Olympic Stadium
NYC 2012

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Design Thesis Program
2004-2005

OLYMPIC STADIUM FOR NEW YORK CITY, 2012

A Design Thesis Submitted to the
Department of Architecture and Landscape Architecture
of North Dakota State University

By

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In Partial Fulfillment of the Requirements
for the Degree of
Bachelor of Architecture

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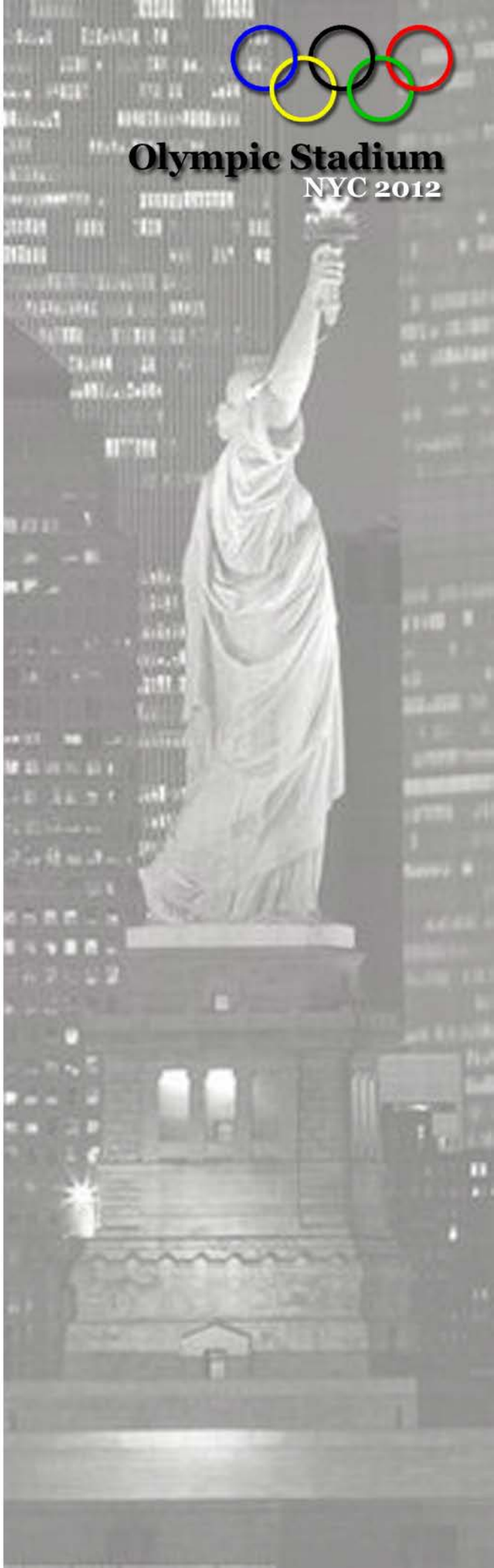
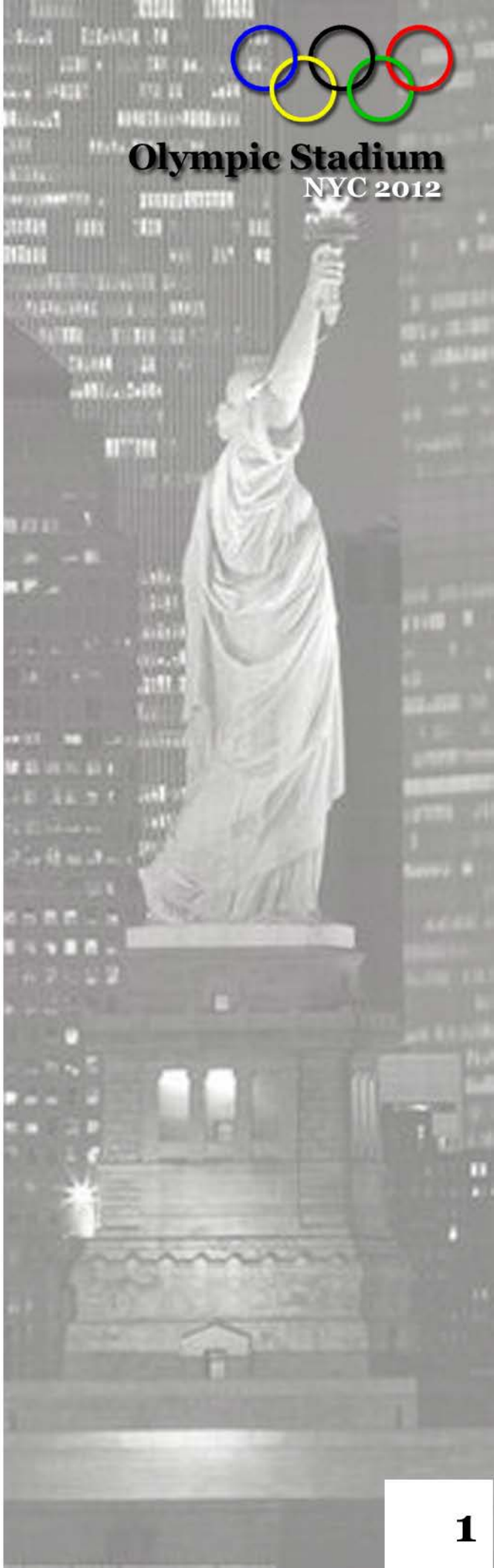
Submitted and approved: May, 2005

Table of Contents



Project Introduction

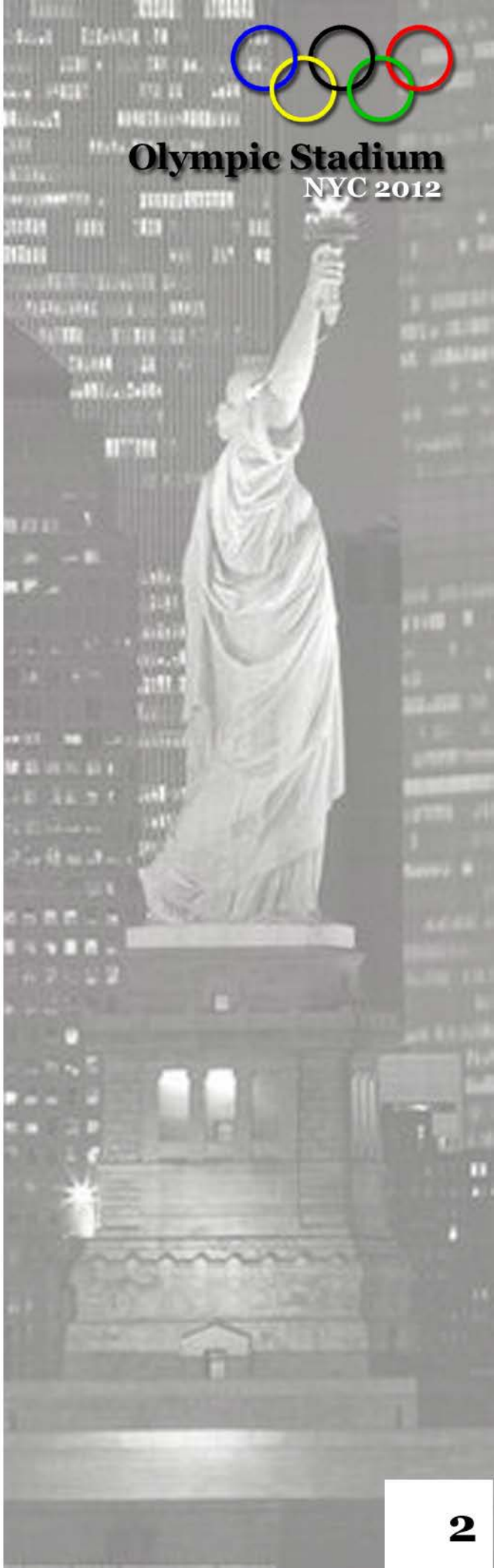


Olympic Stadium
NYC 2012

The Olympic games have forever been a stage for the world's greatest athletes to be showcased. They have also been the only event to include over 200 countries (and growing) worldwide. The games are more than just gold medals. The comrodary, and tradition the games represent is a beautiful thing. Every country is proud of their athletes and for them to be a part of something as wonderful as the olympics. For the 30th Olympiad, New York City, New York is making a bid to be the host city for the summer Olympics. New York City is a perfect fit for the games, because its difficult to tell which is more diverse and colorful.

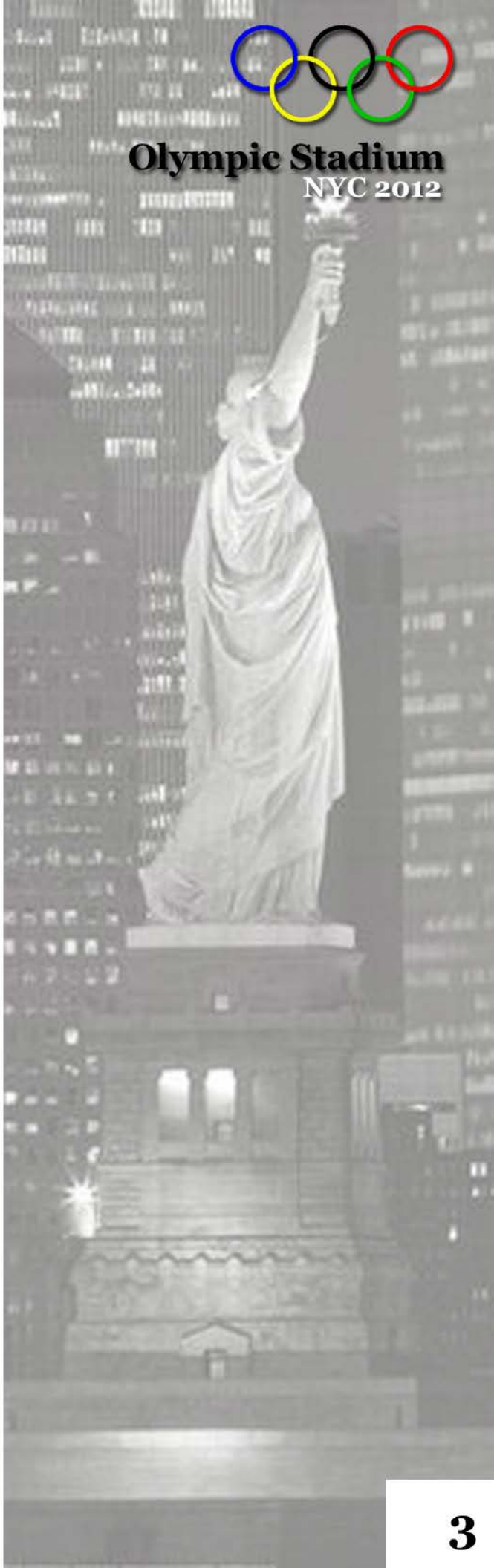
My design will feature a stadium large enough to support 75,000 people. It will be home to the track and field events of the Olympics, requiring a 400 meter track and a field area large enough for a football field. The total floor area must be approximately 150,000 m2. Incorporated into the stadium will be the obvious concession stations, but also it will have 4 permanent restaurants. This stadium will be a structural marvel as well as a technologically spectacular building. This stadium must be a welcoming home for the many athletes that will grace its fields.

Stadiums are very large buildings that can consume massive amounts of energy and produce a lot of pollution. This design will incorporate many alternative energy techniques. Solar panels will be incorporated on the roofing structure to serve as a supplemental power source. Natural lighting and ventilation techniques will be used to cut down on the amount of energy needed to power the facility.

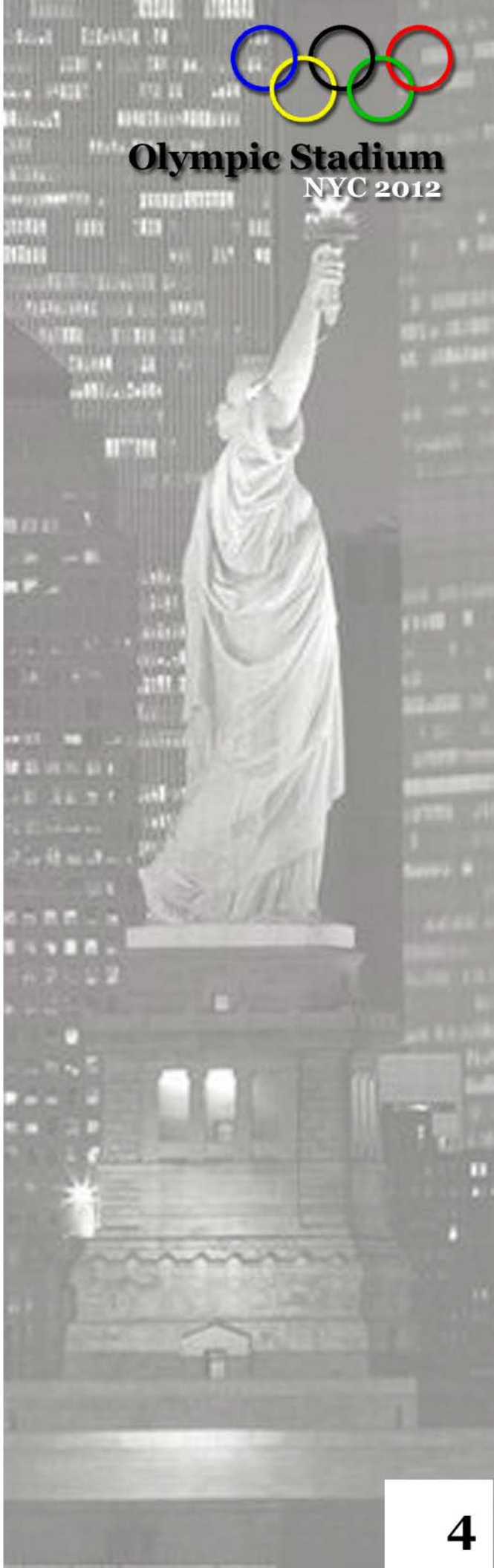


The site is on the Hudson River in the heart of Manhattan. It will be located in immediate proximity to the Convention Center, the Main Press Center, and the International Broadcast Center. The extensive mass transit system of New York makes it one of the few states capable of maneuvering the over 4500 athletes and the projected 500,000 fans. A lot of concern arises when building a stadium specifically for the Olympic games, but in this case, the New York Jets are in the market for a new stadium and this would be the perfect stadium, in the perfect location for them. This conversion will take careful planning in respect to the differences between the Olympics and football. For example, the locker-room facilities will be different, as will the restaurants, the field, and most importantly the people attending the sports will have differing intentions.

New York City is one of the most diverse cities in the world and hosting the Olympic games provides it with a way to display all it has to offer. The challenge of this design is accommodating the diversity of the games in one architecturally exigent structure. The foundation of this design is that the diversity of human culture, as showed in the Olympic Games, can be withheld and advanced by strong Architecture.



Project Description



Conceptual Basis or Unifying Idea:

New York City offers the Olympic movement the chance to tell a very powerful story. It has eight million of the most culturally diverse people in the world. This diversity can only be strengthened by the influence the games hold on the world. Creating a structure that can embody the entire sensation of the games is the challenge. It will be placed in the Chelsea district of Manhattan's West Side. This location is next to the quickly improving Hudson River. This river is representative of the way everyone in the world flows to there destination. In this case the river will bring everyone together in the Olympic Stadium. It will serve as the resting place for thousands of athletes and millions of fans who are in search of the greater glory and the sense of brotherhood that accompanies the Olympic Games. My hope is only to strengthen this feeling through proficient Architecture and a feeling unmatched by any other event on the planet.

Emphasis:

-Adaptive Re-use

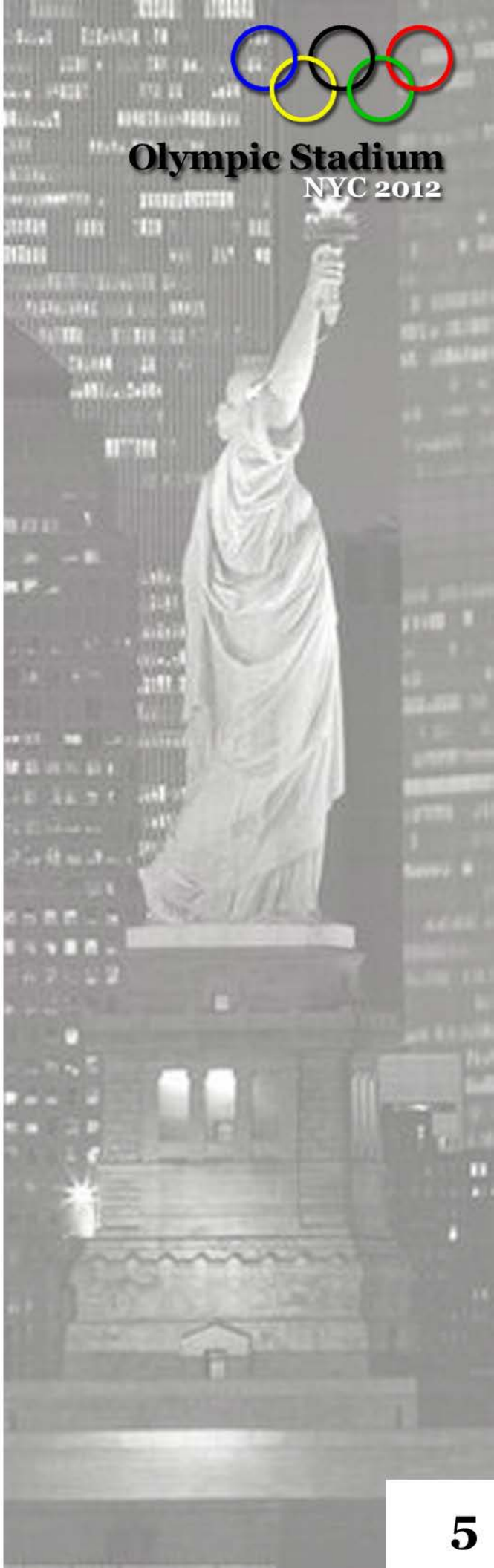
Many Olympic stadiums are used for little other than the games. In this case the facility will be transferred over to the New York Jets football team who has agreed to cover most of the cost. For a building of this cost and this magnitude to continue to be used is a very positive aspect of design.

-Structural marvel

Stadium designs are often accompanied by complicated structural systems that are bulky and not very aesthetically pleasing. Using new technologies and new materials these systems can be used to our advantage. They can be beautiful aspects of a design if used correctly.

-Diversity

This building will need to feel like a home for numerous different types of people. Creating a structure that encompasses all the world has to offer is the challenge.



User / Client Description:

The stadium will begin as an Olympic venue and will finish as the Jets stadium. This stadium will hold up to 75,000 enthusiastic fans that will be only interested in the experience a sporting event can give them. Upon entering the stadium the people need to be excited and the affair needs to continue until the walk out the doors.

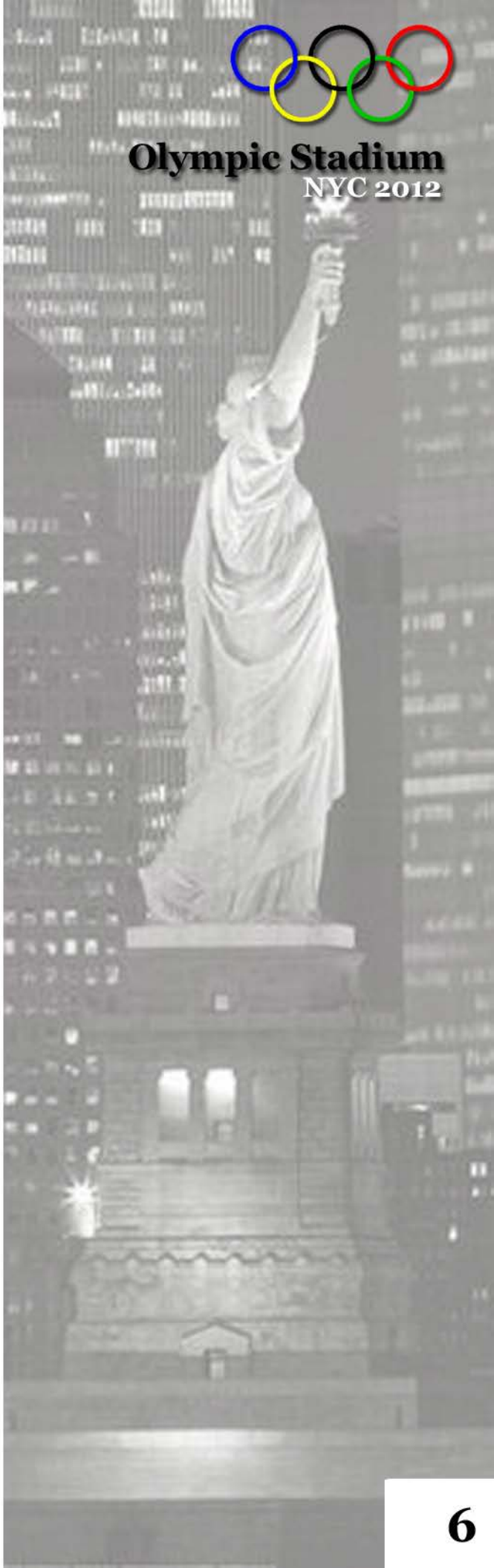
The client for the stadium will be the city and state of New York, as well as the New York Jets. They have proposed spending over $1 billion to accommodate the building of the facility.

Design Methodology:

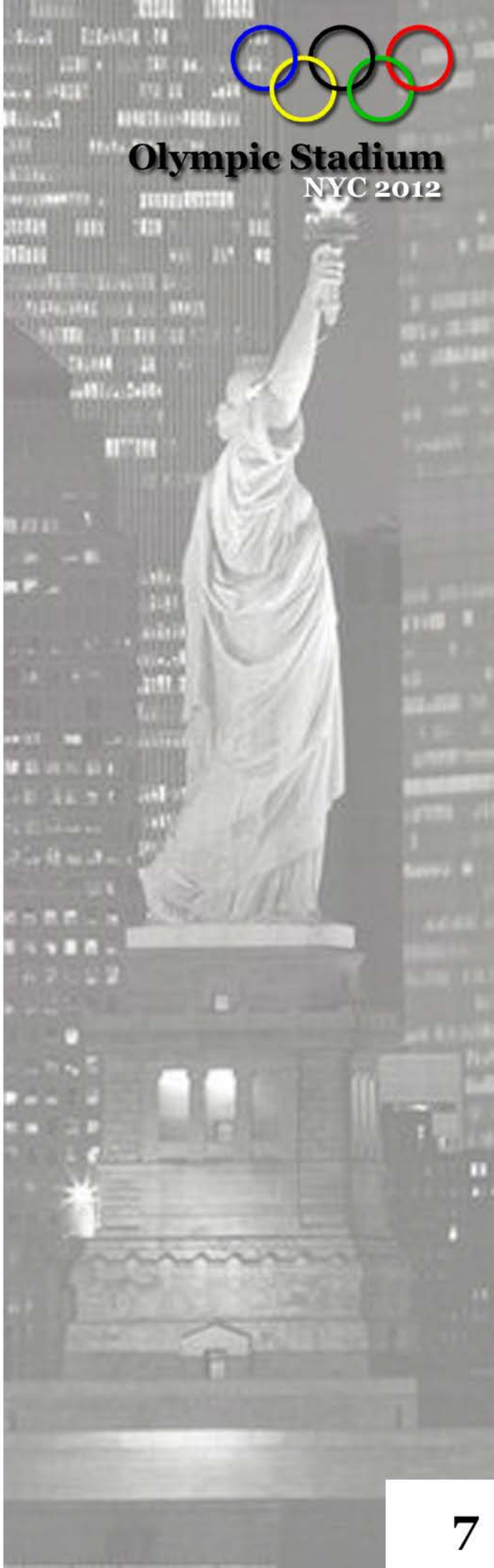
Case studies will be the most helpful tool in discovering the possibilities a stadium holds. Structural systems will be a major point of study, while aesthetical properties will be held with the same respect. Building materials and new technologies will be decisive in how the stadium is shaped and how well it performs.

Realization of the Design Method in the Design Process:

The history of the Olympic Games and story that accompanies them will be a driving force in my case studies. The former games will be merged with the future in my design. Bringing out vibrant history and fusing it with new technology will be a key to the success of this design.



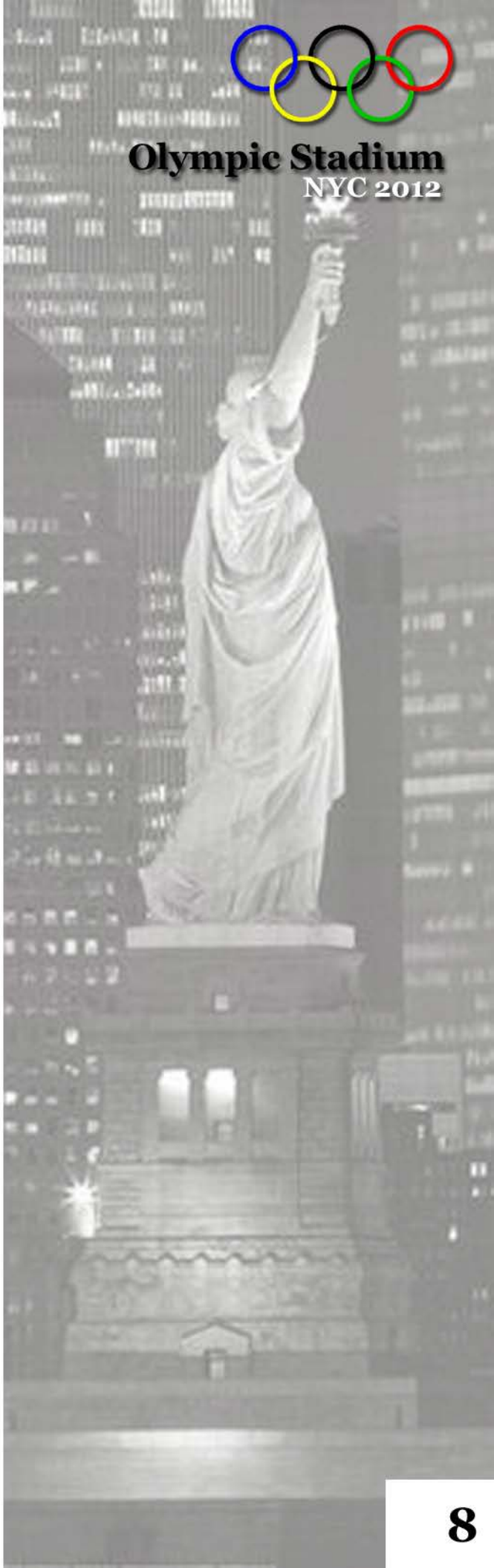
Olympic History



The Olympic Games and the Olympic Winter Games are the world's great festivals of athletic competition and international friendship. Athletes from all parts of the globe, and from all walks of life, gather in one place to realize their dreams and experience the glory of Olympic competition.

The ancient Olympic Games were the great Greek religious, athletic, and cultural festivals that inspired the creation of the modern Olympic Games. The earliest documentation of the ancient Games traces the efforts of King Iphitos of Elis, around 824 B.C., to establish a "sacred truce" through the conduct of Games "dear to the gods." From 776 B. C., these Games took place every four years.

