being the convention center. At this point the whole site becomes a convention center much in the same fashion as a world's fair might seem like. This collection of every building as a whole working in conjuction together as an entity and not as competitors.





Putting this design into the model there were key differences that realized from the previous designs. The obvious being that the height of the buildings were minimalized, however with that minimal nature of the scale correlates with the surrounding context. This assists in keeping a consistent nature throughout the site, with the buildings that surround the district as well as the other buildings that I am proposing to have placed on the site.

This serpentine design is one that has the exhibition halls weave their way in and out of the district, being hidden by the other proposed buildings and peaks out beyond them as it crosses over some of the major streets, and one of them actually covers one of the parking structures.

With this set up the convention centers are interlocking themselves with the rest of the site and intermingling themselves with the other programs of the area, in a way that could be beneficial for each of the buildings that are being effected.

From the massing standpoint, and the relationship it has with the city as whole, this design would appear to be one of the better fitting ones that could really absolve the issues that have been addressed as a problems that need to be accounted for.

Final Decision

Scheme 1

Scheme 2

Scheme 3

Scheme 4

At this point, with all these major massing ideas placed out on the model and analyzing them each individually, a decision had to be made on which design was going to be the primary plan to work with and continue the planning with. This decision came after looking at the issue that was meant to be resolved in the first place, how does a convention center respond to its surrounding context and can it have a greater relationship with the city instead of being a stand alone structure?

Keeping that in mind as the analysis was made of each design, the one that seemed to make the most sense, being something that would be more challenging as well as possibly omre fruitful upon completion is scheme 4. This serpentine design was something that was sought after, with the inspiration of the world's fairs, and the intertwining into the city's dense nature gives an opportunity that the other designs do not. This opportunity is that of sharing and benefitting the surrounding businesses , relating back to the surrounding context, and not over powering the site to such an extent that everything else just seems to fade into the background of the convention center.

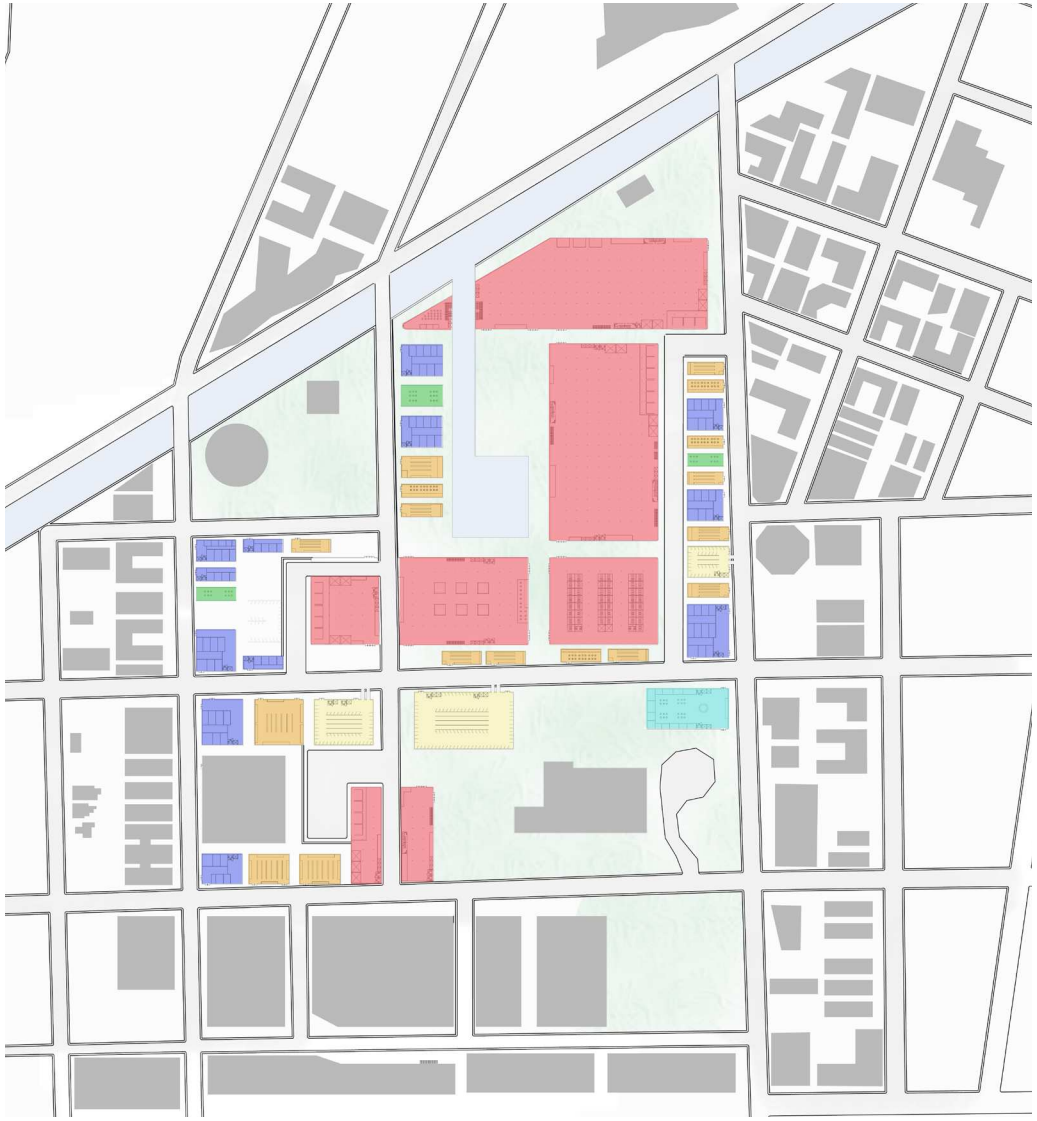
This is the design that shows the way in which each type of program can start to work with each other and benifit from this mutual tourism that every one of the rely on to sustain the business. Not to overwhelm each other by the size of their structure or discredit one because the program is not as important, but to really start relying on each other for greater success.

This design also, in some ways keeps the street section view in tact. To explain further, how the dense nature of the city has a view as you are driving or walking down the street that is everchanging because of the buildings that are so closely placed and each have a smaller footprint. This is something that this design had addressed with keeping the size of the exhibition halls at a smaller scale and allowing the street front to be dominated by the similar density that the city has. That way the exhibition halls work in conjunction with them to keep that view and do not dominate the front, but fall to the back, however they are still visible through some of the street areas and visible over top of some of the buildings that stand in front of them.

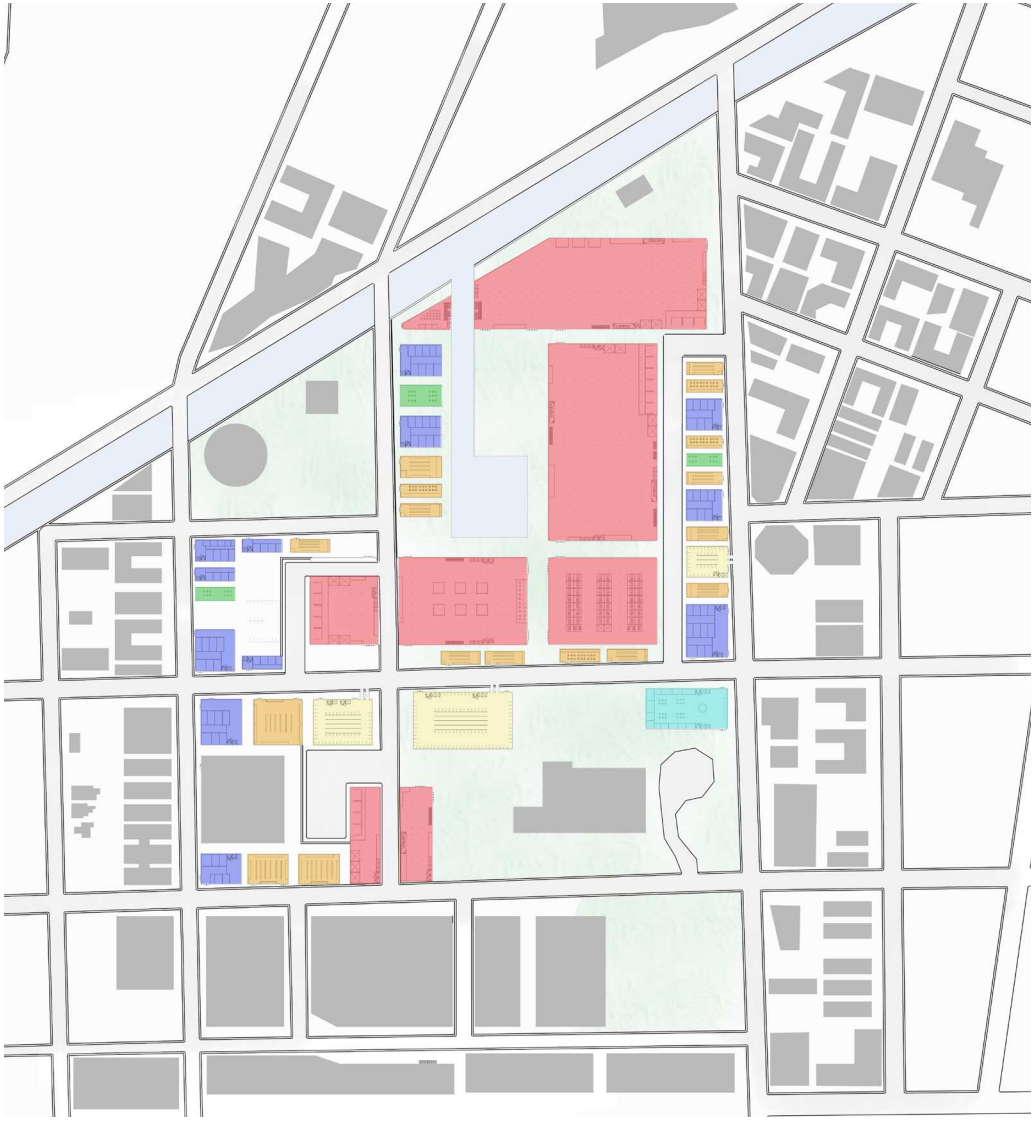
This creates layers of visbility and layers of the city or the site that give a similar feel as the rest of the city does, as you look past one building another is seen with a different perspective, and even though the beach is only three blocks away to the East, and a view to it would be ideal, the relationship to recognize is that the beach is coated with hotels that line the coast. These hotels also tower up towards the sky. Keeping that as something to reinforce the intent of keeping the scale of the exhibition halls small, is a way to embrace the positioning of the convention center and not try to force it into doing something that may not be possible.

Now with the massing design decided upon, the design needed to be populated. The means in which to do that are to add in the programming analysis from earlier on.
Taking each of the programs that were needed and placing them into the site to conform with this design. However, there will be a need to tweak and twist this design a bit to be able to fit all the programming in that is necessary, as well as the new programs that have been added in according to this design intent. So with that, there needs to be a dinstinction on where the commercial and residential will go specifically, as well as where the city hall will go, where parking will be arranged and how each of them relate to the surrounding context and relate with each other. The next page will start to show and discuss how the decisions were made on the placement of each program and how they will relate with each surrounding piece.

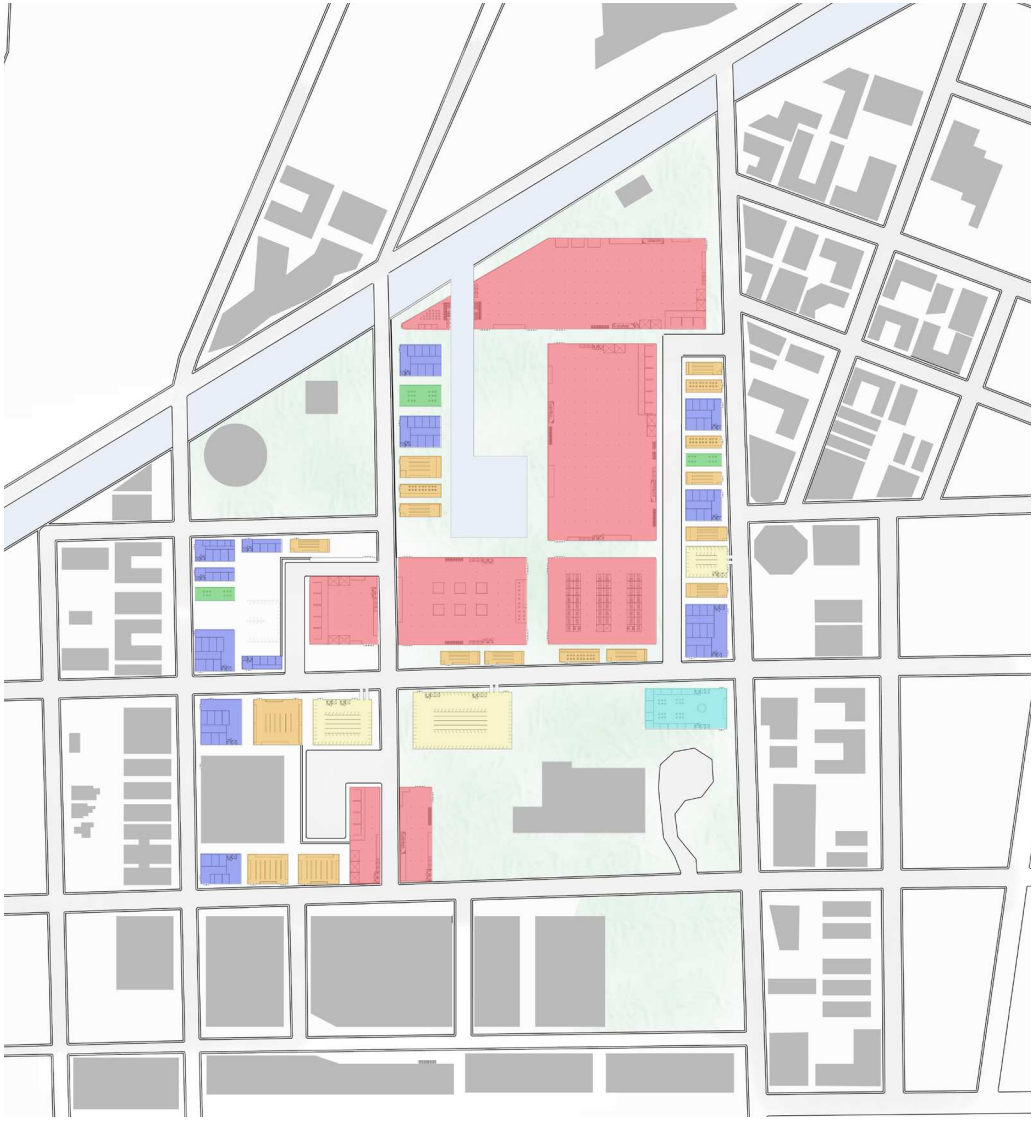
In dealing with the programming of the site and each individual building, there was a decision to make sure that it kept a relationship to the surrounding buildings as it progresses through the site.
The exhibition halls are indicated in the red color. This was an obvious choice considering they become a driving force in the design.
The dark blue color is showing the residential buildings, some of which are apartment complexes that mimic the apartments to the left of the site. However the residential buildings surrounding the core of the exhibition halls are the hotel programming that the RFQ had asked for. Instead of making one large hotel that could possibly over dominate the plan or area, the hotel has been separated into five separate hotel. Since the average hotel room size in America is between 350 and 400 square feet, having 800 rooms becomes quite sizeable, breaking the hotel up seemed logical in the same way that the exhibition halls have been broken up.The intent behind this is to surround the exhibition halls with the people that intend on using it.



Each one of the hotels can have a distinct quality about them to make them unique, creating a new experience everytime someone stays at the hotel for the convention center.
The orange color indicates the placement of the commercial buidlings that would consist of retail and restaurants that can be utilized by people at the convention center or anybody walking around the area. This allows for the businesses that surround the center to benefit from the great number of people going in and out of the area, and those places can help keep people walking around this area to stay at the convention area, or go into one that they had not known about otherwise. In conjuction with the residential buildings, these buildings are assisting in keeping the street front at a consistent nature to that of the rest of the city or even just the surrounding context. This is one of the pivotal moves made in the act of designing in this way so that the lines of where the convention is and where the rest of the city lies gets blurred enough to be considered all the same piece.

