

HEALTHY BUILDING HEALTHY LIVING

An architectural rendering of a modern, curved skyscraper with a glass facade. The building has a unique, wavy design. A rooftop pool with a blue center and red and white striped umbrellas is visible. A green ECG line is overlaid on the building, with three green rectangular boxes highlighting specific sections of the facade. The background shows a city street with other buildings and a road with cars.

ALA MASTER'S THESIS
NORTH DAKOTA STATE UNIVERSITY

A DESIGN THESIS BY:
RYAN FRIESEN

DESIGNING A HEALTHY BUILDING FOR HEALTHY LIVING





HEALTHY BUILDING – HEALTHY LIVING

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

By
Ryan Friesen

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

North Dakota State University Libraries Addendum

To protect the privacy of individuals associated with the document, signatures have been removed from the digital version of this document.

May 2022

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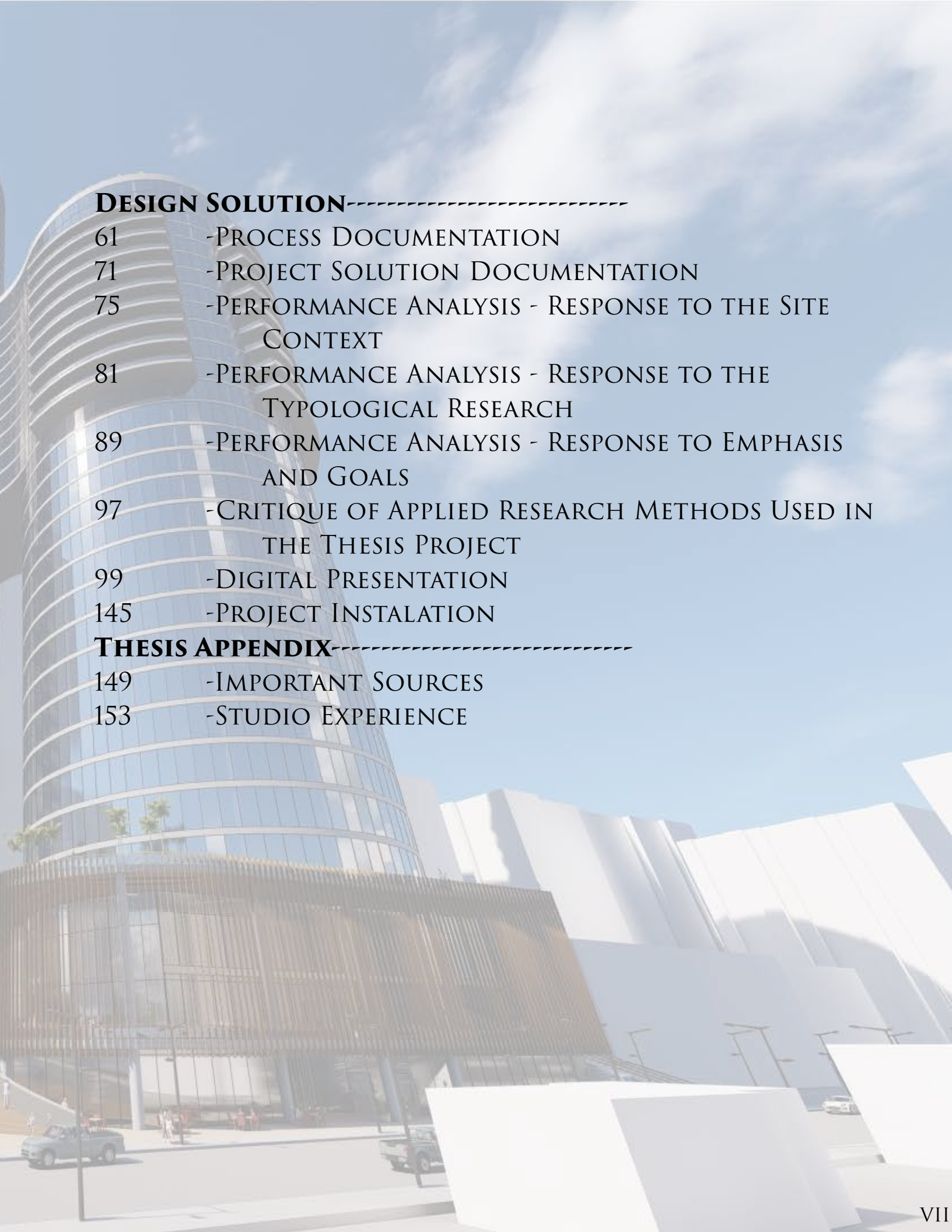
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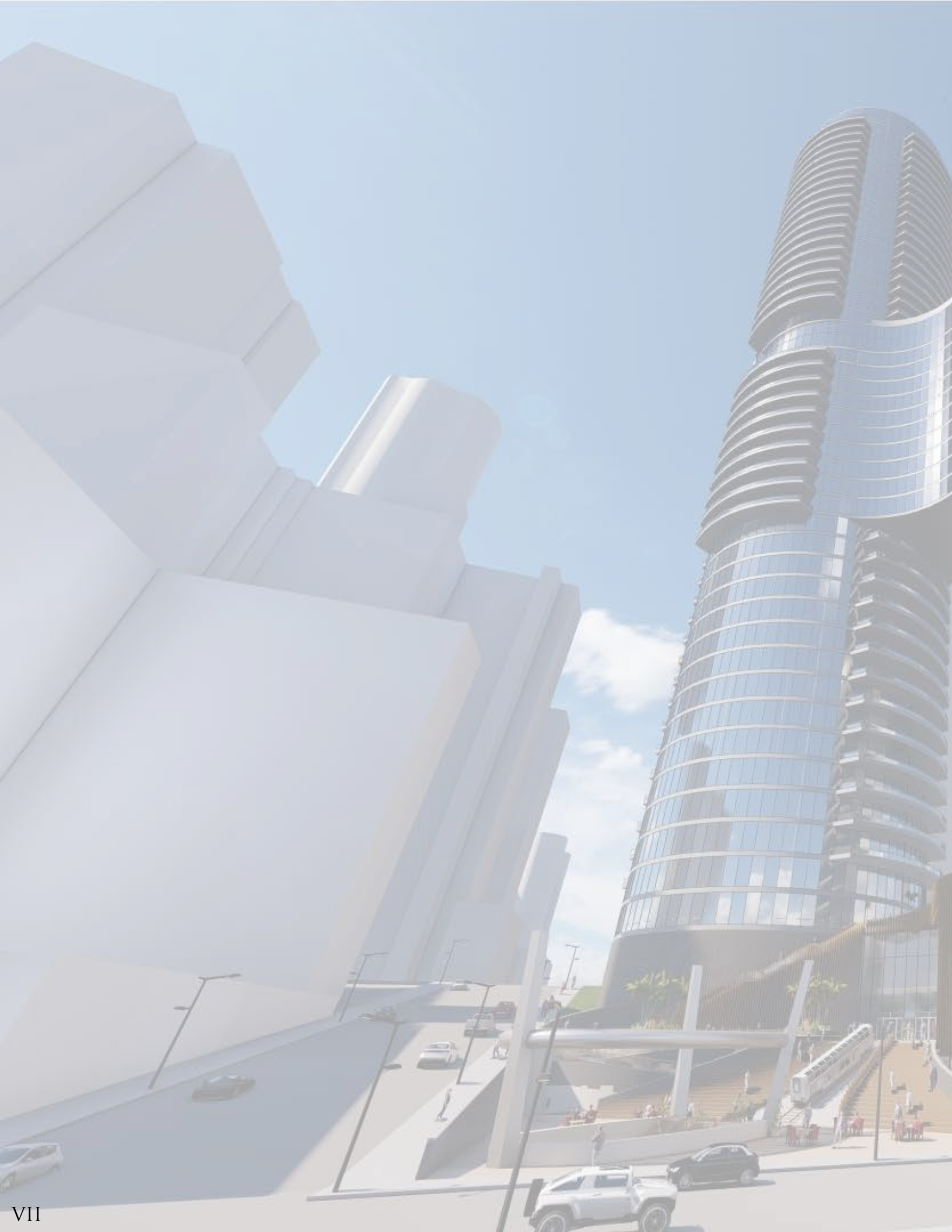