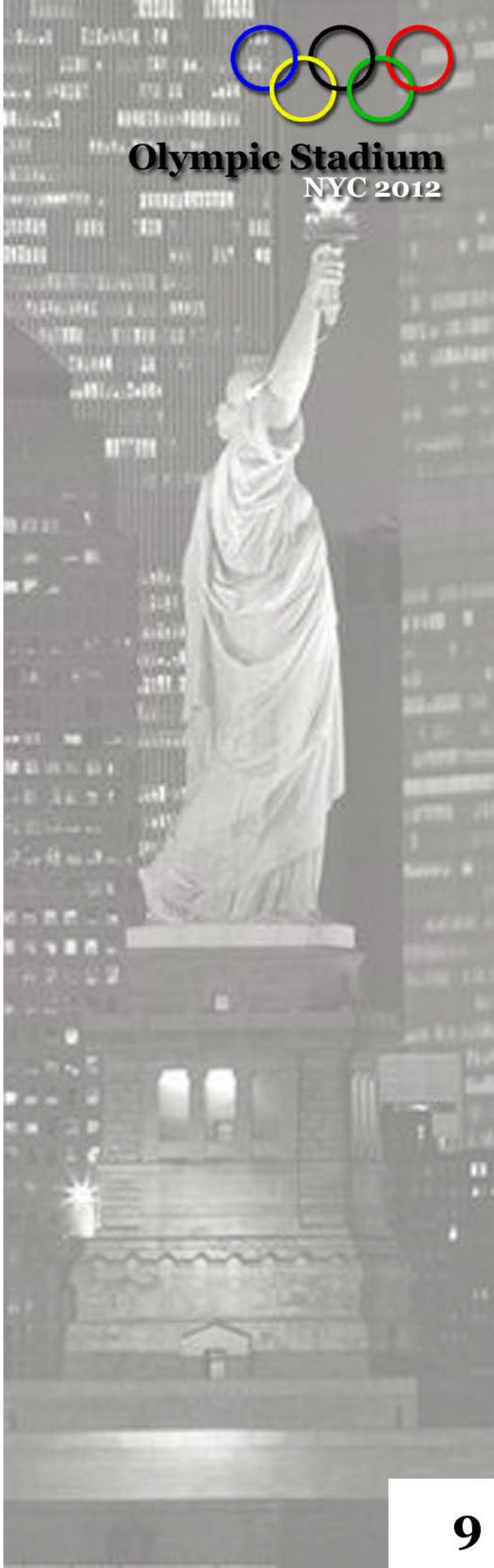
The ancient Games were sacred events. Athletes from all Greek city-states joined the festivals at Olympia. Like the modern Games, the ancient Games were marked by solemn opening and closing ceremonies. The "sacred truce" beginning the first known Games read, "May the world be delivered from crime and killing and freed from the clash of arms." The intent was for warring city-states to lay down their arms for the period of the Games so that athletes could compete in peace.



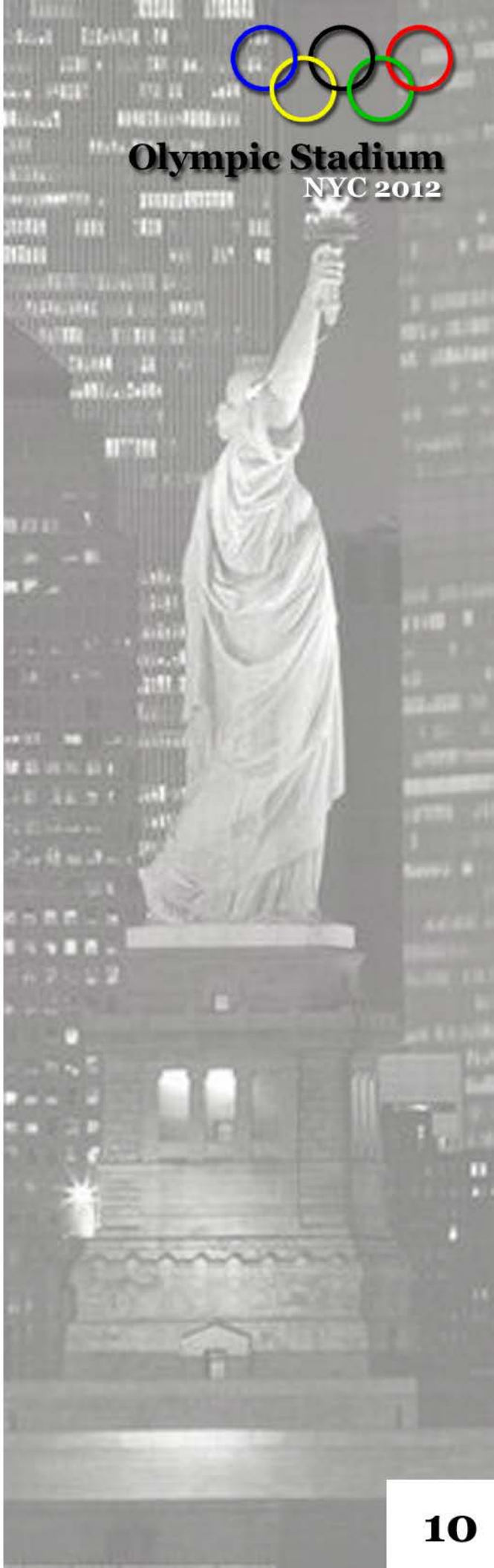
The program of competitive events in the ancient Games evolved over time. Among the sports contested were the foot race, wrestling, boxing, pankration, the pentathlon, and chariot races. The first recorded winner was the runner Koroibos.

Only men were permitted to take part in the Olympic Games. Women were forbidden to compete or be spectators at the ancient Olympic Games under penalty of death. The only female allowed in Olympia was the high priestess of the goddess Demeter. Women in ancient Greece, did, however, participate in festivals of their own. Exclusively female Games, held in honor of the goddess Hera, were held at regular intervals.

The ancient Olympic Games are known to have existed for 12 centuries. The symbolic power of the Games lived on after their demise in 394 A.D., and came to life again as the modern Olympic Games.



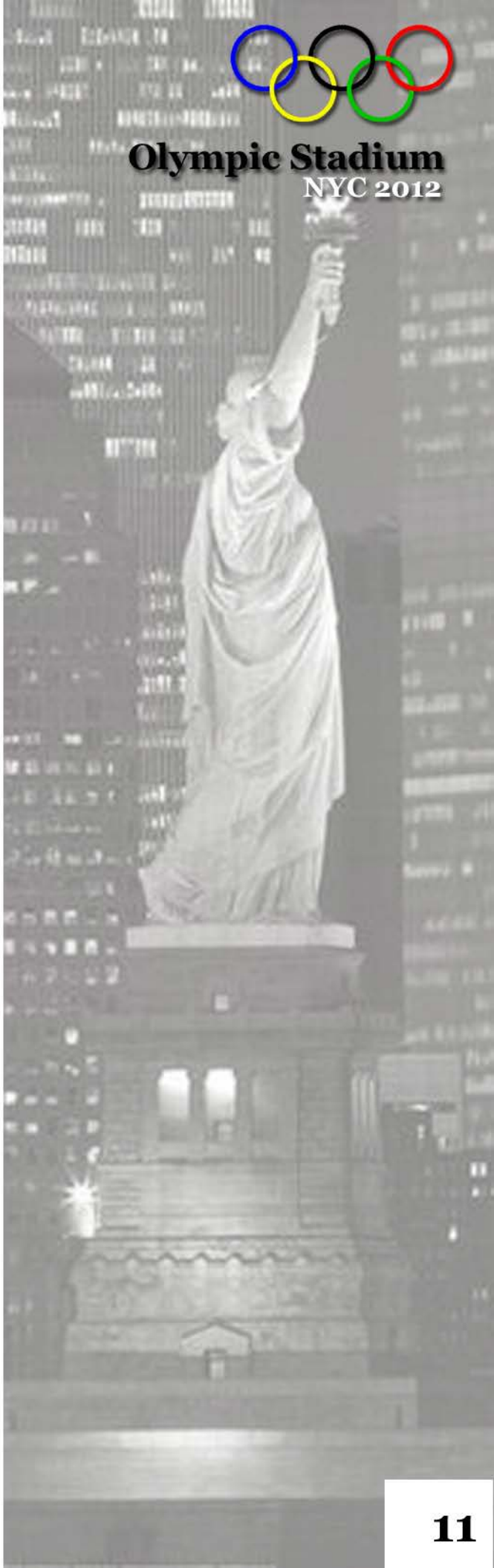
I 1896 Athens, Greece
II 1900 Paris, France
III 1904 St. Louis, U.S.A.
IV 1908 London, England
V 1912 Stockholm, Sweden
VI 1916 Canceled due to W.W.I
VII 1920 Antwerp, Belgium
VIII 1924 Paris, France
IX 1928 Amsterdam, The Netherlands
X 1932 Los Angeles, U.S.A.
XI 1936 Berlin, Germany
XII 1940 Canceled due to W.W.II
XIII 1944 Canceled due to W.W.II
XIV 1948 London, England
XV 1952 Helsinki, Finland
XVI 1956 Melbourne, Australia
XVII 1960 Rome, Italy
XVIII 1964 Tokyo, Japan
XIX 1968 Mexico City, Mexico
XX 1972 Munich, Germany
XXI 1976 Montreal, Canada
XXII 1980 Moscow, U.S.S.R.
XXIII 1984 Los Angeles, U.S.A.
XXIV 1988 Seoul, South Korea
XXV 1992 Barcelona, Spain
XXVI 1996 Atlanta, U.S.A.
XXVII 2000 Sydney, Australia
XXVIII 2004 Athens, Greece



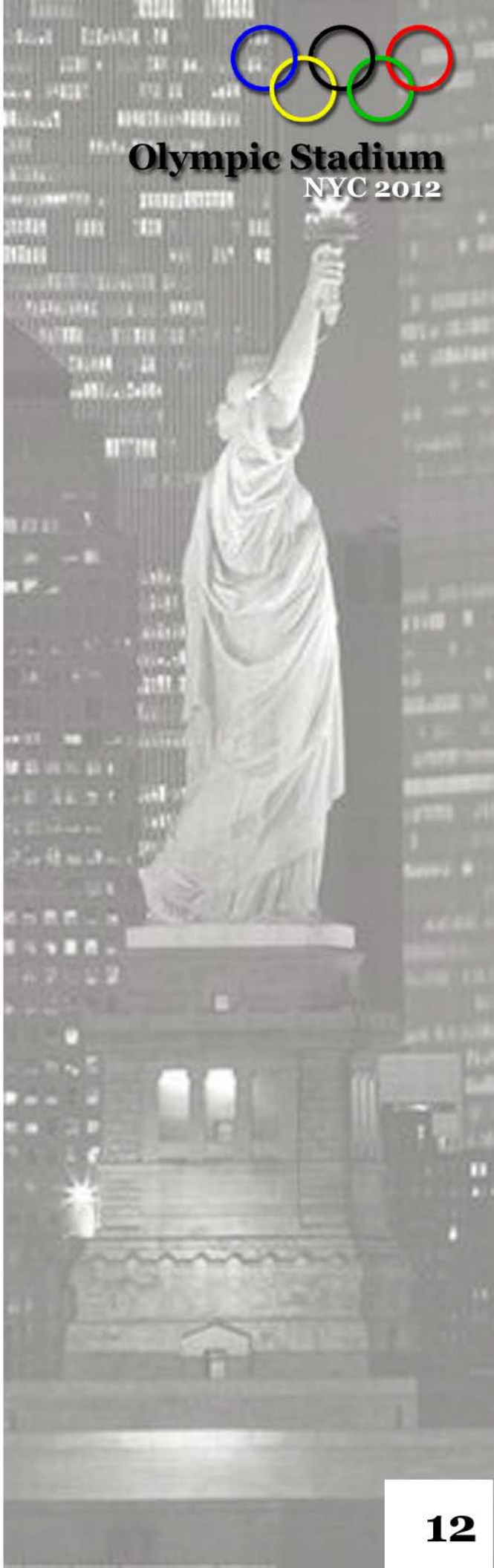
Modern Olympism is described by the Olympic Charter as a philosophy "exalting and combining in a balanced whole the qualities of body, will and mind. Blending sport with culture and education, Olympism seeks to create a way of life based on the joy found in effort, the educational value of good example and respect for universal fundamental ethical principles." "The goal of Olympism is to place everywhere sport at the service of the harmonious development of mankind, with a view to encouraging the establishment of a peaceful society concerned with the preservation of human dignity."

"The goal of the Olympic Movement is to contribute to building a peaceful and better world by educating youth through sport practiced without discrimination of any kind and in the Olympic spirit, which requires mutual understanding with a spirit of friendship, solidarity and fair play."

The Olympic Movement, encompasses organizations, athletes, and other persons who agree to be guided by the Olympic Charter. The Olympic Movement includes the International Olympic Committee, the International Federations, the National Olympic Committees, the Organizing Committees of the Olympic Games, the national associations, clubs, and persons belonging to them, particularly the athletes. The Olympic Movement also "includes other organizations and institutions as recognized by the IOC."



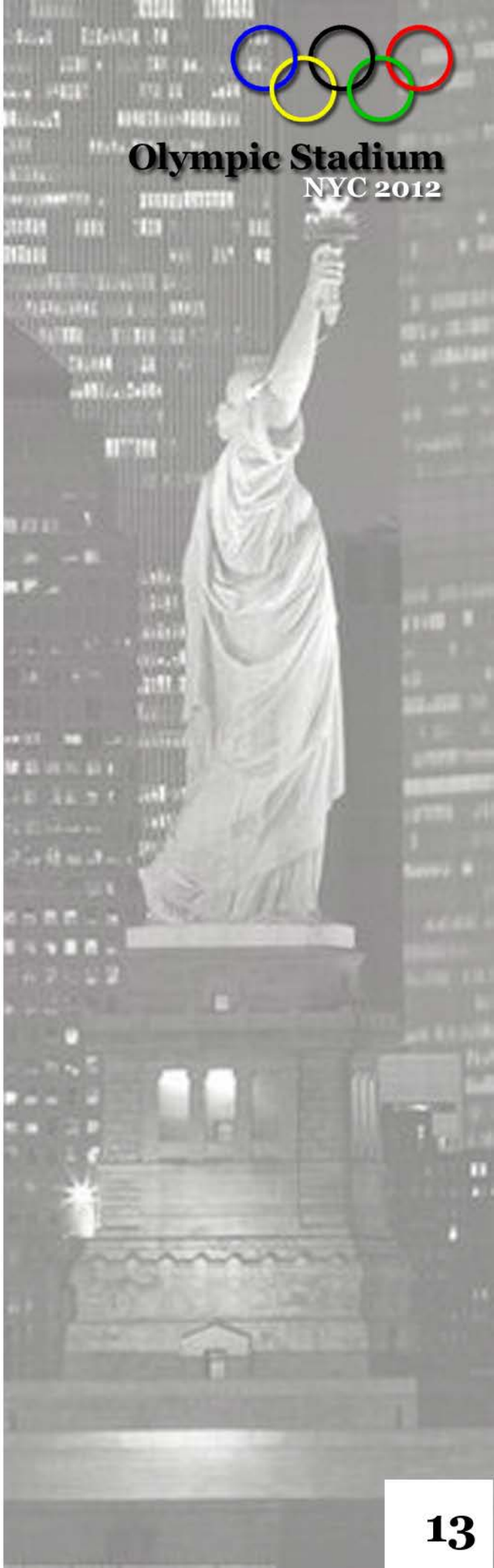
Site Analysis



New York has had a reputation as a crime-ridden city, partly due to the hundreds of TV and movie crime dramas set in it. However, in recent years it has been ranked in the top ten safest large cities in the United States by City Crime Rankings (9th edition, 2003). In addition, New York has been growing safer for most of the last decade—FBI data indicate that the murder rate in 2000 was the lowest since 1967.

There have been some notorious crime sprees, however. For example, on July 29, 1976 the "Son of Sam" pulled a gun from a paper bag killing one person and seriously wounding another in the first of a series of attacks that terrorized the city for the next year.

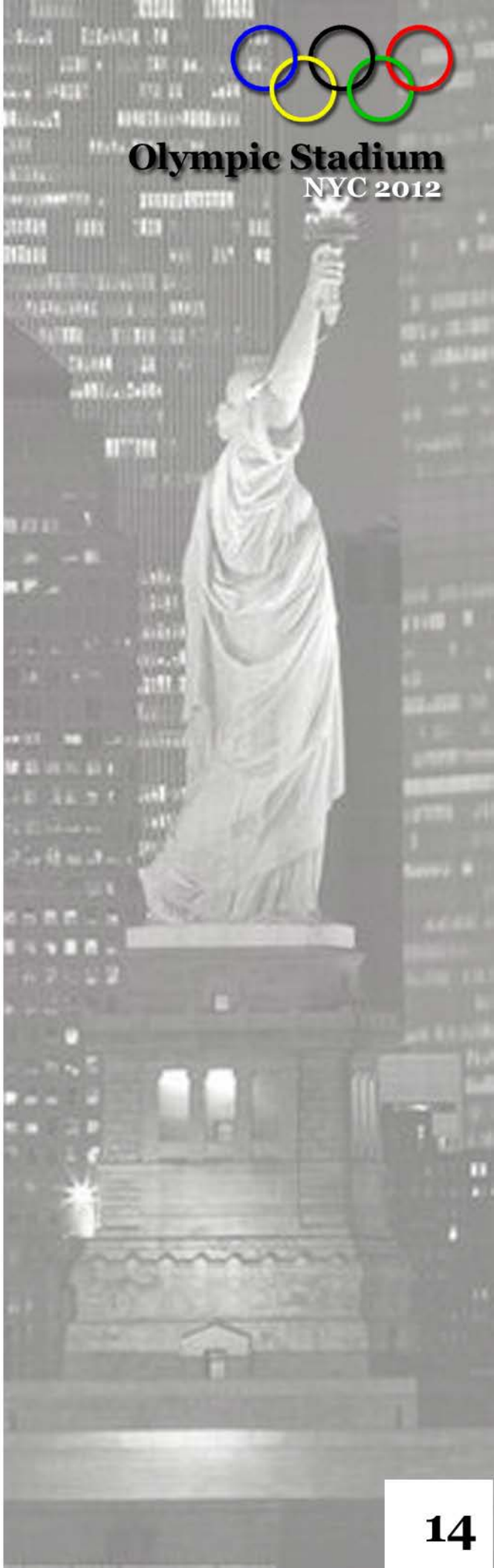
As soon as the Sicilian Mafia moved to New York in the 1920s, they became infamous with their hits on businesses that did not pay money to them. They had also set up smuggling rings and fixed boxing matches. The Mafia flourished due to a distrust of the police in the Italian-American communities in New York. The five largest crime families in New York were the Bonnanos, the Colombos, the Gambinos, the Genovese, and the Luchese. The assimilation of the Italian-American population is choking the Mafia in New York, although they still operate.



The current mayor of New York City is Michael Bloomberg, elected in 2001 on the Republican ticket. Bloomberg had come to prominence as an expert on Wall Street, which had brought him great wealth, but the mayoralty is his first political office. Bloomberg had been a Democrat until only a short time earlier, but switched to the Republican Party to run for mayor, in order to avoid a crowded Democratic primary. Bloomberg succeeded Rudy Giuliani, who actively supported Bloomberg as his successor.

Giuliani's mayoralty was controversial. His bid for United States Senator from New York State was aborted by treatment for cancer and controversy over his affair with Judith Nathan. He handled the aftermath of the September 11, 2001 World Trade Center disaster well, providing much-needed leadership, and greatly increased his popularity. The New York City Council is made up of 51 Councilmembers. The head of the City Council is called the Speaker, currently Gifford Miller. Local "Community Boards" are the decision-making bodies that take care of neighborhood based issues such as zoning variances and other local concerns.

The Borough President of the Bronx is Adolfo Carri Jr; of Brooklyn, Marty Markowitz; of Staten Island, James P. Molinaro; of Queens, Helen Marshall; and of Manhattan, C. Virgina Fields. They have very limited political power.

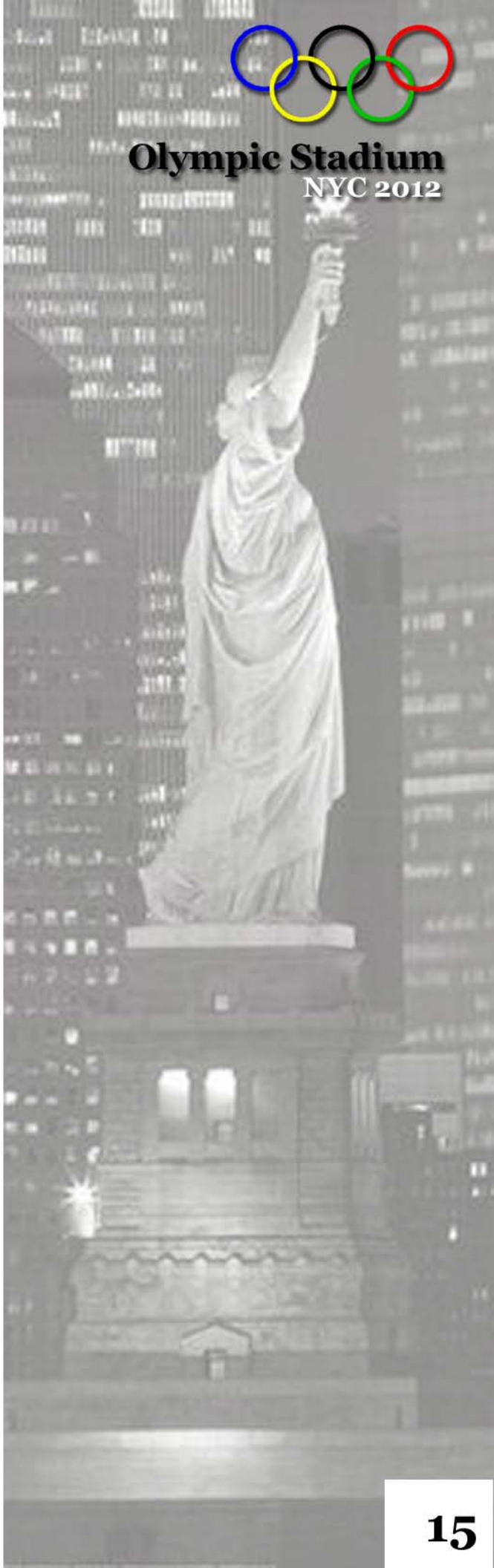


New York City comprises Manhattan Island, Staten Island, the western part of Long Island, part of the North American mainland (the Bronx), and several small islands in New York Harbor.

New York has a humid continental climate. The city is adjacent to water, so temperature changes are not as drastic as those inland. Every winter, it snows in New York due to its latitude. Because of its key position, New York had been king in the shipping passenger trade between Europe and the Americas for quite some time, until the airplane came into wider use across the Atlantic.

Staten Island is hilly, and is the least populated borough of the boroughs in New York City. Space is sparse on Manhattan, therefore tall buildings are preferred.
The city will be threatened if the current patterns of global warming continue to rise the sea level.

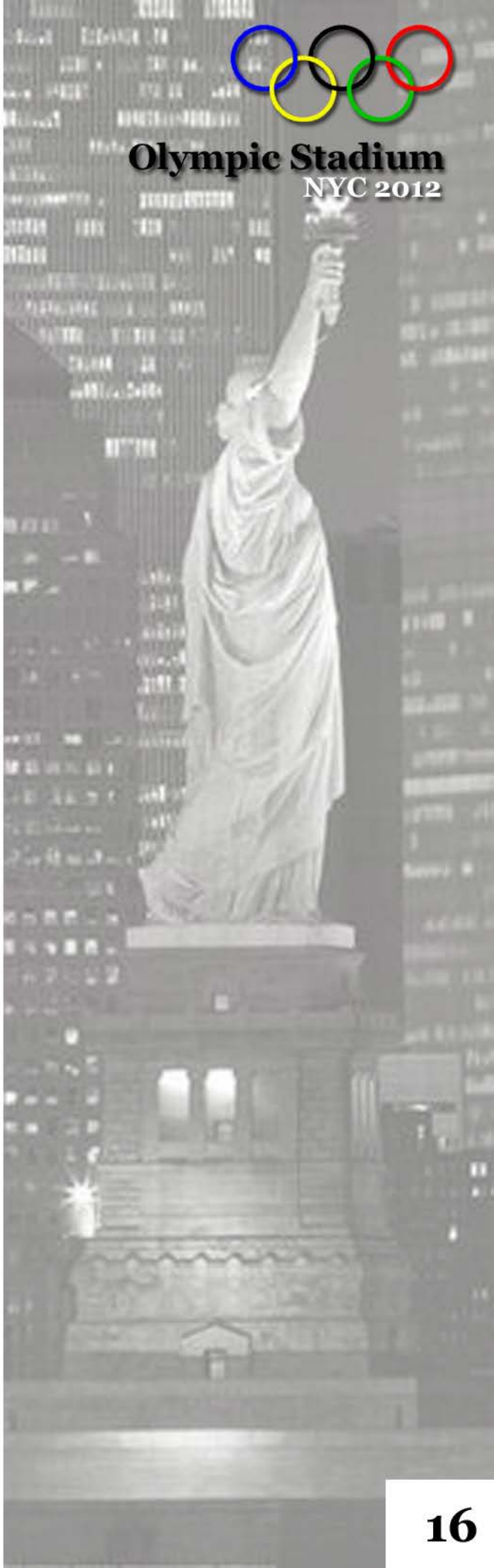
According to the United States Census Bureau, the city has a total area of 1,214.4 km² (468.9 mi²). 785.6 km² (303.3 mi²) of it is land and 428.8 km² (165.6 mi²) of it is water. The total area is 35.31% water.



The median income for a household in the city is $38,293, and the median income for a family is $41,887. Males have a median income of $37,435 versus $32,949 for females. The per capita income for the city is $22,402. 21.2% of the population and 18.5% of families are below the poverty line. Out of the total people living in poverty, 30.0% are under the age of 18 and 17.8% are 65 or older.

As of 2000, there are 8,008,278 people, 3,021,588 households, and 1,852,233 families residing in the city. The population density is 10,194.2/km² (26,402.9/mi²). There are 3,200,912 housing units at an average density of 4,074.6/km² (10,553.2/mi²). The racial makeup of the city is 44.66% White, 26.59% African American, 0.52% Native American, 9.83% Asian, 0.07% Pacific Islander, 13.42% from other races, and 4.92% from two or more races. 26.98% of the population are Hispanic or Latino of any race.

There are 3,021,588 households out of which 29.7% have children under the age of 18 living with them, 37.2% are married couples living together, 19.1% have a female householder with no husband present, and 38.7% are non-families. 31.9% of all households are made up of individuals and 9.9% have someone living alone who is 65 years of age or older. The average household size is 2.59 and the average family size is 3.32. In the city the population is spread out with 24.2% under the age of 18, 10.0% from 18 to 24, 32.9% from 25 to 44, 21.2% from 45 to 64, and 11.7% who are 65 years of age or older. The median age is 34 years. For every 100 females there are 90.0 males. For every 100 females age 18 and over, there are 85.9 males.

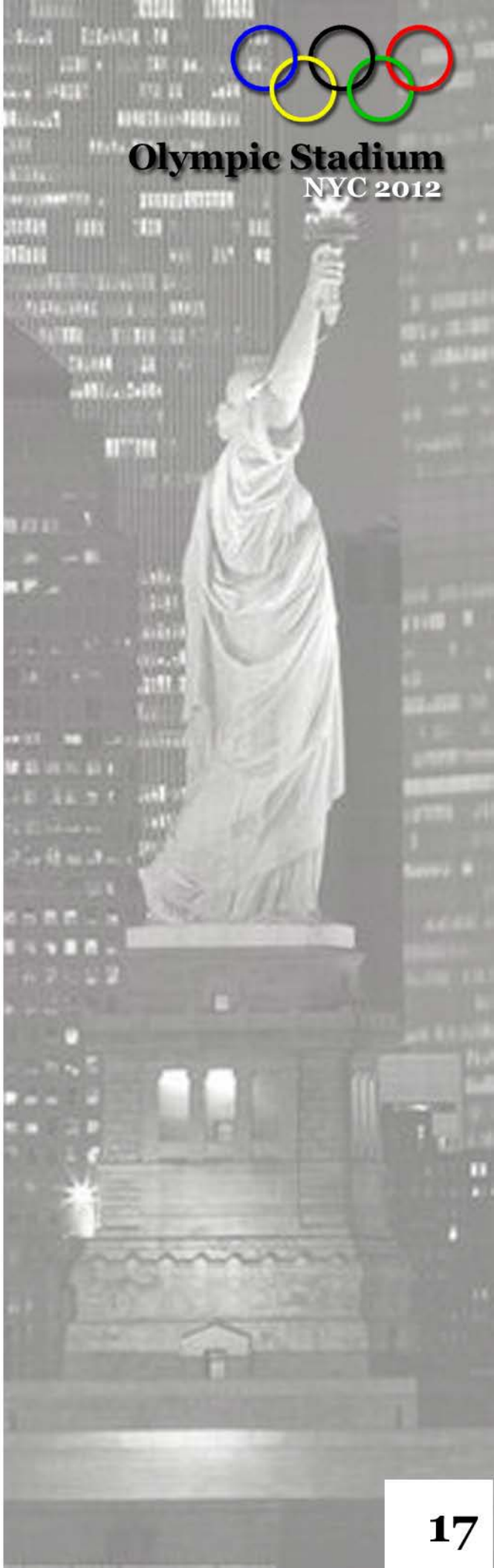


A resident of New York City is a New Yorker. Residents of Brooklyn sometimes call themselves Brooklynites and residents of Staten Island, Staten Islanders. Residents generally refer to New York City (or just Manhattan) as "New York" or "the city". Ambiguity is resolved by writing "NYS" for the state and "NYC" for the city.