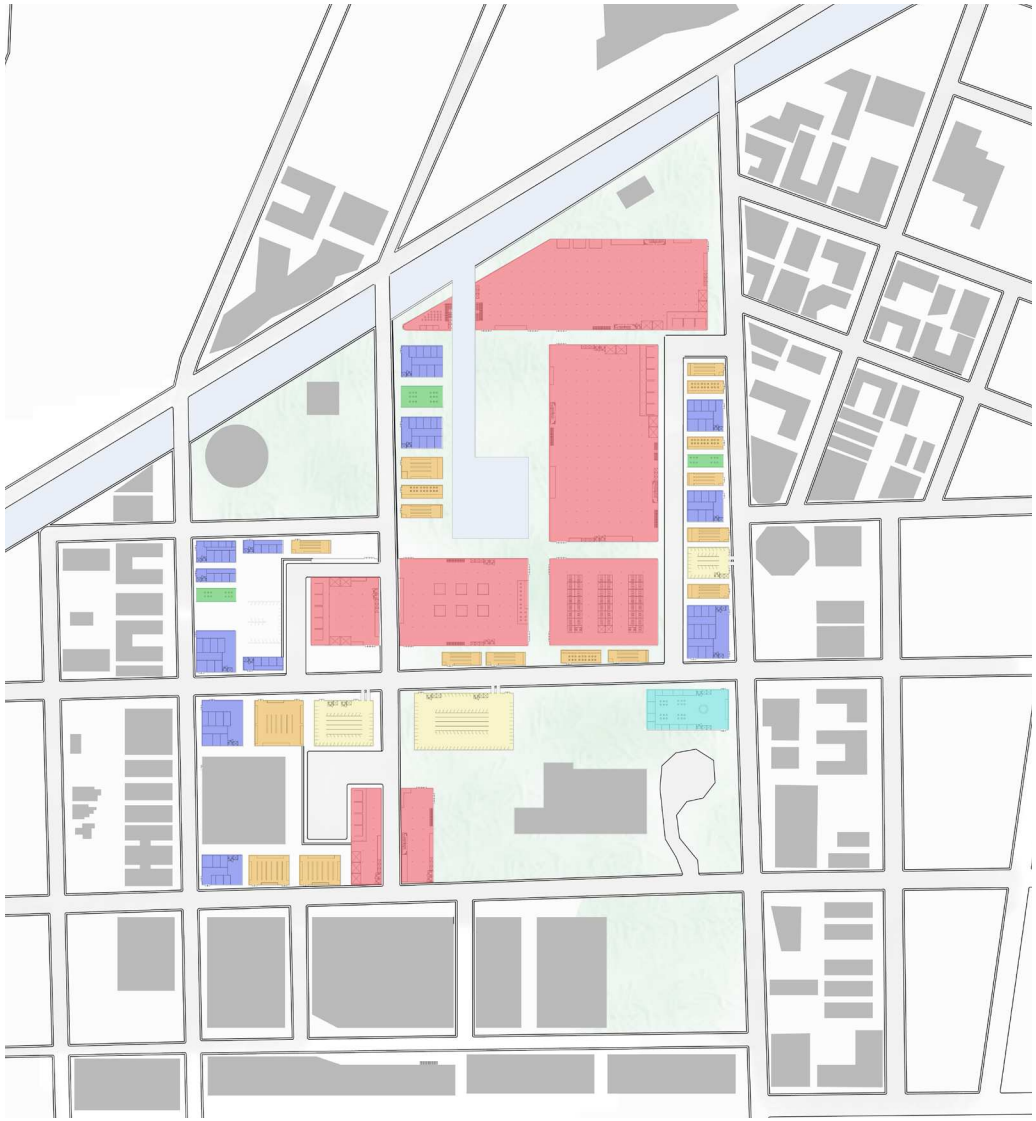


The bright green color is showing where there is planned to be placed outdoor canopies. These infrastructure are utilized because Miami Beach has such beautiful weather all year round, people at the convention, people walking around, and even those staying at the hotels nearby have a place to sit outside in a covered area. This way they could enjoy the outdoors whether it is raining or just too hot out. Either that or even just using it as a place to relax as you might be walking around the city.
The faded out green that cover some of the city blocks are the indicators of other public green spaces that are outdoors. Surrounding the Holocaust Memorial is a public green space, and that is something that is intended to be replicated around the Jackie Gleason Theatre and even with the confines of the area that is surrounded by the exhibition halls and the canal.
The light yellow color is used to show where the parking structures are to be placed. They are used in a way that will be right off the main roads. Located within the center of the site to allow access in any direction. There is also another

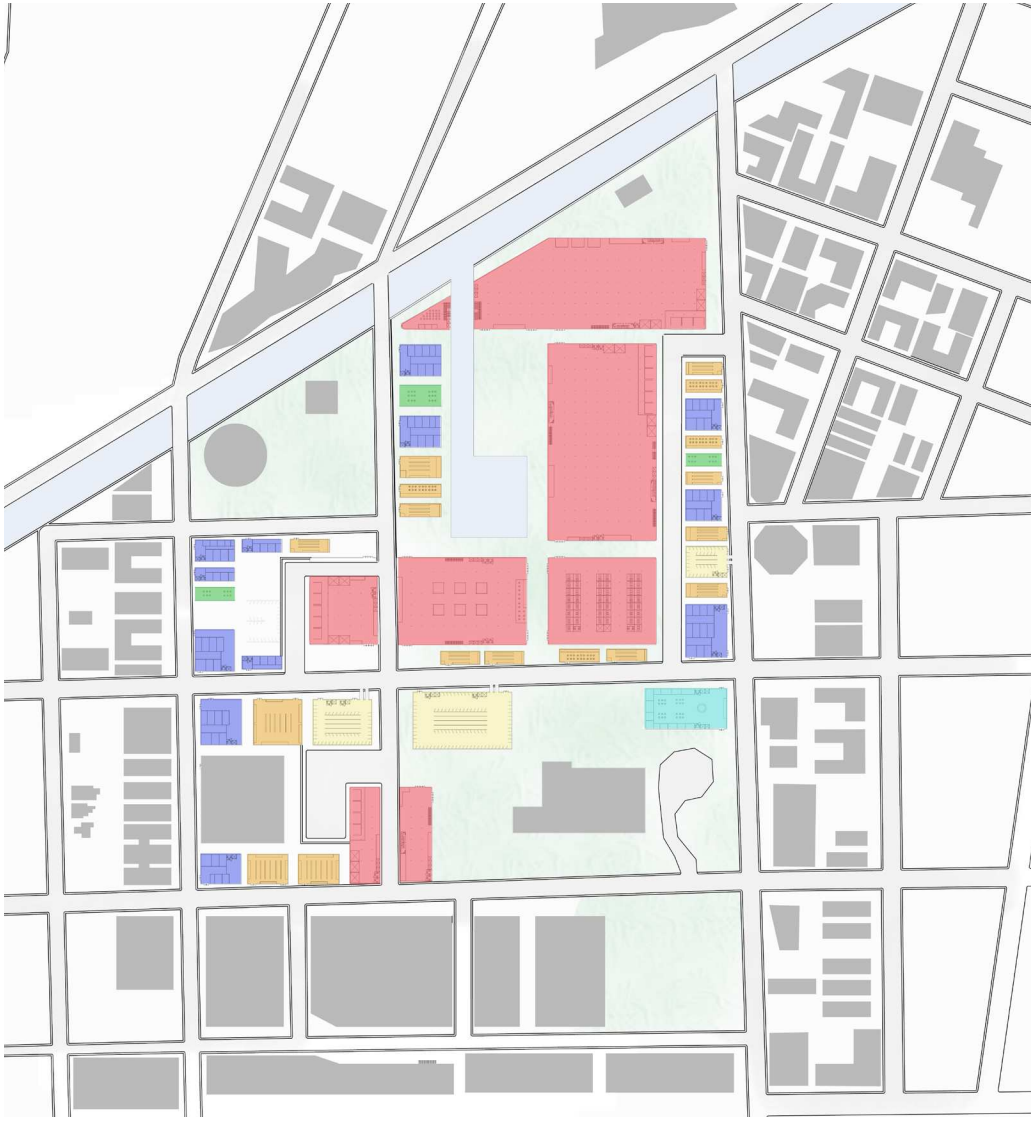


smaller parking garage on the right side of the site in between a couple commercial buildings as well as being sandwiched by the hotels. This placement was done so that those who are staying in the hotel have a place to park that is convenient for where they are staying. This is mimiced on the left side of the site, with a small surface lot that will be designated soley for the residents staying in the public apartments that are being proposed. This will also give some buffer room between the apartments and the exhibition halls.

One more program that is to be addressed is city hall, which is the teal color. It has been relocated to the right side of the site, on the same block as a parking garage and the Jackie Gleason Theatre. The placement of this was done so that it makes an appearance as a grand piece of city that is necessary, and being on the corner helps that endeavor considering that the corner is usually the most important part of a block. City hall will utilize the same drop of circle that the Jackie Gleason will use for quick drop offs, however it is more than possible for both of them



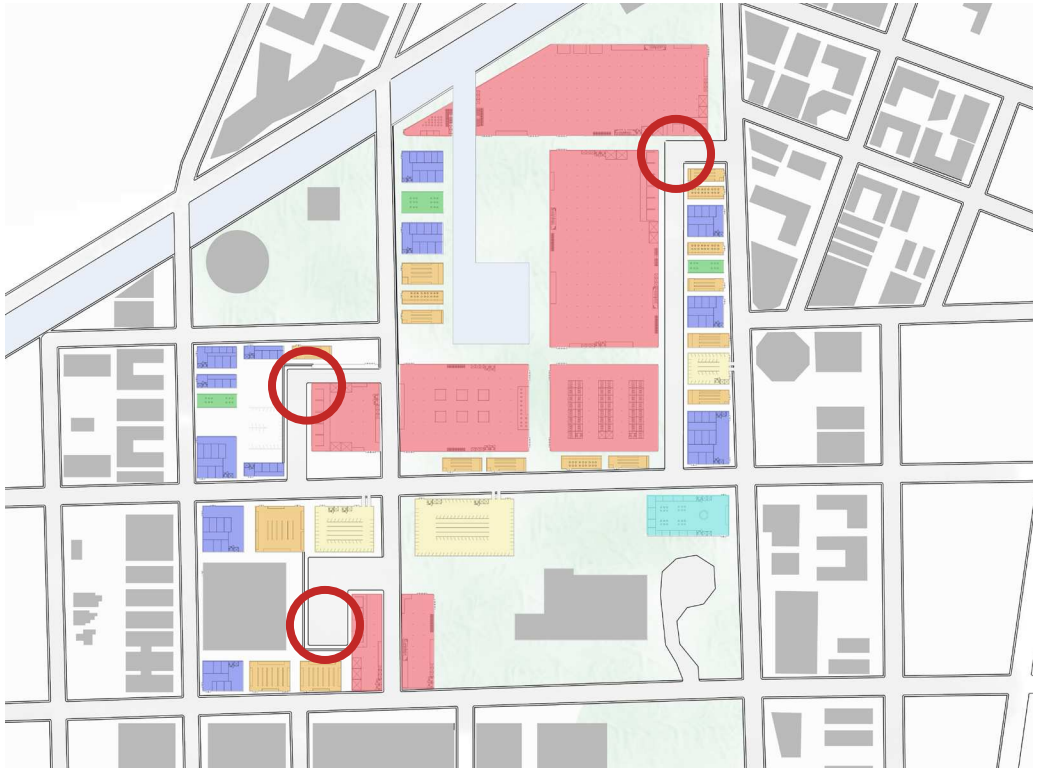
to utilize the parking garage on the same block. This way they have close proximity to their parking and the walk from the parking garage to each of these buildings is surrounded by green space to create a open aired feeling that can show the importance of these buildings as pieces of the cities culture and heritage.
With each of these endeavors in placing everything strategically so that they can work together and function properly a realization was made. This site is quite large, 52 acres to be precise, and the circulation in and around it is something that needs to be worked out in such a fashion to keep people wanted to walk around and not give up before they can get from one end of the site to the other. The circulation could turn into a key component in the finalization of the design in both plan and section, and the circulation of not just individual people, but cars and trucks as well.



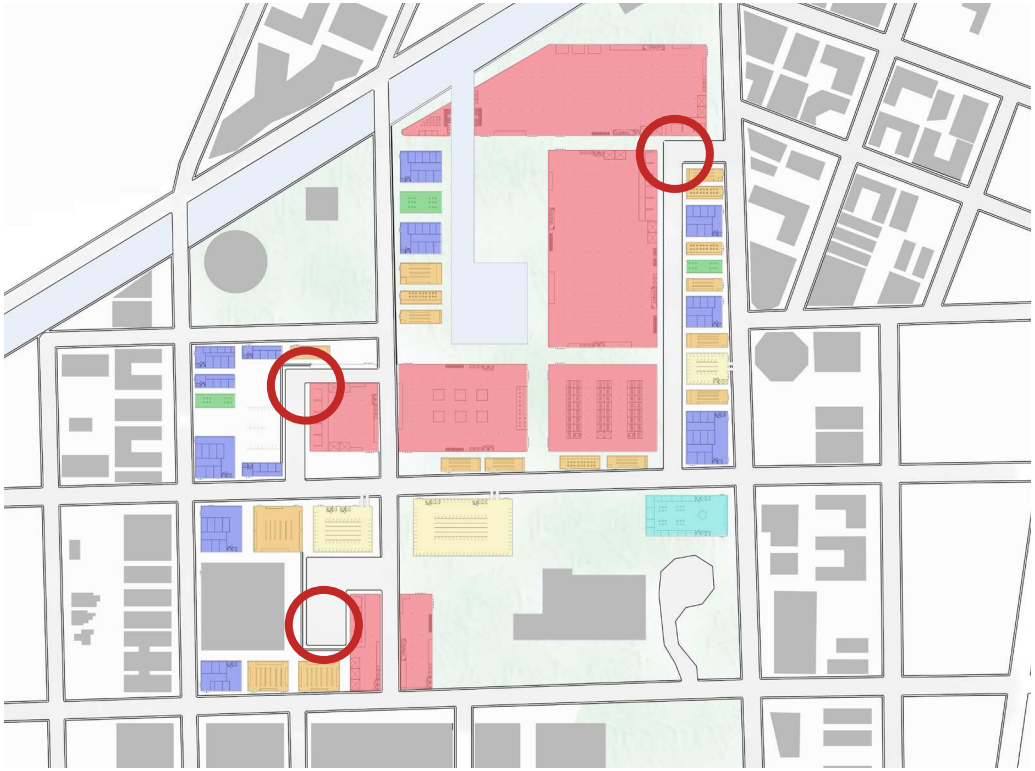
Circulation Strategy

A circulation strategy was necessary to be developed so that the master plan could show it's promise, not just from an interaction standpoint of the buildings interacting with each other, but how the people interact with them. For this to be successful there needs to be a means of easily traversing the site, getting from the end of one exhibition hall to the end of the furthest one away. However, this is not the only means to be taken into account, there is also the traffic of the trucks coming in to drop off whatever the convention requires, whether that is large cars for the show, or large kiosks that needs to be put in the exhibition halls. The trucks need to have access to each of the halls and it would be greatly beneficial if it was made easy and convenient. Lastly there is a need to understand how people can traverse the site without entering the exhibition halls, and how that happens throughout the area, whether that is through the open green spaces or if there are designated pathways for them.