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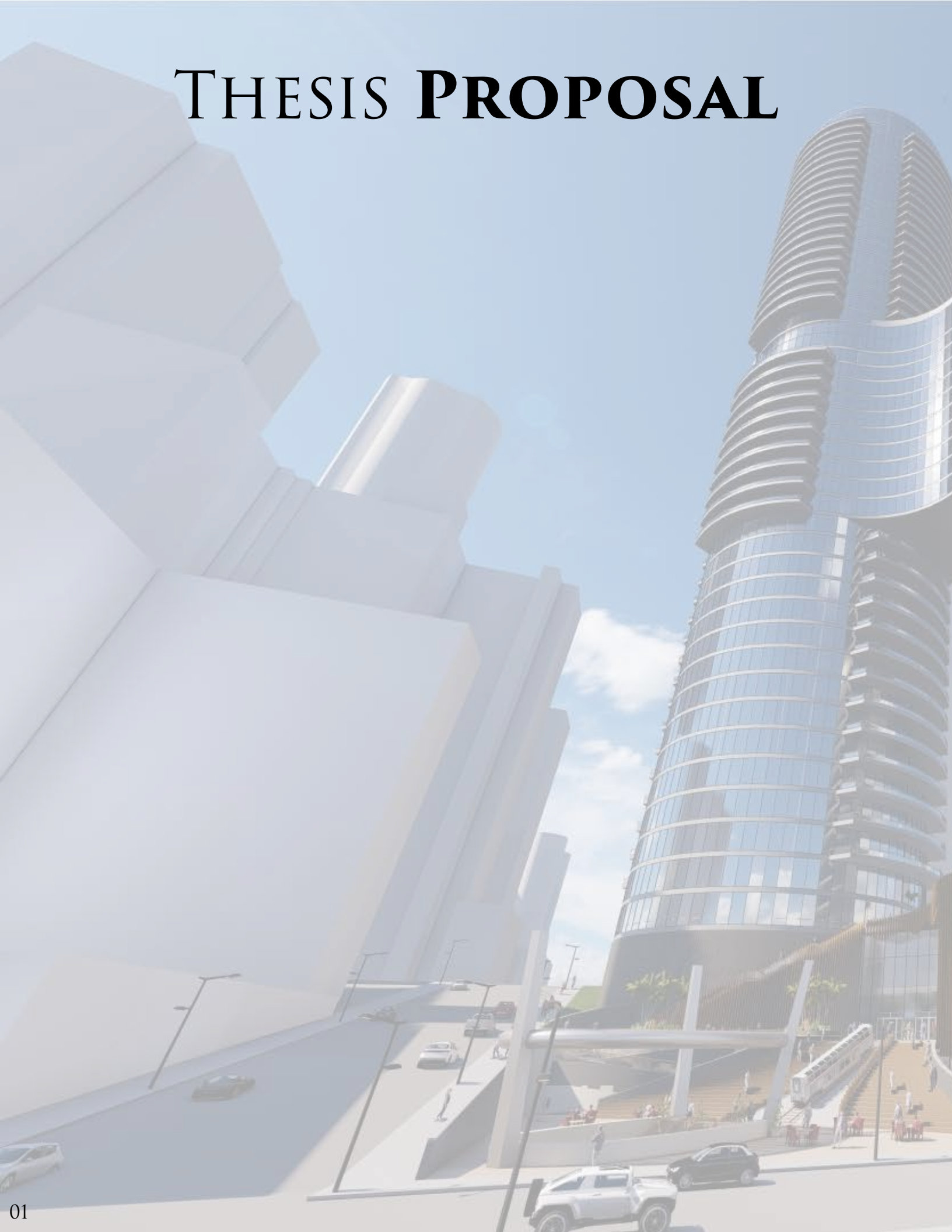
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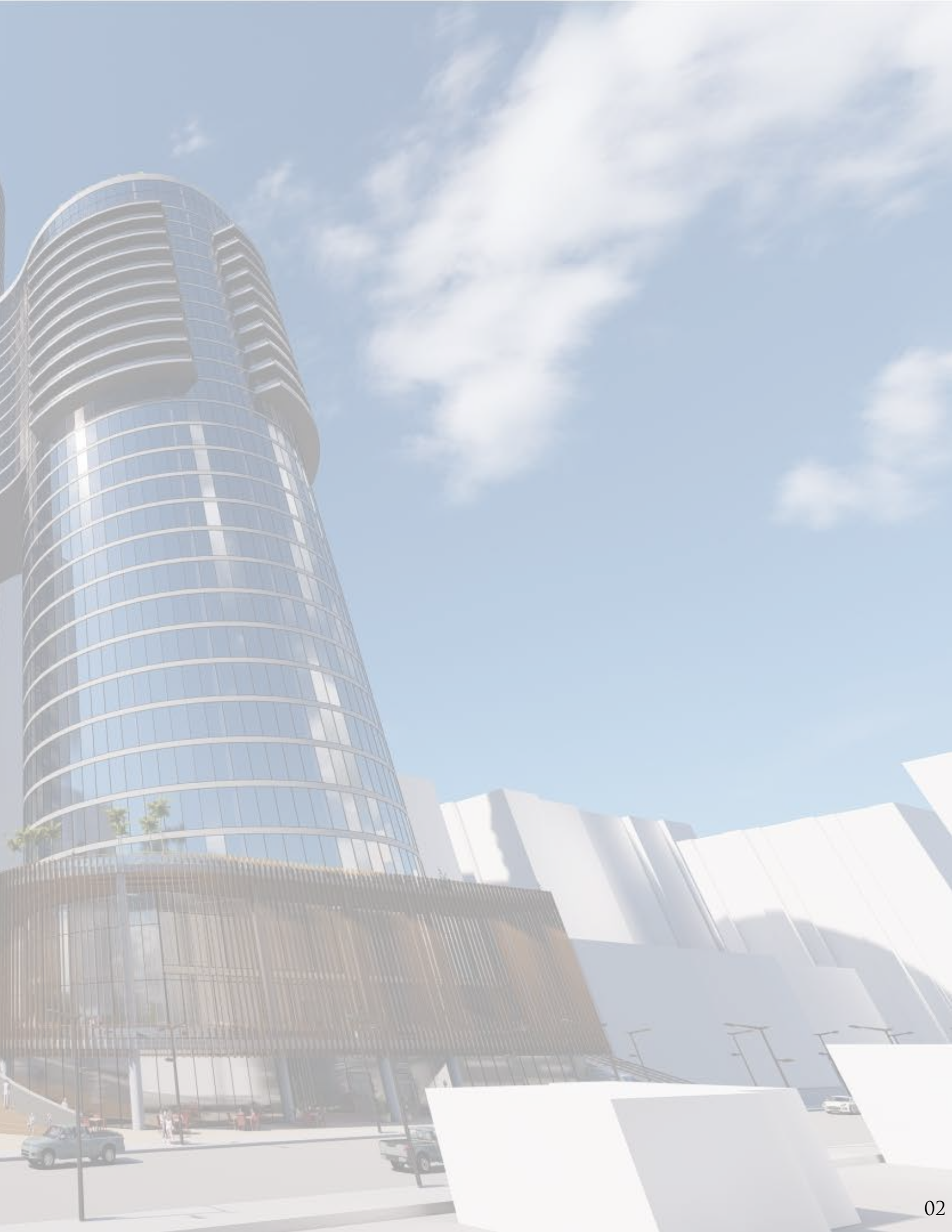