New York has been more of an international city than an "American" city, due to the large influx of immigrants. Only Los Angeles receives more immigrants. Hundreds of languages are spoken in New York City. Irish, Italian and Jewish areas of the city still exist. New York has a higher Jewish population than Jerusalem, Israel does. New York has also received a lot of Puerto Ricans whom migrated from their commonwealth to New York City.

Before September 11, the perception of New Yorkers was often as rude and brusque, but since the World Trade Center destruction, many people empathized with New Yorkers, and so, the stereotype has largely faded away.

New York has an intense rivalry with the city of Boston, Massachusetts. This is perhaps the most infamous city rivalry in the United States.

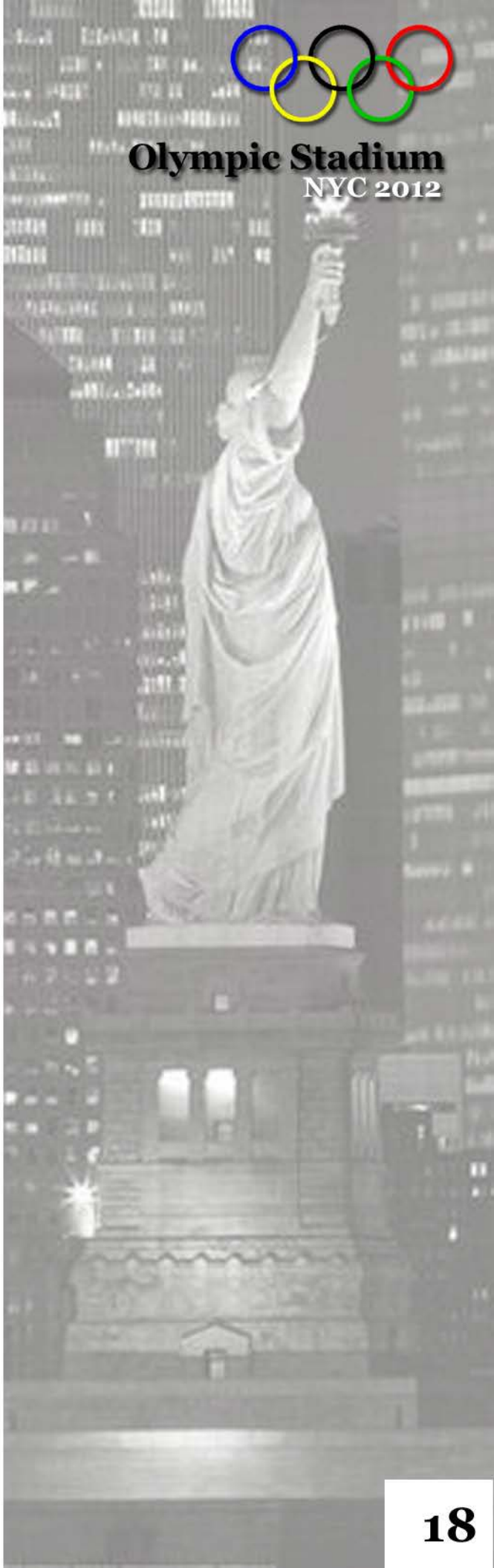


Tourism is a very large business, with hundreds of famous buildings, sites, and monuments in New York City. Many people visit the Radio City Music Hall, the Statue of Liberty, the Empire State Building, the Brooklyn Bridge, Ellis Island, and several other famous New York City landmarks. The World Trade Center was a famous tourist destination before September 11, 2001, and since that day, Ground Zero has become a very important place for visitors to see. The most famous FAO Schwarz is located in Manhattan. It is so popular that long lines to enter are seen as one approaches the building.

Coney Island, in the south of Brooklyn, has New York's roller coasters and amusement parks.

The first Macy's Thanksgiving Day Parade was held in New York on November 27, 1924. Since then this has been a annual event drawing tens of thousands of spectators and in later years millions of television viewers.

Many people characterize the tourist-filled Manhattan as "New York". New York is actually more diverse than that, since Staten Island and Queens have shorter buildings than Manhattan does.
A common saying about con artists is to say that they are selling "pieces of the Brooklyn Bridge."

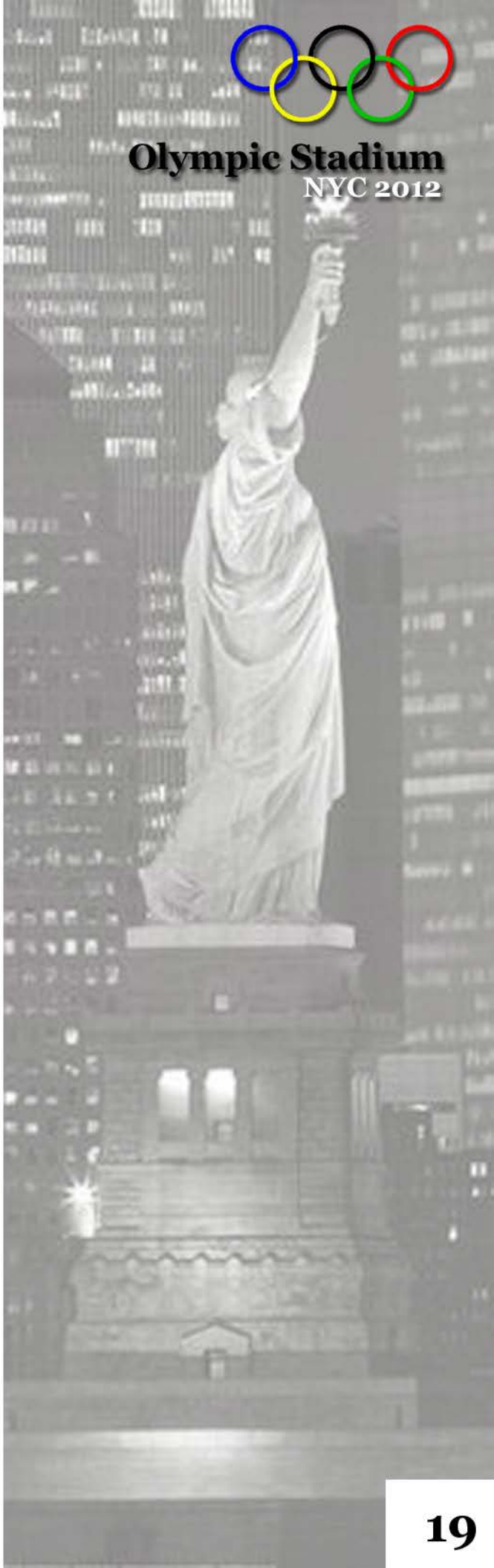


Unlike most major cities, New York has two teams for most types of sports, one for each division.

- New York Knicks, National Basketball League, Madison Square Garden
- New York Mets, Major League Baseball, Shea Stadium (1964-)
- New York Rangers, National Hockey League, Madison Square Garden
- New York Yankees, Major League Baseball, Yankee Stadium (1923-)

The New York Islanders reside in the Nassau Veterans Memorial Coliseum of Uniondale, New York. This arena is also home to the New York Dragons of the Arena Football League. The rest of New York's teams reside in the Meadowlands Sports Complex in East Rutherford, New Jersey. The New York Giants (National Football League), the New York Jets (NFL), and the MetroStars (Major League Soccer) play in Giants Stadium. The New Jersey Nets (NBA) and the New Jersey Devils (NHL) are based in the Continental Airlines Arena. Ebbetts Field is the former home of the Brooklyn Dodgers until 1958 (Now known as the Los Angeles Dodgers)

New York City is also home to two minor league baseball teams. Both play in the short-season Class A New York-Penn League, and each is an affiliate of one of the city's major-league teams. The Brooklyn Cyclones are a Mets affiliate, and the Staten Island Yankees are (obviously) affiliated with the Yankees.



Unlike most of America's car-oriented urban areas, public transportation is the common way of travel for the majority of New York City residents. High parking fees, alternate side of the street parking rules and traffic jams discourage driving, and New York Subway—fast, efficient, but not always clean—provides the best alternative. People living in the suburbs in eastern Long Island, New Jersey, Connecticut, Pennsylvania, and upstate New York tend to use the automobile to work in New York City. High tollway fees on bridges and underground tunnels help raise revenue and discourage too many commuters from using the crossings. New Yorkers who live in the city tend to take taxis, buses, subways (the underground in British English), and elevated trains. Ferries are also taken between Manhattan and New Jersey, as well as other parts of New York City.

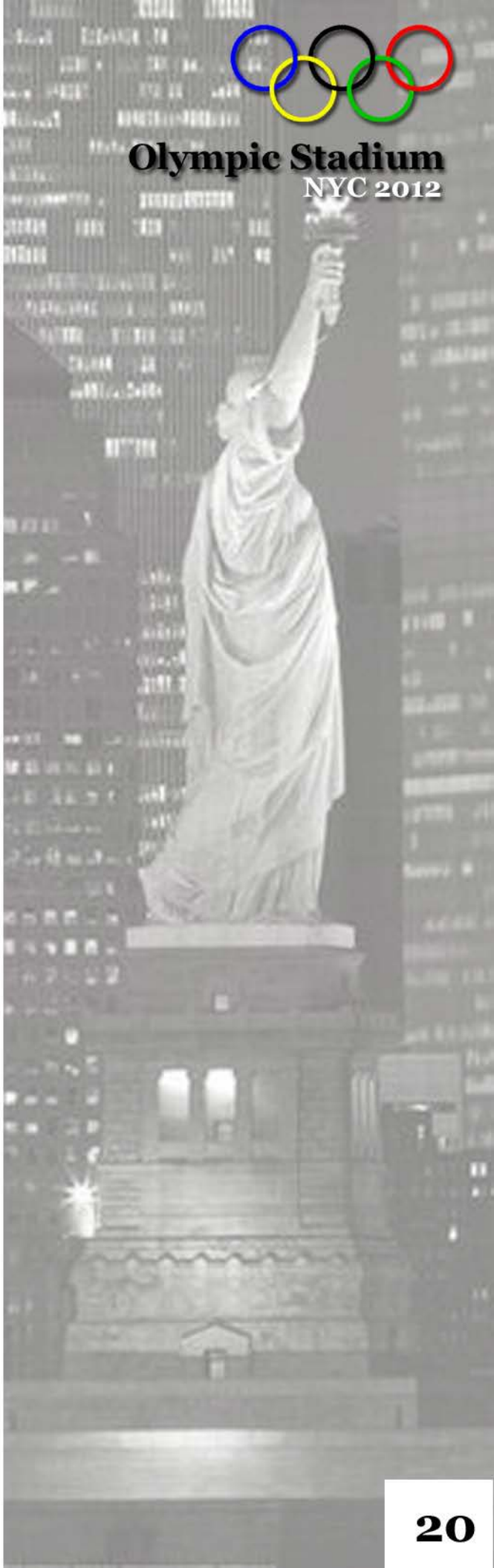
The three local airports are JFK International Airport in Jamaica, Newark Liberty International in Newark, New Jersey, and La Guardia Airport in Flushing. Most New Yorkers fly domestic flights out of La Guardia, while many flying domestically into Newark and JFK are not from the New York area. Although Newark was the first airport in the area, and the closest to Manhattan, it is in New Jersey.

Rail service provided by Amtrak, Long Island Rail Road, and Metro-North Railroad terminates at New York's two major rail stations, Grand Central Station and Penn Station. The Amtrak Acela high speed rail service along the Northeast Corridor runs from Penn Station.

Regional and interstate bus service travels from the Port Authority Bus Terminal in downtown and the smaller George Washington Bridge Bus Terminal, both run by the Port Authority of New York and New Jersey.

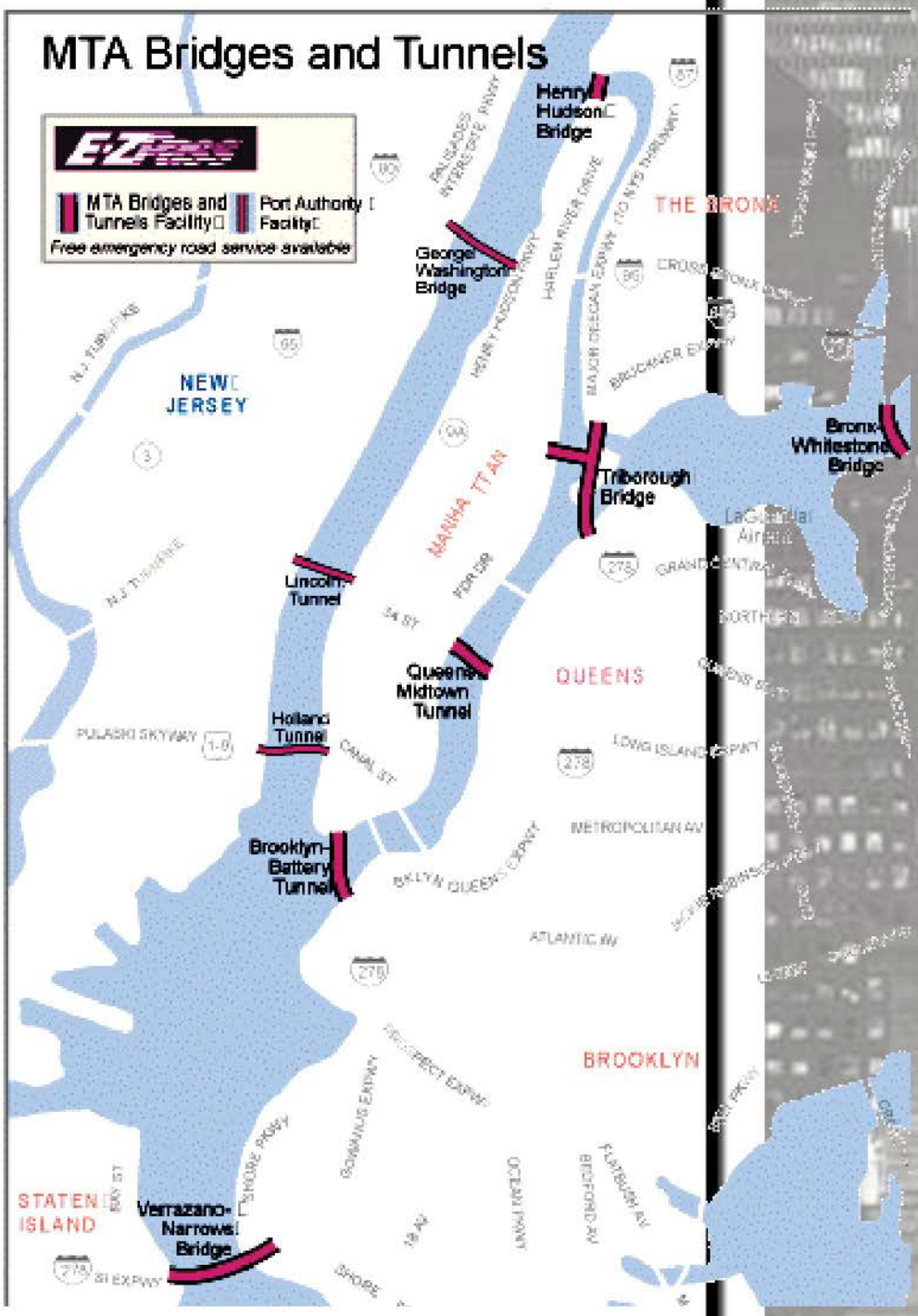
Many private ferries are run by NY Waterway, New York Water Taxi, and other operators.

Taxicabs are licensed by the New York City Taxi & Limousine Commission. There are two kinds of taxis: "medallion taxis," which are the familiar yellow taxis and which can be flagged down, and "car services," which are not allowed to pick up flag customers but are radio- or computer-dispatched to pick up customers who have called for a taxi.



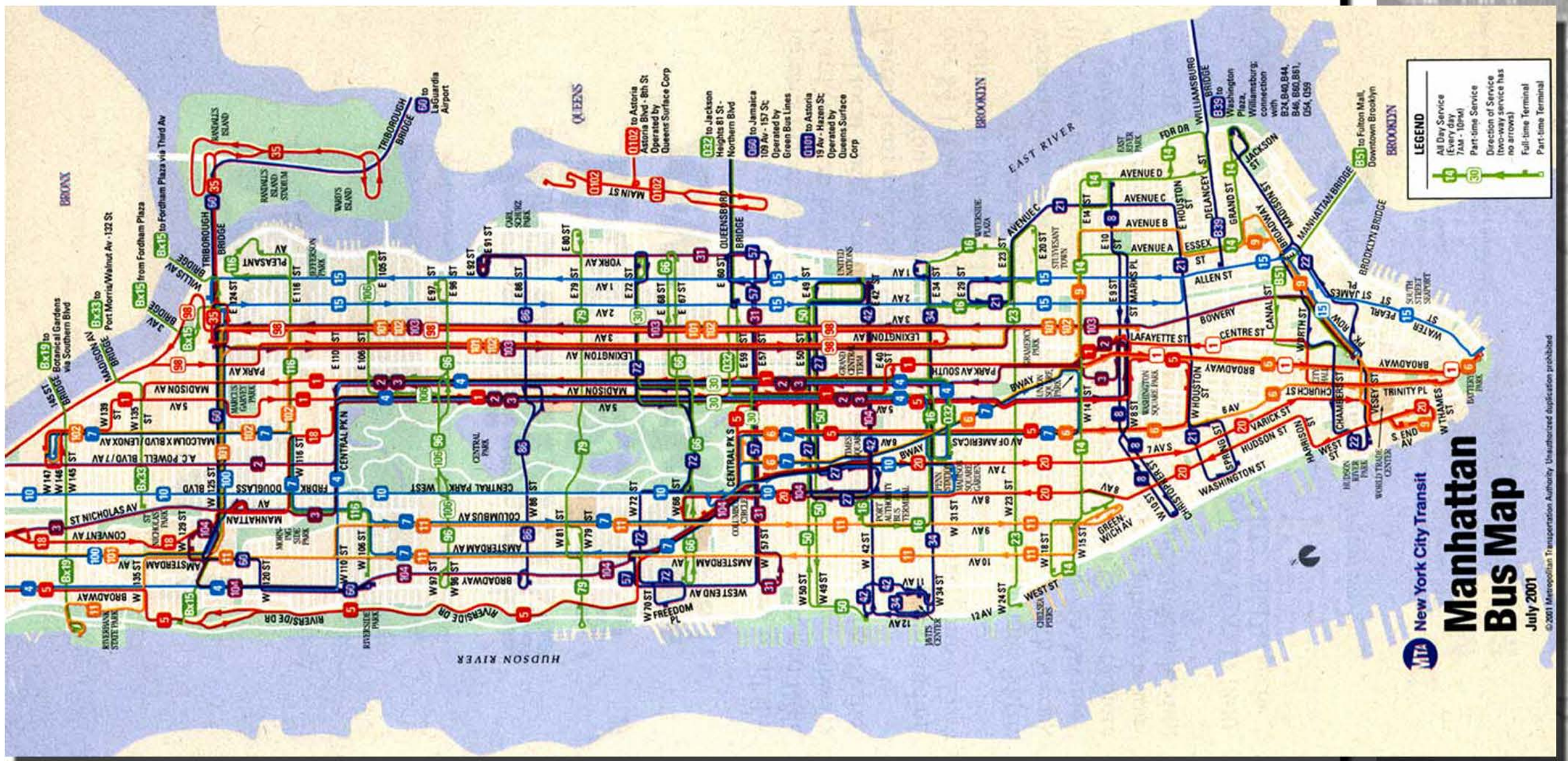
Enlarged Site Map

Bridge and Tunnel Map



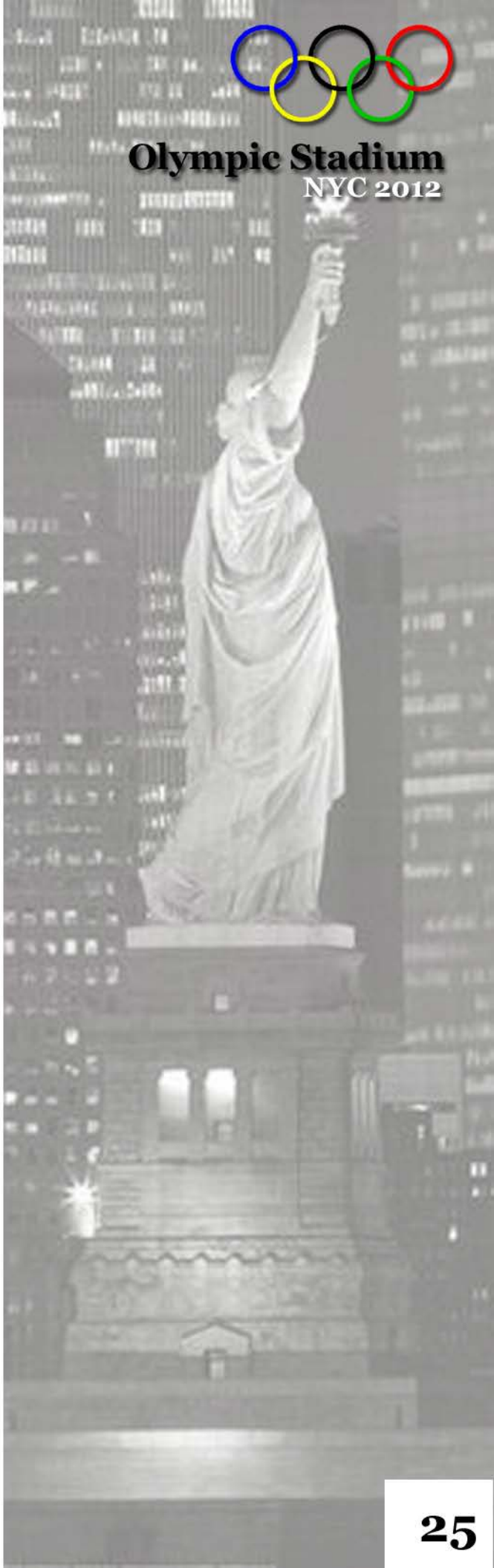
Olympic Stadium
NYC 2012

Manhattan Bus Map



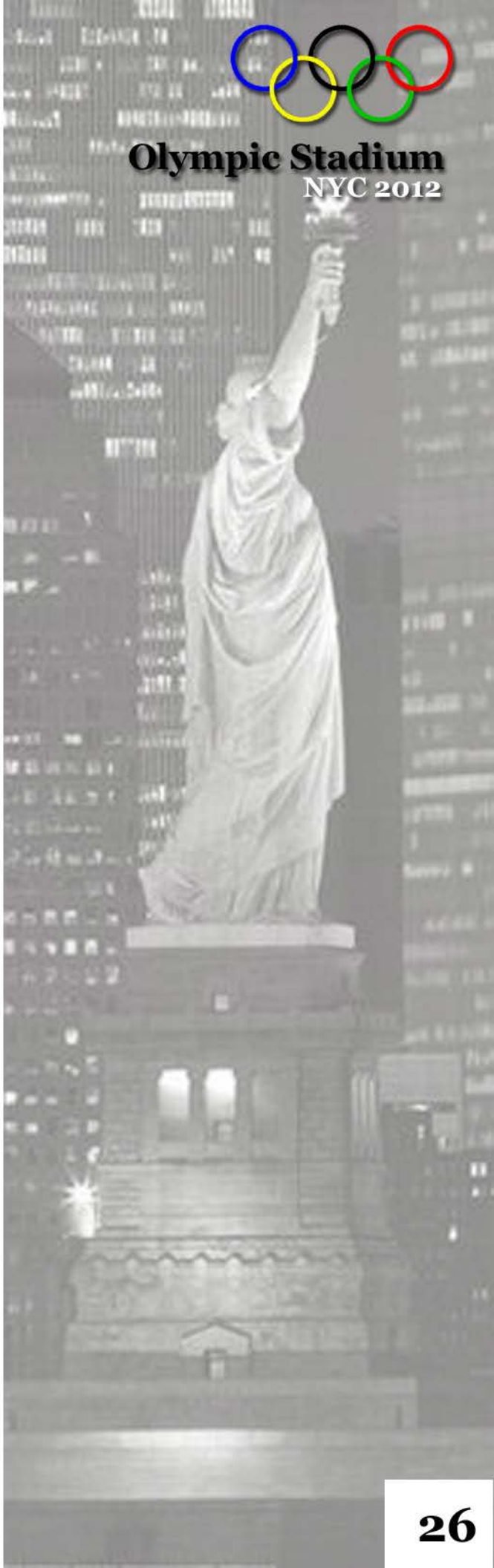
New York City Subway map

Program Requirements



Building Spaces

-Receiving
-Concession stands
-Restaurants
-Memorabilia booths
-400m track
-100m warm-up track
-Grass infield
-Long jump pit
-Locker room facilities
-Training facilities
-Restrooms
-Circulation
-Seating
-Luxury Box Seats
-Press Box Seats
-Retractable roof
-Mechanical systems rooms
-Replay booth
-Offices
-Museum

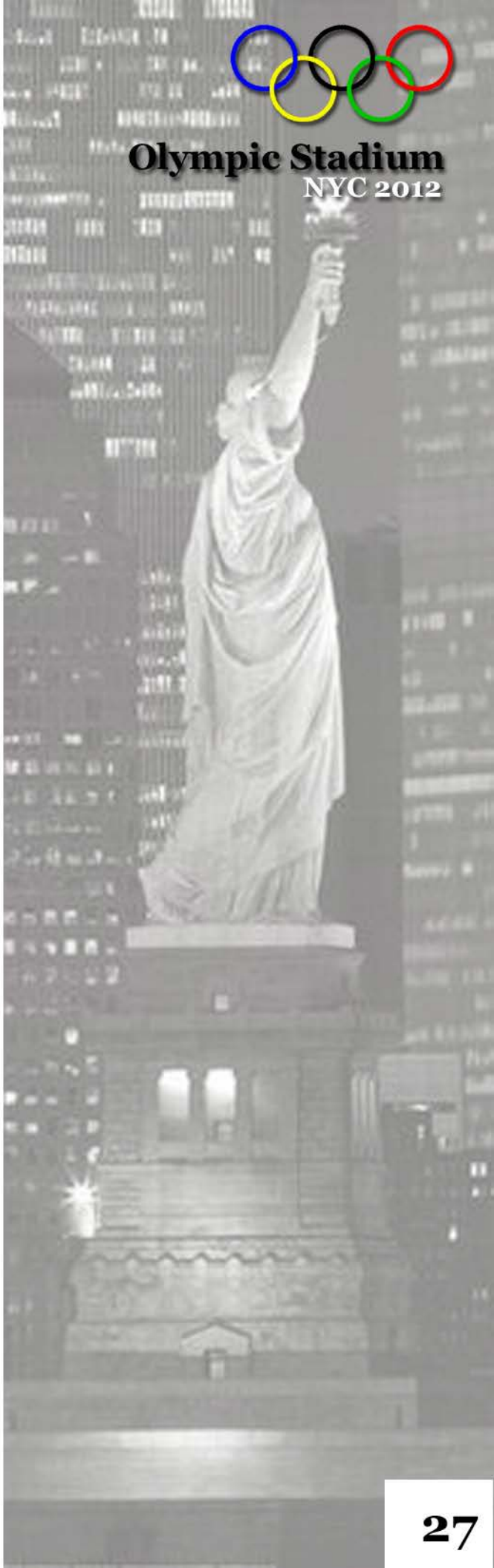


Total Building Square Footage = approx. 1.8 million sq. ft.

-Receiving (4 x 20,000 sq. ft.)
Entrances will be placed at four locations around the facility ensuring ease of entry for the large amounts of people. The entrance is a key part of stadium design. The entrances include ticket booths, security checkpoints, vertical circulation, and exterior landscaping. The ticket booths will require small, but necessary spaces which will be easily accessible to all inhabitants. The security checkpoints are particularly important in today's society. It will be manditory for all occupants to pass through metal detectors and x-ray machines similar to those found in airports. The vertical circulation will be in plain site to all and large enough to effectively move a massive amount of people. Several elevators will be needed at each entry point for accessibility. The landscaping on the exterior of the building will be very important because this makes waiting in line a more pleasant and enjoyable experience.