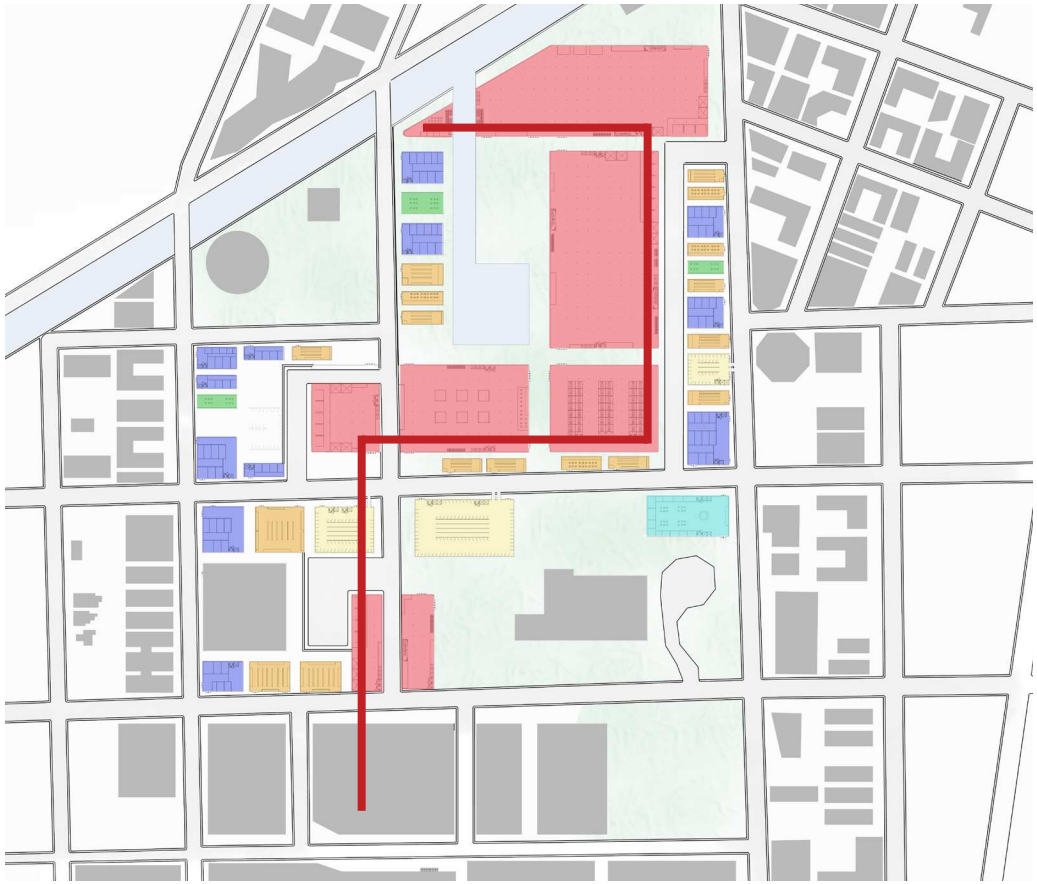
The first issue that was addressed was how the trucks will make their drop offs happen easily. The reason for this being the first step is that it will be the most determining in how the block might need to be broken up or where more streets may need to be added so that they can get access to the halls. Since all of the halls are separated at this point, each of them need to have an access point for the trucks coming in. Each of them are indicated below.



The placement of these are meant to give the trucks a private road to themselves to allow the drop off to go smoothly without interuption from other traffic. The two exhibition halls to the top share a private road that comes off a main road to their right, it enters from one street and exits on another to keep from too much congestion at one single point considering that there are two halls sharing this road. This road is also set behind the hotels and the commercial buildings so that it can be hidden away much that the exhibition halls are in the same way. The next drop off to the top left is one that again opens on one street and exits on another because of the nature of how busy that particular street is for public transit. this street also cuts into the first floor of the exhibition hall there, going under it in the same way that the exhibition halls cover the streets. The last one at the bottom left is opened up more to have one enter and exit. This space is a larger piece that is more resembling of a lot, then a drop off. This much space will be necessary to have each truck drop off what they need to and be able to turn around and exit the same way they came it. Each of these drop offs have required a small shift in the design so that access can be made to each hall



The next issue to address is that is the visitor circulation throughout the site, especially going from one end of an exhibition hall to the other opposite end of the furthest exhibition hall from it. In beginning to take a look at this there was a calcuation that needed to made, considering the large size of the site, the distance that needed to be traversed would be a long one. So it was necessary to look at how far it really is.



The distance indicated in the red line, would be the farthest distance one would have to travel to get from one end of the site to the other throughout each of the exhibition halls. This distance is measure out to be approxiamtely half a mile, or 2,640 feet.

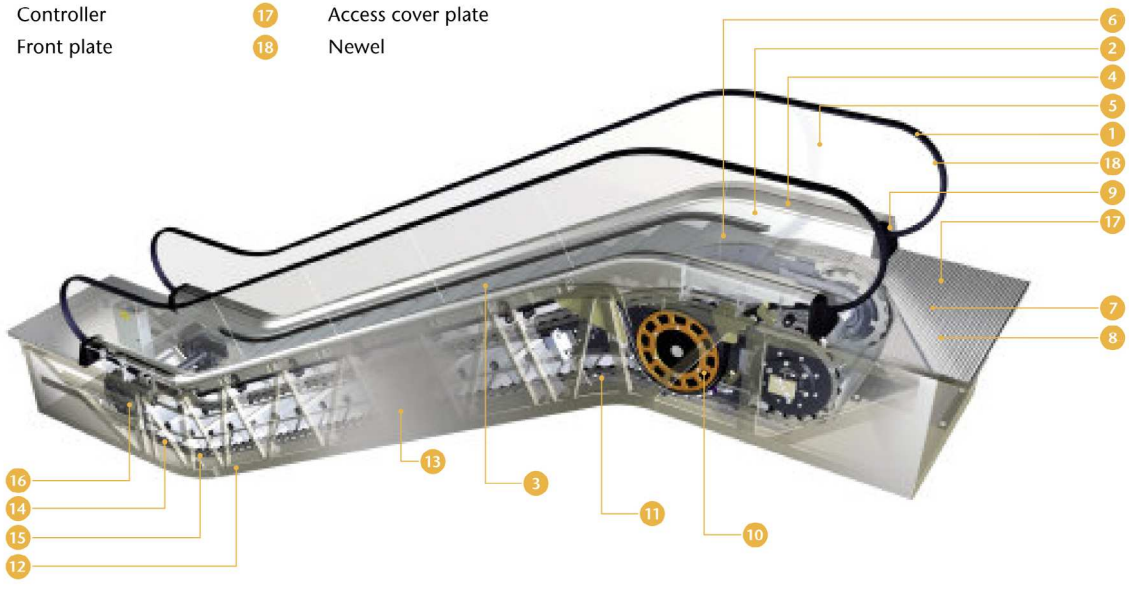
With a distance of 2,640 feet, that is quite a bit of walking to go through, and that is not including the stopping and looking around whatever is being passed by. However, after taking a few averages and looking at the calculations for this distance to travel, it is not actually that terrible. It takes the average person 25 minutes to walk a mile at an normal pace. This would give the indication that it would only take 12.5 minutes to walk that red line. Keeping in mind that there is going to be some traffic backups with the congestion of having thousands of people at the convention, we can round that number up to 15 minutes, even 20 in the worst case. Now when thinking about this, when at a convention it is logical to understand that people plan to be there a while, so walking that far would not be that far fetched of an idea to give that amount of time to it. However, when walking all that way it is possible that it will tire people out more than necessary, so there needs to be means to which to make the travel easier, and maybe seem a little faster.

With that in mind, research was done to see how this problem could be remedied. There are obvious and easy ways to solve this problem and they are utilized pretty much everywhere where there is a necessity to walk a far distance to get through a building, and those ways are using escalators and moving walkways. Escalators primarily are used for going vertically but greatly assist in saving time. This is documented through the case in Medellin, Colombia. Medellin is a city where the primary of it's residents live on top of a hill, and the main part of the market and the city in down at the bottom of the hill. The normal walk to get down there was approxiamtely half an hour, so taking that walk down and then another half an hour back up possibly carrying groceries can be unbearable at times. This is why the city implemented outdoor escalators to reduce the time it took to get down the hill. It was successful by the means that the travel time was reduced to six to seven minutes. This is not including the reduced amount of work put forth to walk all that way up and downhill.(20)

(20) http://www.bbc.co.uk/news/world-16336442

So there is the precedent as to how efficient escalator transporation can be. Some of the specific information on these mechanical pieces of work are:

Item	Component	Item	Component
1	Handrail	10	Handrail drive
2	Skirting	11	Transition radii
3	Steps/pallets	12	Truss
4	Decking	13	Side cladding
5	Balustrade	14	Step chain
6	Horizontal steps/pallets	15	Tracks
7	Drive station	16	Return station
8	Controller	17	Access cover plate
9	Front plate	18	Newel



KONE's escalators come in a diverse range of specifications:

- Inclination 30°
- Step width 24 in. (600 mm) | 32 in. (800 mm) | 40 in. (1000 mm)
- Speed 100 fpm (0.5 m/s)
- Level steps 2 | 3 | 4*
- Environment Indoor | semi-outdoor | fully outdoor

** only for infrastructure escalators*

(21) Planning guide for kone escalators & autowalks

The different configurations for these escalators can be seen as such:

A single escalator arrangement, free-standing or against the wall

+ An inexpensive method of transporting passengers between two floor levels
+ Particularly suitable for small retail stores where available floor space is restricted
+ Only one side of decorative truss side cladding is required if against the wall

– Only really suitable for installations where passenger flow is in one direction, although on-demand starting can be utilized to allow travel in both directions
– An easily accessible staircase is required for passengers to return to the ground floor level
– Restricts traffic flow within the building

Escalators in parallel arrangement

+ Passenger flow within the building is maximized by moving the users between the two floors
+ Increased passenger comfort in comparison to single arrangement
+ Both sides can be used for promotional purposes

Escalators in one travel direction (interrupted traffic flow)

+ Cost-effective method for transporting passengers between three floors
+ In retail installations, passengers have to make a short detour to the next escalator; strategically placed displays alongside the route of this detour can help to increase sales by encouraging impulse buying

– Only really suitable for installations where passenger flow is in one direction
– Passenger flow through the building is interrupted, so overall traveling time to higher floor levels is increased
– Readily accessible staircases are required for passengers to return to the ground floor level

Multi-level scissor arrangement (continuous traffic flow)

+ Cost-effective and efficient method for transporting passengers between three floor levels
+ Continuous arrangement allows the fastest movement of passengers over two or more floor levels, so is particularly suitable for public service buildings, office buildings or large department stores

With a single multi-level scissor escalator arrangement:
– Only really suitable for installations where passenger flow is in one direction
– Readily accessible staircases are required for passengers to return to the ground floor level

Multi-level criss-cross arrangement (continuous traffic flow)

+ Continuous arrangement allows the fastest movement of passengers over two or more floor levels, so is particularly suitable for public service buildings, office buildings or large department stores
+ Reduces congestion at the landing areas by separating upwards and downwards traveling passengers
+ Frequently used to make an attractive feature of the escalators in the center of retail stores

Multi-level parallel arrangement (interrupted traffic)

+ In retail installations, passengers have to make a short detour to the next escalator; strategically placed displays alongside the route of this detour can help to increase sales by encouraging impulse buying
+ The possibility to reverse the direction of travel of both escalators depending on the usage or traffic flow

– Passenger flow through the building is interrupted, so overall traveling time to higher floor levels is increased

The moving walkways are also something that are widely used to assist in the moving of people through long spaces, especially those carrying bags the entire way. Primarily they can be seen in airports, but convention centers are a place where these can really assist in the movement of people, especially since in this design they have such a distance to travel. The way that these are set up and how they help are as such:

A horizontal autowalk is a conveyor belt that transports people horizontally. Autowalks are generally provided in areas where people need to walk long distances with luggage, baggage carts or shopping carts. An autowalk is generally flat, but can be slightly inclined.

KONE's horizontal autowalks cover all the standard requirements:

- Inclination — from 0° to 6°
- Pallet width — 40 in. (1000 mm) | 48 in. (1200 mm) | 56 in. (1400 mm)
- Speed — 100 fpm (0.5 m/s)
- Environment — Indoor | semi-outdoor | fully outdoor

(21) Planning guide for kone escalators & autowalks

Coupled with these two works of mechanical genious to assist our everday life in movement through buildings and even the outside, the utilization of elevators will be necessary. This will be for multiple reasons, one being ADA will require it for the disabled, second to assist those in going to higher floors without using the escalator, and lastly for those dropping off supplies for the exhibitions that require a large elevator to move the supplies or large objects up to the exhibition hall that they are to be placed. These elevators will be private use for the suppliers only, this will be because they are going to be much larger than the normal elevator, which will be necessary. Some of the specifications on the advatages and disadvantages of each of these modes of transportation and what they specifically do is as such:

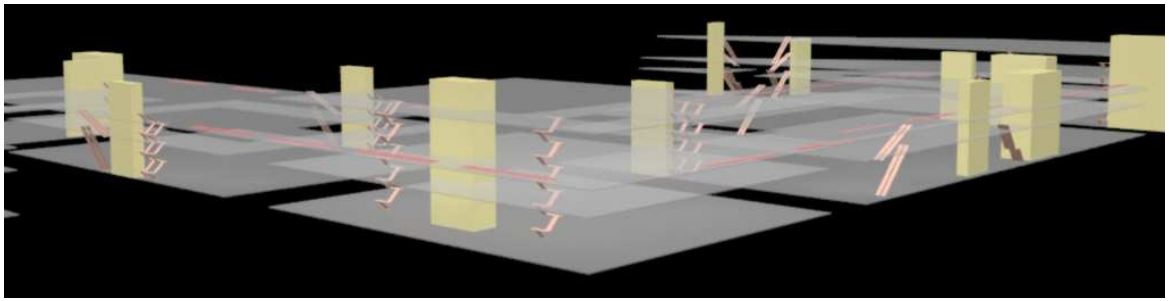
Escalators	Horizontal autowalks	Elevators
Continuous	Continuous	Interrupted
Mass transport	Mass transport	Limited number
Short-medium distances	Medium-long distances	Higher rises
In between floors	On one floor	In between floors
Steer people flow	Save time and effort	Improve accessibility

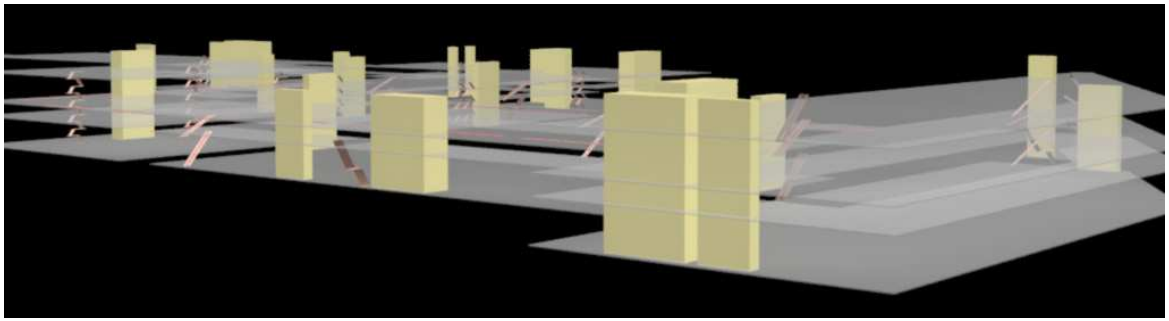
With this criteria, a better understanding came about on where to place these equipment throughout my design to optimize movement from floor to floor and from one end of the floor to the other.

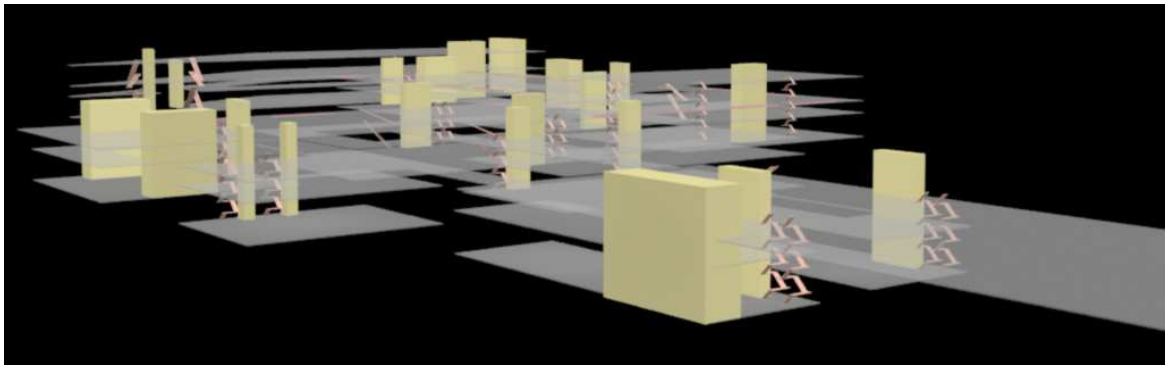
(21) Planning guide for kone escalators & autowalks

Early Circulation Diagram

Now to take this information and implement them into the design proposed. An early circulation diagram was made to start to get an idea on how it will look and to see how they will work throughout the site. Something to keep in mind when looking at these too is that the primary exhibition halls are on the second floor, so the primary horizontal walkways are going to be on that floor, whereas the vertical circulation will be utilized to get there and down from there.







These circulation diagrams are a prelude to how the diagram will officially turn out. This was meant as an excercise to get an idea on how everything is going to be placed and within what proximity to each other. The yellow boxes being the elevators, the pink rectangals are the staircases and escalators, and the red rectangals are the horizontal autowalks.

This was also looking primarily at just the exhibition halls, and not the entire site. This helped in the analysis on how these are working next to each other and from this the floor plans of the site really started coming to fruition, especially considering that it was necessary to look at this in section and not just in plan.