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THESIS PROPOSAL



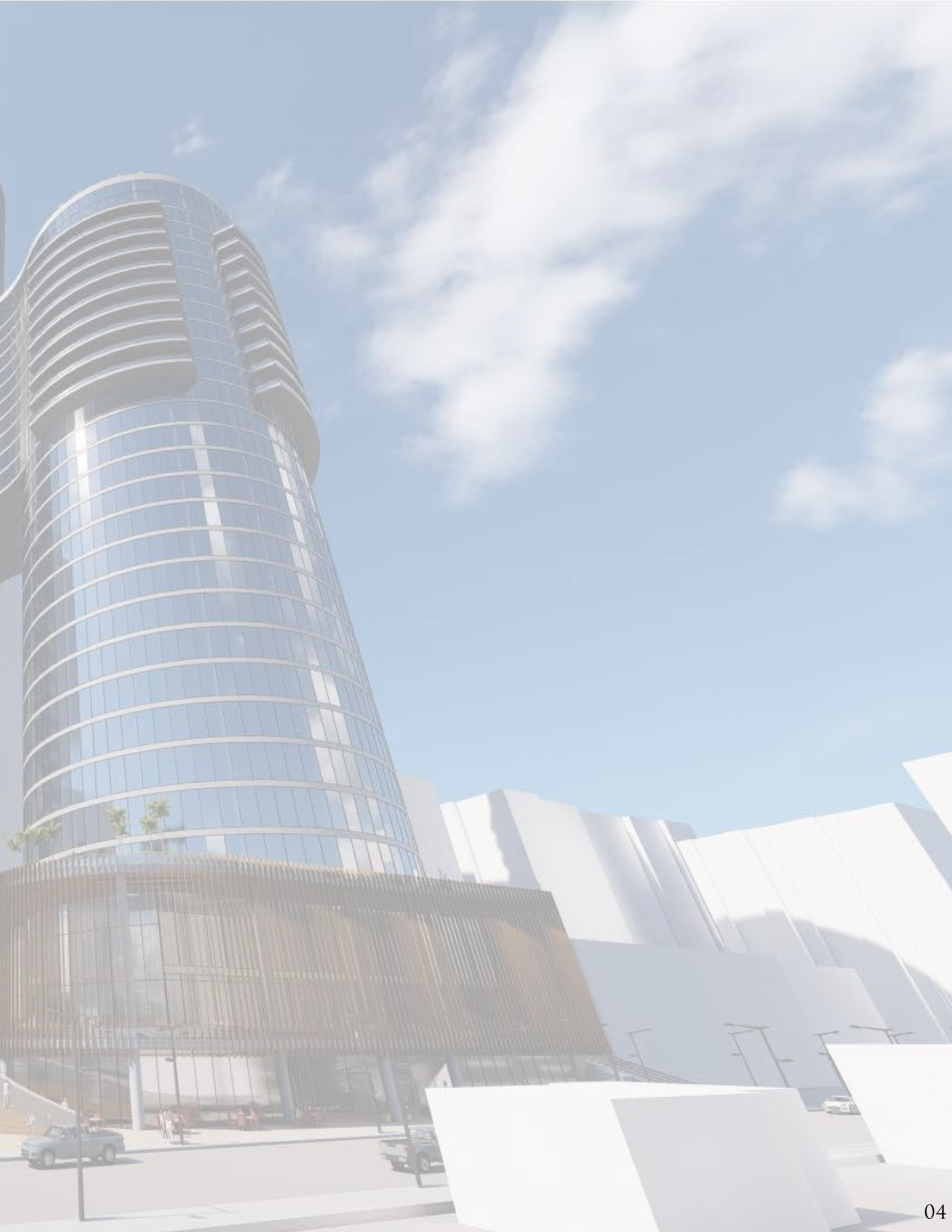


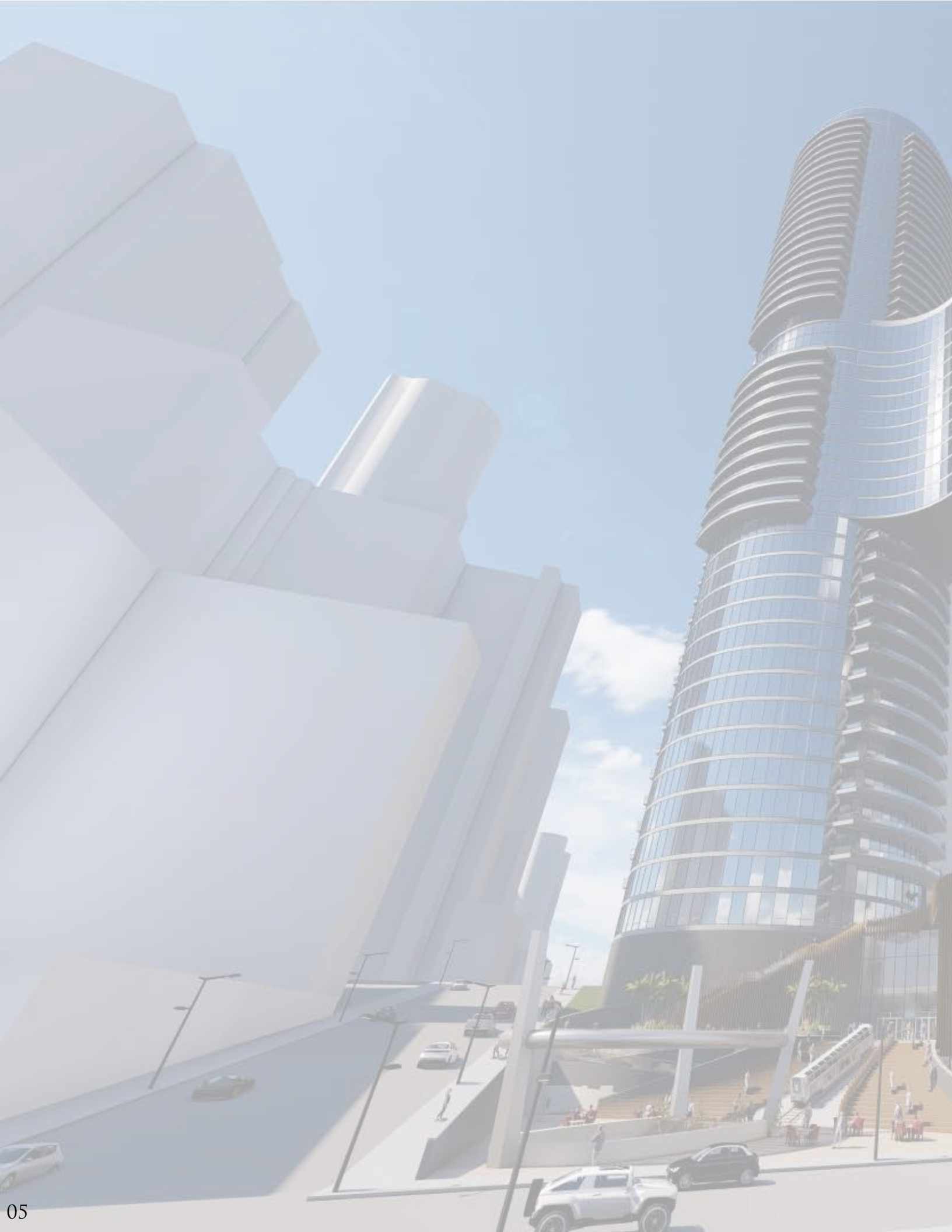
THESIS ABSTRACT

The background of the page is a semi-transparent architectural rendering of a modern urban environment. On the right side, a tall, cylindrical skyscraper with a glass facade and horizontal bands of windows rises into the sky. In the foreground, a multi-level transit station is visible, with a train on an elevated track and people walking on the ground level. A road with several cars is also shown. The overall scene is set against a clear blue sky with some light clouds.

IN A WORLD EXPERIENCING A PANDEMIC WITH UNHEALTHY GLOBAL CHALLENGES; PUBLIC SPACES, BUSINESSES AND PEOPLE ARE STRUGGLING TO STAY 'AFLOAT' AS THE WORLD STRUGGLES TO HELP. WHAT MOST PEOPLE DO NOT REALIZE IS HOW MUCH EFFECT THE BUILT ENVIRONMENT HAS ON ITS SURROUNDINGS AND THE USERS.

THE PURPOSE OF THIS THESIS IS TO PROPOSE A SOLUTION IN LOS ANGELES, CALIFORNIA, TO CREATE A HIGH RISE BUILDING THAT WILL MAKE A STRONG AND HEALTHY IMPACT ON NOT JUST THE USERS OF THE BUILDING, BUT OF THOSE IN THE CITY. BY CONDUCTING RESEARCH ON THE TECHNOLOGICAL ADVANCES ON SUSTAINABILITY, FLEXIBLE SPACE, AND THE URBAN ENVIRONMENTAL DESIGN OF A BUILDING, THIS THESIS PROPOSAL WILL ESTABLISH A SOLUTION CREATING A SAFER AND HEALTHIER ENVIRONMENT TO LIVE AND WORK IN.