-Concession Stands (100 x 1,000 sq. ft.)
The concession stands must be numerous enough to quickly serve the large amounts of people. They will be evenly spaced by floor and location around the stadium. Each stand will need small cooking spaces with fryers, ovens, microwaves, beverage dispensers, coolers, and heaters. The counter space will be large enough to handle up to 10 people per stand at any given time. Stands must be located such that horizontal occupant flow around the building is not hindered by lines. Each concession stand will need between 5 and 10 employees depending on the size of the stand and the products it is selling.

-Memorabilia Booths (50 x 500 sq. ft.)
The memorabilia booths will need to be easily accessible to all at the stadium. They will carry thousands of items that display olympic pride. These items will be only available to those who are in the stadium.



-Restaurants (4 x 7,500 sq. ft.)
- -Entry
- -Kitchen
- -Dining
- -Restroom
- -Storage
- -Mechanical

Each restaurant will require entry points that are clearly marked and easily accessible by those who are at the stadium. Two of the four restaurants will be accessible from the street and will remain open year round. The other two will be in use only by those in the stadium and will have views of the event taking place. This will enhance the experience of those who chose to eat or drink while the event is in progress.

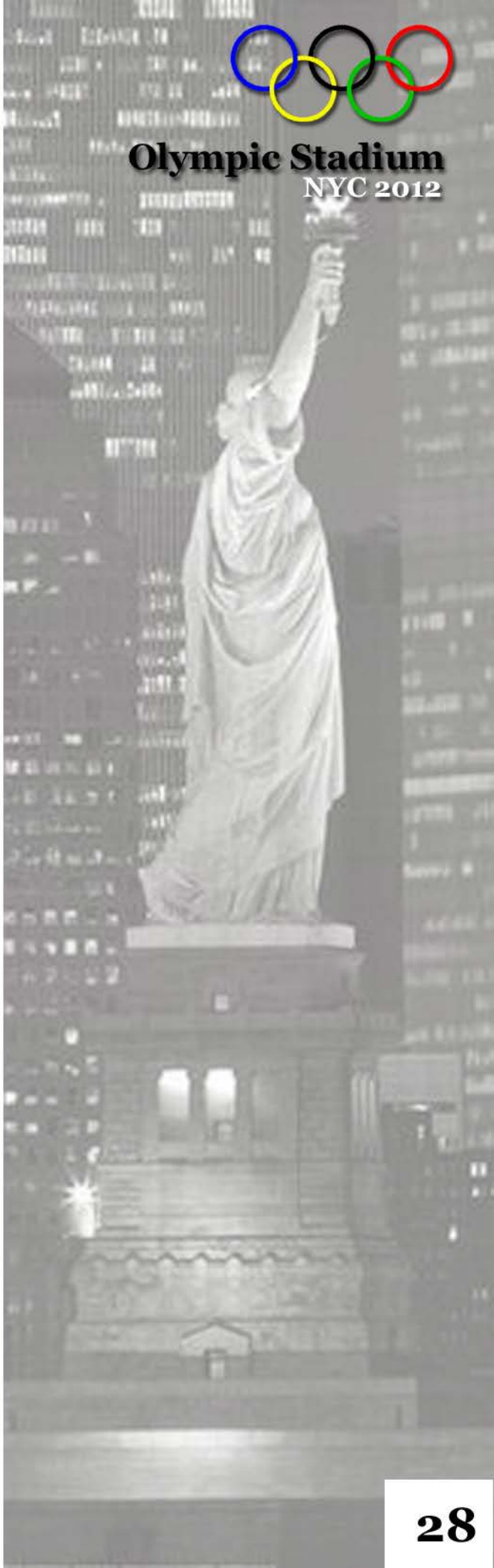
Kitchen spaces will be used for food and beverage preparation. It will require various cooking and cleaning spaces to handle the load of a full restaurant during events. Ease of movement between dining area, storage area, and cooking and cleaning area is essential. The required amount of employees on a given day/night will be approximately 25 per restaurant. Space allocation will be 2,000 sq. ft.

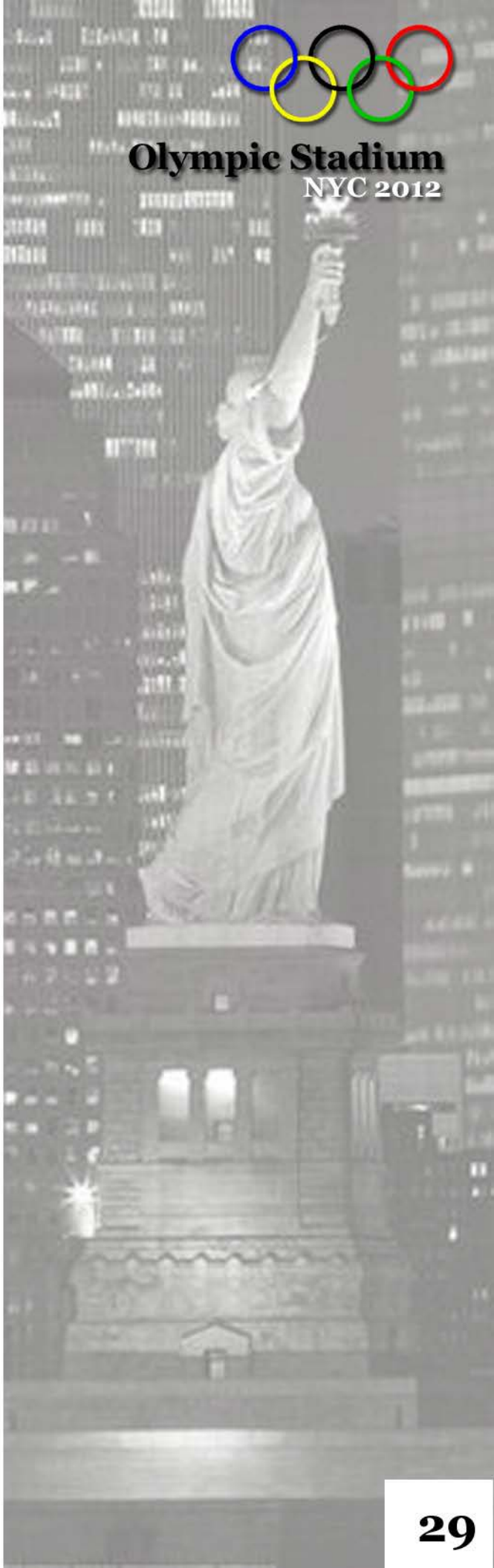
The dining area will be able to seat 150 people per restaurant at maximum capacity. This will allow for efficient serving for all customers. The interior stadium restaurants will require sightlines of the playing field for everyone in the dining area. This will create a unique experience for those interested in more than just the event itself.

Restroom areas will be for those in the restaurant only. They must be handicap accessible and large enough to satisfy the restaurant needs at maximum capacity.

Storage facilities will be for food and beverage required for restaurant operation.

Mechanical systems will operate seperate from stadium systems due to smaller requirements.





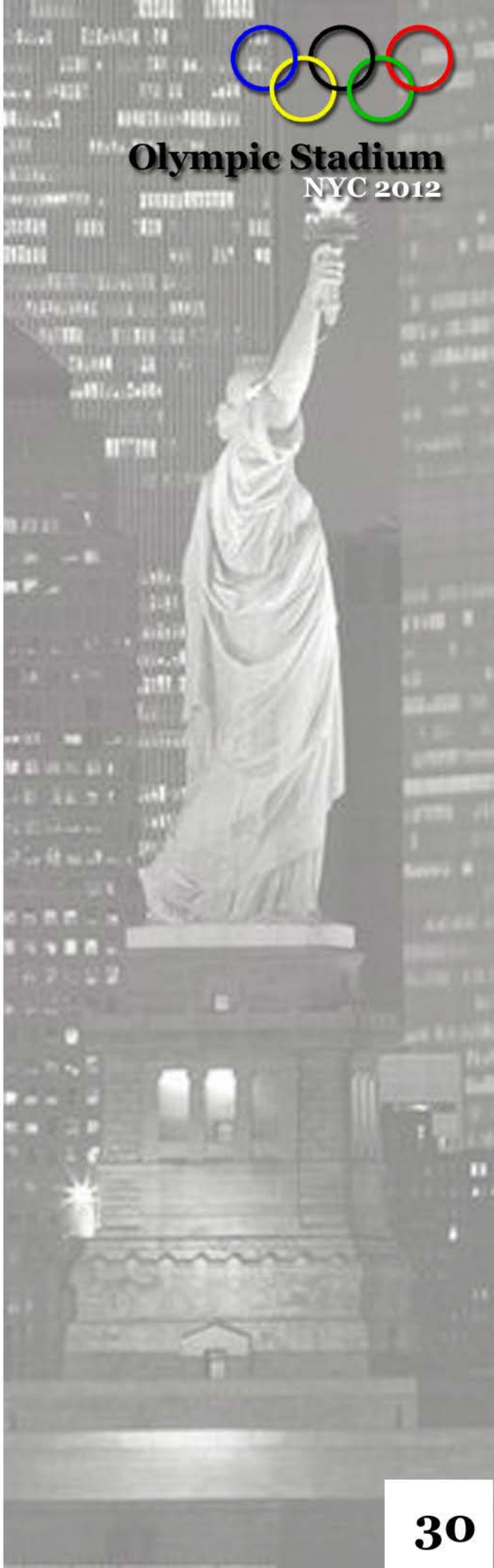
-Running Track (1 x 400m, 1 x 100m)
The track inside the stadium will be the regulation size of 400 meters. It will be the standard oval shape and run near the outside of the grass infield. It will be comprised of a rubber material that will require little or no maintenance. They track wll be fully visible to all in the stadium at all times. A warm-up track with a length of 100 meters will be provided in direct proximity to the stadium. This will be used by all athletes who need to warm-up prior to their events.

-Grass Infield (50,000 sq. ft.)
The total floor area inside the stands will reach upwards of 50,000 sq. ft. This massive amount of floor space is required for all the events that must take place for the track and field events of the Olympics. The infield will be grass with an integrated sprinkler system. The grade must be such that the water from said sprinklering system will not build up in any area of the field. Thus requiring drainage techniques moving water to the outer edges of the grass.

-Restrooms (25 x 2,000 sq. ft.)
The restrooms will be evenly spaced around the facility making sure that the massive amount of people will be able to answer nature's call in a speedy manor. These restrooms will be furnished with water saving toilets and faucets in an effort to reduce water consumption. Grey water will be filtered in the stadium and re-used where possible to reduce pollution given off by the restroom facilities. Handdryers will be used instead of paper drying systems also in an effort to reduce waste.

-Locker Room Facilities (4 x 10,000 sq. ft.)
- -Lockers
- -Benches
- -Showers
- -Restrooms
- -Trainers tables
- -Medical rooms
- -Storage

Each locker room will be furnished with benches and lockers large enough for the athletes who will need to use them. At any time they will require enough space for up to 200 people. The showers in the locker rooms will be equipped with water saving low-flow shower heads to conserve water. These spaces will be directly accessible through the locker room and private from the rest of the stadium. The restrooms in the locker rooms will be accessible only by the personnel who are allowed to use the locker room. They will be furnished with low-flow toilets and faucets, and hand dryers to reduce waste. Grey water from the locker rooms will be filtered and reused where possible. The trainer's tables and medical rooms will be directly accessible from the locker rooms. They will be used by the medical and training staff. They will require various training table and medical supplies needed for treating all potential injuries. The medical rooms will be used by the medical staff and will have incoporated storage units for all necessary medical supplies and equipment. Additional storage spaces will be provided in the locker rooms for items such as media equipment, sporting goods, laundry equipment, and cleansing supplies. These spaces will be comfortable for all those who need to inhabit these spaces for any amount of time.

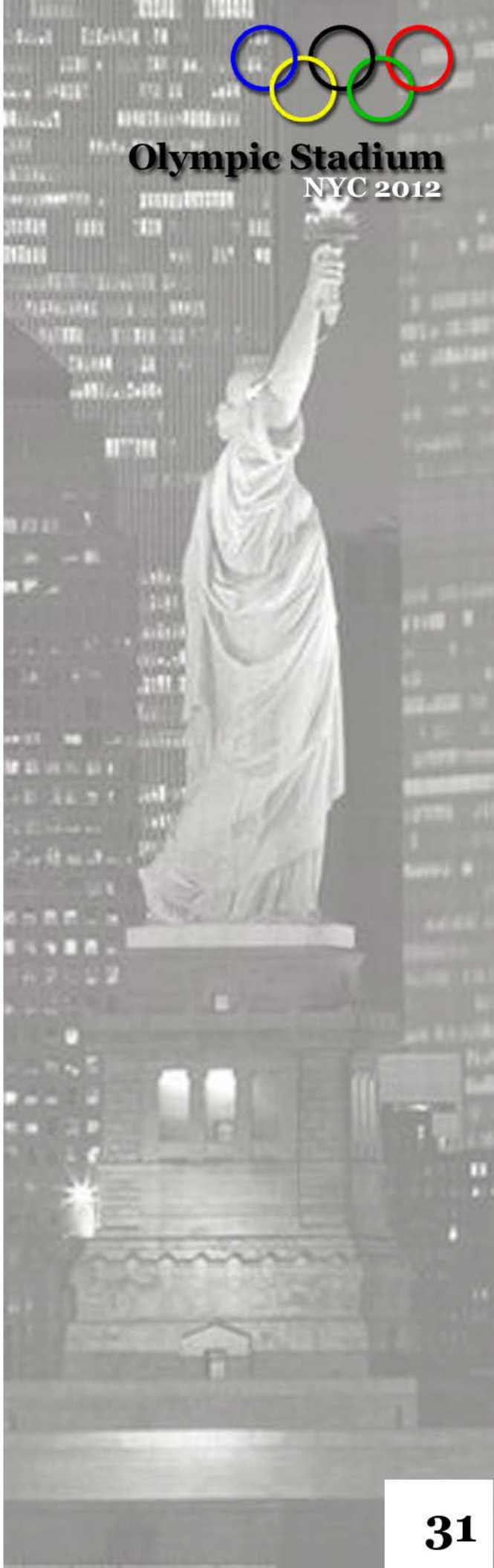


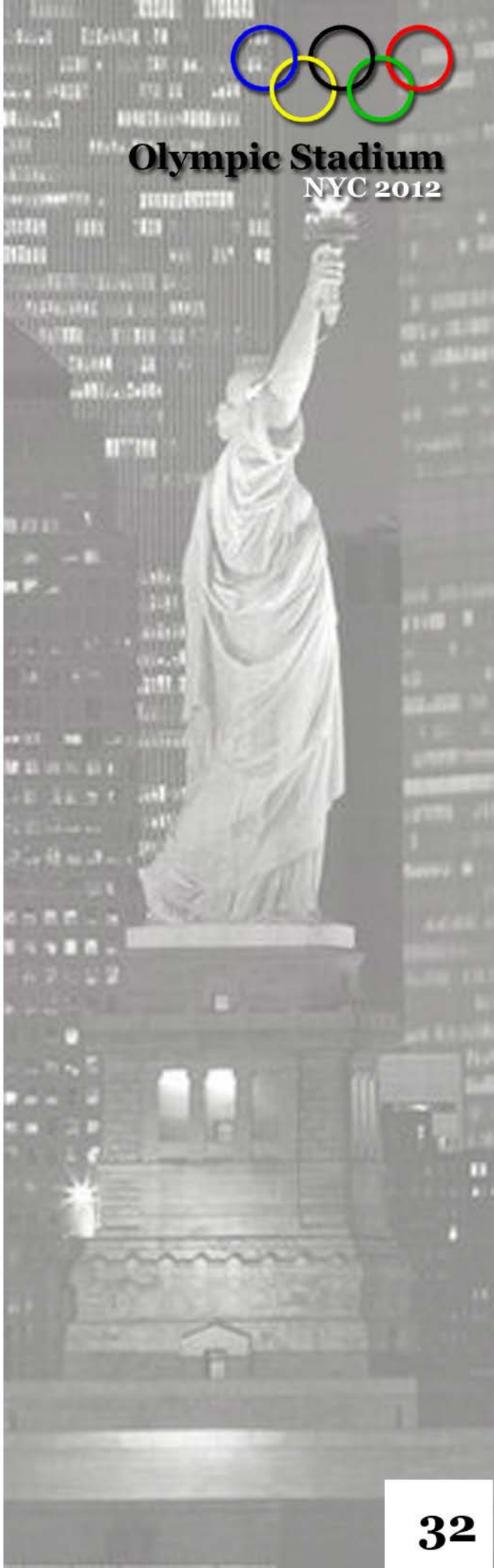
-Workout rooms (2 x 10,000 sq. ft.)
Each workout room will be furnished with weight training and conditioning equipment. These facilities will be used by those with access passes to the stadium facilities.

-Offices (20 x 500 sq. ft.)
Offices will be used by the professionals who require an office space directly in the stadium. These offices will be furnished with desks, computers, bookcases, and seating for up to four individuals.

-Conference Rooms (2 x 1,000/2,000 sq. ft.)
The 1,000 sq. ft. conference rooms will be used for small gatherings of stadium personnel and/or visiting parties. The larger conference rooms will be used for team gatherings of large scale meetings of stadium personnel. Each room will be fully media capable. They small rooms will feature enough seating for approximately 25 people, the large rooms will seat approximately 50 people. These will serve as gathering places for the many meetings that take place on a daily basis in a stadium facility.

-Museum (1 x 5,000 sq. ft.)
The museum will serve two seperate purposes. While the Olympics are in progress it will be used for Olympic history and memorabilia. After the Olympics have ceased, it will serve as an NY Jets, and NFL museum. It will be used by the public generating some supplemental income for the stadium. However, ticket holders will be granted free access. This will be a great way for people to see the rich and wonderful history of the Olympics, and the NFL. Keeping the past close reminds us of all the great stories carried through the friendship athletics can bring us.





-Seating

-Fan seating (Capacity 75,000 total)
-Luxury Boxes (Cap. 1,000)
-Press Boxes (Cap. 2,000)
-Accessible seating (Cap. 3,500)

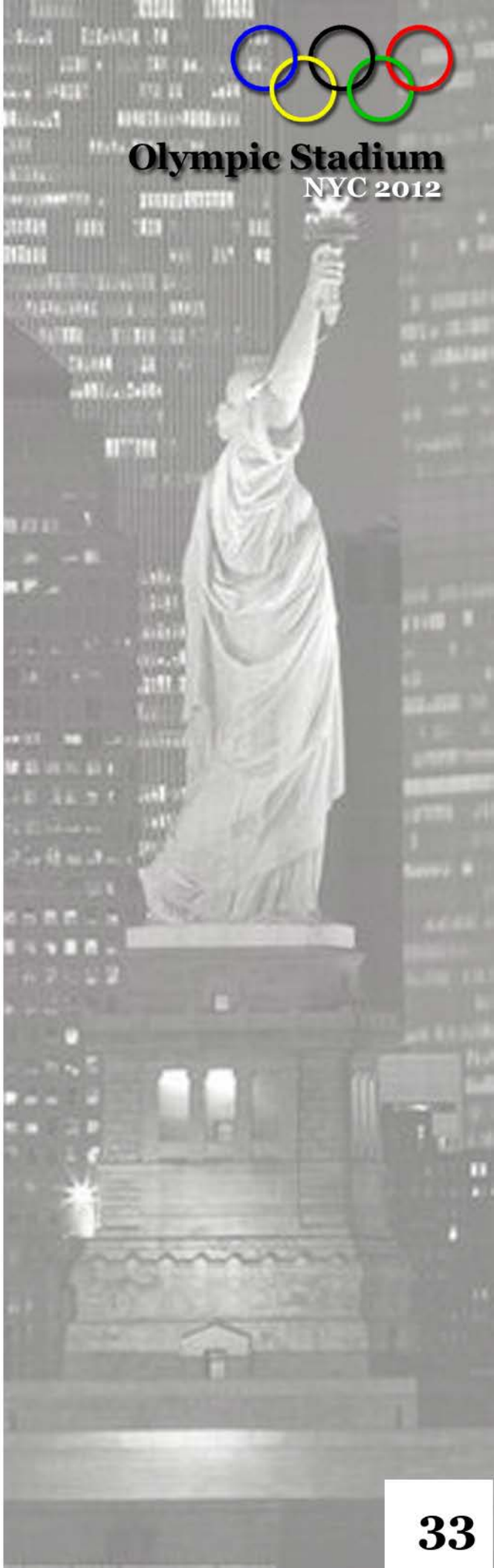
The total seating capacity for the stadium will be approximately 75,000 people. This will be comprised of three major areas: general seating, luxury box seating, and press box seating.

The general seating will be placed on three levels which will be very easily accessible both vertically and horizontally. The horizontal travel will be 360 degrees around the building from all levels of seating.

The luxury box seating will be positioned evenly around the stadium. The total capacity of the luxury boxes will be approximately 1,000 people. These boxes will be fully furnished with deluxe seating, private bathrooms, wet bar, and half-kitchen spaces. The box areas will be accessible to only those with a special ticket purchase. This will require seperate cirulation and security for the area.

Similar to the luxury box seating, the press boxes will require seperation from the general seating. They will only be accessible to those with a press pass. The expected press seating will be approximately 2,000 people. The press seating will be in enclosed spaces of various size dependent upon its use.

The necessary accessible seating for a stadium of this size is approximately 3,500 people. These seats will be incorporated into the general seating where possible. All accessible seats will be near exits and entries, and without stair access.



-Retractable Roof/Structure
- -Adaptive Re-use
- -New Roof Structure
- -Roofing Materials
- -Structural Materials
- -Exterior Materials

-Adaptive Re-use

Adaptive re-use will be an issue this building will be a part of. The existing NY Jets stadium will be torn down once this facility is up and running. This is why the structural elements, where applicable, will be used in the new building. This will cut down on cost for the new stadium as well as reducing waste from the previous building. It will also incorporate some nostalgia from the old stadium into the new one.

-Roof Structure

The roofing structure will be comprised of mainly a long-span truss system which will support the roofing membrane. The premiere objective of the roof structure is support while the roof is closed. The supports will be mounted on a mobile platform so the roof will be able to remain open when possible. The truss system will need to be approximately 10 ft. deep at its strongest point. It will need to be peaked or rounded to repell the snowfall New York recieves annually.

-Roofing Materials

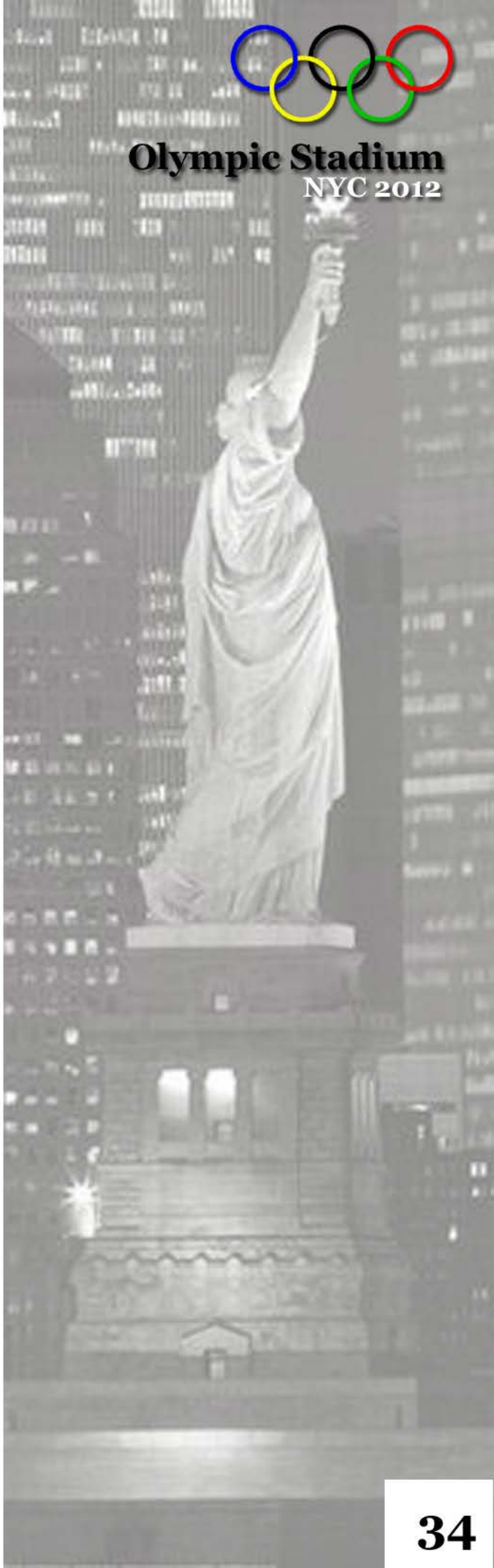
There will be two different roofing materials used in this stadium. The roofing membrane over the retractable roof will be a material that is permeable to light, but remaining water-resistant. The material will be lightweight reducing the load over the long-span members. This material will only cover the part that can open. The other part of the roof will remain stationary and be comprised of mainly steel panels. This portion of the roof can be a more heavy-weight material because it will be supported from below.

-Structural materials

The structural columns will be comprised of mainly re-inforced concrete. The beams supporting the seating and circulation areas will be steel. The decking material for the seating area will be poured in place concrete. For the flat circulation area, pre-cast hollow-core concrete will be used. Interior walls will be constructed with a steel stud framing and a gypsum board exterior. Mechanical will be exposed on the ceiling of this structure. Therefor, ceiling construction will be open.

-Exterior materials

The exterior fascade will be comprised of mainly glass construction. This will be to allow as much natural lighting in as possible. This will make the circulation areas very visible during the day requiring very little supplemental lighting. Masonry accents will be added to help the building fit into the context of Manhattan. Entryways will be mainly masonry construction to help them be easily visible to all upon entry into the building. The entry systems will need to feature a foyer to warm the exterior air before it enters the building.

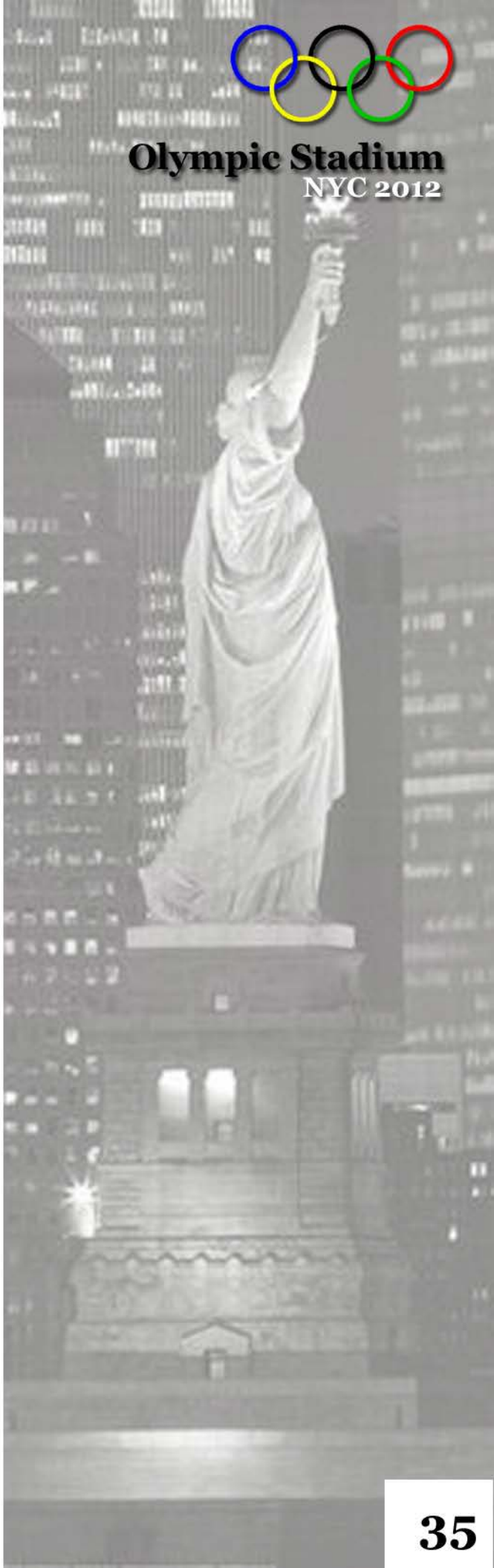


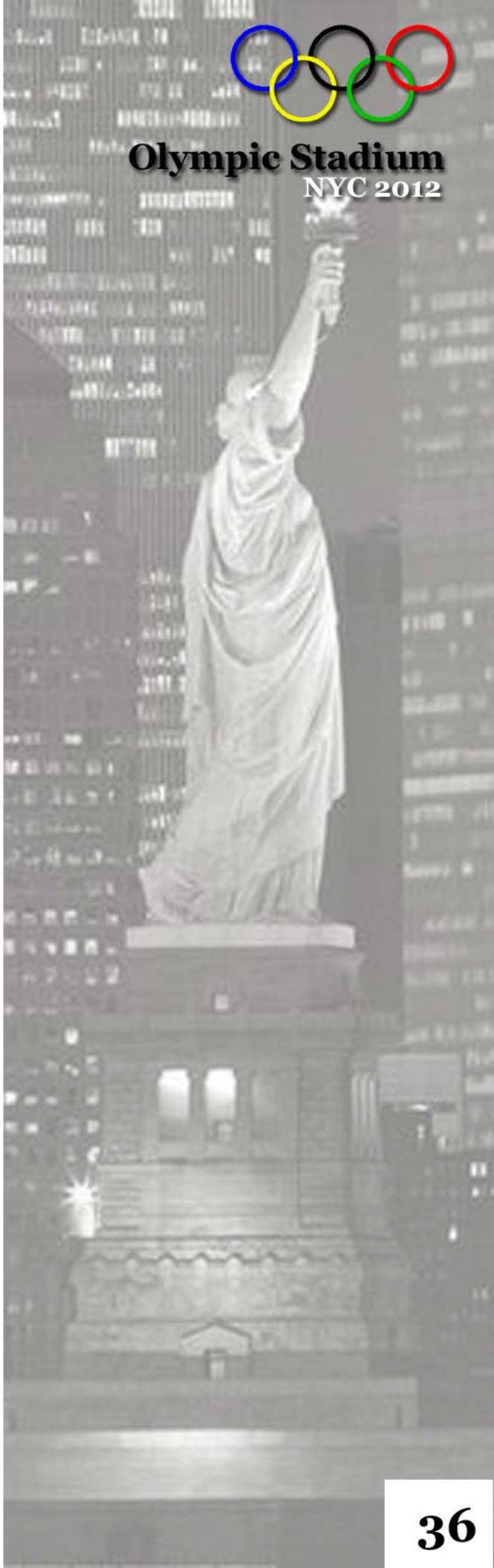
-Mechanical Systems

The mechanical system spaces will be located where needed around the stadium. The main source of power for the building will be the New York City Electric company. On the roof of the facility will be solar panels, creating a supplemental power source. This will greatly help in the massive amount of energy consumed by a building of this magnitude. Natural ventilation will be a large factor in the heating and cooling of this facility. While the roof is open, the heating and cooling systems will only run in spaces where applicable. Sustainability is a major concern of this project and whenever possible a sustainability technique will be employed.