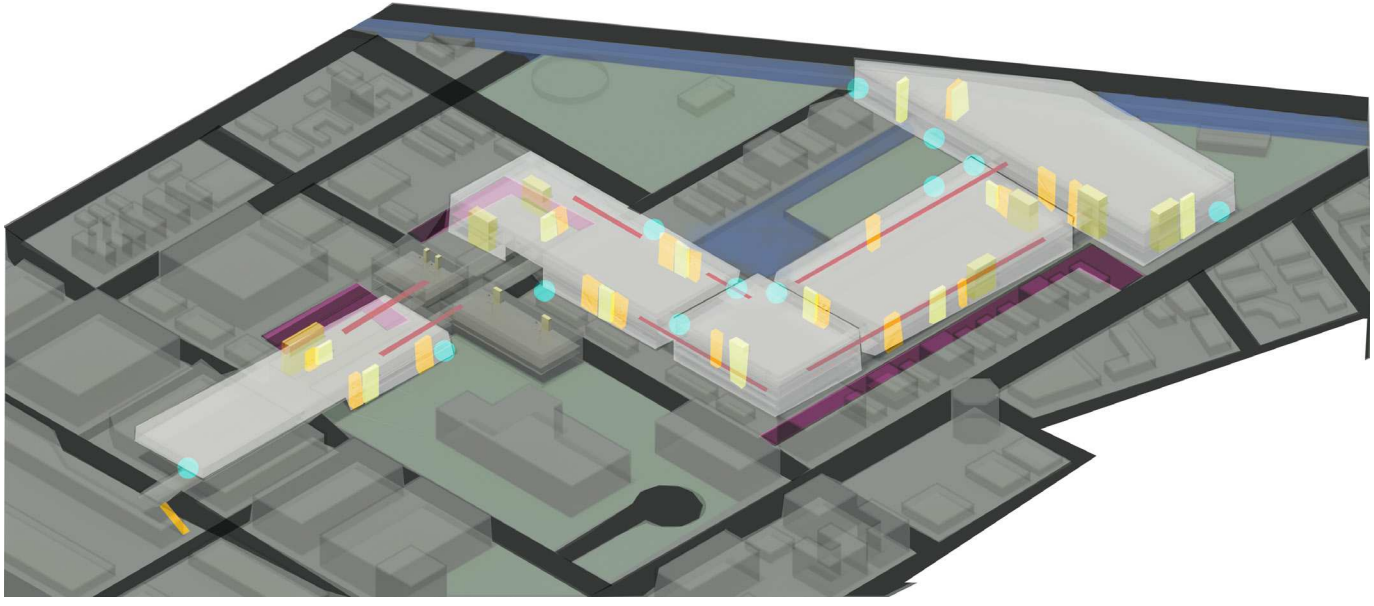
The larger yellow blocks are the elevators for the truck drop offs and the smaller yellow boxes are for the pedestrian circulation.

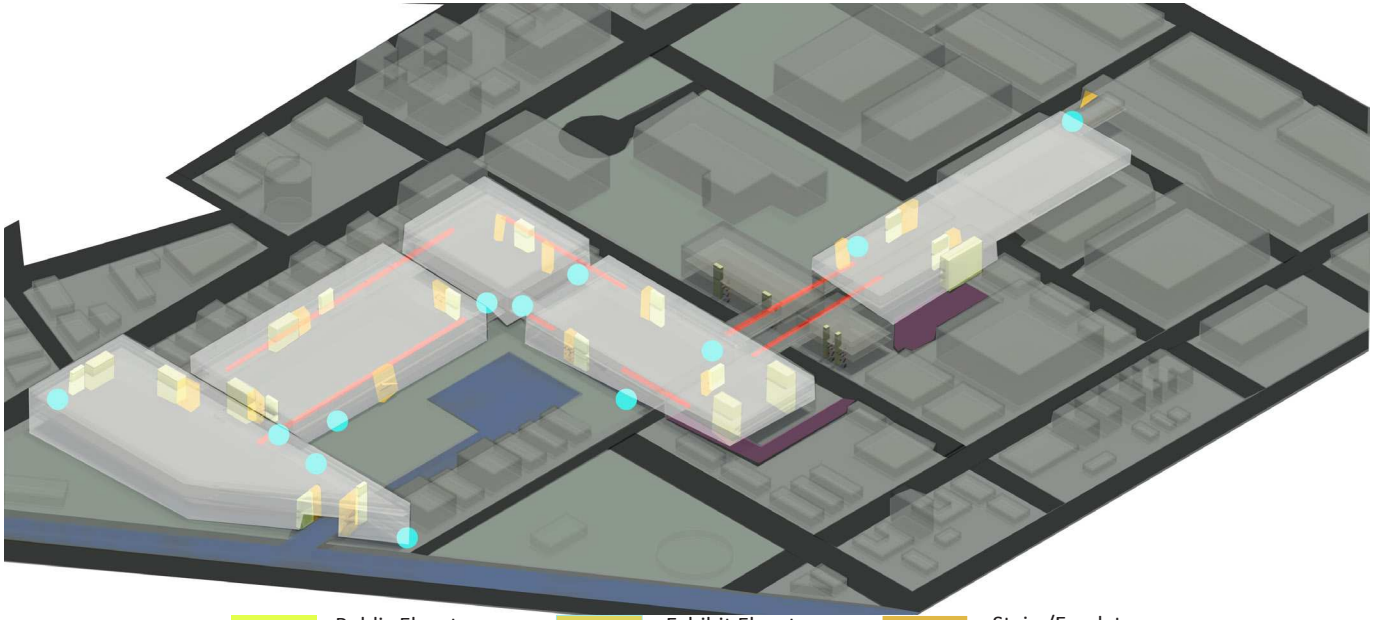
A realization was made that these diagrams needed to be stretched to encompass more of the site and actually show the site context. The reason being, the circulation needs to have the relationship with the rest of the site so that entrances and exits can be judged and placed accordingly.

That is why there was another model was made to better show the circulation throughout the entire site and the relationship to the convention center as a whole.

These diagrams are shown on the next page.

Final Circulation Diagrams





Public Elevators
Exhibit Elevator
Stairs/Escalators
Moving Walkways
Truck Drop Off
Entrances

These final circulation diagrams are placed within the surrounding context, of which can be seen in the the transparent gray color. Each of those are existing buildings on the site, as well as the other buildings that have been proposed for the plan of this area. The exhibition halls are highlighted as the white buildings, so that it is easier to see the way in which the circulation is running through them.

The black lines are the main roads of the site area, and from this the truck routes are derived. These private roads for the trucks to use as the drop offs are in the magenta color covering the black lines of the roads. From these it can be seen how they are lining up to each exhibition hall and where they are in proximity to the elevators that they will need to ride to get up to the exhibition floor. Those elevators are in the darker yellow color.

Coupled with these are the stairs to make the same way up and down so that the elevators are not always necessary to use.

With that there are main entrances for the guests of the convention center on the main streets of every hall. They are also located between each hall so that anybody can enter or exit without going directly to another hall. This is beneficial considering that the halls enclose a green space that is also containing the canal. The access to this area can give a chance for there to be an exhibition outside on the water or in the green space. Also, there is an entrance to the southern most exhibition hall directly from the parking garage that it sits upon form crossing the street.

To get from exhibition hall to the next, considering that each building does not touch directly, there will be elevated catwalks that will be situated on the second floor of the exhibition halls. These catwalks or skywalks will allow direct flow from the exhibition in one hall to the next one without having to walk outside or exit the building although that would be entirely possible. These catwalks will also be connecting the southern most exhibition hall to two more parking garages that link to the closest exhibition hall in proximity to them. This way there is dirct acces to get into the buildings from wherever you park in the area to already begin to limit them amount of walking necessary to start the journey through the convention.

The pedestrian elevators, escalators, and staircases are located near each entrance and exit. This will keep a good proximity so that anybody can easily find where to go and how to go up. Also, there is more vertical transportation in the middle of each hall, so that as somebody is walking through the hall, they have the ability to ascend or descend at any given time that they would like to. This creates less limitations on the route that visitors can take throughout the space so that it can be a new experience each time they walk through.

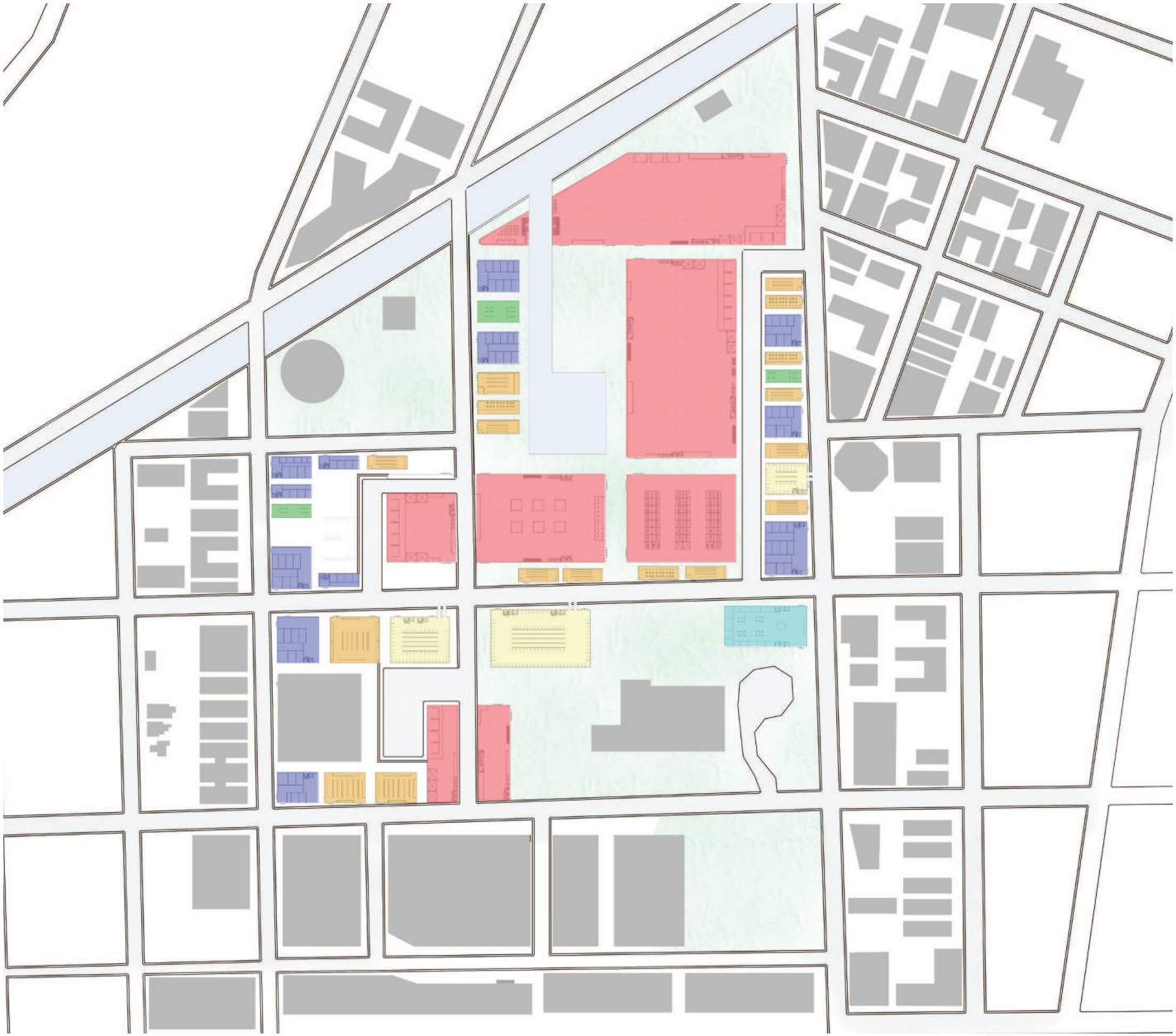
The moving walkways/autowalks are all located on the second floor of the exhibition halls. The reason being that the primary exhibition spaces are on the second floor so that this is the floor that most people will be traversing throughout any visit they have here. The autowalks extend from one exhibition hall through all the rest through the catwalks and primary areas of the exhibition halls, this way it can help to limit the time and effort necessary to make such an exhausting walk, especially if the visitors are carrying anything with them.

Master Plan

At this point, with the general planning completed, programming implemented, and a circulation strategy developed, it is now possible to develop the final master plan. This plan will consist of each of these elements combined into one cohesive plan that will function as a solid unit with the rest of the area as planned and the previous context that already exists.
The master plan will be displayed and developed through floor plans and sections. These drawings will assist in giving a clear idea on where each program is situated, what is existing and what is new, and how the make up of the interior spaces will look. This way a sense of scale of the buildings to an individual person can start to be understood, as well as the scale of the buildings in conjuction to one another. First, we will take a look at the floor plans so that the the final planning can be understood before the sections come into play, they are drawn in such a way that they link with each other not just by showing similar information, but by color as well. Each color that is utilized in the plans is replicated in the sections to keep a consistency throughout the drawings to easily identify what is where and how it is being shown.

The first floor plan, on the next page, shows the layout of the floor plan for each of the proposed buildings from the plan. This assists in giving a sense of what the program of each building is instead of just relying on the color to know what it is. The light gray color is used to show the existing buildings that have not been touch by the design and will not be changed. Now, since this is the first floor, the fact that the exhibition halls cover the streets will not be shown yet since that happens on the second floor of the exhibition halls, which will be in the plan of that floor shown in a couple pages. This plan shows where each exhibition hall will be situated on the ground plan and how the are looking in conjuction with the other proposed buildings and the existing ones.
Another piece of information to understand this plan is that for each proposed building that is not an exhibition hall has a floor to ceiling height of 12 feet. This is to give ample room for whatever program is implemented and create a more open space as opposed to a smaller ceiling height that some of the programs require. However, the exhibition halls have a floor to ceiling height of 30 feet. This is to give ample room for any type of display that might come through the convention and so that there is no limitation to the size of the event that is to be held there. One last piece of information for the ceiling heights is that the exhibition hall to the bottom left is one that is primarily meeting space and offices, so because of that the ceiling height is at 15 feet. This way there can still be large meetings to give presentations, but not at the same scale as that of the exhibition halls.
At this point another decision was made, as thought of the exterior architectonic would look, and that is that each corner of the exhibition halls will be rounded off to allow glazing, or glass, to wrap around the corners in an effort to excentuate the horizontality of the buildings.