THESIS NARRATIVE

SINCE 2020, COVID-19 HAS PUSHED PEOPLE AWAY FROM PUBLIC LOCATIONS, IN-PERSON EDUCATIONAL SETTINGS, AND FACE TO FACE WORK ENVIRONMENTS AND HAS HINDERED OUR ABILITY TO PERSONALLY INTERACT WITH ONE ANOTHER. AS THE PANDEMIC CONTINUED, WE LEARNED TO LIVE, WORK, AND PERFORM ESSENTIAL EVERYDAY ACTIVITIES FROM THE SINGULAR LOCATION OF OUR HOMES, AVOIDING COMMUNITY ACTIVITIES.

ARCHITECTURE HAS THE CAPACITY TO IMPACT THE WAY PEOPLE INTERACT WITHIN THEIR BUILT ENVIRONMENTS. IN AN EVER-DENSIFYING WORLD, OUR BUILT ENVIRONMENTS ARE STARTING TO ALSO DENSIFY AND CONNECT VERTICALLY RATHER THAN ONLY EXPANDING HORIZONTALLY. ARCHITECTURALLY, THE INTERCONNECTION OF INDIVIDUAL SPACE TYPOLOGIES IS BECOMING MORE COMPLEX AND NEW SOLUTIONS ARE CRITICAL FOR INCREASING QUALITY OF LIFE FOR BUILDING USERS.

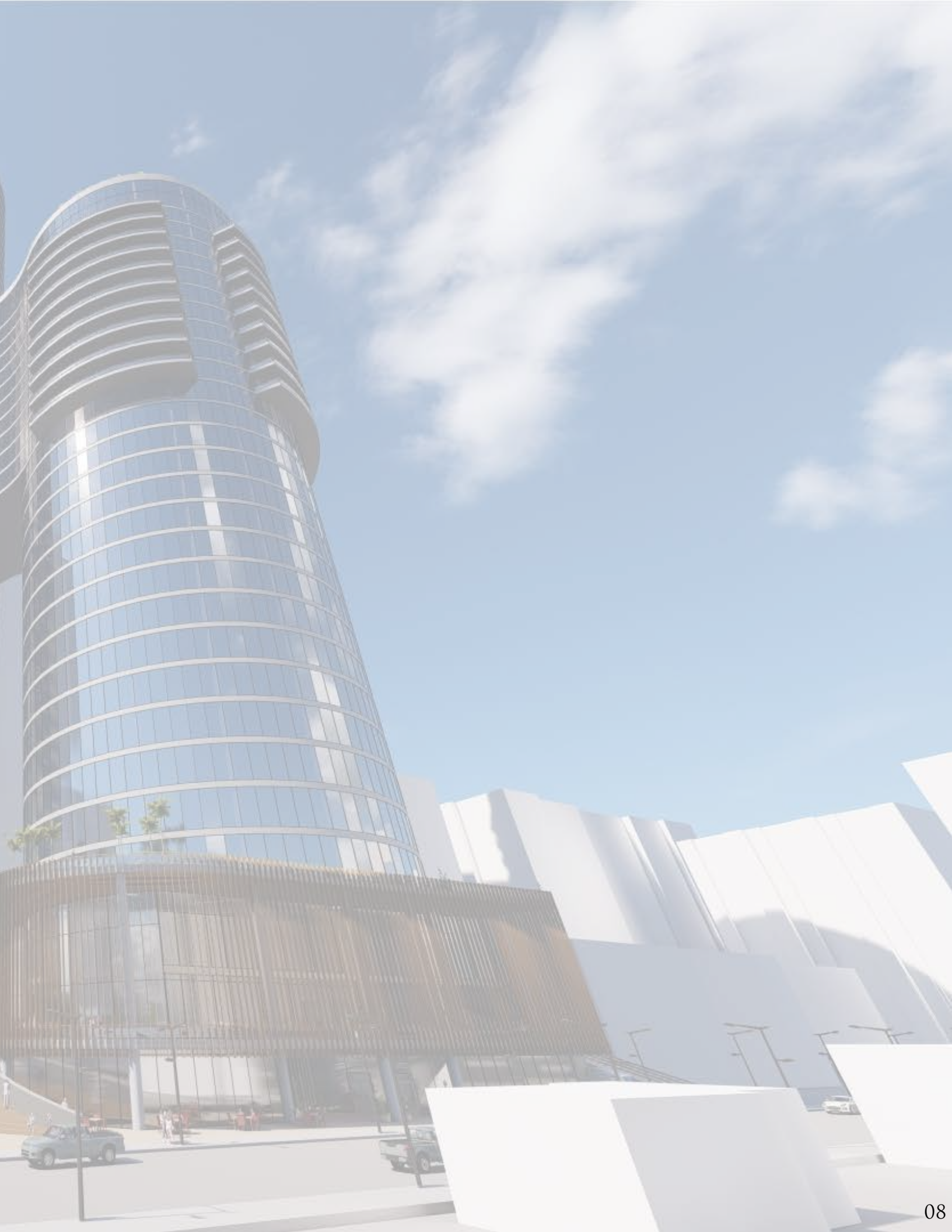
THE MOTIVATION BEHIND THIS THESIS WAS TO ENCOURAGE PEOPLE TO GRASP THE IMPORTANCE OF HEALTHY INDOOR/OUTDOOR ENVIRONMENTS AND DETERMINE HOW CONTRASTING SPACE TYPOLOGIES CAN INTERACT WITH ONE ANOTHER. ADDITIONALLY, THIS THESIS EXPOUNDS ON HOW SYNCHRONIZING DISTINCTIVE TYPOLOGIES OF A MULTIPURPOSE SKYSCRAPER CAN REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE FOR ITS VISITORS/USERS IN A POST-COVID WORLD.