-Mechanical Rooms (4 x 2,000 - 15 x 1,000)

The larger mechanical rooms will be for the heating and cooling systems. They will contain boilers, water heaters, grey water storage, cooling towers, etc. The smaller mechanical rooms will be used for janitorial staff. The rooms will be located in the appropriate places around the stadium. These rooms will hold cleaning supplies as well as serve as breakrooms for the janitorial staff.





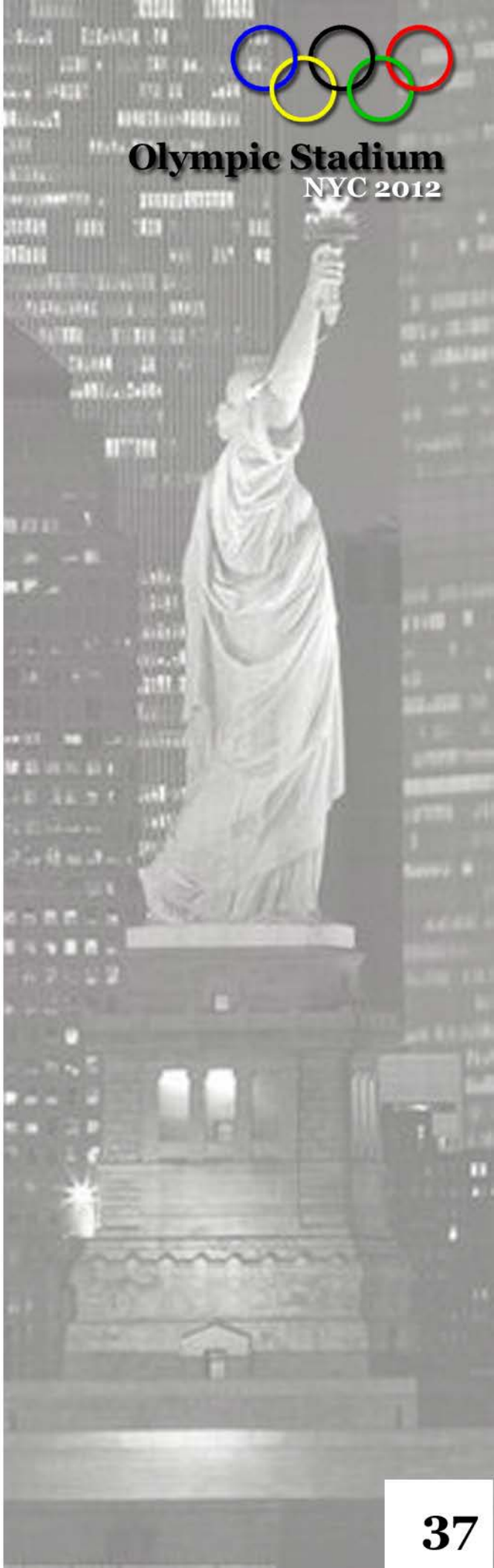
-Circulation

The primary circulation of the building will be horizontally. Movement around the stadium will be 360 degrees from all levels. This will house the majority of the spectator traffic. At full capacity the horizontal traffic areas must be large enough for the movement of all inhabitants. Each concourse will be approximately 50 feet wide at all points. This will allow for smooth, safe and efficient flow. All spaces must be ADA accessible from the hoizontal concourse spaces.

Vertical movement through the building will be placed at many locations around the building allowing for fast and easy access from all points in the stadium. Large stairwells will be places at approximately 6 locations around the building. Each stairwell will be accompanied by several elevators which will service all floors. Circulation through the seating areas will be primarily stairways large enough to handle the number of ticket holders for that particular section.

Restaurants, press and luxury boxes will require seperate vertical circulation. Access to these points will be only allowed with the correct ticket or pass. It is important to keep these seperate which will restrict those who are not supposed to be in those areas.

Required Staff

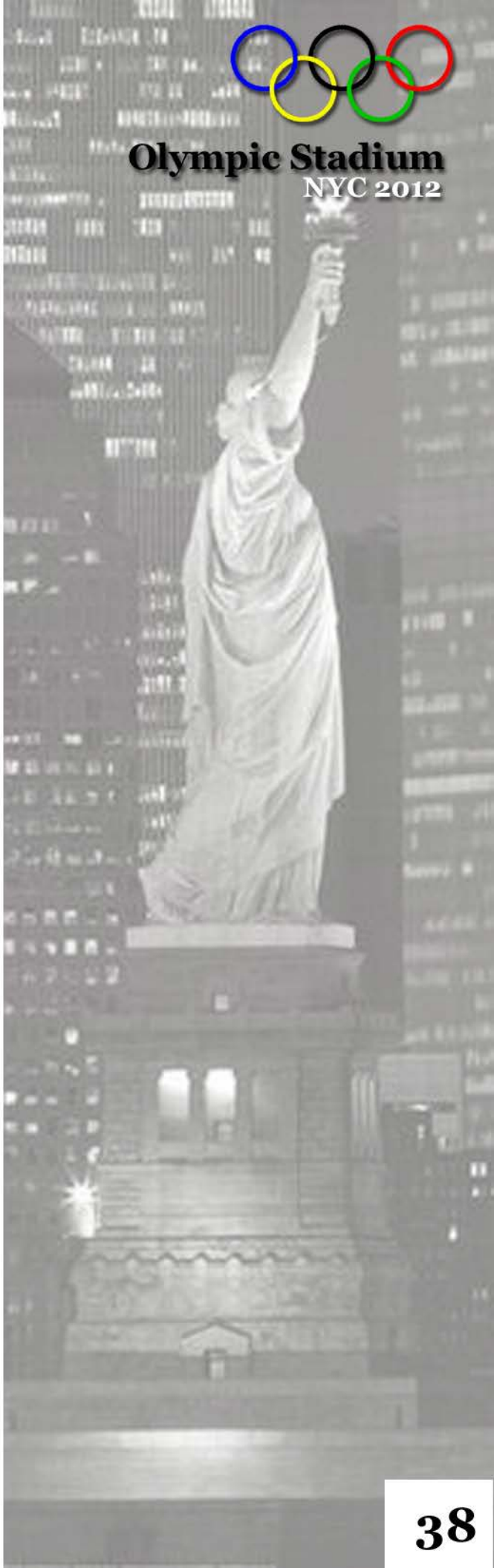


-Staff (1,000 people during events - 100 people full time)

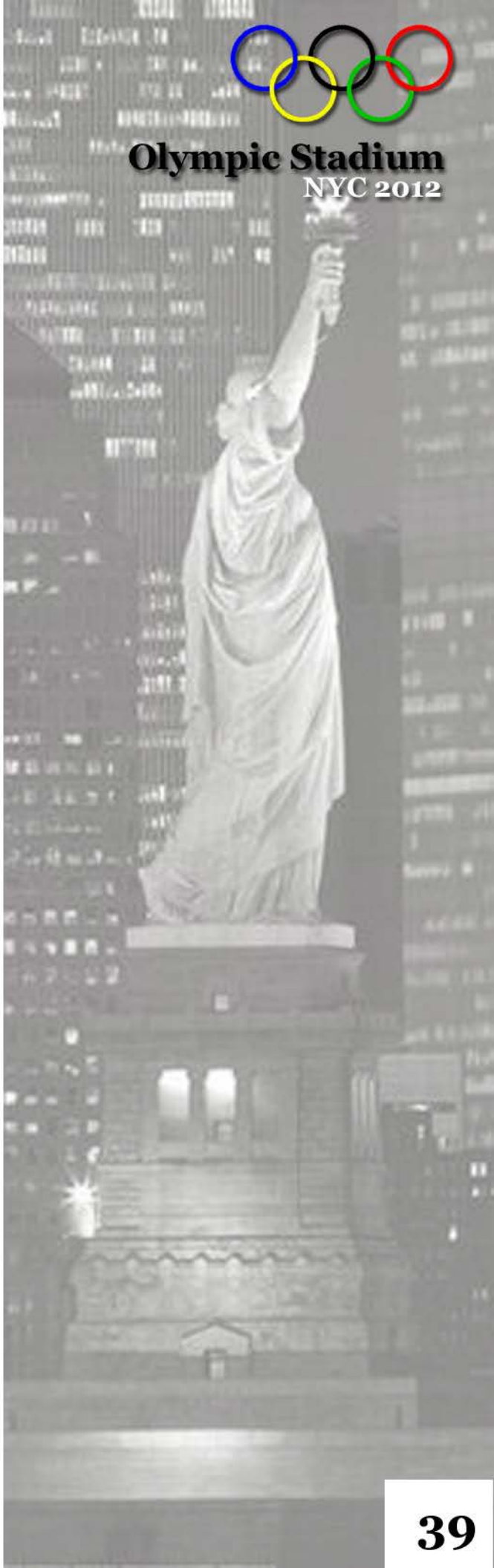
The staffing requirements for this stadium will fluxuate from event days to normal days. Approximately 100 full time staff will be needed for operation of the museum and the premanent restaurants. On days of events 1,000 +/- people will be needed for full facility operation. People needed will be:

-Security
-Ticket Takers
-Concession stand workers
-Memorabilia stand workes
-Janitorial staff
-Mechanical systems operators
-Restaurant staff
-Museum staff

Each staff member will be responsible for certain duties that make the facility run smoothly and efficiently. All required staff will need to be present during events. Museum staff will operate daily from the hours of 9:00 a.m. to 5:00 p.m. The permanent restaurtants will determine their own daily operating times.



Project Goals



-Project Goals

-Sustainability

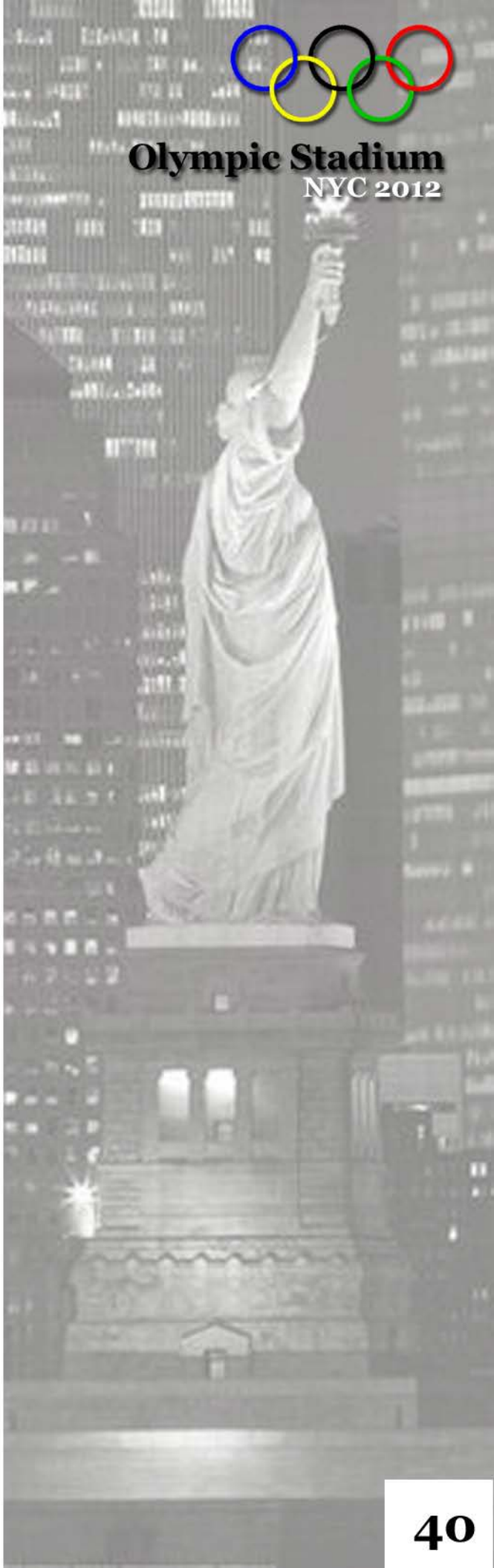
Sustainability is the primary goal of this project. For a building of this size, supplemental power sources are a must, incorporating energy, water, and money saving techniques whenever possible. Adaptive reuse will be employed in the structure of the building. The former NY Jets stadium contains members which can be re-located to the new stadium, saving money and creating less waste.

-Being a home

Being a home for one the greatest worldly events is a goal for this project. The Olympics is the only event worldwide that showcases not only athletes, but countries as well. Making sure there is something to offer for all who attend the stadium is very important. This is essentially more than a stadium. It is the connective piece for the friendship of many athletes and countrymen.

-Showcasing the City

The Olympic Games will be a terrific opportunity for New York to showcase itself. This city is regarded as the "city that never sleeps," and for everyone who will be there to witness the games, there will be plenty to do.



Case Studies

Criteria:

-Site Considerations

-Fits context

-Effective structural system

-Lighting

-Seating

-Material use

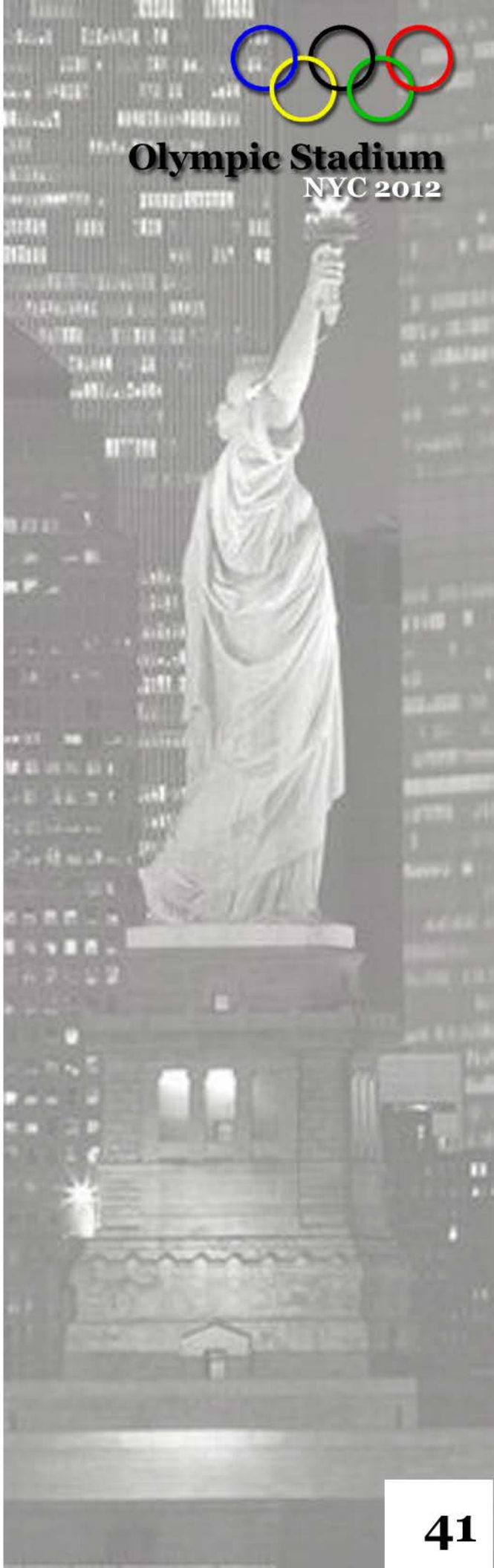
-Retractable roof design

-Inhabitant circulation

-Parking

-Security/Safety

-Restaurant/Lounge areas



Viking Stadium Minneapolis, MN

Olympic Stadium
NYC 2012

In the summer of 2000, after less than two decades of playing at the Metrodome, the Minnesota Vikings unveiled a plan for a new retractable roof stadium. Like many other teams in the NFL, the Vikings want a new stadium to generate more income, so they can be more competitive on the playing field. If built, the new stadium would be the home of the Vikings and the University of Minnesota Golden Gophers. Instead of being built in downtown Minneapolis, the new stadium would be built on the campus of the University of Minnesota. The stadium would have a retractable roof and around 65,000 seats. A retractable roof is necessary because of the harsh winter weather in Minnesota. The stadium would be in the shape of an oval, and the exterior would consist of brick and glass. A new stadium would consist of many amenities that are not at the Metrodome. The Vikings also studied the option of possibly renovating the Metrodome. However, the Vikings would prefer to have a new stadium built, because the cost of renovating the Metrodome would be as costly or more than building a new stadium.

Viking Stadium Minneapolis, MN

-SITE CONSIDERATIONS
This was a good site choice. The site chosen is in the heart of the twin cities which makes it easily accessible for everyone. The site immediately surrounding the building was well-designed.
-FITS CONTEXT
This design does not fit the context especially well due to the large number of masonry buildings in the twin cities.
-EFFECTIVE STRUCTURAL SYSTEM
This structural system is particularly effective. The long spanning member essentially reduces span load by one-half.
-LIGHTING
The natural lighting is effective in this stadium only when the roof is open. The roofing system is made of material too dense for light to pass.
-SEATING
The lower level seating is too flat for inhabitants to comfortably view gameplay.
-MATERIAL USE
Materials appear to be reflective which could hinder views on sunny days. The masonry use may not fit well with the reflective steel.
-RETRACTABLE ROOF SYSTEM
Very unique design. Un-like most roof systems this one collapses at the end instead of at the sides. This greatly reduces structural load on the side members.
-INHABITANT CIRCULATION
Great entrance and vertical circulation shafts. Horizontal circulation around entire building is not possible.
-PARKING
The parking system may be confusing for users. The circular pattern is very unconventional.
-SECURITY/SAFETY
Many new security considerations were taken into account in this design. Roof design has many safety factors for opening and closing.
-RESTAURANT/LOUNGE
Good integration of restaurants around the stadium. Users can watch the game will enjoying other aspects of the stadium.

Olympic Stadium NYC 2012

Reliant Stadium Houston, TX

-SITE CONSIDERATIONS
The site is vastly concrete around the building. This does not make the fan feel very welcome upon entering the facility.
-FITS CONTEXT
This is the largest stadium in the NFL, and it may be too large for the area. There are not many buildings even near its size in the area. It really sticks out.
-EFFECTIVE STRUCTURAL SYSTEM
The structure of this stadium is great because it uses high-strength materials that allow maximum spanning with very few members.
-LIGHTING
The natural lighting in this building is perfect. The roof is made of a light permeable membrane. Activities during the day require very little artificial lighting techniques.
-SEATING
Seating is a three teared design which creates no bad seats. This stadium really examplifies the phrase, “not a bad seat in the house.”
-MATERIAL USE
The material choice for the stadium works well in Houston. Many of the buildings are of similar construction.
-RETRACTABLE ROOF SYSTEM
This is a perfect example of roof design. The roofing material works beautifully with the simple spanning members.
-INHABITANT CIRCULATION
Good vertical and horizontal circulation. Both are attached at the sides of the building.
-PARKING
On-site parking is very effective. The site was large enough to incorporate many spaces.
-SECURITY/SAFETY
The roofing structure cannot be opened or closed without many steps for safe operation first.
-RESTAURANT/LOUNGE
There are no existing restaurants in this design that allow site of the field during game-play. This is a poor choice in a stadium.

Reliant Stadium Houston, TX

Olympic Stadium
NYC 2012

Home of the Houston Texans, Reliant Stadium was the first of its kind in the NFL, with a retractable roof when it opened in September 2002. Prior to 1997, Houston had a NFL franchise, the Houston Oilers. After thirty years of playing in Houston, TX at the Astrodome, the Oilers began demanding that a new football only stadium be built in the mid 1990's. After numerous attempts to get a stadium failed, the team decided to move to Nashville, TN after the 1996 season. Once the Oilers left for Nashville, a group including Bob McNair, got HOK sport to design a new retractable roof stadium, that could help lure a team back to Houston. In 1999, convinced by the Houston group, the NFL awarded the area a new franchise, the Houston Texans to begin playing in 2002. The Texans partnered with the Livestock Show and Rodeo in building a stadium. Groundbreaking ceremonies for the new stadium, which was built near the Astrodome, began in early 2000. The stadium is capable of accommodating both football and rodeos. In October 2000, Reliant Energy purchased the naming rights, thus the facility was named Reliant Stadium.

The Houston Texans played their first regular season game at Reliant Stadium on September 8, 2002 against the Dallas Cowboys. Reliant Stadium has a capacity of around 69,000, in three main tiers of seats that enclose the field. A retractable roof was chosen for the stadium because of the late summer heat and because the stadium will host rodeos, that bring in an annual 2 million people. The roof consists of two sections that meet over the 50 yard line when it is closed. When the roof is open, each section is above the seats in the endzone. Reliant Stadium has many amenities including over 7,000 club seats, 166 luxury suites, club lounges and bars, and a Texans team store. Reliant Stadium will be the site of the 2004 Super Bowl.

Qwest Field Seattle, WA

-SITE CONSIDERATIONS
This stadium creates breathtaking frames around the landscape and cityscape in the background. It is very enjoyable to watch an event here.
-FITS CONTEXT
This stadium was built in proximity to Safeco field where the baseball team plays. This makes parking dividable between venues.
-EFFECTIVE STRUCTURAL SYSTEM
A beautiful archway takes the majority of the load off the long span system making it very effective.
-LIGHTING
Natural lighting is very effective in this stadium, but only because there is no roofing system.
-SEATING
The seating is well-designed for creating awe-inspiring views. Open-ended seating was a great choice for this site.
-MATERIAL USE
The material at ground level is masonry and fits well with the context.
-RETRACTABLE ROOF SYSTEM
This stadium is open air construction.
-INHABITANT CIRCULATION
Good vertical circulation for fans, but 360 degree navigation is not possible around the stadium.
-PARKING
Parking is shared with another venue in Seattle which is great if possible, but most cities aren't allowed that luxury.
-SECURITY/SAFETY
The roofing structure was designed with safety in mind. The load on long span members was reduced dramatically for safety concerns.
-RESTAURANT/LOUNGE
There are no existing restaurants in this design that allow site of the field during game-play. This is a poor choice in a stadium.

Qwest Field Seattle, WA

After more than two decades of playing in a stadium with another tenant, the Seattle Seahawks moved into their own stadium in the summer of 2002. After spending more than two decades at the Kingdome; a multipurpose dome facility, which was also the home of the Seattle Mariners (MLB), the Seahawks wanted a new facility for themselves along with the Mariners. In the mid 1990's voters approved bonds for two new stadiums to be built. A new baseball only stadium, Safeco Field, was constructed adjacent to the Kingdome. However, the Seahawks new facility was going to be constructed on the same site as the Kingdome. In order for the new stadium to be built, the Kingdome had to be imploded. While the new stadium was being constructed, the Seahawks moved to Husky Stadium, home of the Washington Huskies (NCAA). Construction began on the Qwest Field in early 2000.

The Seahawks christened their new state of the art facility on September 15, 2002. The stadium is configured in a horse shoe shape, with three tiers of 68, 000 seats. The north end of the stadium is open, allowing superb views of the surrounding Seattle area. A 13-story tower with a scoreboard at the top and bleacher seats for up to 3,000 fans, known as the "Hawk Nest" is also located at the north side. The new stadium is the first of its kind to have luxury suites on the field directly behind the north endzone to provide an in-your-face experience. The stadium has a total of 82 luxury suites and over 7,000 club seats. One of the most unique features of the stadium is the overhanging roof design and rainbow trichord trusses that rise 260 feet above the field surface. The roof covers 70 percent of the seats keeping many fans dry during inclement weather. The exterior of the stadium consists of red brick, and brick-accented colored concrete, tan pre-cast concrete and white painted steel for the roofing supports; blending in with other surround facilities. Fans attending games at the new Seahawks stadium have some of the best views than any other stadium in the NFL. In June 2004, Qwest Communications International Inc. purchased the naming rights to the stadium, thus the stadium is know known as Qwest Field.

Jets Stadium New York City, NY

-SITE CONSIDERATIONS
Great site choice. The location is ideal for a city the size of New York. It is in the hub of the transportation for the city. Off-site parking could be an issue.
-FITS CONTEXT
This stadium fits well with the buildings in proximity to the site. Steel and glass are the dominant features of buildings in the area.
-EFFECTIVE STRUCTURAL SYSTEM
The structure of this building is uniquely designed in that the main supports are shown at the sides of the stadium. This creates an interesting view for people at the street level.
-LIGHTING
Natural lighting in this stadium is very effective. The combination of glass and steel construction work well with letting light in.
-SEATING
The seating is in a unique square configuration which fits well on the site, but may not be the best solution for the user.
-MATERIAL USE
The material choice was great for the context and for light transmission. Very much a first in stadiums.
-RETRACTABLE ROOF SYSTEM
The system uses the conventional side fold design which works well with a square stadium.
-INHABITANT CIRCULATION
Great care was taken in making the entrance as enjoyable of an experience as being in the stadium. Waiting in line may become fun at this stadium.
-PARKING
The parking is mostly off-site. This helps keep the site clean, but can be a problem for densely populated areas.
-SECURITY/SAFETY
Security has been in question in New York recently. This makes stadiums here revamp old techniques and ensure fan safety.
-RESTAURANT/LOUNGE
There are no existing restaurants in this design that allow site of the field during game-play. This is a poor choice in a stadium.

Jets Stadium New York City, NY

After playing at a stadium with another team for their entire existence, the New York Jets may one day have a stadium of there own. In conjunction with New York City trying to land the 2012 Olympics, the Jets will probably get a new stadium if the city is awarded the Olympics. If built the stadium would have 75,000 seats, a retractable roof, and built on Manhattan's west side. It would incorporate sustainable design technology through use of solar panels, wind turbines, and hydroelectric technology to supply energy to the stadium and to the surrounding city grid. As part of the continued redevelopment of the west side, the stadium would be built on a deck over the west side rail yards, adjacent to the historic Highline. It would have an extensive public plaza called the “woodland wedge” on the 34th Street side. In addition, the facility would improve development around the Hudson River, creating a new sports entertainment district. All back of house facilities would be below-grade, and the stadium will be built of steel and recycled materials. The future Jets stadium is in its early stages and all depends on whether New York City is awarded the Olympics.