First Floor plan (Ground Level)



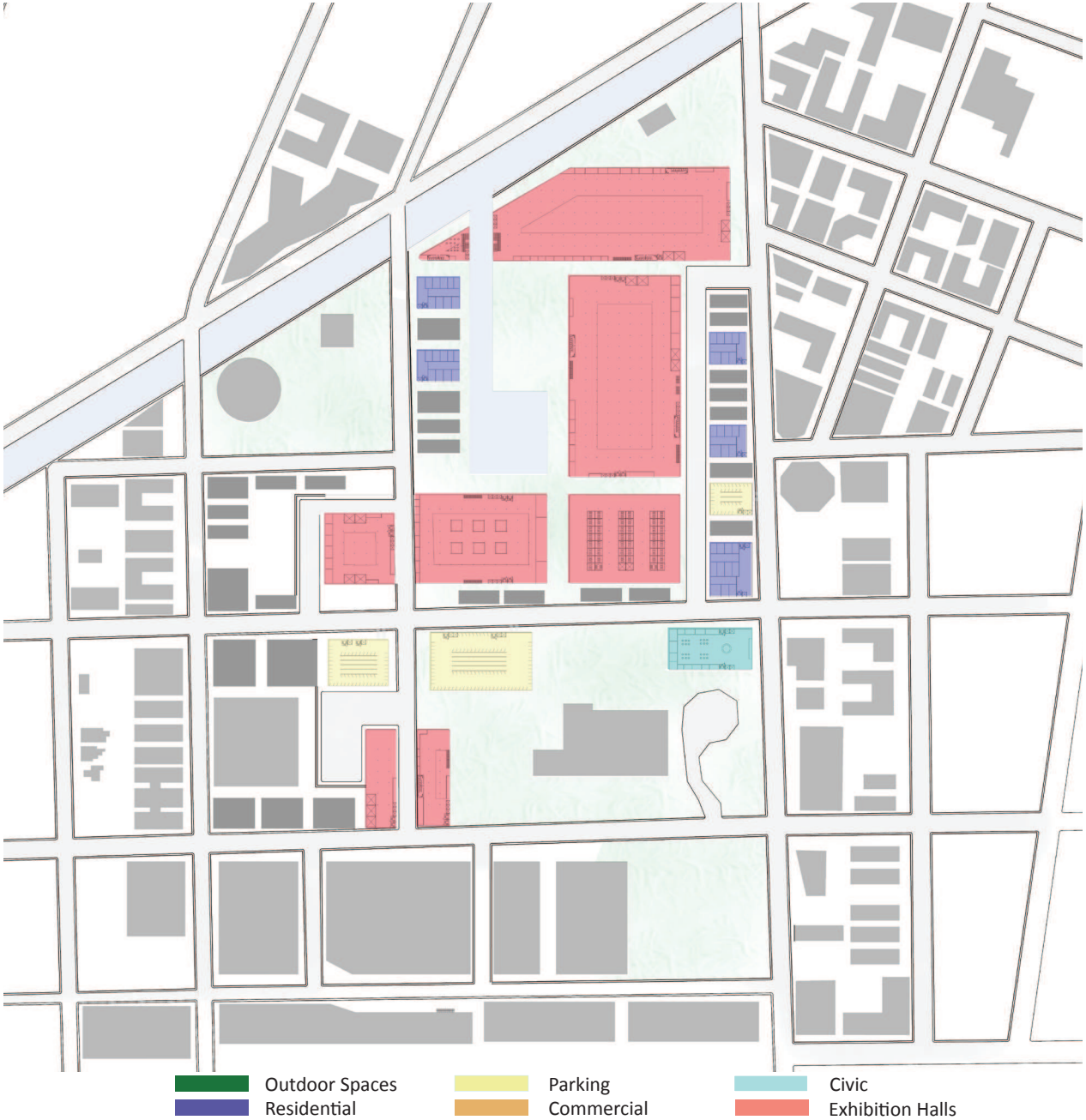
Outdoor Spaces
Residential
Parking
Commercial
Civic
Exhibition Halls

This next floor plan is to show the mezzanine floorr arrangement. The mezzanine is a balcony area that will have a center piece of the floor plate cut out to be open to the first floor, this way the first floor will have an even greater appearance through the height of the ceiling that will be perceived. This level of the exhibition halls is 15 feet tall and consists mainly of meeting spaces and office rooms, as well as concessions and utilities. This is designed as a buffer floor between the first floor, the entrance, and the primary exhibition halls. Again the arrangement of each of these floors are shown to the extent on how they can be laid out given the parameters of the design and what could be one of the most efficient ways of laying it out. One idea that has been carried through from the precedent studies of other exhibition halls is that the meeting spaces and offices are lined along the perimeter of the building so that they do not interfere with the large open space necessary for the exhibition. This is also reflected on the placement of the utilities and concessions.

In this plan it can be seen that there is another darker shade of gray. This color denotes that in buildings that are being proposed by this plan, we are now looking from a view that sees the roofs of these buildings. The darker gray is to show the difference between the exisiting and the proposed even after we reach a roof plan of them.

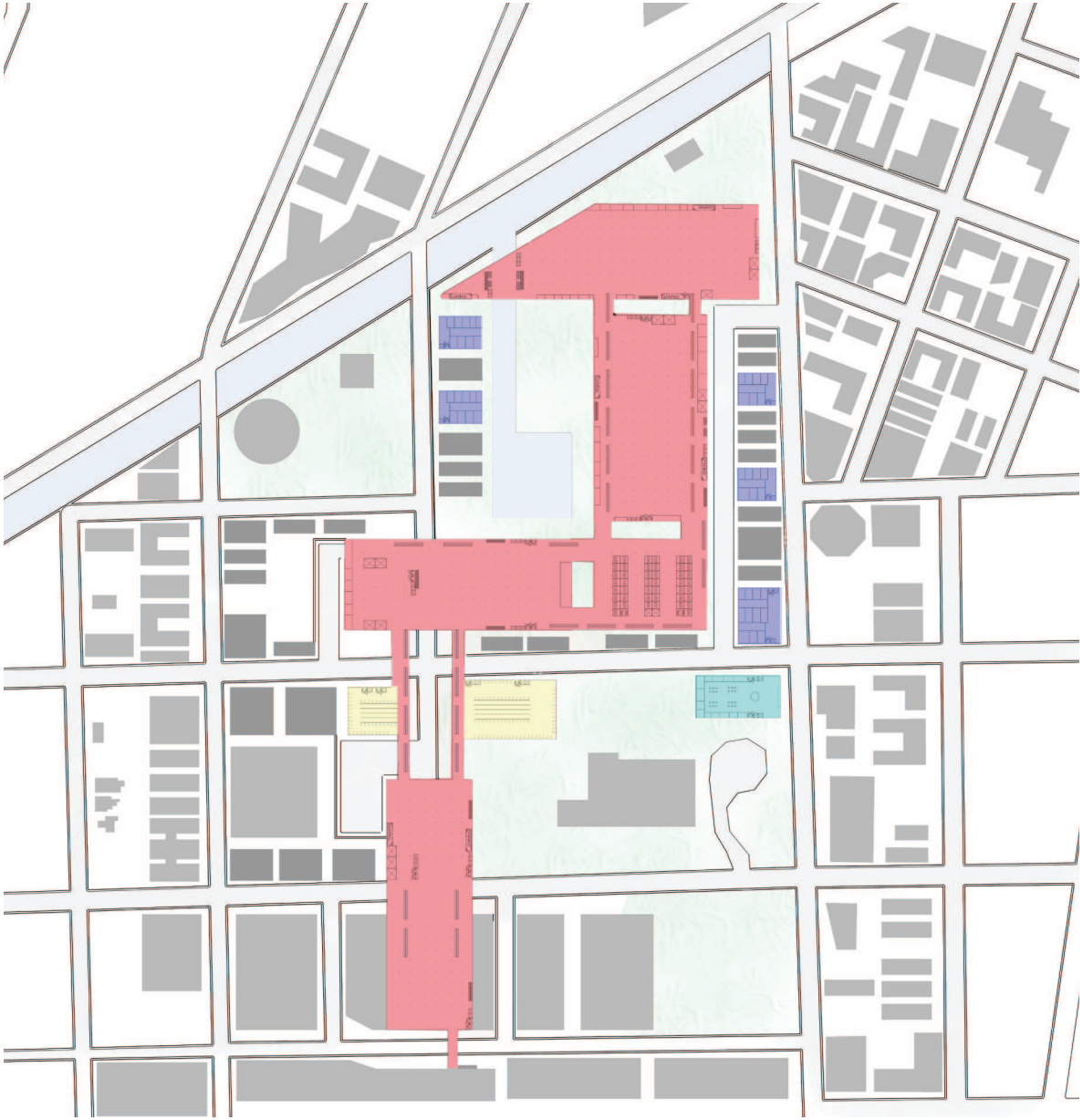
From this, we can really begin to understand the real relationship between the buildings heights proposed on the site, in terms of when one stop how do the others continue up and what program is working on the same floor as those.

Mezzanine Floor Plan



The second floor of the exhibition halls is again a 30 foot ceiling, and this is the plan to really show how each of them connect with each other through the catwalks and the horizontal transportation between them.
At this point most of the other buildings that are being proposed are at their roof plan so that we can focus on the exhibition halls in particular considering that this is at 45 feet above the ground plan.
Now that we are looking at the primary exhibition spaces it is shown how each of them cross the streets and the canal as it runs through the site. Also, the relationship of how the catwalks connect each of them at two points for each hall. The reason for having two, is that congestion can be limited and and that anybody can go from one hall to the other no matter what side of the hall they are on. Being that this is the primary exhibition space, all the floors are left open as much as possible to allow for ample room for the convention with being obstructed by unecessary programs that are not as important to the convention itself. The utilities and concessions are again pushed to the edges of the spaces to limit that amount of obstructions to effect the open area needed. With this plan laid out it can be seen where the horizontal circulation is, utilizing the autowalks. These autowalks go from one hall all the way to the last hall. There are breaks in them where necessary due to placement of other program and vertical circulation, however they still assist in the movement through each building making the walk easier and more comfortable to traverse. The autowalks are located near the perimeter of the buildings on each side, this will allow for people on both sides to use them and much like the other programs being pushed to the edges it will keep from obstructing the open space necessary for the hall to function properly as an exhibition hall.

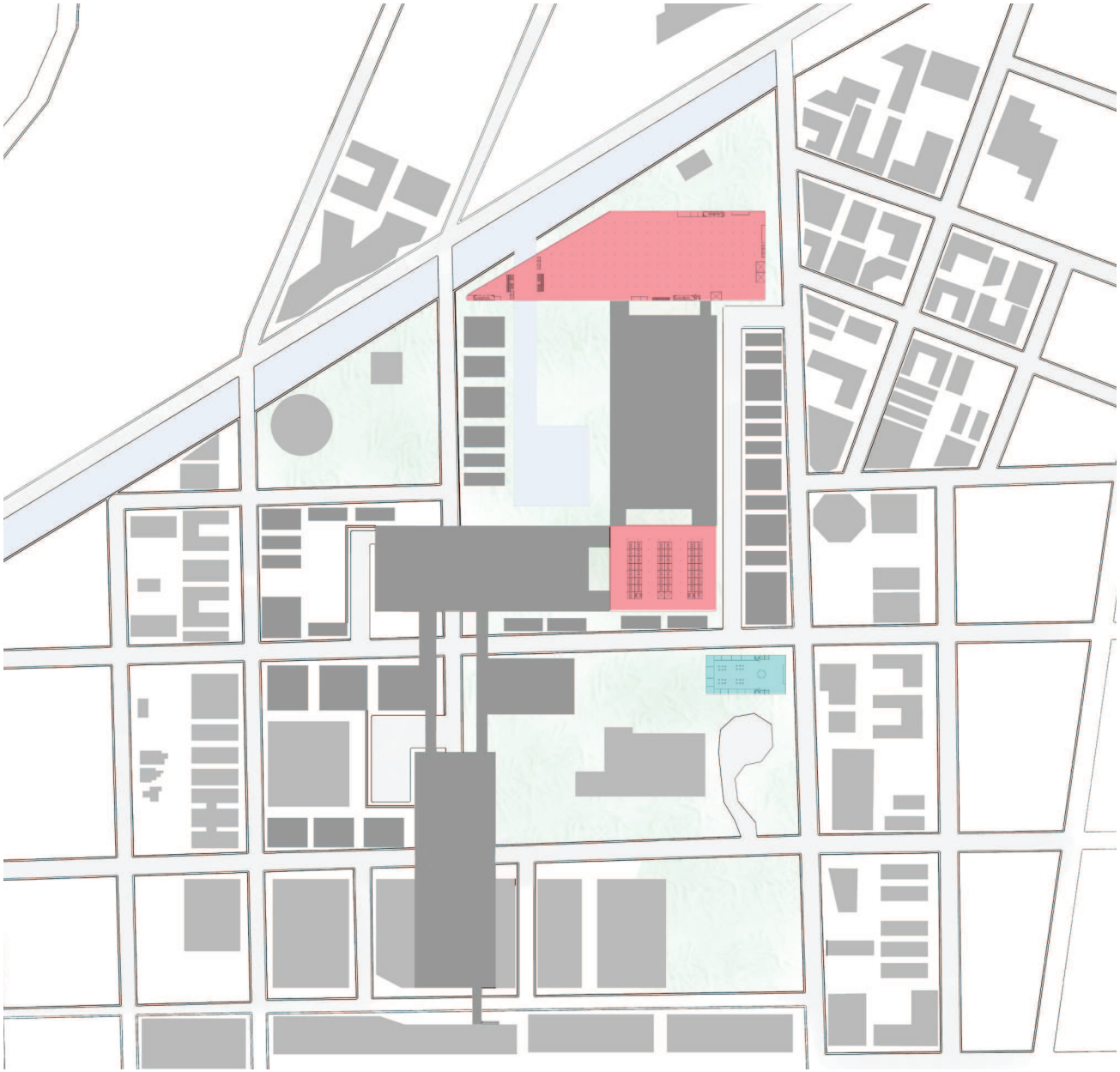
Second Floor Plan



Outdoor Spaces
Residential
Parking
Commercial
Civic
Exhibition Halls

The final floor plan is for the third floor of the exhibition halls. Beside city hall, two of the exhibition halls are the only ones that go to this height. The ceiling height is at 20 feet for this floor and the program for these are very specific. For the exhibition hall to the north, this floor is the ballroom that was requested by the RFQ to add into the site. This ballroom is located on the top floor to allow for great views around the city as well as the most amount of daylighting to come in from the east, west, and south. Having this structure rise above the surrounding ones will allow that to happen as well as making it a pinnacle point for the corner of the site. This makes the convention seen at a prominent piece of the city that shows something important. However, even though it is larger in scale comparing to the others, it still keeps within a consistency of the surrounding context without being too overpowering, which is something that was trying to be avoided. With that in mind the other hall that rises to this height is on the bottom left of the site. This building is originally programed to be for meeting space, and because of this, the top floor has been programed to be the food courst of the area. A relaxing break point as a center point for all the exhibition halls as one is traversing from one to the next, this area can give the users a placde to rest and eat at their leisure to keep going through the convention considering these events are all day affairs. Also, this provides easy access to a place to eat for those who might be here for meetings after meetings and don't have much time to go somewhere else for food. This was done as a convenience means for the users and relaxing method of breaking up the space. Being that this floor is meant as a relaxing area, that is why it also exceeds the other exhibition halls in height, to allow more daylight to come in as well as show some views of the city that cannot be seen from the other halls. At this point you could overlook the entire convention area as well to try to plan out the rest of the time there and see what could be interesting to go to as the day presses on for the convention. This building as itself will be open whether or not there is a convention going on or not, that way businesses can use it for meeting spaces and the food court can be open for the pedestrians walking around the city. This is also why it is situated near another corner of the site.

Third Floor Plan

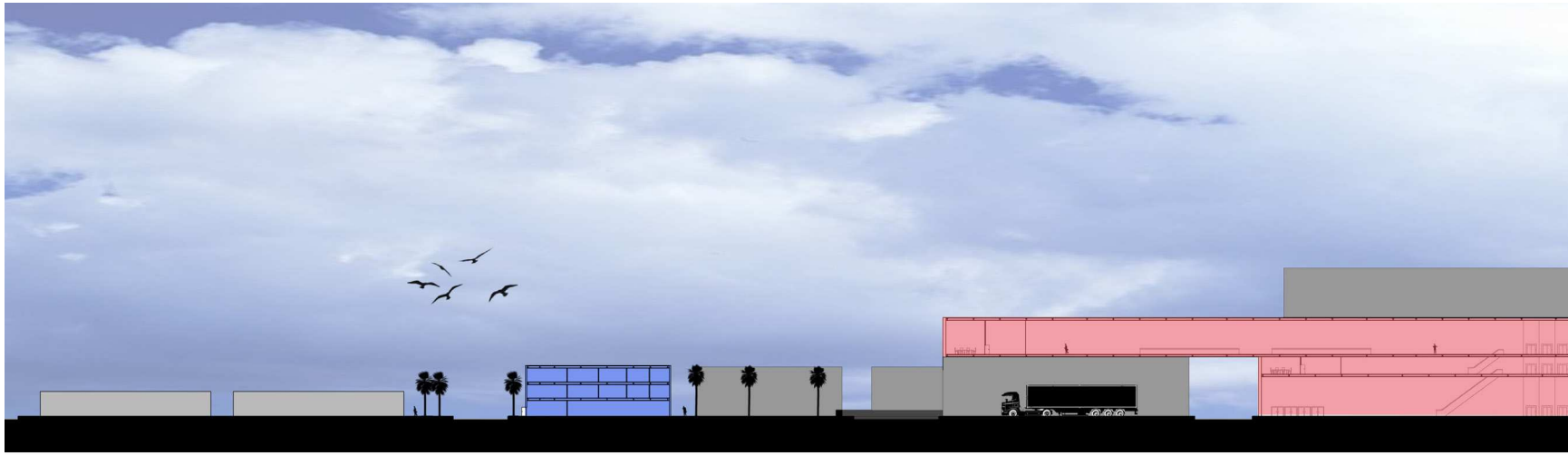


Outdoor Spaces
Residential
Parking
Commercial
Civic
Exhibition Halls

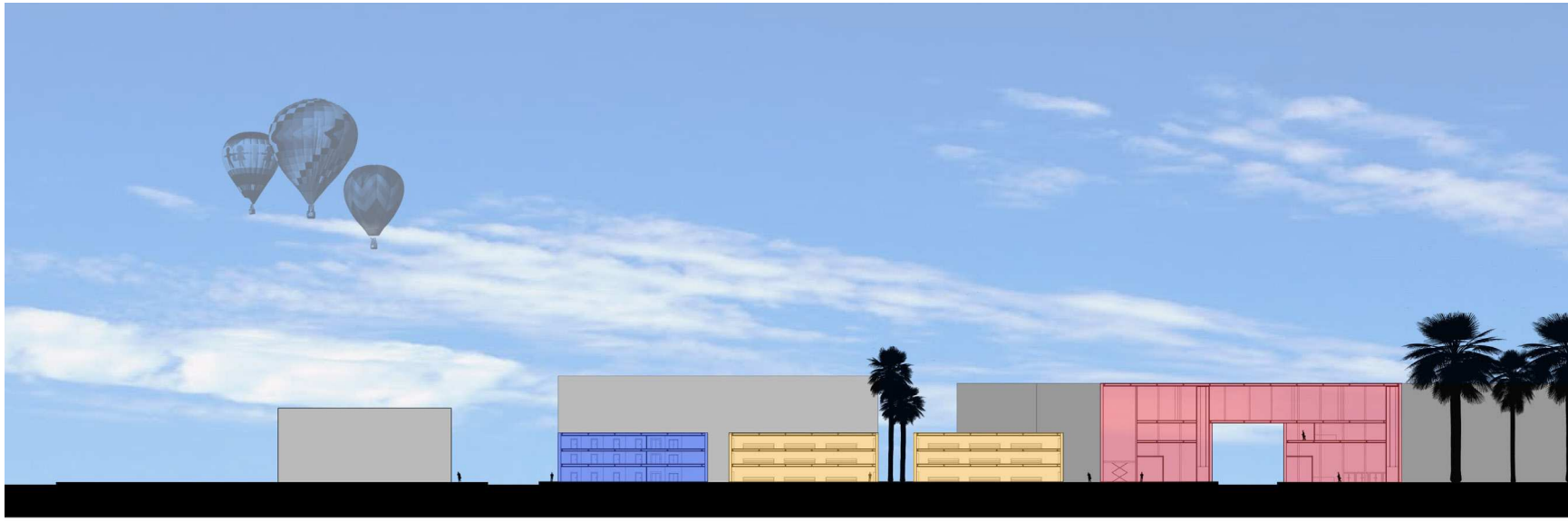
1st Level (Ground Floor)