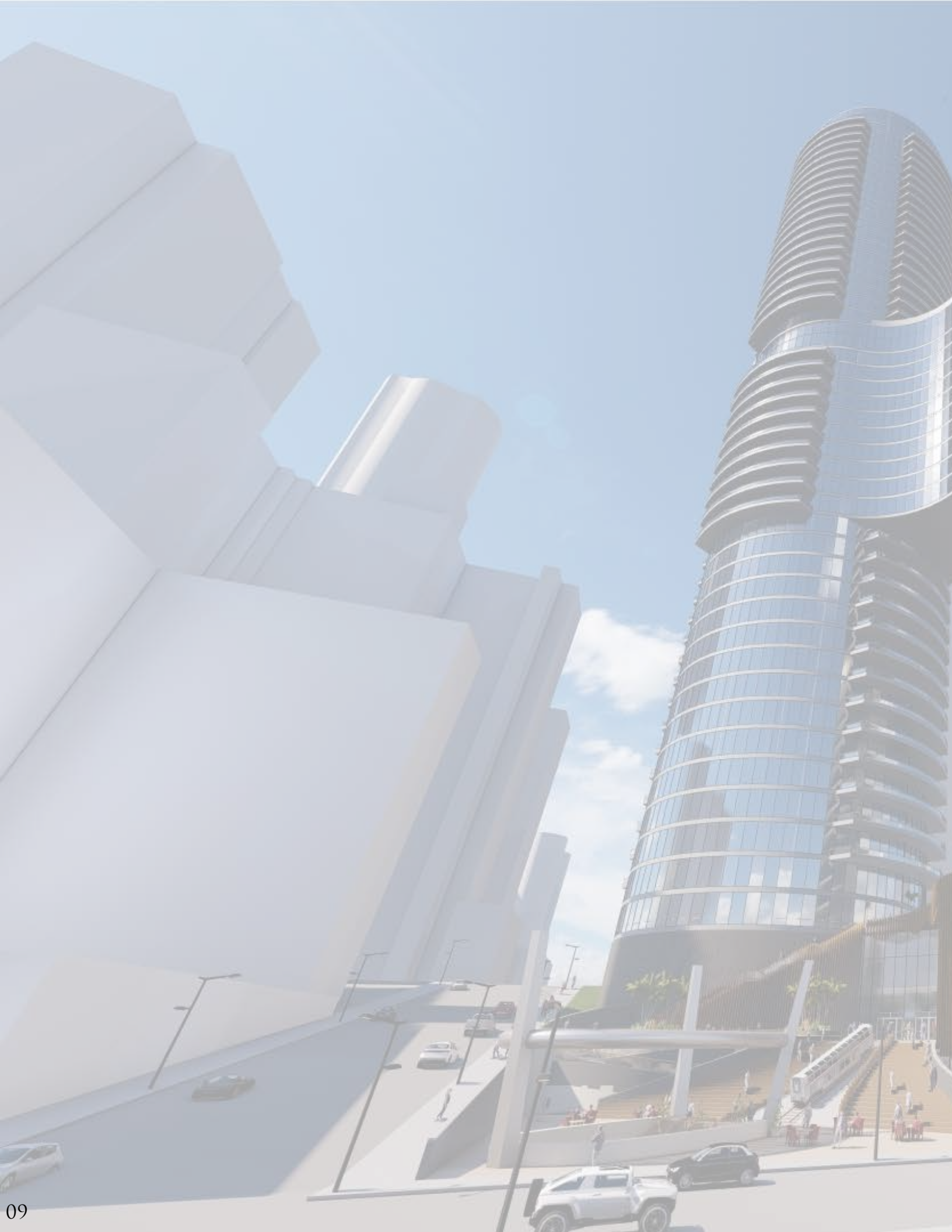
PROJECT TYPOLOGY



THE TYPOLOGY OF MY THESIS WILL BE A SKYSCRAPER STRUCTURE WITH A FOCUS ON THE HEALTHY DESIGN OF A BUILDING RELATING DIRECTLY TO THE QUALITY OF LIFE OF THOSE DIRECTLY USING THE BUILDING AND THE SURROUNDING COMMUNITY. WITH A FOCUS ON THE URBAN ENVIRONMENT, ARCHITECTURAL DESIGN, AND INTERIOR DESIGN, MY THESIS WILL ESTABLISH A STRONG SOLUTION FOR IMPROVING THE WELL-BEING OF THE COMMUNITY IN THE DOWNTOWN LOS ANGELES AREA.

THIS TYPOLOGY WAS CHOSEN BECAUSE LARGER OCCUPIED BUILDINGS TEND TO HAVE THE LARGEST EFFECT ON THE ENVIRONMENT. DUE TO CONSIDERABLY FULL OCCUPANCY OF MOST HIGH RISE BUILDINGS, MY THESIS PROPOSAL HAS THE OPPORTUNITY TO MAKE A SIZABLE IMPACT ON THE CONDITION OF THE QUALITY OF LIFE IN THE CITY.





MAJOR PROJECT ELEMENTS

URBAN ENVIRONMENT - URBAN PLANNING THAT IS SMART, SOCIAL, AND GREEN.

DESIGNING A BUILDING FOR AN URBAN ENVIRONMENT REQUIRES COMPOSING A PLAN TO CREATE AN AREA THAT CONNECTS THE BUILDING AND ITS SITE TO THE SPACES AROUND IT. UNDERSTANDING THE SURROUNDING URBAN ENVIRONMENT WILL CREATE OPPORTUNITIES FOR THE BUILDINGS DESIGN TO CONNECT THE CITY AND COMMUNITY IN THE AREA.