Ford Field Detroit, MI

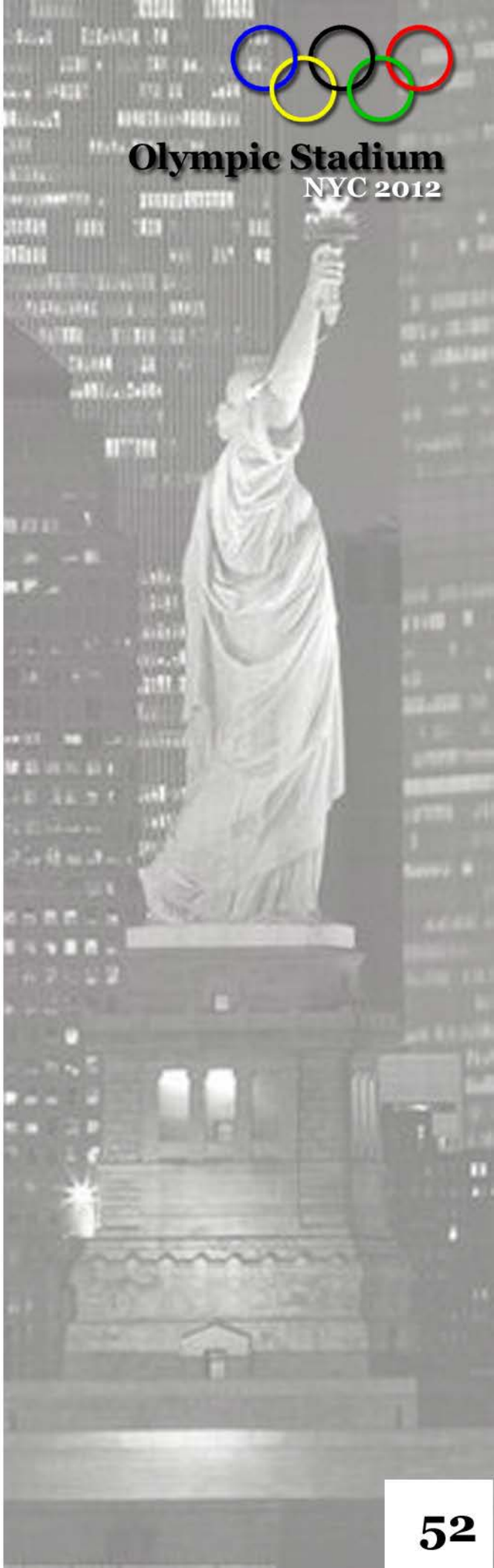
-SITE CONSIDERATIONS
Good use of site. The stadium consumes the majority of the site while making sure there is enough off-site parking to fill the needs of the inhabitants.
-FITS CONTEXT
This stadium is perfect for Detroit. The motor city has many significant buildings that this stadium took its cues from.
-EFFECTIVE STRUCTURAL SYSTEM
The structural system is filled with long-spanning members which create an interesting roof pattern.
-LIGHTING
The end walls of the stadium let effective amounts of natural lighting in. The roof however does not allow light to pass.
-SEATING
The seating configuration is designed for a maximum amount of fans. This can be good and bad.
-MATERIAL USE
The materials are a good fit for a steel producing city. They fit in well with the context.
-RETRACTABLE ROOF SYSTEM
The roofing system is non-retractable.
-INHABITANT CIRCULATION
Great horizontal circulation patterns. Fans can move 360 degrees around the stadium.
-PARKING
The parking is mostly off-site. This helps keep the site clean, but can be a problem for densely populated areas.
-SECURITY/SAFETY
Many security considerations were used in this design including entrance techniques that pass all fans through a security checkpoint.
-RESTAURANT/LOUNGE
There are no existing restaurants in this design that allow site of the field during game-play. This is a poor choice in a stadium.

Ford Field Detroit, MI

Along with three other NFL teams, the Detroit Lions began playing in a new stadium in 2002. After more than two decades of playing at the Silverdome in Pontiac, MI, the Lions and Detroit Tigers (MLB) first proposed to have two new stadiums built in downtown Detroit in the mid 1990's. Construction on the Tigers new stadium, Comerica Park began in 1997 and was completed by 1999. Voters approved a bond that paid for 51% percent of the football stadium, while the team paid the remaining 49% of the $430 million stadium. Appropriate enough, Ford Motor Company purchased the naming rights to the stadium, thus it was named Ford Field. Groundbreaking ceremonies for Ford Field began on November 16, 1999.

The first game at Ford Field was on September 22, 2002 vs. the Green Bay Packers. Ford Field is one of the NFL's most unique stadiums. Ford Field has 65,000 seats, and has a fixed roof supported by two 18ft-wide concrete columns. A structural-steel supported permanent dome was chosen to cover the facility because of Detroit's cold and harsh winter weather. One of the unique aspects of Ford Field is that the entire south wall of the stadium is made up of two shelled-out J.L. Hudson's warehouses. The 80-year-old buildings have been renovated to include 140 luxury suites on three levels facing the playing field, along with other uses like retail, restaurants and possibly a hotel. On the south entrance of Ford Field is a six story glass atrium. Fans receive tremendous views of the downtown Detroit's skyline through the atrium. This also allows natural light inside the stadium. The FieldTurf playing field is 45 feet below street level, allowing fans easier access to their seats. Amenities at Ford Field include 7,000 club seats, 140 luxury suites, a club lounge, banquet rooms, conference and convention areas, and a Lions team store. Prior to its opening, Ford Field was awarded Super Bowl XL in 2006.

References



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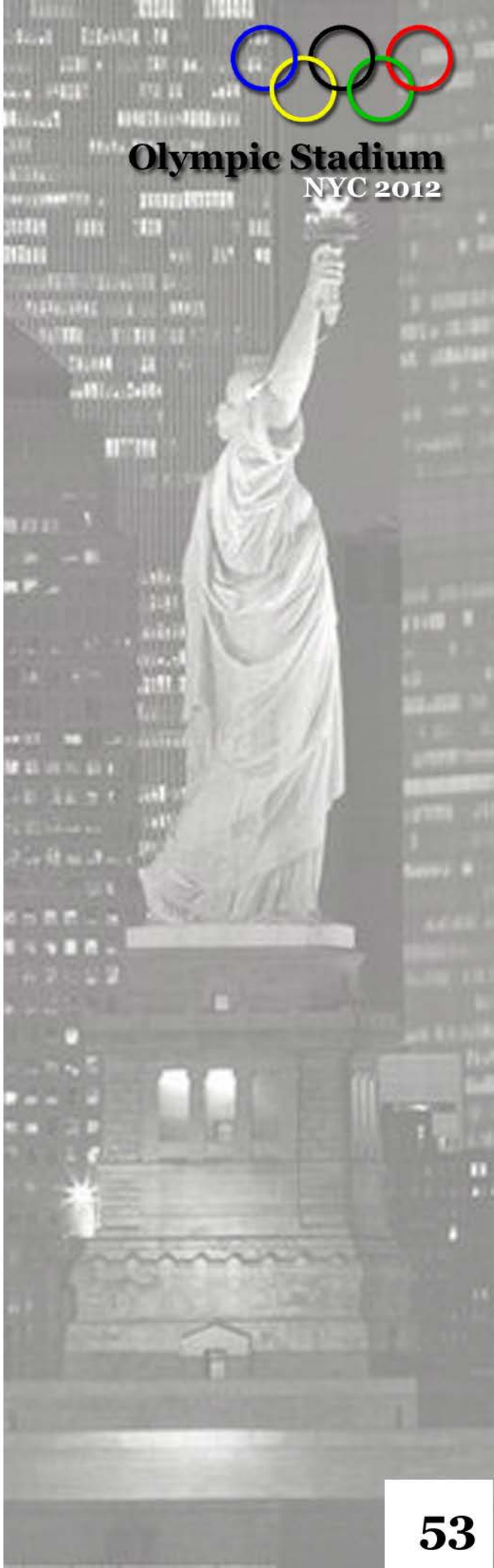
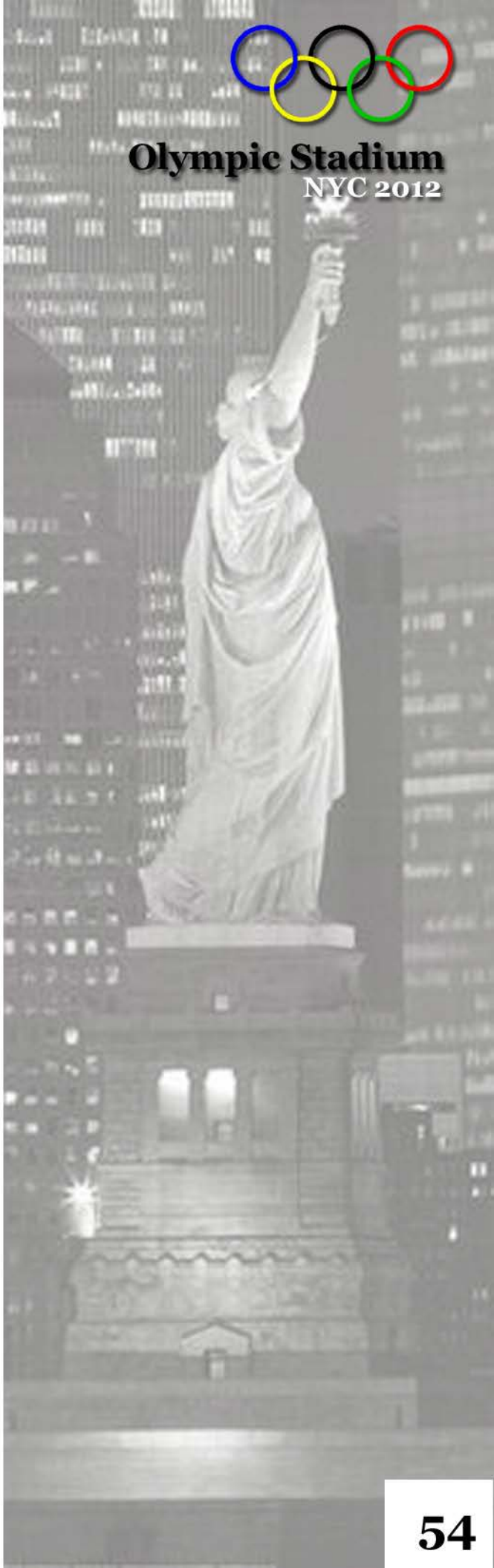


Appendix



Important dates:

Week #1 (Oct. 4-8)
7Oct Thesis proposal due
Student critic preference slips available
Research

Week #2 (Oct. 11-15)
14Oct Return preference slips to main office
Research

Week #3 (Oct. 18-22)
21Oct Primary and secondary critics announced
Research

Week #4 (Oct. 25-29)
28Oct Last day of Arch 561 class
Research

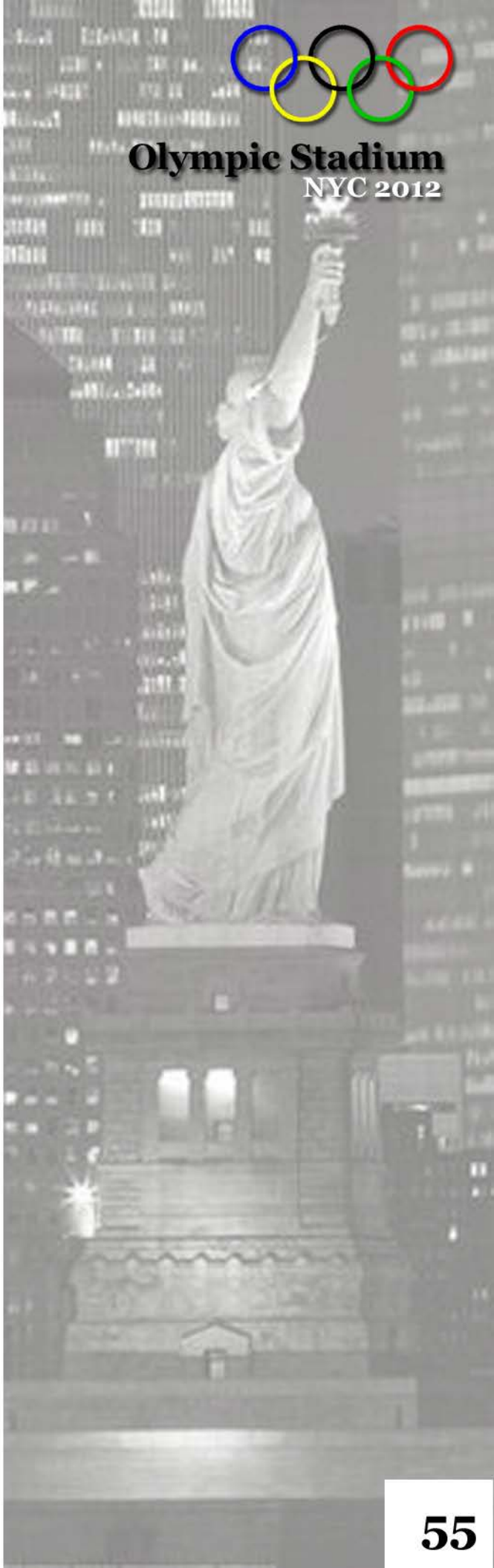
Week #5 (Nov. 1-5)
Define the Program
Research

Week #6 (Nov. 8-12)
11Nov Veterans Day Holiday
Further work on program
Research

Week #7 (Nov. 15-19)
15-19Nov Final week of Arch 571/ presentations
Organize site information
Further work on program

Week #8 (Nov. 22-26)
24Nov last day before Thanksgiving holiday
Draft thesis program due to primary critic (1copy)

Week #9 (Nov. 29-Dec. 3)
Review of program with thesis critic
Work on final program draft



Week #10 (Dec. 6-10)
9Dec Final thesis program due to primary critic (1 copy)
10Dec Final day of classes

Week #11 (Dec. 13-17)
13-17Dec Final Examinations
16Dec Program grade due to primary critic (1 copy)

Week #12 (Dec. 20-24)
Research

Week #13 (Dec. 27-31)
Research

Week #14 (Jan. 3-7)
Research

Spring Semester 2005

Week #15 (Jan. 10-14)
11Jan Classes begin
Conceptual and schematic design work

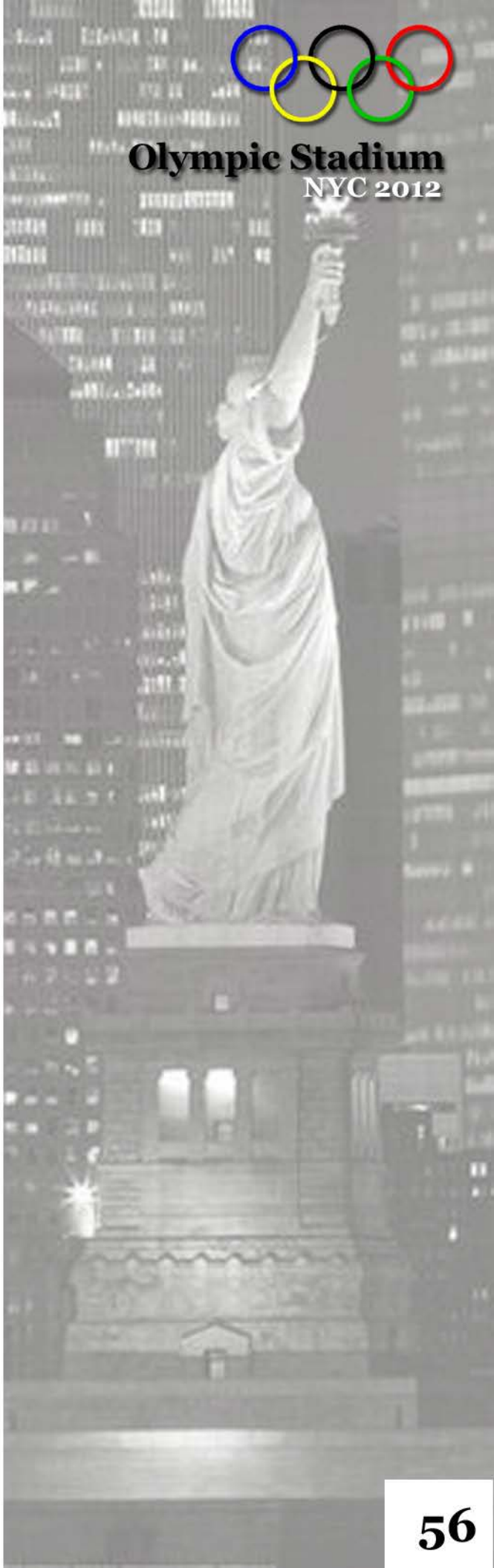
Week #16 (Jan. 17-21)
17Jan Martin Luther King, Jr. Holiday
Conceptual and schematic design work

Week #17 (Jan. 24-28)
Conceptual and schematic design work

Week #18 (Jan. 31-Feb. 4)
Conceptual and schematic design work

Week #19 (Feb. 7-11)
Conceptual and schematic design work

Week #20 (Feb. 14-18)
Design Development



Week #21 (Feb. 21-25)
21Feb President's day holiday
Design Development

Week #22 (Feb. 28- Mar. 4)
Design Development

Week #23 (Mar. 7-11)
7-11Mar Mid-semester thesis reviews

Week #24 (Mar. 14-18)
14-18Mar Spring Break
Presentation Drawings

Week #25 (Mar. 21-25)
25-28Mar Easter Holiday
Presentation Drawings

Week #26 (Mar. 28- April 1)
Presentation Drawings

Week #27 (April 4-8)
Presentation Drawings

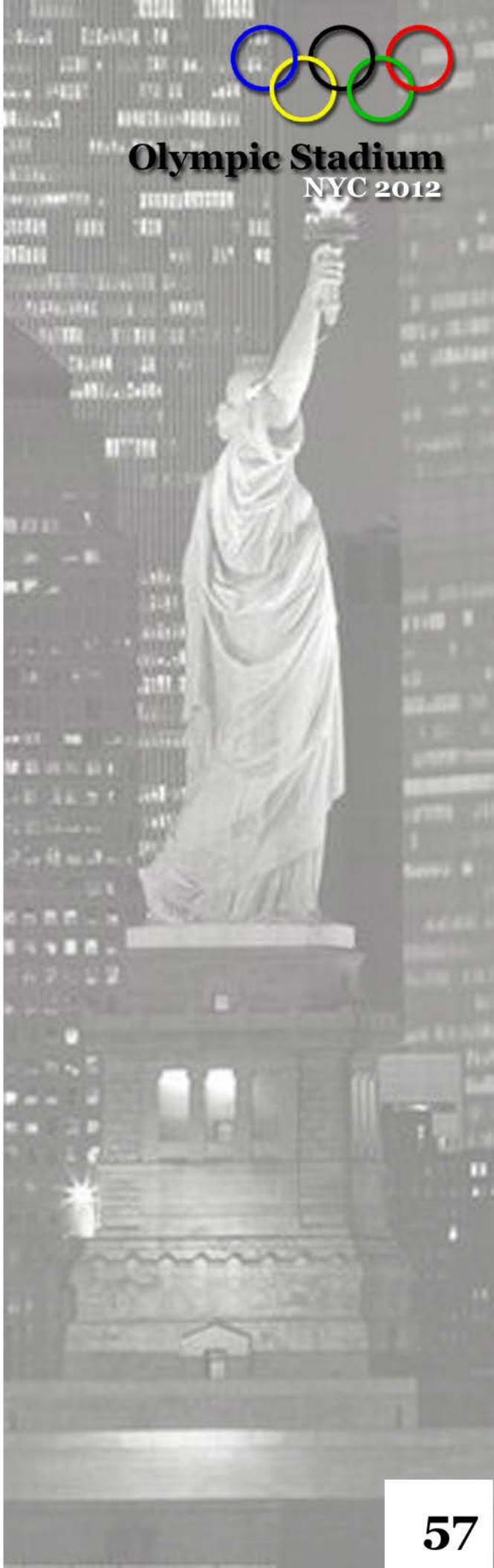
Week #28 (April 11-15)
Presentation Drawings

Week #29 (April 18-22)
Presentation Drawings

Week #30 (April 25-29)
25April Thesis projects due at 4:30 Union Ballroom
26-27April Annual Thesis Exhibit
28April-05May Final Thesis Reviews
29April Draft of Thesis document to primary critics

Week #31 (May 2-6)
6May Final day of classes

Week #32 (May 9-13)
9-13May Final Examinations
12May Final thesis document due at 4:30pm in the Department office
13May Commencement at 4:00pm Fargodome



Thesis Proposal

A. Title:

Olympic Stadium: 2012 Games in New York City, New York.

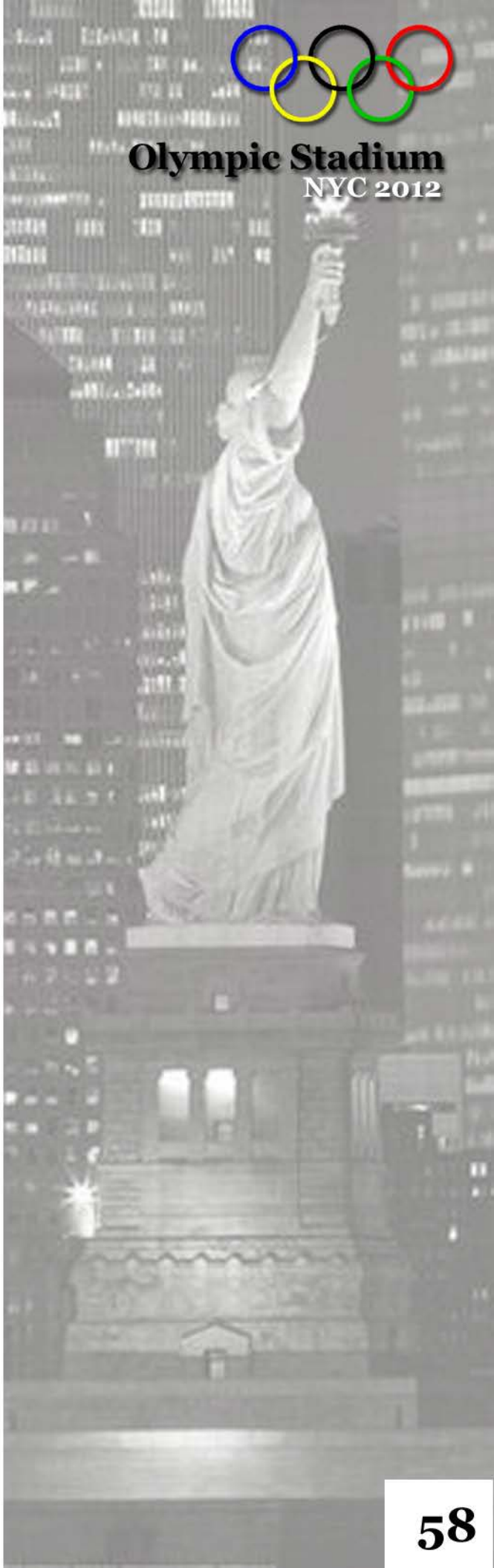
B. Building Typology:

This project will be home to the thousands of athletes and hundreds of countries that attend the Olympic Games. It will serve as the track and field stadium, providing for the majority of events that occur during the Olympics. After the Olympics have subsided the stadium will accommodate the NY Jets football team. This will require certain measures to make the transition smooth and effortless.

C. Conceptual Basis or Unifying Idea:

New York City offers the Olympic movement the chance to tell a very powerful story. It has eight million of the most culturally diverse people in the world. This diversity can only be strengthened by the influence the games hold on the world. Creating a structure that can embody the entire sensation of the games is the challenge.

It will be placed in the Chelsea district of Manhattan's West Side. This location is next to the quickly improving Hudson River. This river is representative of the way everyone in the world flows to there destination. In this case the river will bring everyone together in the Olympic Stadium. It will serve as the resting place for thousands of athletes and millions of fans who are in search of the greater glory and the sense of brotherhood that accompanies the Olympic Games. My hope is only to strengthen this feeling through proficient Architecture and a feeling unmatched by any other event on the planet.



D. Project Justification:

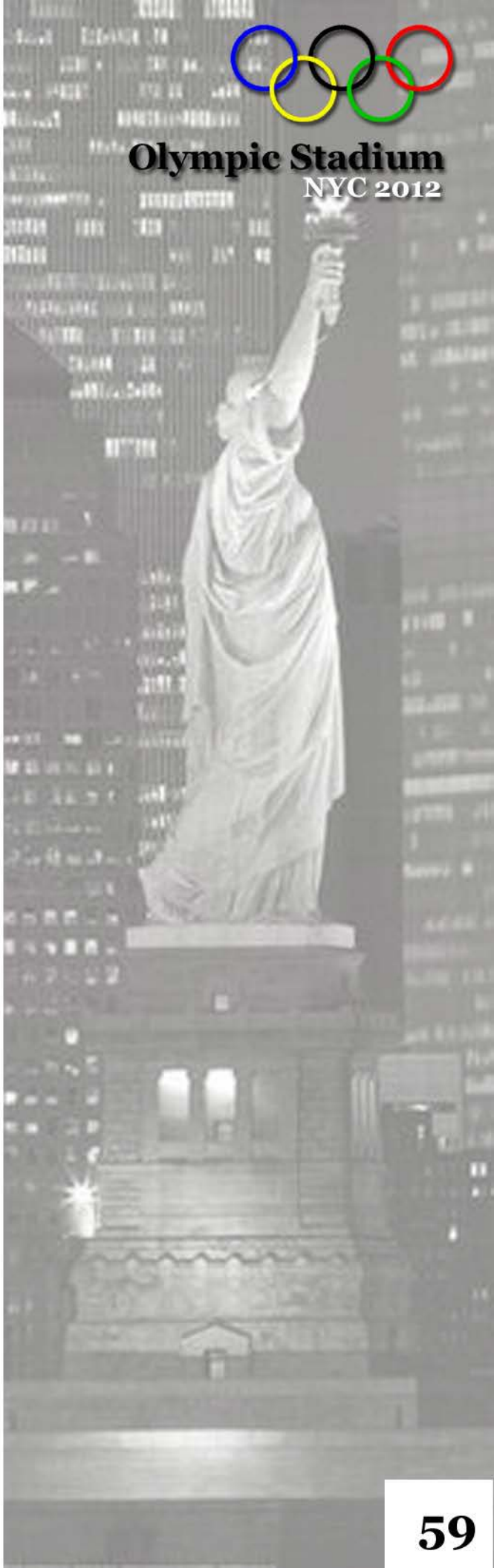
Any time the United States is host to a world-wide event, it is an excellent chance for us to show how welcoming and accommodating we can be, and the Olympic Games are the ultimate in world-wide events. Millions of people around the world watch the Olympics and hundreds of thousands travel to see the games first hand. This is a huge boost in the American economy. It is estimated that 125,000 new jobs will arise and nearly $1 billion in revenue will be generated for the city. The cost of a new stadium is sometimes a concern, but in this case the Jets have proposed spending $800 million and New York City and state have each enlisted $300 million for the retractable roof and platform over the existing rail yards. On Tuesday, September 28th the city was announced as 1 of the 5 finalists for hosting the 2012 games. Mayor Bloomberg said, “We are Flattered, and we are humbled. Nowhere in the world is there a city as organized and prepared for 2012.”

E. Emphasis:

• Adaptive Re-use
Many Olympic stadiums are used for little other than the games. In this case the facility will be transferred over to the New York Jets football team who has agreed to cover most of the cost. For a building of this cost and this magnitude to continue to be used is a very positive aspect of design.

• Structural marvel
Stadium designs are often accompanied by complicated structural systems that are bulky and not very aesthetically pleasing. Using new technologies and new materials these systems can be used to our advantage. They can be beautiful aspects of a design if used correctly.

• Diversity
This building will need to feel like a home for numerous different types of people. Creating a structure that encompasses all the world has to offer is the challenge.



F. Site:

The site is on the West side of Manhattan. It is located on the Hudson River. This site is an excellent choice because of its proximity to major city features such as: transit, media, restaurants, hotels, and the Javits Convention Center.