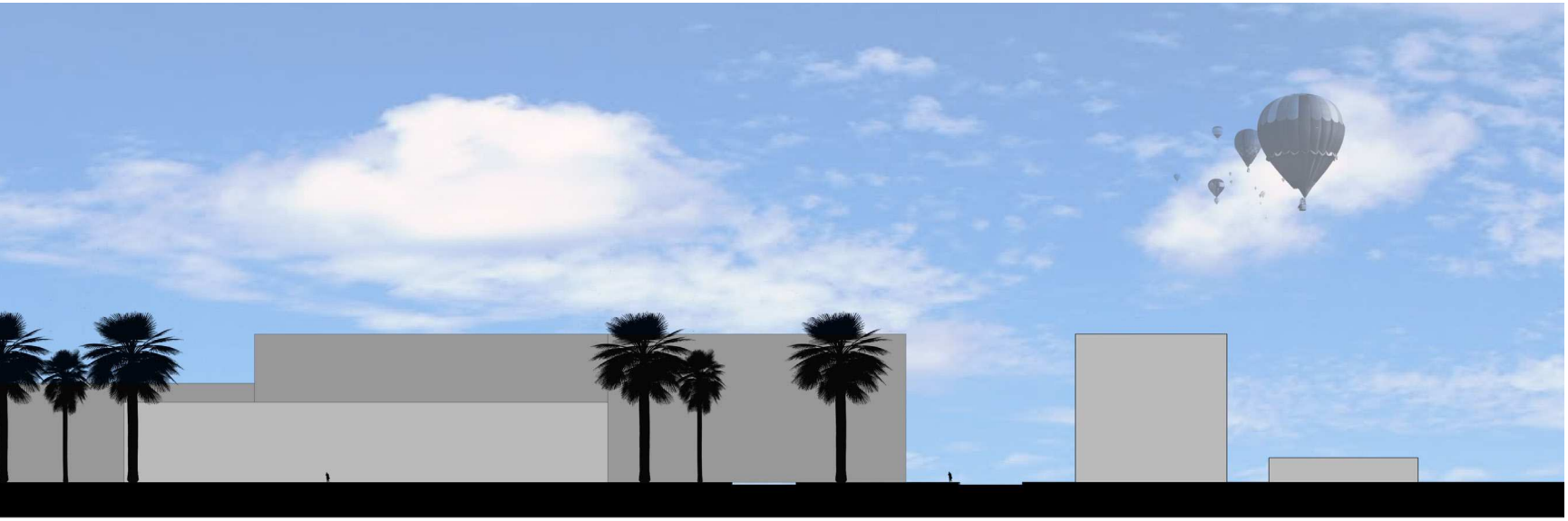
The section drawings as mentioned earlier keep a consistent feel of the floor plans to make it easier to understand them in terms of programming and where they are situated. Also, these section cute are to really show how the exhibition halls are working as well as the circulation through the buildings. Especially how the exhibition halls look as they cross the streets and the canal. Showing the catwalk circulation from hall to hall as well. Each section includes the addition of people and everyday objects that will show the scale of each space and how an individual will be in the space. How they might percieve the space if it is too large or too small, as well as, looking at the spaces in between each of the buildings and how that effects the negative spaces.

A



B



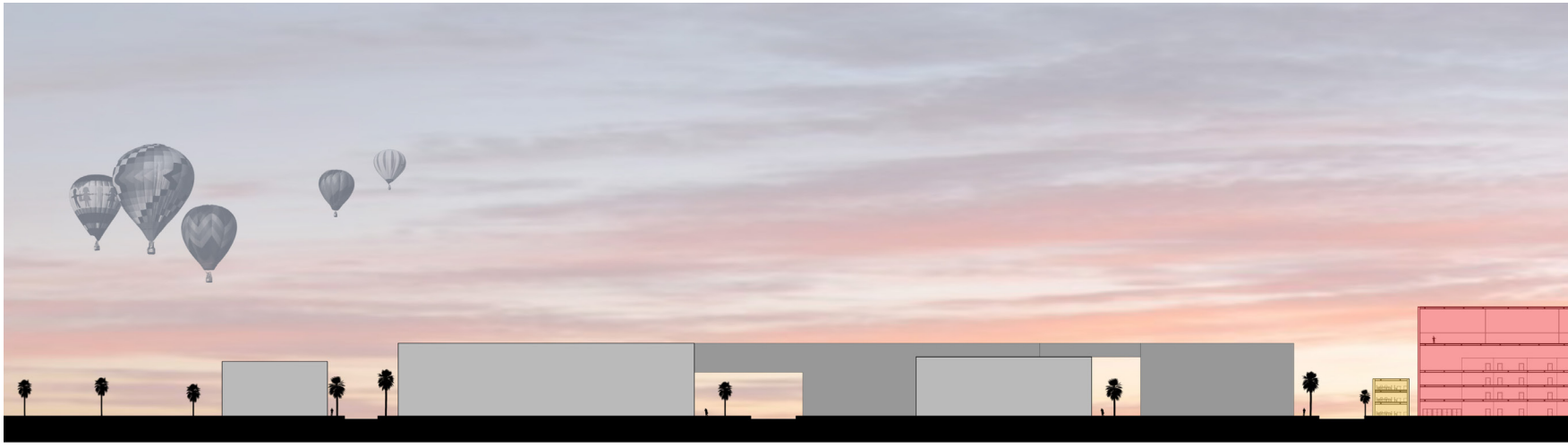


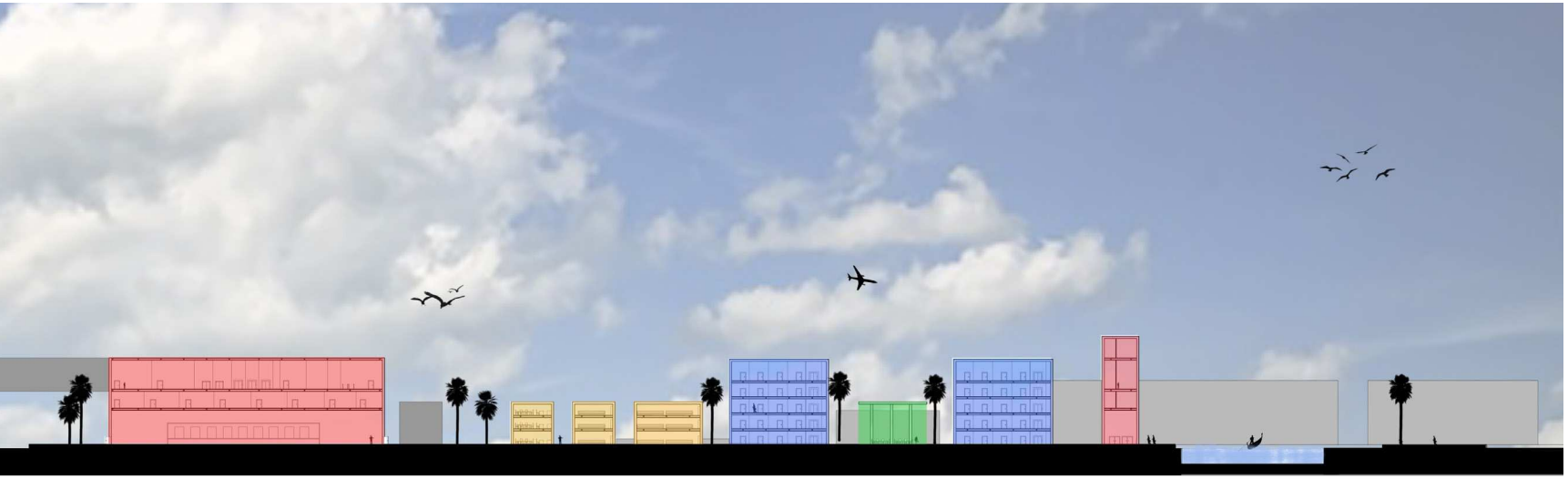
1st Level (Ground Floor)

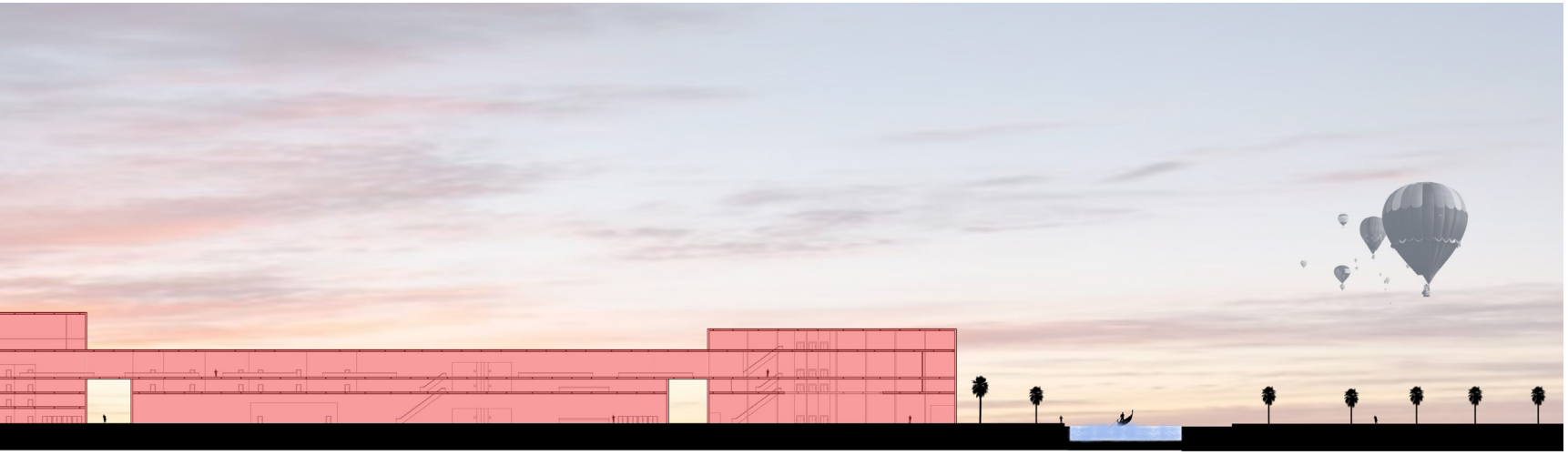
The next section drawings are going in the opposite direction so the orientation of the floor plan has been turned so that you, the reader, will not have to turn your head sideways to understand what the section cut is going through. These also go through the canal so that the scale of the canal running through the site and how it continues through the island can be better understood that it is not something that a large boat could utilize, but something smaller like a gondolla or a couple person boat could make it to the convention center by the canal. This would assist in the use of the canal as a water feature and another mode to transportation to the area.