ARCHITECTURAL DESIGN - SUSTAINABILITY, DURABILITY, AND TECHNOLOGICALLY ADVANCED.

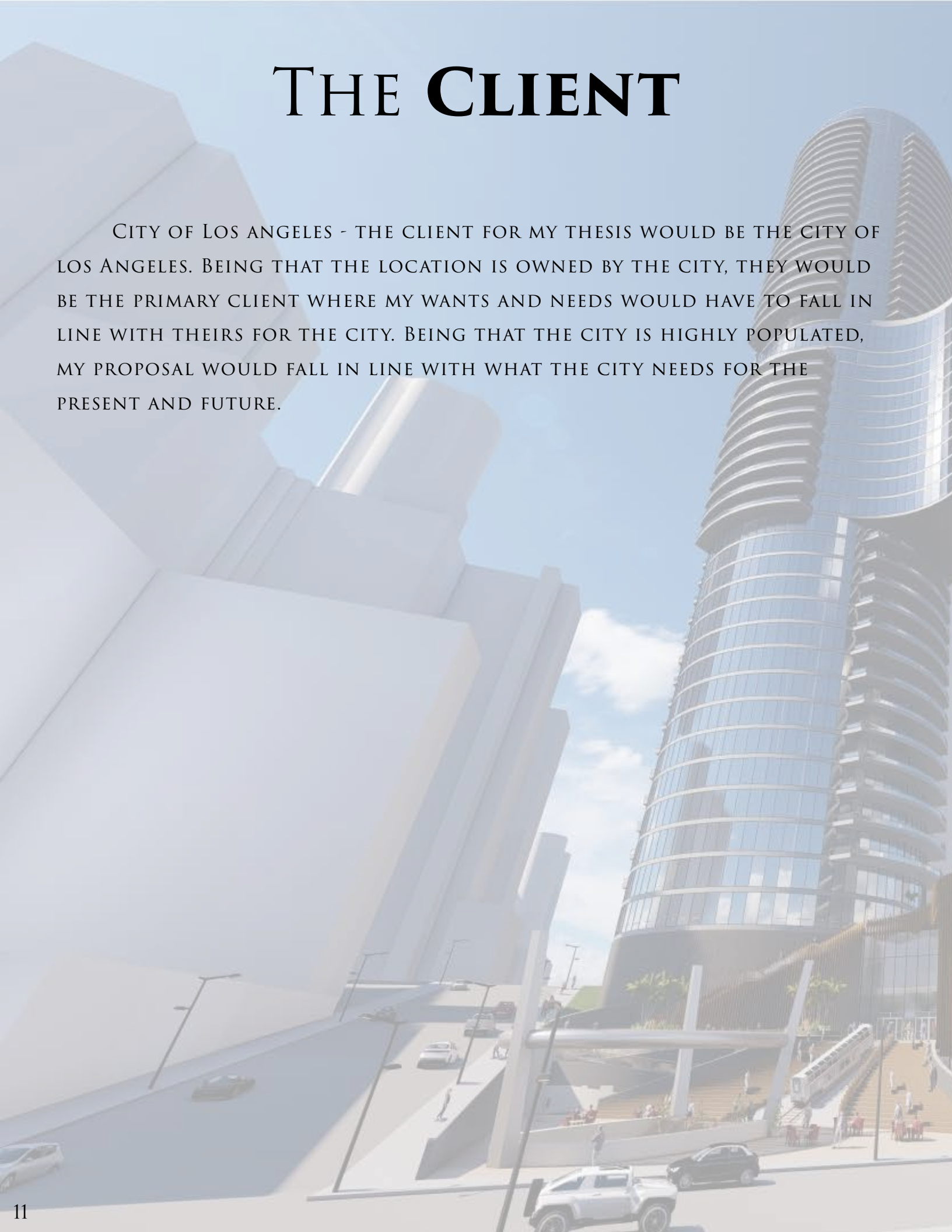
COMPOSING A BUILDING TO BE VIABLE, DEPENDABLE, AND EQUIPPED WITH THE NEWEST TECHNOLOGY IS VITAL TO CREATING A GREEN DESIGN. THIS PROJECT ELEMENT WILL FOCUS PREDOMINANTLY ON THE TECHNOLOGICAL ADVANCES THAT CAN BE MADE TO THE BUILDINGS ECO FRIENDLY DESIGN TO IMPROVE AIR QUALITY, LOWER THE CARBON FOOTPRINT, AND GIVE BACK TO THE COMMUNITY IN NUMEROUS WAYS.

SPATIAL/INTERIOR DESIGN - FURNISHING AND FLEXIBILITY OF SPACES.

THIS ELEMENT HAS THE HIGHEST IMPORTANCE ON THE COMFORT, SATISFACTION, AND CONTENTMENT OF THE BUILDINGS USERS. SPACE, LINE, FORM, LIGHT, COLOR, AND PATTERNS ARE ALL CONSIDERABLE COMPONENTS OF AN INTERIOR DESIGN. EACH FACTOR OF THIS ELEMENT HAS ITS OWN IMPORTANCE THAT CAN EFFECT THE MOOD AND ATMOSPHERE INSIDE THE FRAMEWORK.

THE CLIENT

CITY OF LOS ANGELES - THE CLIENT FOR MY THESIS WOULD BE THE CITY OF LOS ANGELES. BEING THAT THE LOCATION IS OWNED BY THE CITY, THEY WOULD BE THE PRIMARY CLIENT WHERE MY WANTS AND NEEDS WOULD HAVE TO FALL IN LINE WITH THEIRS FOR THE CITY. BEING THAT THE CITY IS HIGHLY POPULATED, MY PROPOSAL WOULD FALL IN LINE WITH WHAT THE CITY NEEDS FOR THE PRESENT AND FUTURE.



THE USER

THE NEIGHBORHOODS AND COMMUNITIES - THE CURRENT SITE SELECTED IS A PUBLIC PARK AND GREEN SPACE, AND SINCE LA IS IN DIRE NEED OF MORE GREEN SPACE, MY PROPOSAL WOULD BE TO RECREATE THIS GREEN SPACE INTO THE LOWER LEVELS OF THE BUILDING. THIS SPACE WILL BE AVAILABLE TO THE PUBLIC AND ALL THE NEIGHBORHOODS AND COMMUNITIES IN THE AREA.

RESIDENTS OF LOS ANGELES - WITH LOS ANGELES BEING ONE OF THE MOST POPULATED CITIES IN THE UNITED STATES, THE NEEDS FOR MORE RESIDENTIAL APARTMENT SPACES IS VERY HIGH. THIS PROPOSAL WILL ATTEND TO THE NEED AND INCLUDE RESIDENTIAL APARTMENTS FOR LOS ANGELES RESIDENTS.

VISITORS - BEING THAT LOS ANGELES IS ONE OF THE MOST DESIRED TOURIST DESTINATIONS IN THE UNITED STATES, THE NEED FOR HOTELS WILL BE ACCOMMODATED IN THE BUILDINGS PROPOSAL.