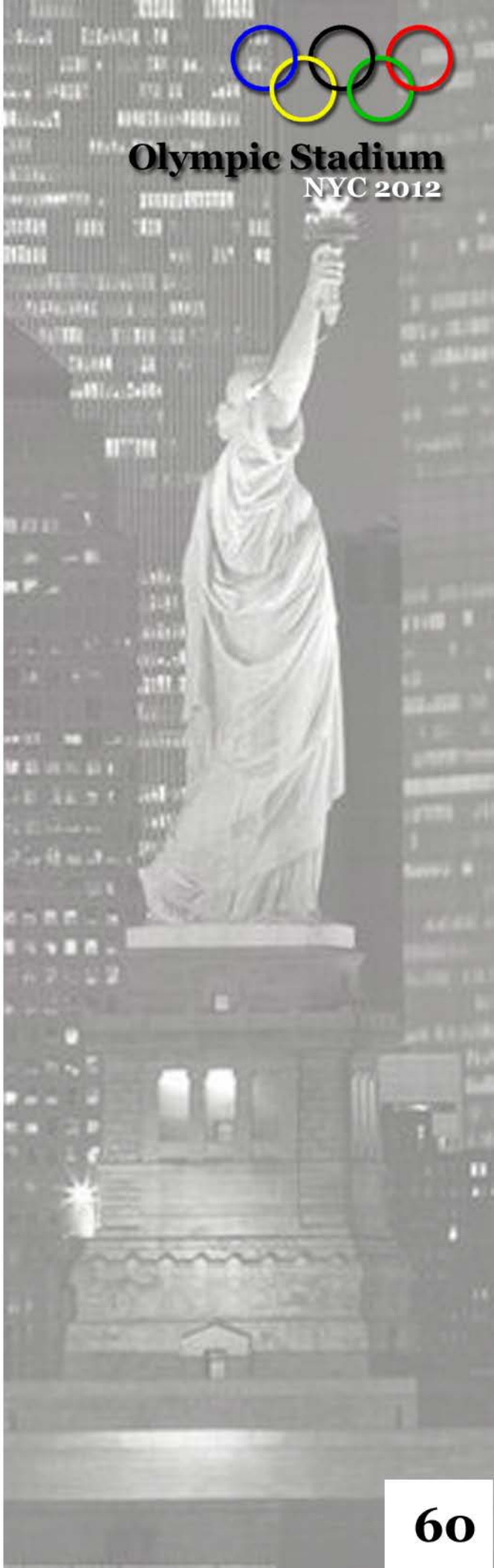
The area holds various different types of travel possibilities. Boat, cab, rail, and air are all possible modes of transportation. The transit system of West Manhattan is directly connected with every major part of the city. The Lincoln Tunnel is within two blocks of the proposed site providing easy access to the opposite side of the river. The rail system would be re-routed to bring the trains directly by the stadium which would make it easily accessible to the public.

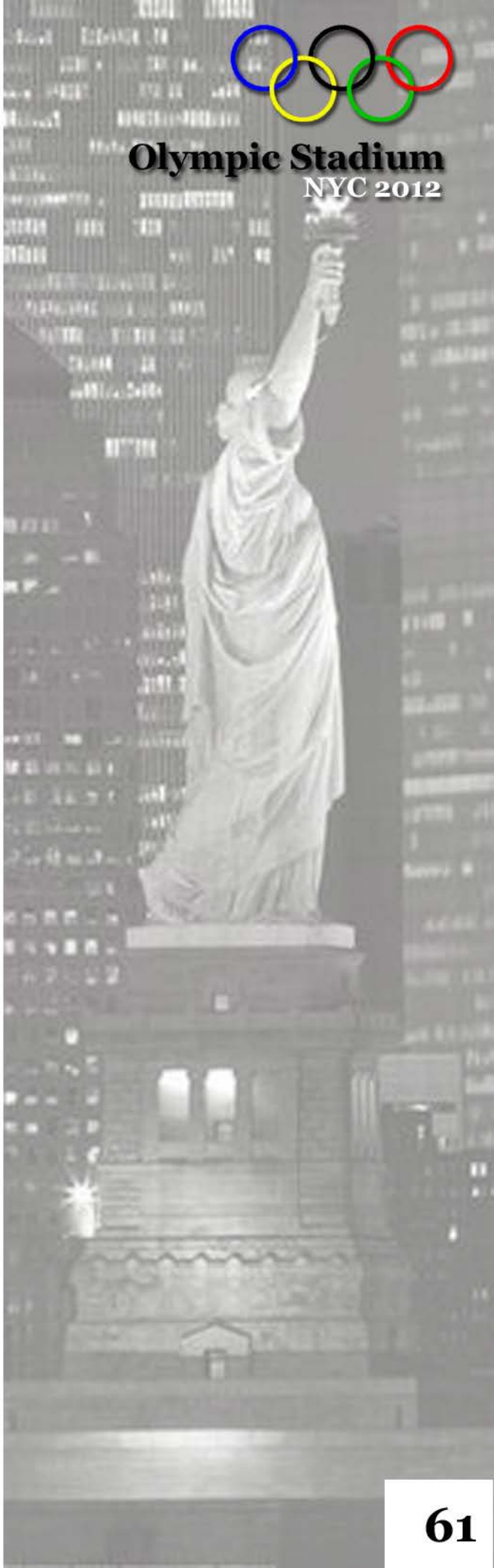
This area is largely responsible for what the world sees, hears, and reads in the news. The Main Press Center and the International Broadcast Center are both within walking distance of the proposed site. This is a huge advantage in the bidding process due to the convenience this would provide.

There are many diverse restaurants in the area creating one of the most eccentric eating experiences anyway in the world. Whatever your taste, it can be found within blocks of the stadium.

The Javits Convention Center, designed by I. M. Pei, is steps away from the stadium. This building will be great for gathering mass amounts of people for media announcements, gallery showings, etc.

The best feature of New York City lies in the salty waters just off shore. The Statue of Liberty has been the symbol of freedom in the United States for well over 100 years. The copper beauty shines her torch over the entire city. This is a symbol for all in the world to view while the Olympics are being held in Lady Liberty's view.





H. User / Client Description:

The stadium will begin as an Olympic venue and will finish as the Jets stadium. This stadium will hold up to 75,000 enthusiastic fans that will be only interested in the experience a sporting event can give them. Upon entering the stadium the people need to be excited and the affair needs to continue until the walk out the doors.

The client for the stadium will be the city and state of New York, as well as the New York Jets. They have proposed spending over $1 billion to accommodate the building of the facility.

I. Design Methodology:

Case studies will be the most helpful tool in discovering the possibilities a stadium holds. Structural systems will be a major point of study, while aesthetical properties will be held with the same respect. Building materials and new technologies will be decisive in how the stadium is shaped and how well it performs.

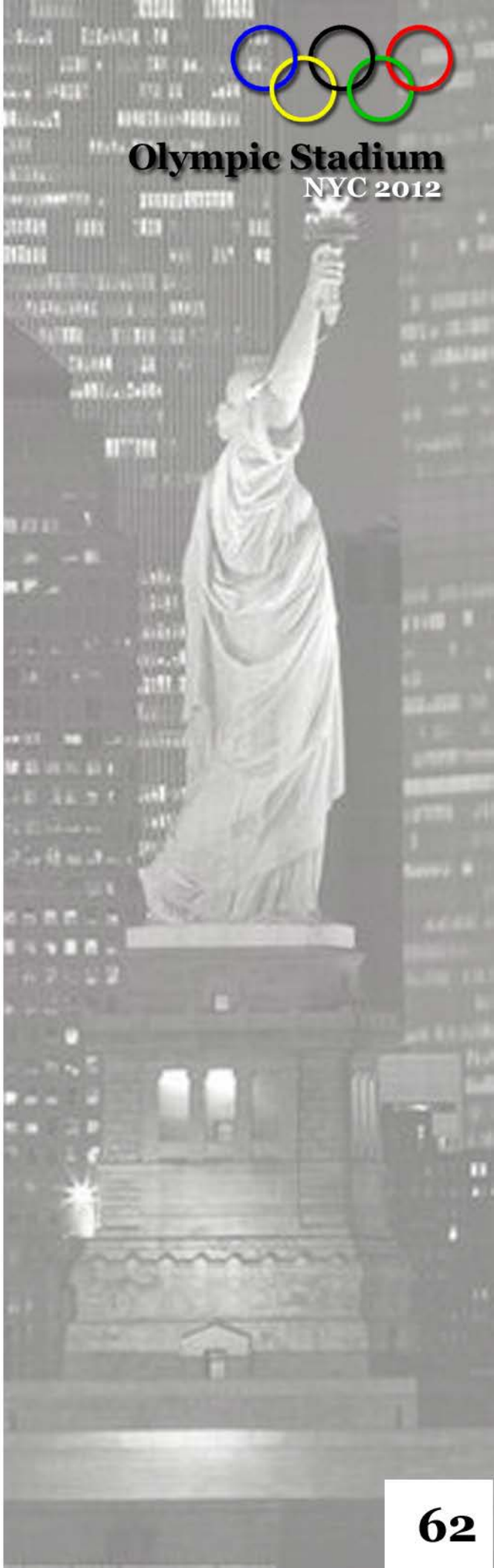
J. Realization of the Design Method in the Design Process:

The history of the Olympic Games and story that accompanies them will be a driving force in my case studies. The former games will be merged with the future in my design. Bringing out vibrant history and fusing it with new technology will be a key to the success of this design.

Statement of Intent

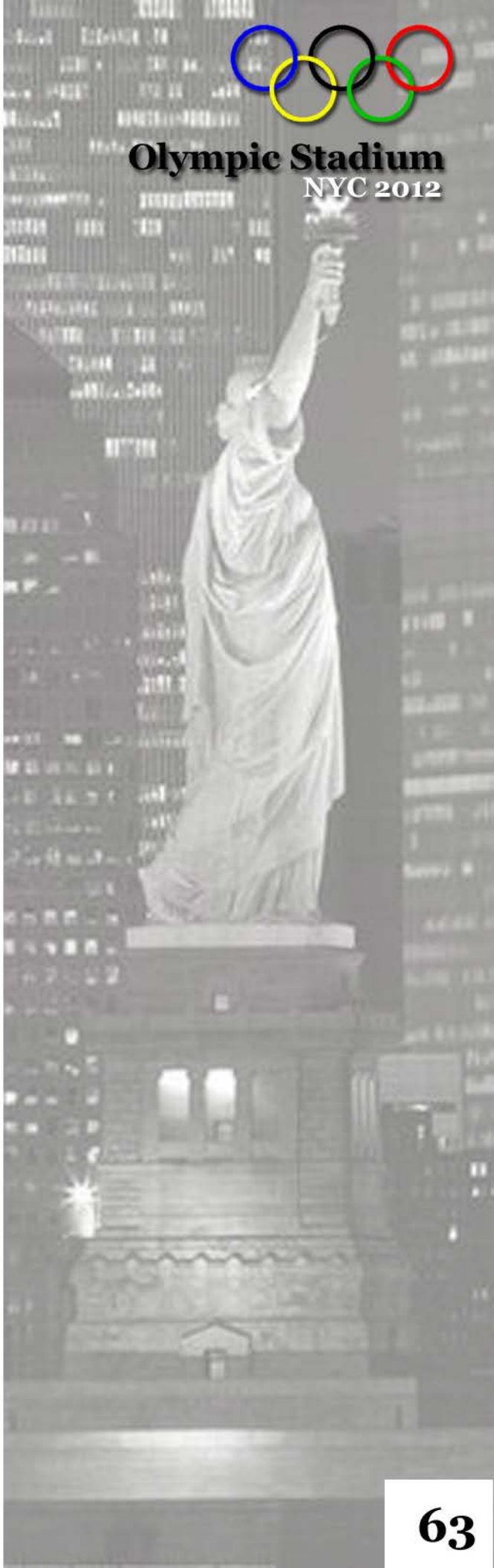
The Olympic games have forever been a stage for the world's greatest athletes to be showcased. They have also been the only event to include over 200 countries (and growing) worldwide. The games are more than just gold medals. The commrodary, and tradition the games represent is a beautiful thing. Every country is proud of their athletes and for them to be a part of something as wonderful as the olympics. For the 30th Olympiad, New York City, New York is making a bid to be the host city for the summer Olympics. New York City is a perfect fit for the games, because its difficult to tell which is more diverse and colorful.

My design will feature a stadium large enough to support 75,000 people. It will be home to the track and field events of the Olympics, requiring a 1600 meter track and a field area large enough for a football field. The total floor area must be approximately 150,000 m2. Incorporated into the stadium will be the obvious concession stations, but also it will have 2-5 permanent restaurants. This stadium will be a structural marvel as well as a technologically spectacular building. This stadium must be a welcoming home for the many athletes that will grace its fields.

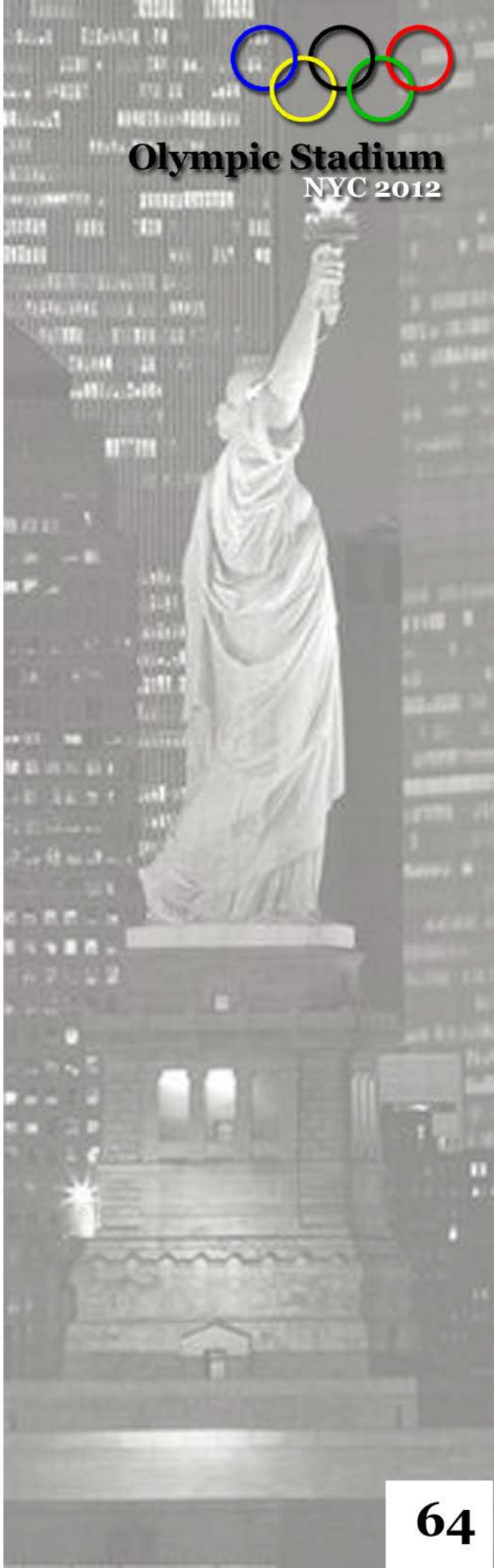


The site is on the Hudson River in the heart of Manhattan. It will be located in immediate proximity to the Convention Center, the Main Press Center, and the International Broadcast Center. The extensive mass transit system of New York makes it one of the few states capable of maneuvering the over 4500 athletes and the projected 500,000 fans. A lot of concern arises when building a stadium specifically for the Olympic games, but in this case, the New York Jets are in the market for a new stadium and this would be the perfect stadium, in the perfect location for them. This conversion will take careful planning in respect to the differences between the Olympics and football. For example, the locker-room facilities will be different, as will the restaurants, the field, and most importantly the people attending the sports will have differing intentions.

New York City is one of the most diverse cities in the world and hosting the Olympic games provides it with a way to display all it has to offer. The challenge of this design is accommodating the diversity of the games in one architecturally exigent structure. The foundation of this design is that the diversity of human culture, as showed in the Olympic Games, can be withheld and advanced by strong Architecture.



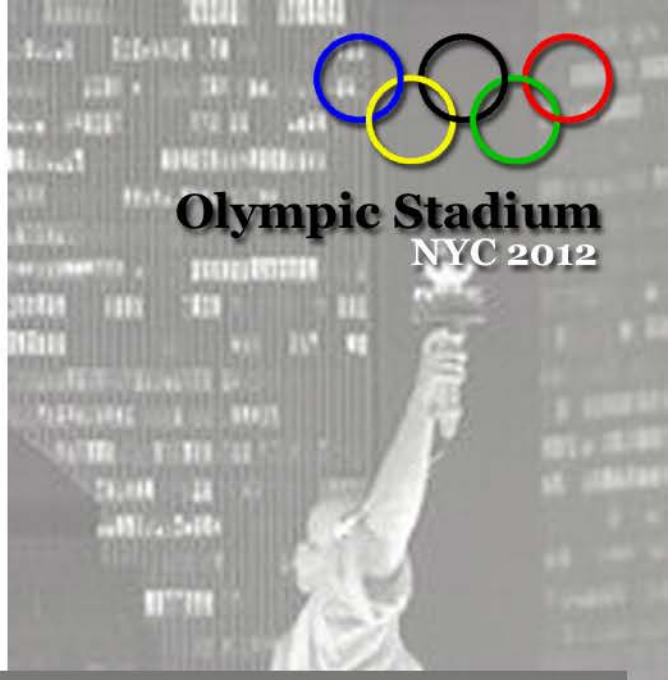
Final Boards



Final Boards

Olympic Stadium
NYC 2012

Final Boards



The Olympic games have forever been a stage for the world's greatest athletes to be showcased. They have also been the only event to include over 200 countries (and growing) worldwide. The games are more than just gold medals. The commrodary, and tradition the games represent is a beautiful thing. For the 30th Olympiad, New York City, New York is making a bid to be the host city for the summer Olympics. New York City is a perfect fit for the games, because its difficult to tell which is more diverse and colorful.

My design features a stadium large enough to support 75,000 people. It will be home to the track and field events of the Olympics, requiring a 400 meter track and a field area large enough for a football field. The total floor area is approximately 150,000 m2. This stadium will be a structural marvel as well as a technologically spectacular building. This stadium must be a welcoming home for the many athletes that will grace its fields.

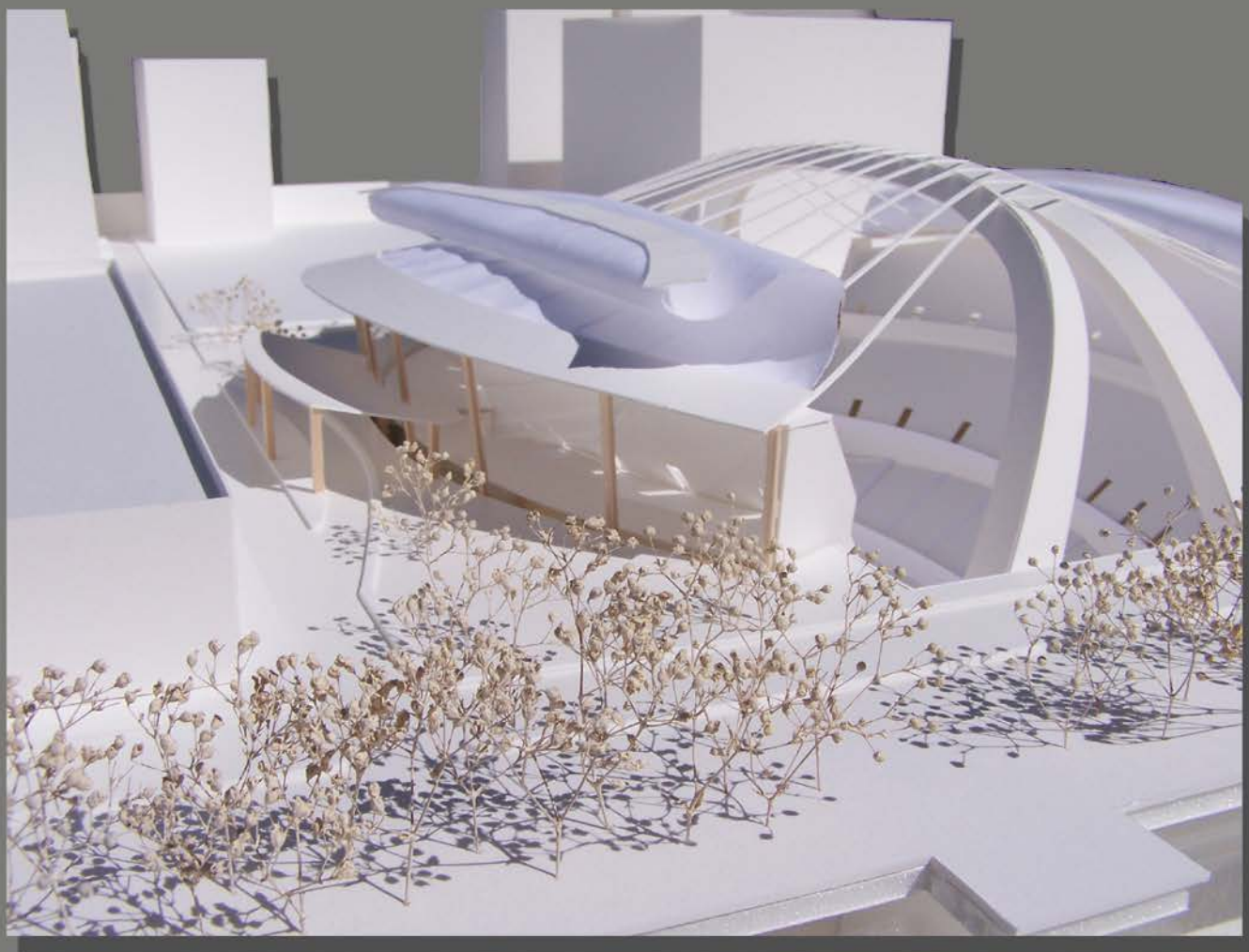
Stadiums are very large buildings that can consume massive amounts of energy and produce a lot of pollution. This design will incorporate many alternative energy techniques. Natural lighting and ventilation techniques are incorporated to cut down on the amount of energy needed to power the facility.

The site is on the Hudson River in the heart of Manhattan. It is located in immediate proximity to the Convention Center, the Main Press Center, and the International Broadcast Center. The extensive mass transit system of New York makes it one of the few cities capable of maneuvering the over 4500 athletes and the projected 500,000 fans.

New York City is one of the most diverse cities in the world and hosting the Olympic games provides it with a way to display all it has to offer. The foundation of this design is that the diversity of human culture, as showed in the Olympic Games, can be withheld and advanced by strong Architecture.

Final Boards

Olympic Stadium
NYC 2012



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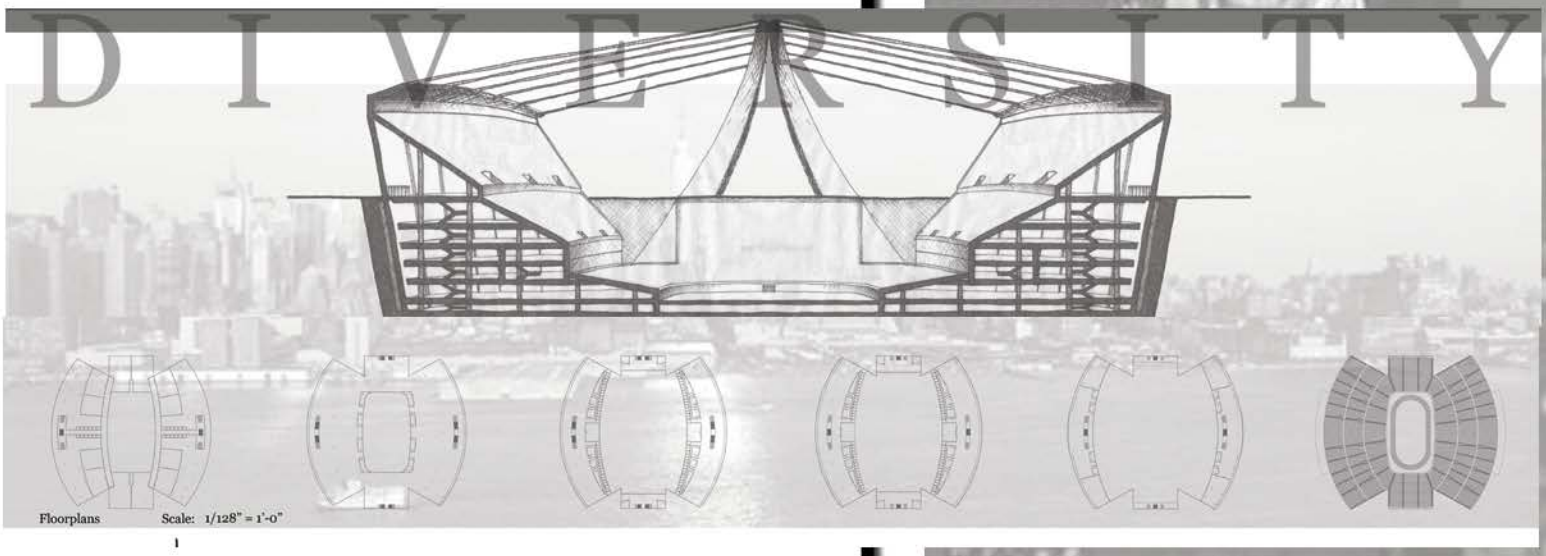