C

D

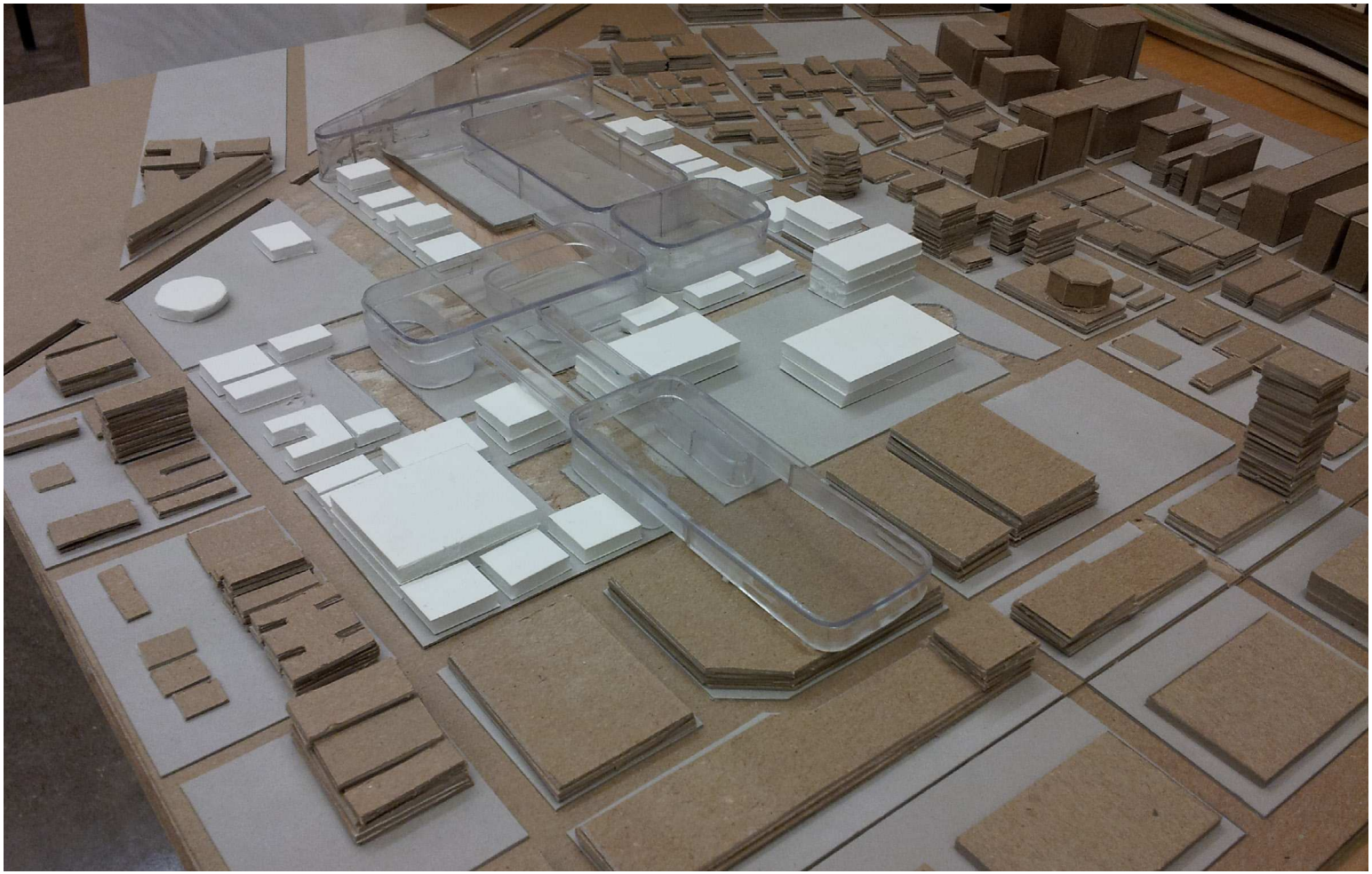


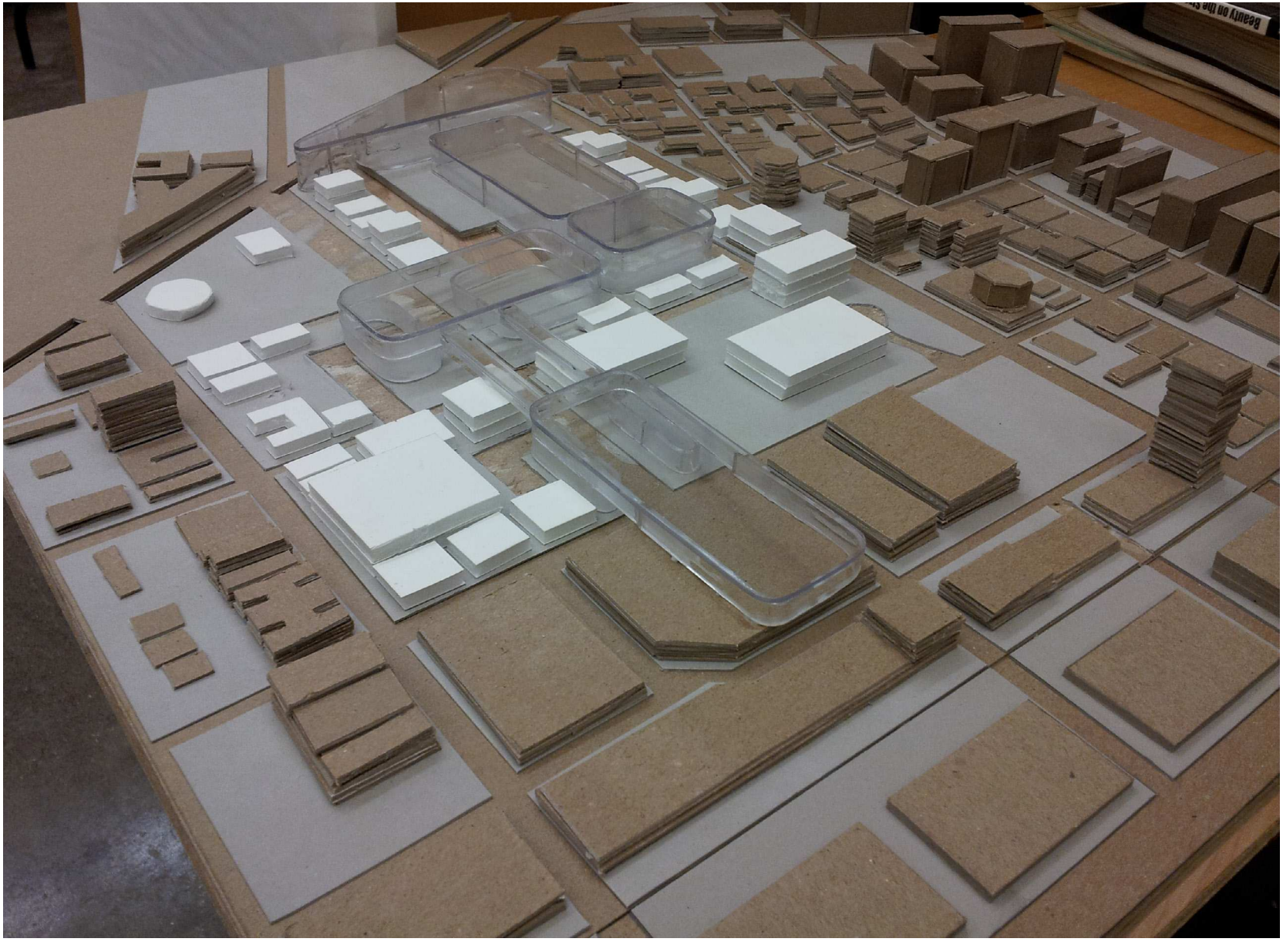


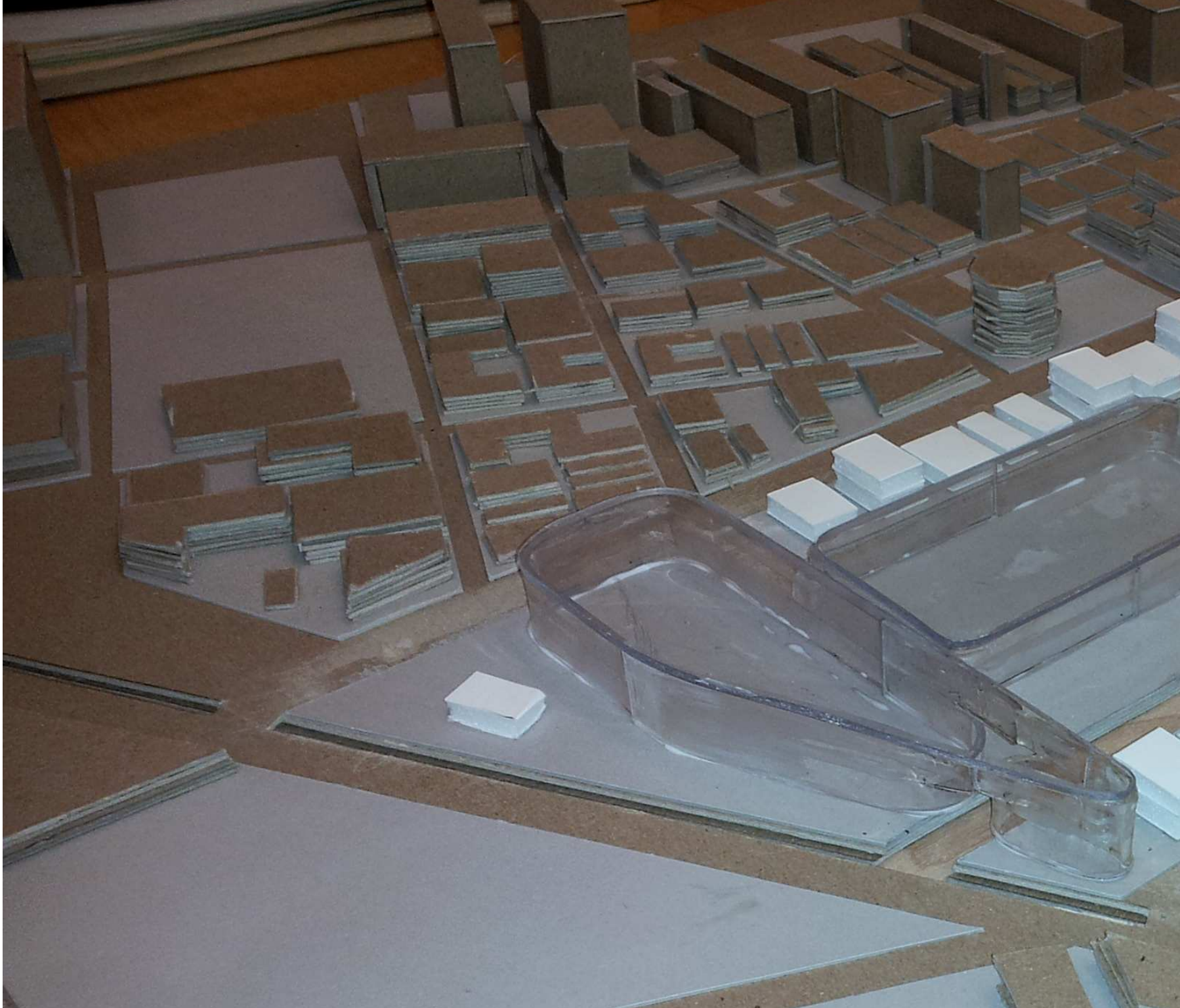


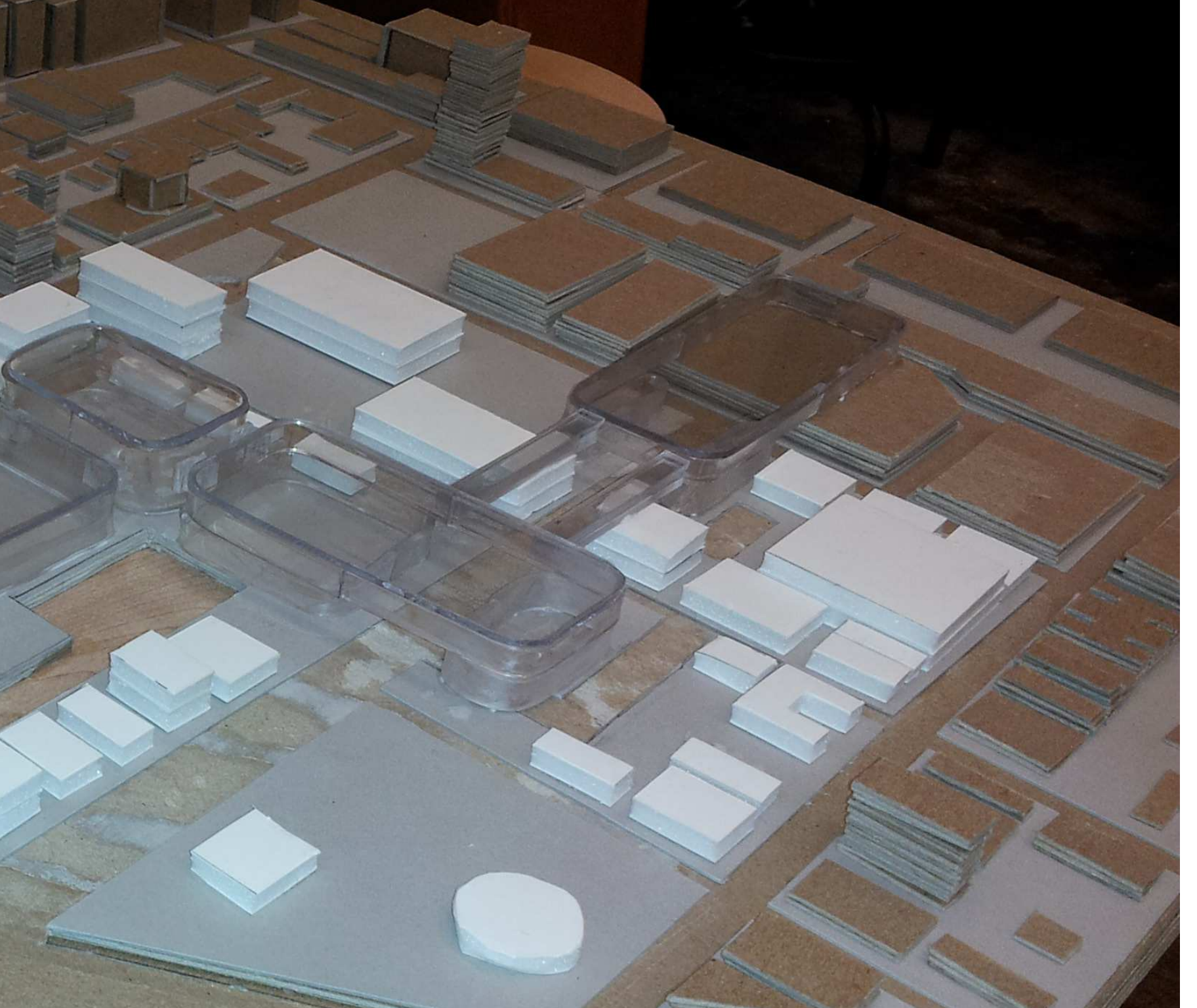
Final Model

The final model was built to show the differences between what is exisiting, what I am proposing that is not directly convention center program and the exhibition halls. The brown chipboard is the existing structure, the white foam board indicates buildings that are proposed by the master plan that are not exhibition halls. The clear acrylic represents the exhibition halls, which have been curved around to corners to show the edge conditions and sanded to show where initial plans for transparencies will go for the architectural intent.