COMPANY OFFICES - WITH AN EMPHASIS ON QUALITY OF LIFE, MY THESIS WILL LOOK AT HOW AN OFFICE COULD BE AT ITS HIGHEST POTENTIAL FOR ITS EMPLOYEES.

THESIS SITE

LOCATION - BUNKER HILL NEIGHBORHOOD, LOS ANGELES, CALIFORNIA.

SIZE - 320' X 350' = 112,000 SQ FT

TYOLOGY - SKYSCRAPER

SUMMARY:

LOS ANGELES IS KNOWN FOR BEING ONE OF THE WORLDS MOST FAMOUS CITIES HOME TO THE RICH AND FAMOUS. BEING THE SECOND LARGEST CITY IN THE UNITED STATES, LOS ANGELES IS ALSO KNOWN FOR ITS BAD TRAFFIC AND BEING ETHNICALLY DIVERSE. THE CITY IS HOME TO MANY CELEBRITIES, THEME PARKS, CLUBS, BEACHES AND MUCH MORE.

BEING THAT LOS ANGELES IS WELL KNOWN FOR SO MANY THINGS, IT MAKES THE COST OF LIVING ONE OF THE MOST EXPENSIVE IN THE WORLD. EVEN THOUGH IT IS ONE OF THE MOST EXPENSIVE CITIES TO LIVE IN, IT IS ALSO ONE OF THE BIGGEST ECONOMIC CENTERS IN THE WORLD WITH A TRILLION DOLLARS A YEAR IN GDP.

WITH SUCH A HIGH COST OF LIVING, SOME GO TO LOS ANGELES WITH HIGH HOPES OF MAKING IT BIG AND END UP IN A NEIGHBORHOOD CALLED SKID ROW. SKID ROW IS A NEIGHBORHOOD IN DOWNTOWN LA WITH THE LARGEST HOMELESS POPULATION IN THE UNITED STATES.

THE TOPOGRAPHY IN CALIFORNIA MAKES IT VERY DIFFICULT TO BUILD ON DUE TO THE PACIFIC OCEAN ON THE SIDE AND THE MOUNTAINOUS TERRAIN ON THE OTHER.

WITH A MEDITERRANEAN CLIMATE, CALIFORNIA IS A WELL SOUGHT AFTER DESTINATION TO LIVE OR A VACATION SPOT.