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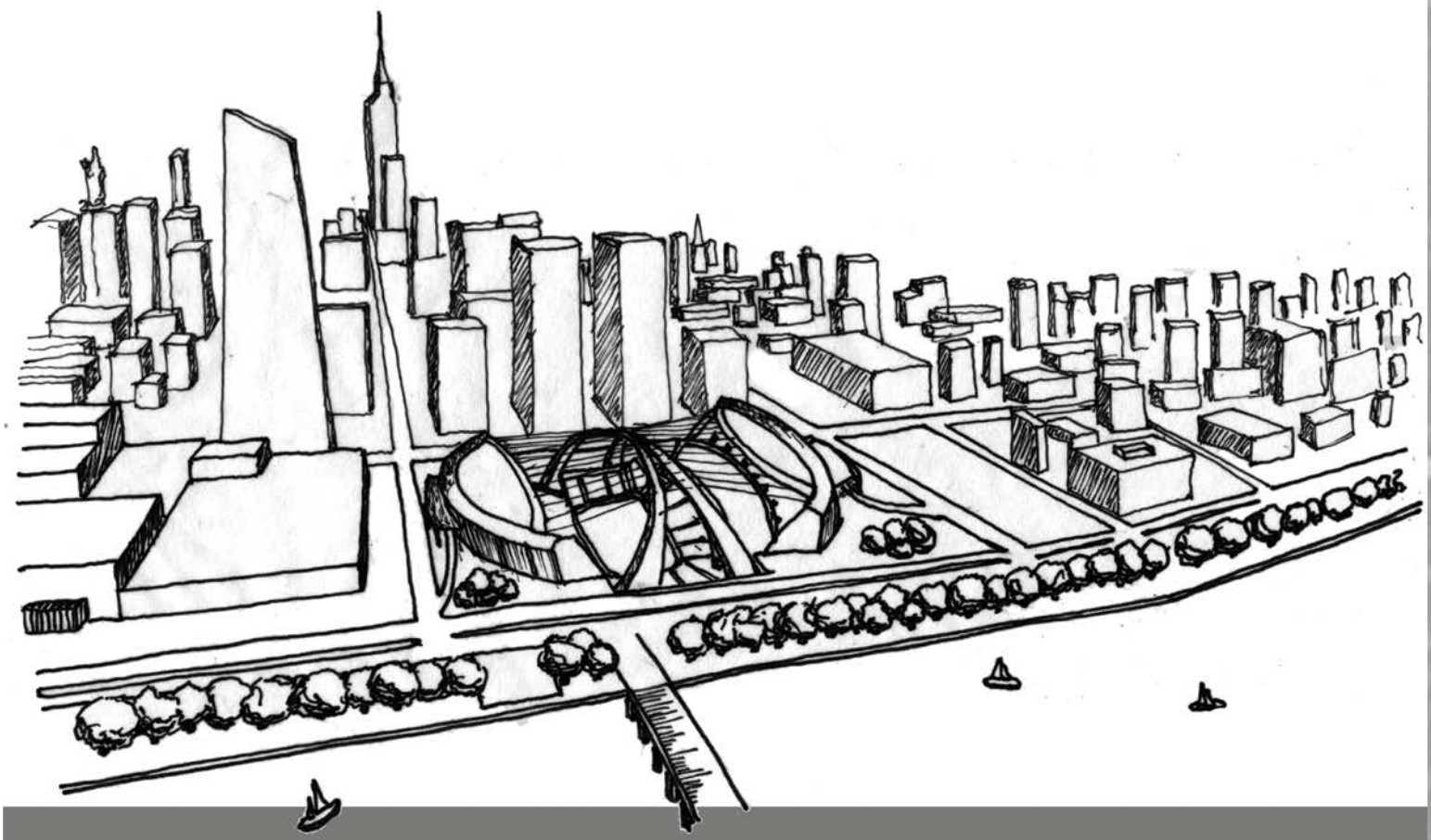
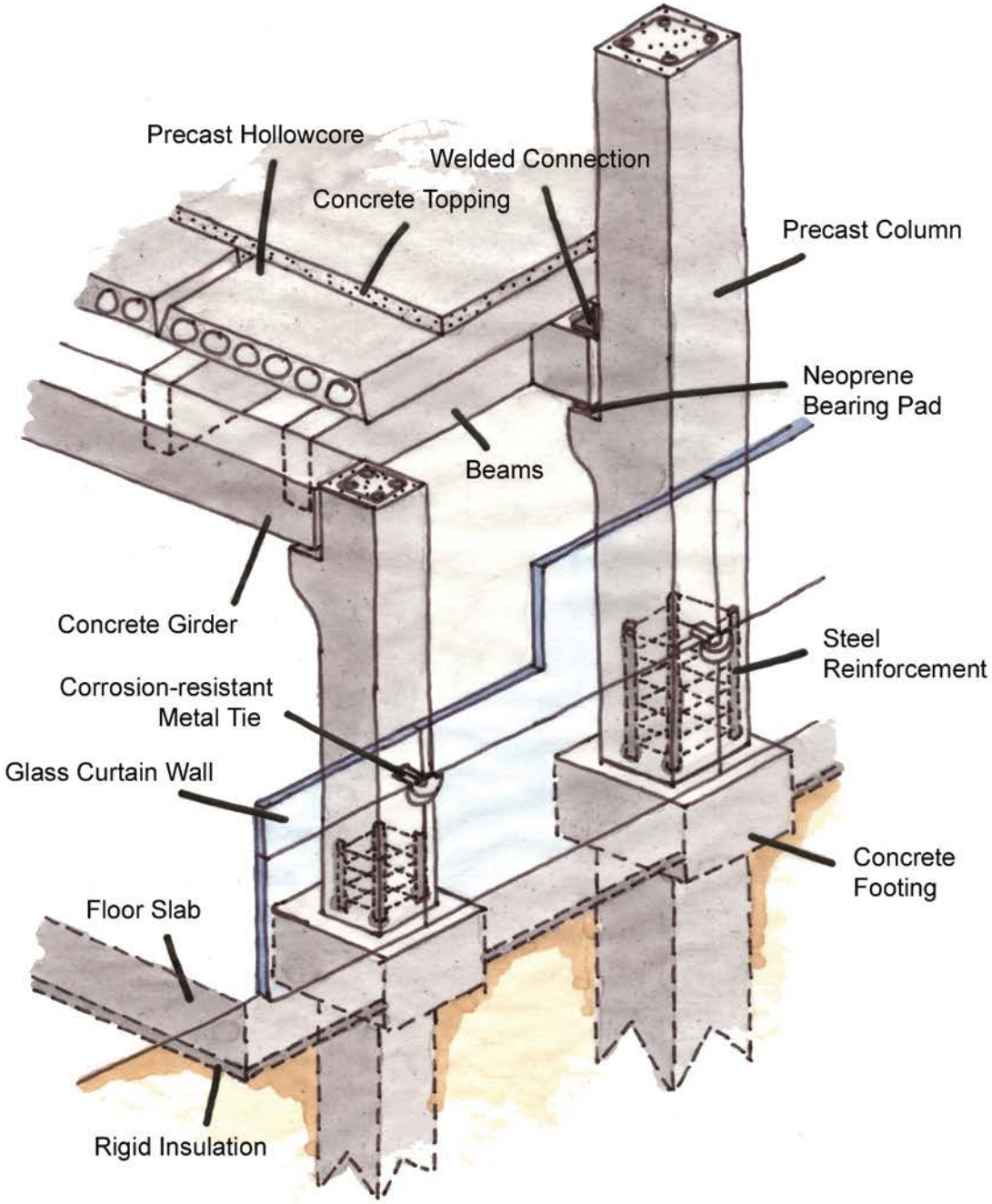


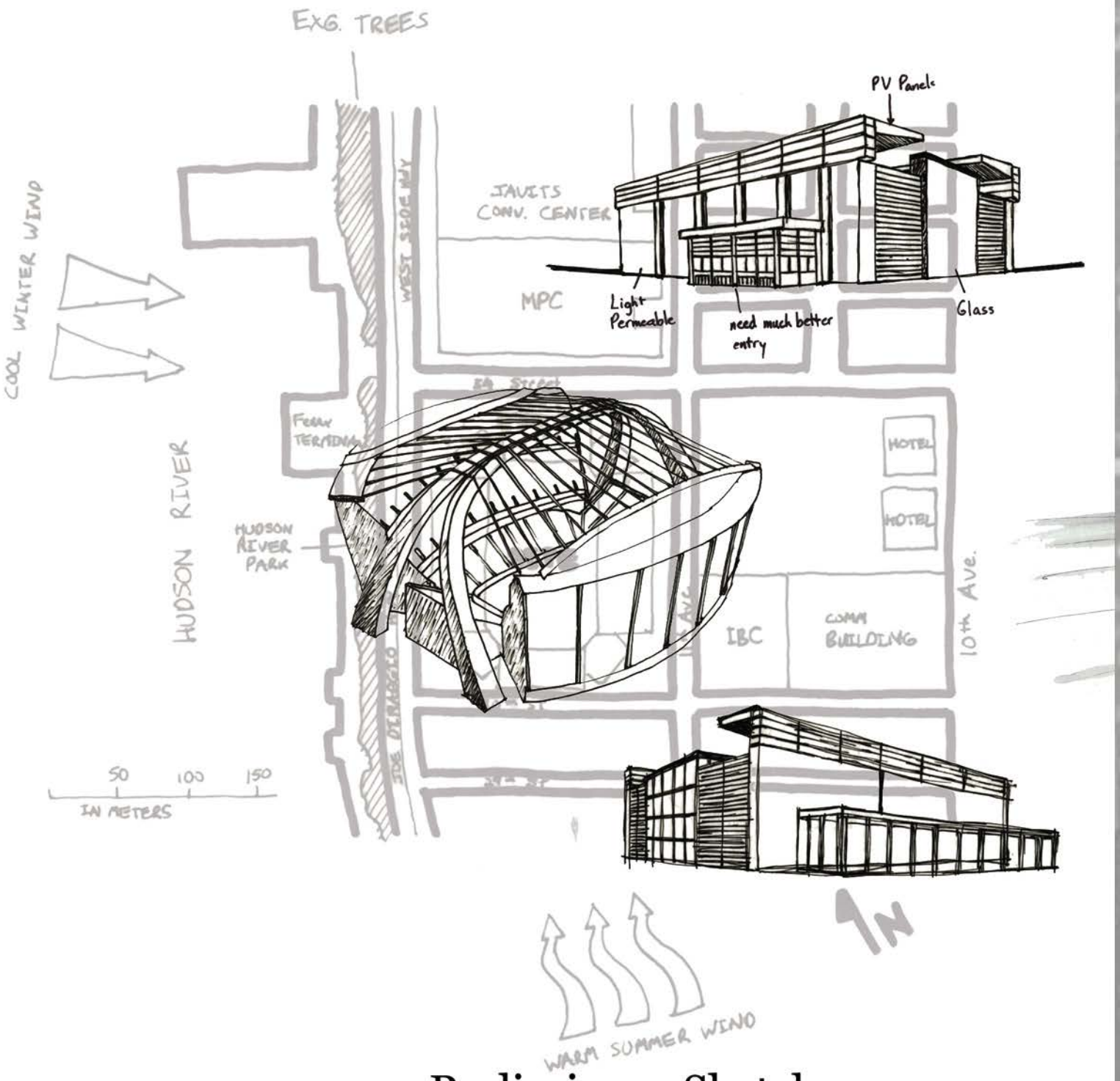
jason chisholm

Final Boards



Wall Section Detail Scale: 1/2" = 1'-0"

Final Boards



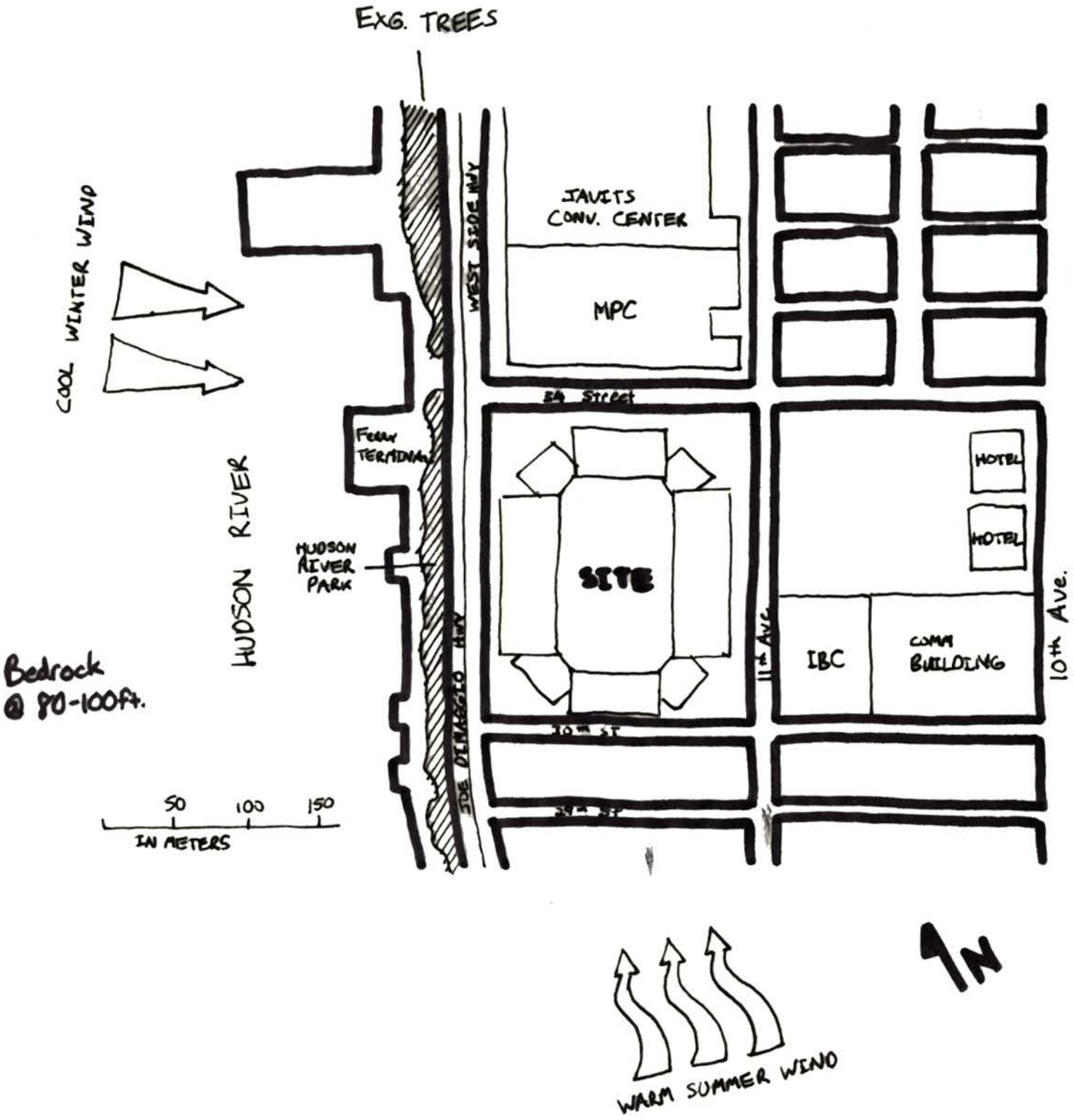
Preliminary Sketches

Final Boards

Olympic Stadium
NYC 2012

Restaurant Entry

Contributing Items



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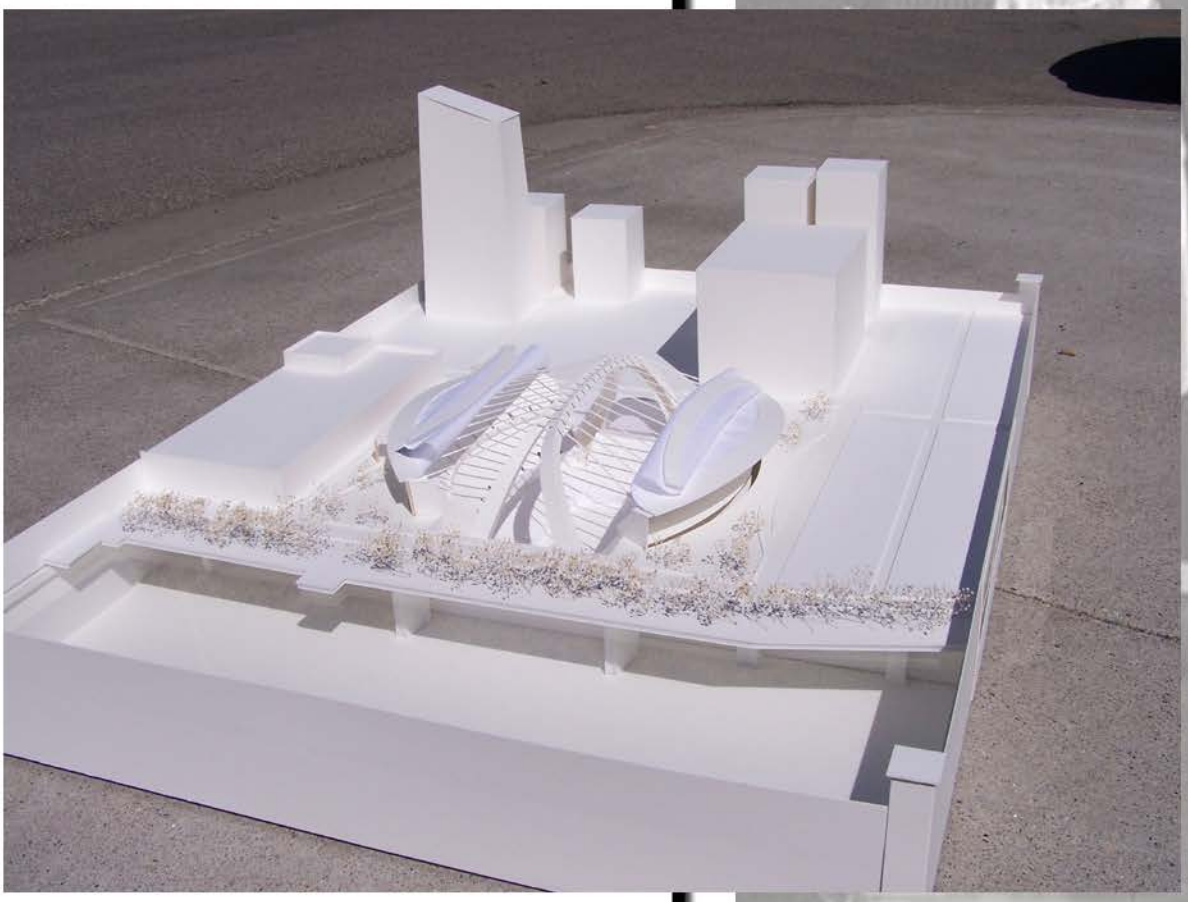

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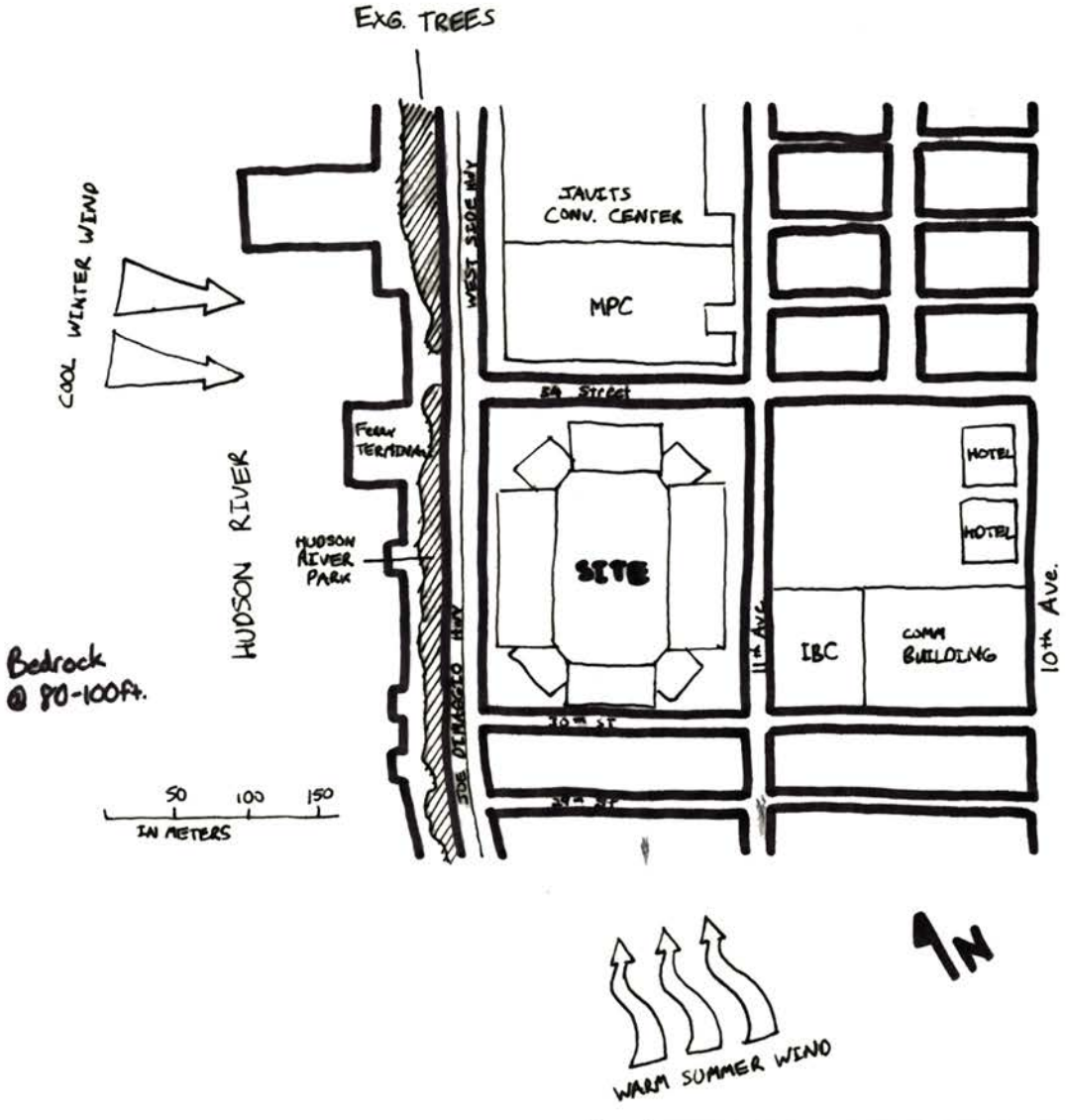

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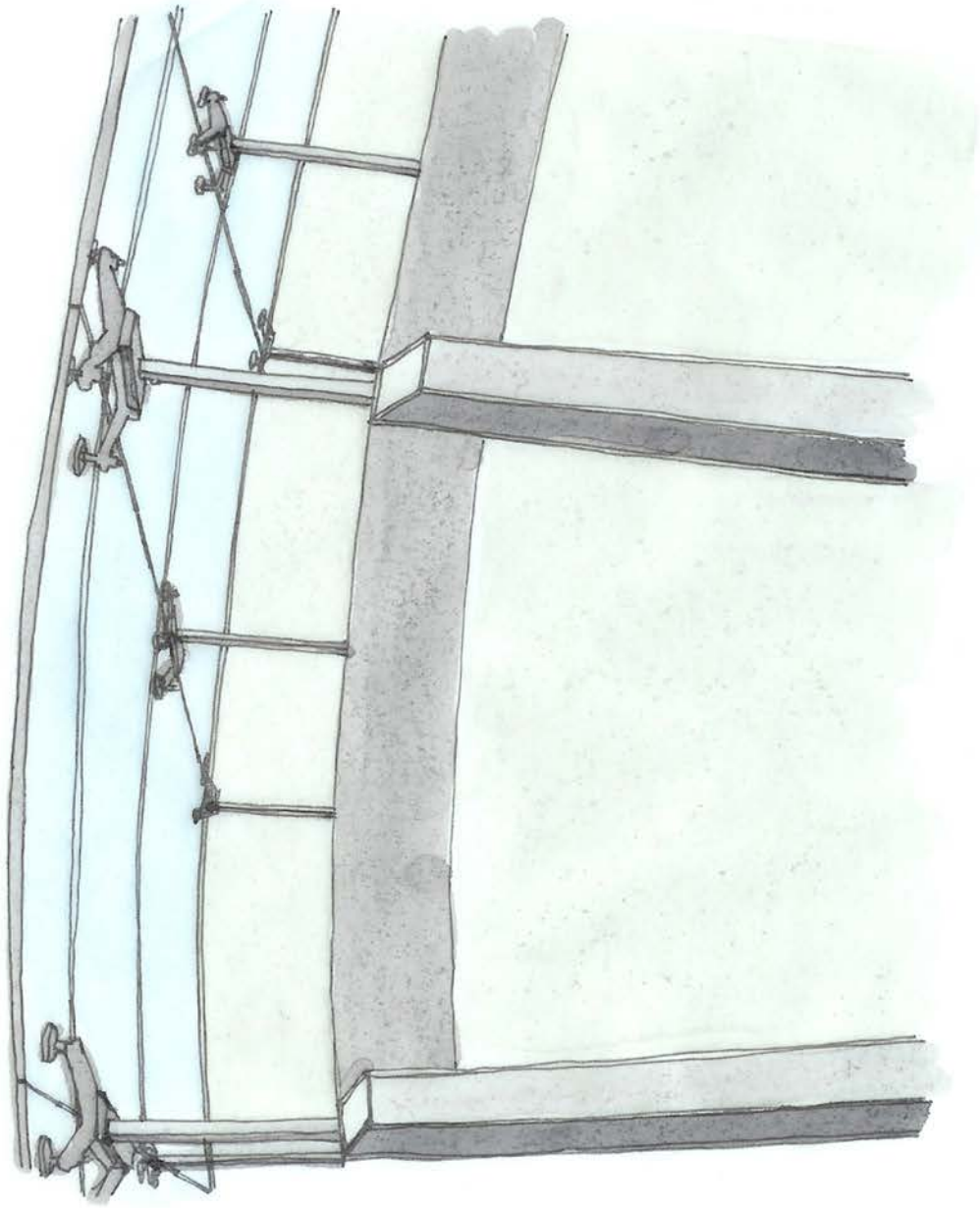
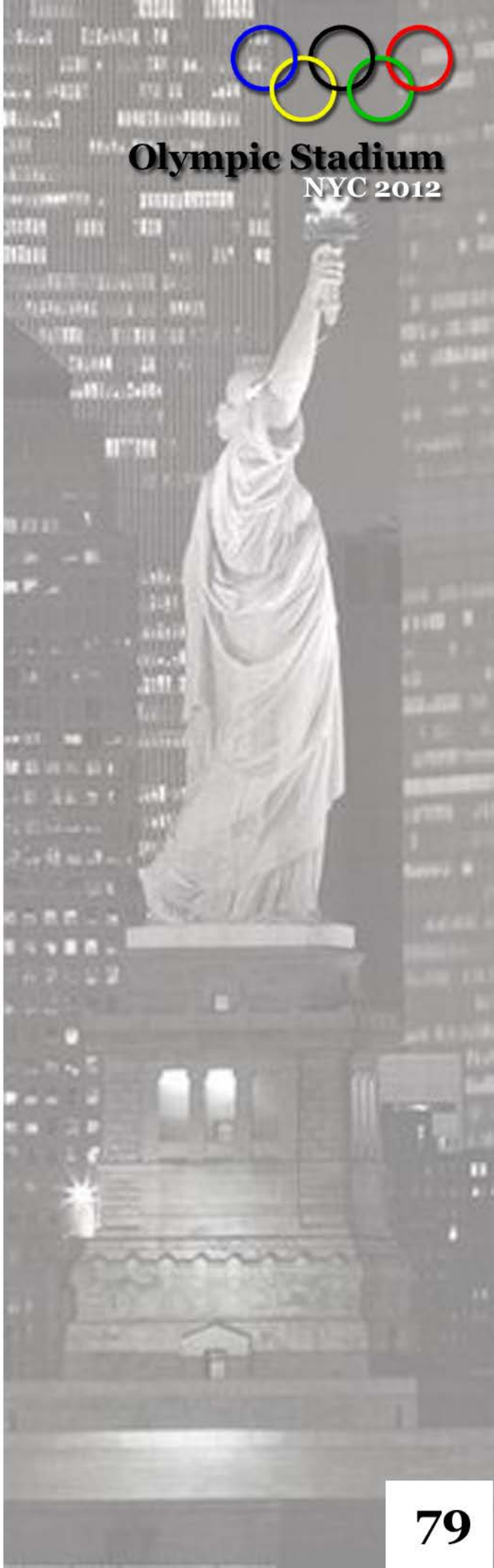


Process



Process

Finding a site

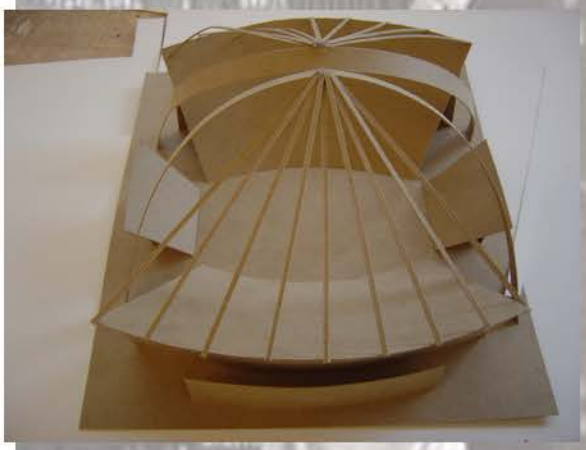
Process

The site was very important to the design process due to the fact that it needed to be a hub to everything the city had to offer. From that point on it was easy to make effective design decisions. Many of the decisions that were made were what the people of Manhattan wanted.

Process

The design evolved in every area as the exploration continued. The initial concept model was a square design that did not flow into the city very well. It was decided that to ease the impact of the building on the landscape, it needed to be more curved and smooth.

The idea of sinking the building came from an article about the city wanting a low impact building. This greatly minimized its effect on the already beautiful skyline. It also had many effects on the structural needs for the building, which in turn cut cost and lowered building time.



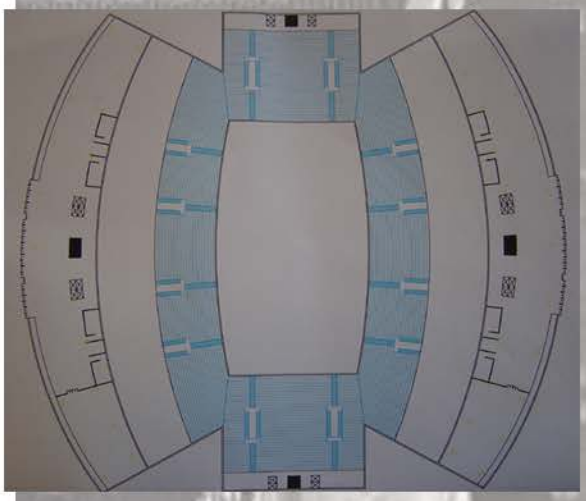
Process

Seating became an issue when code information was presented that created a need for many extra exits.

Viewing angles were also a problem at first. The need for a more curved seating plan was necessary. So, again the seating was rearranged.

The roof design went from a retractable roof design, to an open roof design, back to a retractable roof design. The initial plan called for a truss system that supported the roof. The final plan called for a cable system that supported the roofing membrane.

As you can see that design process was very long and complicated, with many options explored. The end result was the best of many things combined into one idea.



Jason Chisholm

Olympic Stadium
NYC 2012

Hometown:

Architecture is to make us know and remember who we are.
-Sir Geoffrey Jellicoe

I would like to thank my family and friends, and everyone in studio for all your help. This was a fun year and I will miss you all. I would also like to that Paul and Bakr for your comments during the presentation of this project. A very special thanks goes to Mohamed Elnahas for all your help and guidance throughout the semester. I couldn't have done it without you!