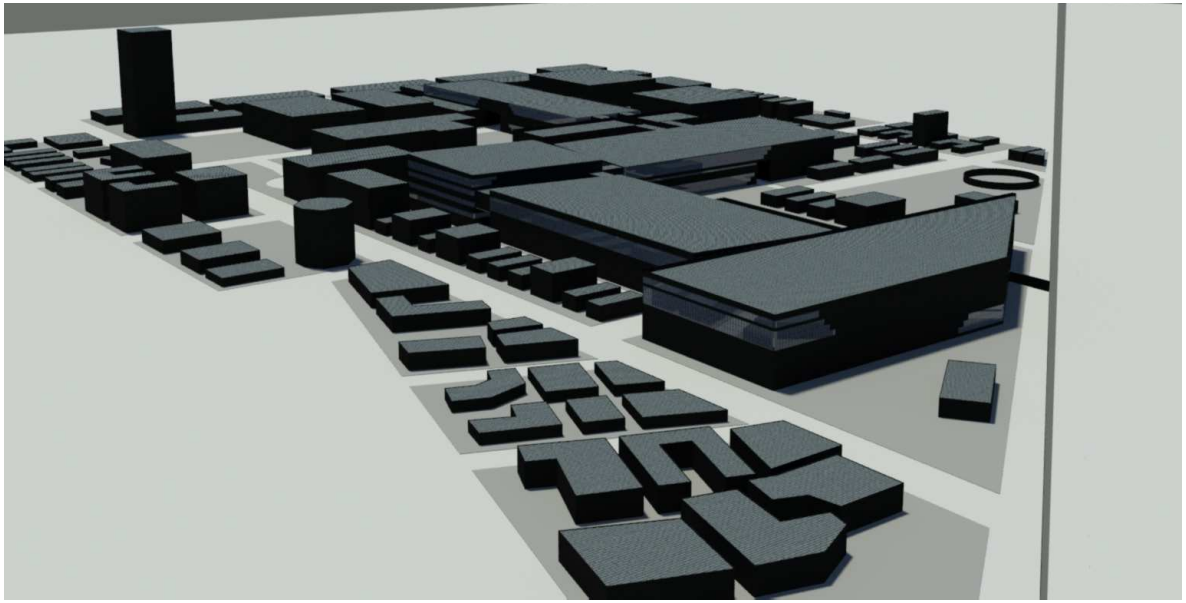


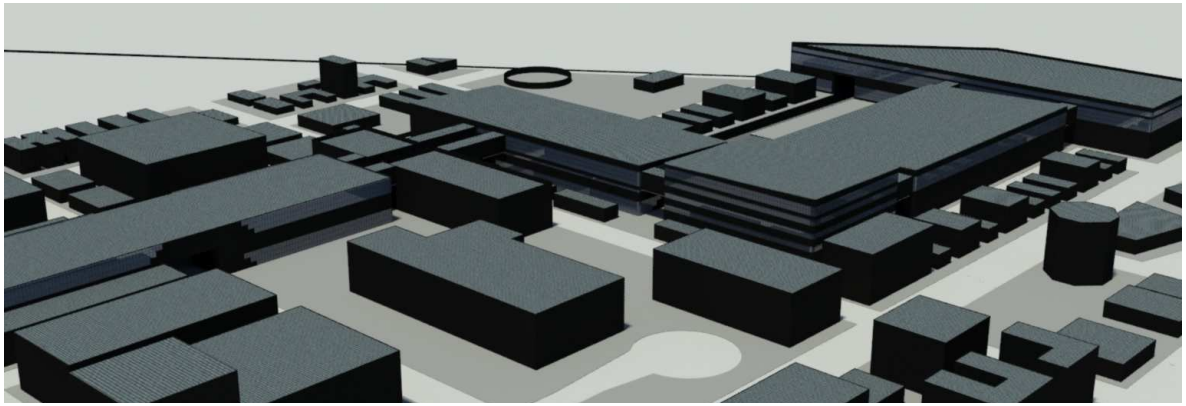


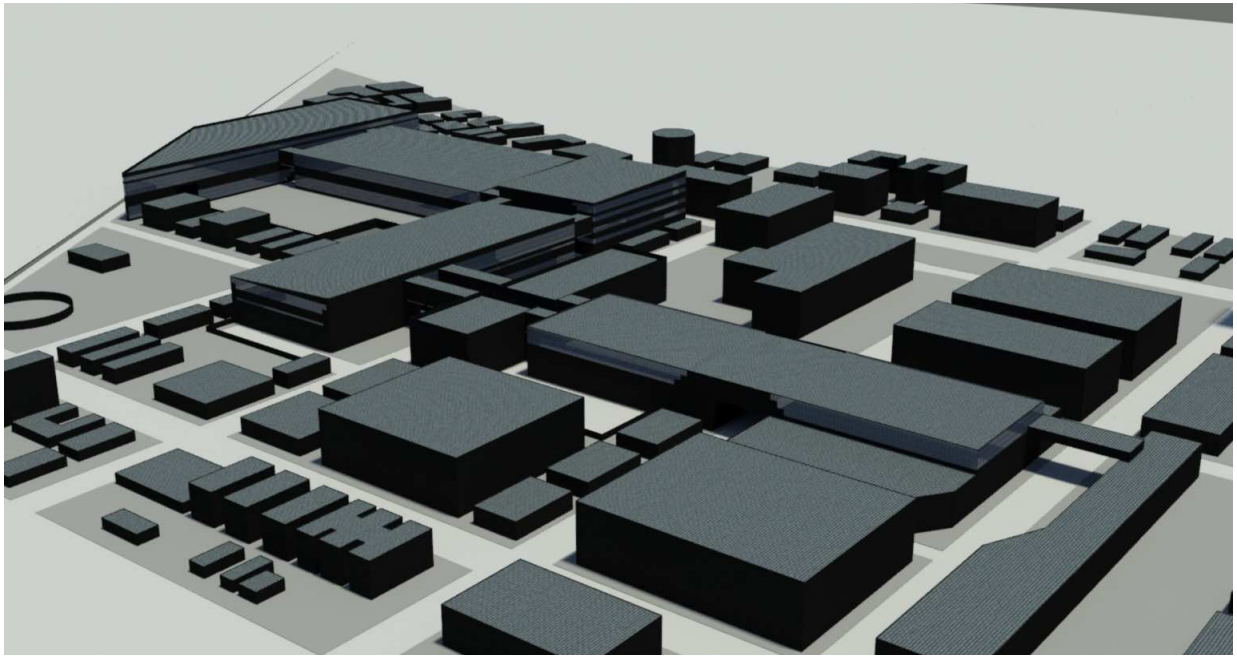


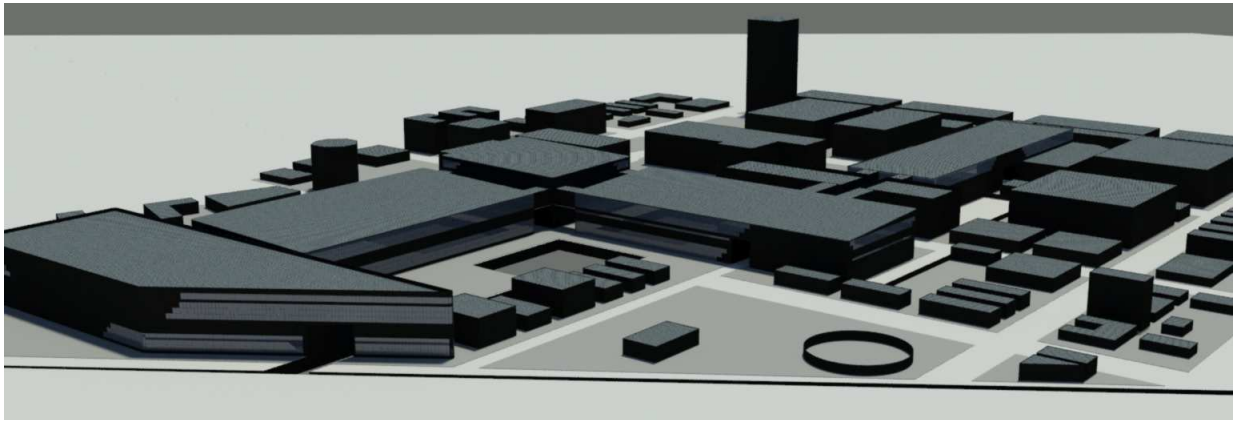
Architectural Intent

From this point, there is some architectural intent that would be beneficial for the exterior of the building that will be addressed. Mostly it is where the transparencies and the opaqueness of the exhibition halls we be. This is something that is imperitive to show considering they are such large structures they will require much daylighting and glazing will be the way to do it. So a computer model was built to show the glazing and the placement of it. The intent was to keep the actual exhibition spaces as open as possible having the glazing wrap around the corners of the buildings to be the edges seemless, much like the core of the design was. However, where there would be blocked views or utility programs the walls would stay more opaque. These first renderings were done with black walls so that the openings of the glass could show through.

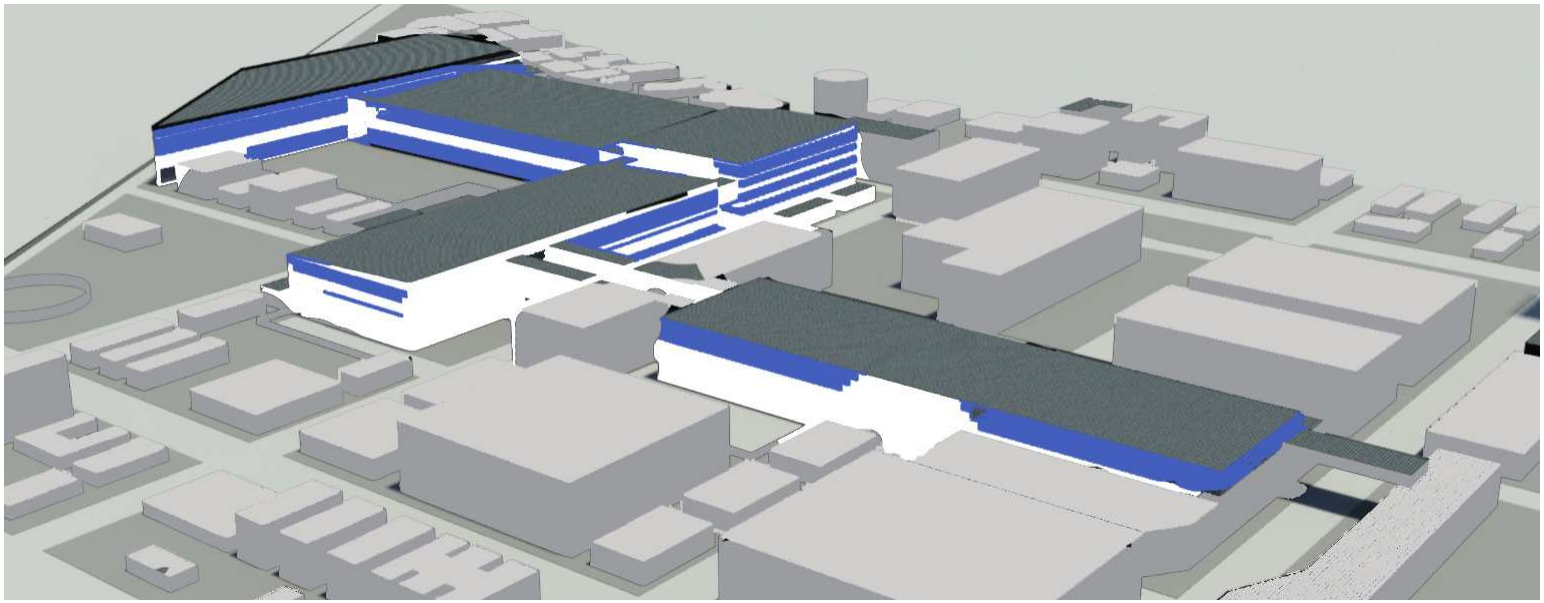


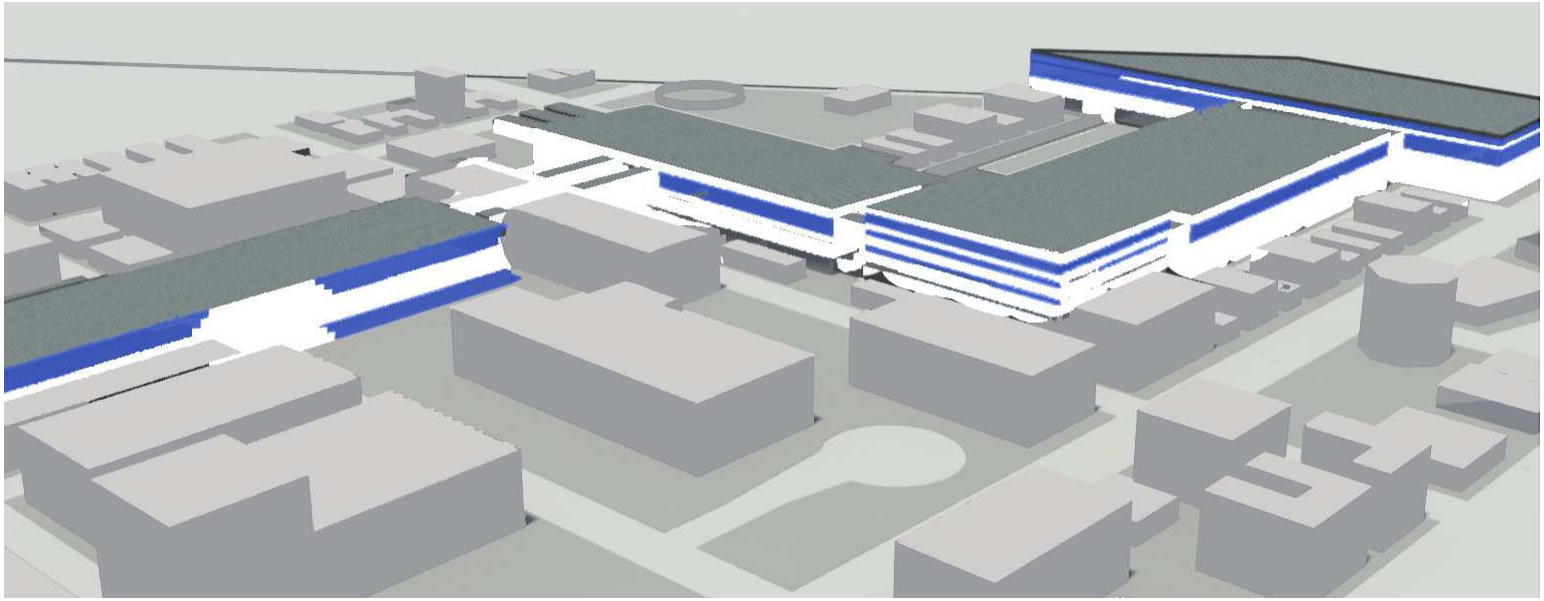






Although it began to show some of the glazing intended, the dark nature of these renderings loses some of the quality that it needs to really show what is intended by the design. So because of this, a couple of these were edited to have white walls for the exhibition halls and excentuate the glazing more with a bright blue color.





Having the white walls, brings out where the glazing will be. The glazing focused mainly on the south, west, and east sides does bring up a problem though. With so much daylighting there will need to be some method of sun shading to keep form too much sun getting in, or to just diffuse the light a little. This is where a search was done on methods of sun shading and a technique was found that would really celebrate the glazing and the life of the building as a whole. Implemented at The Richard Desmond Children's Eye Centre in London, UK, a series of horizontal louvres were hung by the glazing that diffuse the light and also light up in all different colors to give life to the building throughout the day and night. And considering that Miami Beach is a 24 hour city and the conventions can go on until late in the night, it would be a nice quality to have the buildings be as exciting as the program on the inside.

(22) http://www.moorfields.nhs.uk/aboutus/therichardddesmondchildrenseyecentre

Conclusion

Implementing a serpentine design that spreads out the convention center into a series of buildings that mimics a world fair, in this case, of this city, is a solution that seems to be more effective in resolving the issues that arose from the research. Looking at solving the issue of addressing the surrounding context and relating back to the city as whole to work with it instead of city as a stand alone structure, this design utilizes the means of the city to form it's final design to allow it to mesh into the city keeping the street fronts and density in tact that could have been destroyed or unattended otherwise.

There was another topic that was studied at the start of this project, and that was humar power as an alternative source of generating electricity. This is something that had the possibility of being implemented into the design to assist in the fact that convention centers do not make much money. However, being that the cost of the electricity for the centers was not even close to a factor in which they lose money this topic was dropped to focus on the design and urban plan of the convention center to the surrounding context. The following page has some of the human power research.

Human Power

So with that as the starting point came the research. Starting with looking at Human Power, which is defined as work or energy that is produced from the human body(1), there have been many ways that have been invented to utilize normal activities we do in our life to help generate electricity that can be used to power the building it is in, the mechanism it is used for, or to be fed back into the grid when there is excess. Examples of this come from simple inventions such as the Copenhagen Wheel, which is a wheel used on a bike that generates electricity while braking that can be utilized for an extra boost of energy when going uphill(2). Now there have been advances that allow for larger uses than on a completely individual scale. This is shown to some extent with The Great Outdoor Gym Company's "Green Energy Gym". In Hull,
England, This gym consists of 6 exercise machines that are all hooked into the electricity of the gym that when each machine is getting used electricity is generated and used by the gym
itself to be lit up as it gets darker out. Each piece of equipment can generate between 50-400 watts of electricity, however on average each one generates 50-100 watts with the average user(3). The gym lights up bright with green neon LED lights when it gets dark so that it can still be used at night. The extra electricity that is gained and not used in the gym is fed back in the grid for other purposes. This is the first of many gyms in plan to be put in place to assist in cleaner electricity and a healthier country.


Copenhagen Wheel

"Green Energy Gym" Hull, England

(1) http://dictionary.reference.com/, LLC, 2012
(2) http://dictionary.reference.com/, Cliff Kuang, 2011
(3) http://www.psfk.com/2012/05/generate-electricity-while-working-out.html, The Green Energy Gym harnesses 'people power,' converting the energy people expend when they exercise to clean, usable electricity, Allie Walker, May 16, 2012.

Acknowledgements

With the conclusion of this book, it will mark the end my long schooling. At this point there are those that have help guide me through this and put up with me no matter how much I complained and neglected them. That is why I would like to show my appreciation for those people and truly thank them with every ounce of gratitude that I have.

Most importantly, I would like say thank you to my parents. As they have allowed me to saty in their house and gave me everything I needed to survive in this world, a warm bed, food everyday, and most importantly support on whatever I had choose to do . Support to the greatest intent because they trusted me and knew that whatever I decided to do I would succeed at. None of this would have been possible without them at all. I could not imagine a better life than the one have and a better family altogether that will always be there for me everyday when I wake up. I know I don't always show how much I love you mom, dad, grandma, Megan, Ralph, and especially my neices Faith and Lily, but I truly love you with every bit of my heart. All of you are everything I have, and everything I need to succeed in life and be happy.

I would also like to thank my good friends that have always given me the confidence and support as things got tough in life. The confidence they had in me gave me the confidence to try harder because I knew I could with them behind me. This is in particular going out to Amanda Steele, who no matter what happened in my life made me smile and laugh uncontrollably, and Kelsea Lazzaro, who has the biggest smile I have ever seen that makes me want to smile, and has been going through school this past year helping me get through as I have helped her get through. Both of you are amazing.

To my best friend Jesse, I know that life has separated us across America, but soon we will be reunited. It's been a hard year not having you by my side. Watching you get out of my car at the airport to leave was one of the hardest days of my life. I miss you entirely, but no matter what happens you will always be the best friend I have ever had.

And lastly I would like to give a very special thank you to my dear friend Elisabeth. Transferring to architecture school and pursuing this dream has put the most detriment on you more than anyone else I believe. When my priorities switched to school and school alone, the relationship we had dwindled, and that brought about a time in which we didn't talk. I don't know how I survived it because that was truly one of the darkest times in my life. This is why it makes me so happy know that we are still really good friends, and even after everything happened between us, to have you support me as much as you did has been wonderful. Especially coming to watch my final critique, all of this meant more to me than you will ever know. I am proud to have such an amazing person as such a close friend as you. I can honestly say no one knows me better than you and I don't believe anyone will ever know me better than you do, all the times we have had and everything we have gone through. I hope that you will be in my life until the end. Thank you so very much for being an excellent friend, support system, dinner companion, and for just being you. Don't change who you are, because you are best person I have met and I know that one day everything will work out for you the way you want it to.

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(5) http://www.dcconvention.com/Venues/ConventionCenter/UniqueSpaces.aspx, Explore the rich history of the Walter E. Washington Convention Center and our nation's capital while enjoying fun facts about our venue and past events, Events DC, 2012.

(6)Woolley, John T.; Gerhard Peters. "Remarks in Convention Hall, Philadelphia. August 29, 1964". The American Presidency Project. Retrieved 2008-12-30.

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(10)http://archrecord.construction.com/projects/bts/archives/civic/04_lawrenceConvention/overview.asp, David L. Lawrence Convention Center, McGraw-Hill Companies Inc., 2012.

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