UNITED STATES



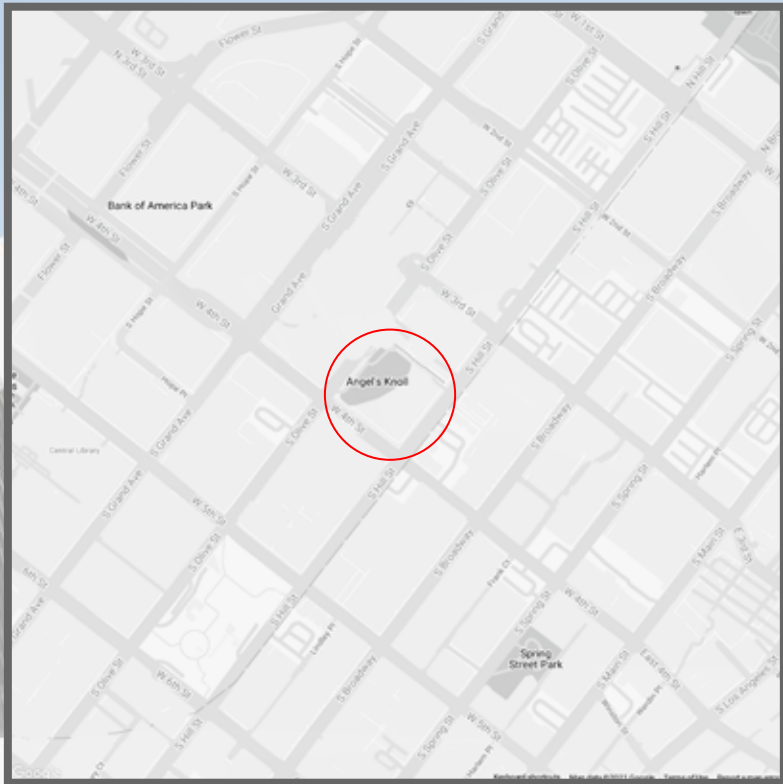
CALIFORNIA



LOS ANGELES



BUNKER HILL NEIGHBORHOOD



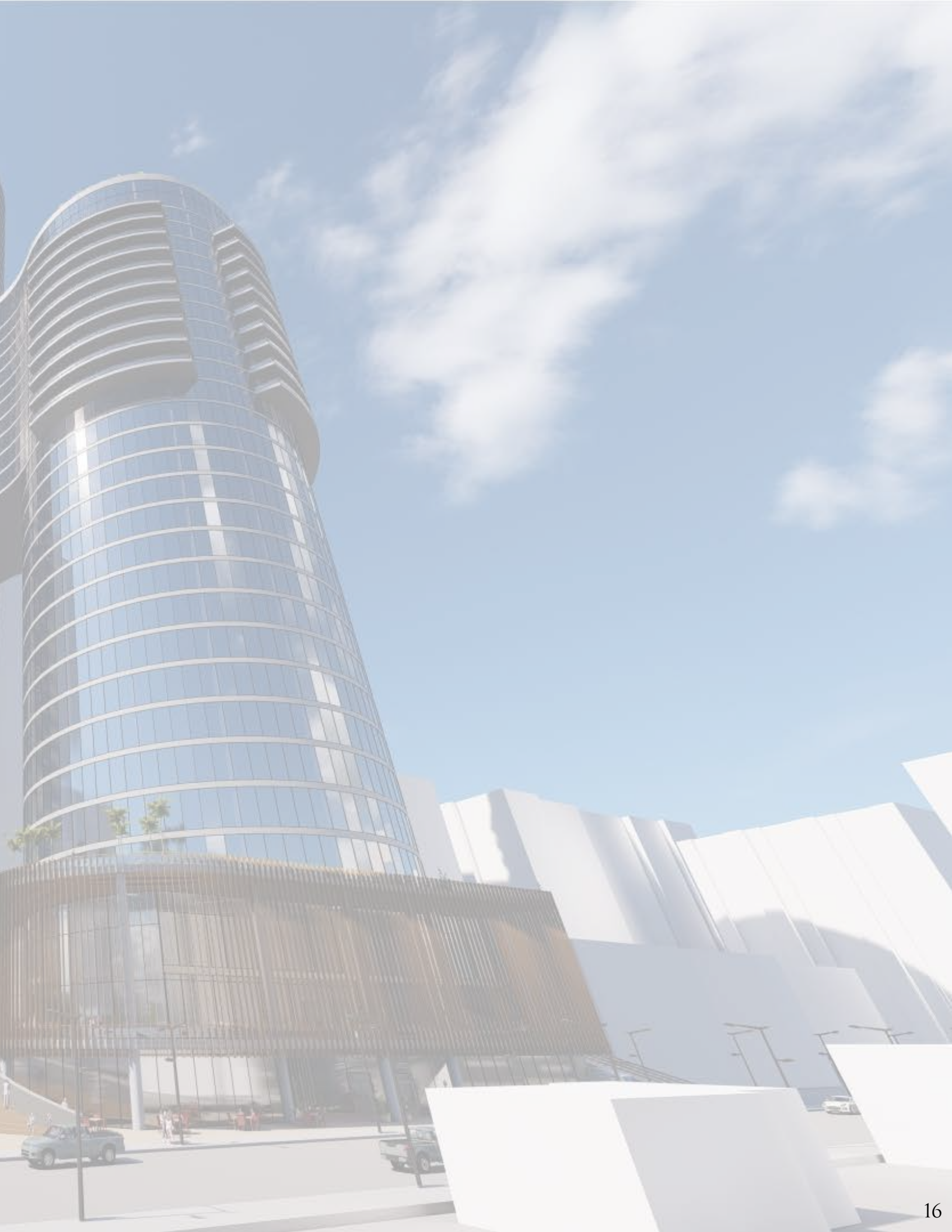
PROJECT EMPHASIS

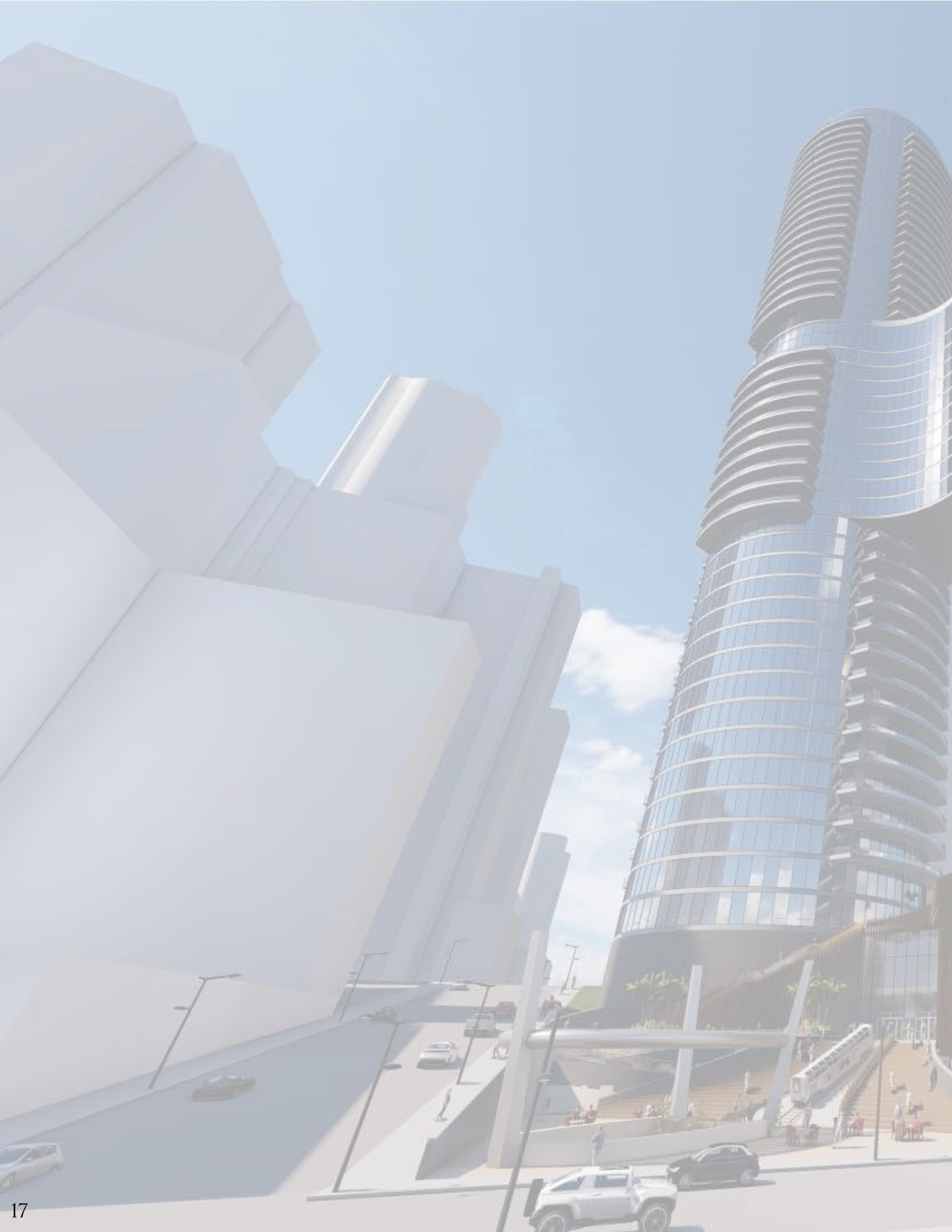
HEALTHY BUILDING - QUALITY OF LIFE - HEALTHY ENVIRONMENT

HEALTHY BUILDING - THE MAIN CONTROLLING FACTOR OF THIS THESIS IS DESIGNING A HEALTHY BUILDING. A HEALTHY BUILDING REFERS TO SUPPORTING THE PHYSICAL, PSYCHOLOGICAL, AND SOCIAL HEALTH AND WELL-BEING OF THE BUILT ENVIRONMENT. THIS WILL BE THE BASE LINE THAT WILL BE EMPHASIZED IN THIS THESIS PROJECT.

QUALITY OF LIFE - QUALITY OF LIFE IN THIS THESIS SPECIFICALLY SPECIFIES TOWARDS THE OVERALL WELL-BEING OF THE COMMUNITY AND THE USERS OF THE BUILDING. THE COMPREHENSIVE DESIGN OF THE BUILDING WILL DIRECTLY RELATE TO THE QUALITY OF LIFE AND HOW THE BUILDINGS COMPOSITION EFFECTS THE MOOD, CHARACTER, AND COMFORT OF THE USERS.

HEALTHY ENVIRONMENT - KNOWING THE NEEDS OF THE SURROUNDING ENVIRONMENT WILL DIRECTLY EFFECT THE DESIGN, OVERALL EFFICIENCY, AND HOW THE BUILDING CAN GIVE BACK. EMPHASIZING A HEALTHY ENVIRONMENT IN THIS THESIS PROJECT WILL PROVIDED NOT JUST SMALL SCALE SINGULAR BUILDING PERFORMANCE, BUT A LARGE SCALE MODERNIZATION AND IMPROVEMENT TO THE SURROUNDING COMMUNITY AND STANDARD OF LIVING IN THE AREA.





THESIS GOALS

URBAN ENVIRONMENT - DESIGNING A BUILDING FOR AN URBAN ENVIRONMENT REQUIRES A BALANCED PLAN TO CREATE AN AREA THAT CONNECTS THE BUILDING AND ITS SITE TO THE SPACES AROUND IT. UNDERSTANDING THE URBAN ENVIRONMENT CREATES OPPORTUNITIES FOR THE BUILDINGS COMPOSITION TO CONNECT THE CITY FROM A SINGULAR LOCATION.

ARCHITECTURAL DESIGN - WHEN WORKING ON THE ARCHITECTURAL DESIGN ELEMENT, I LOOKED TO COMPOSE A BUILDING THAT IS VIABLE, DEPENDABLE, AND EQUIPPED WITH THE SPACES NEEDED TO CREATE A SENSE OF COMMUNITY WITHIN AND AROUND THE STRUCTURE.

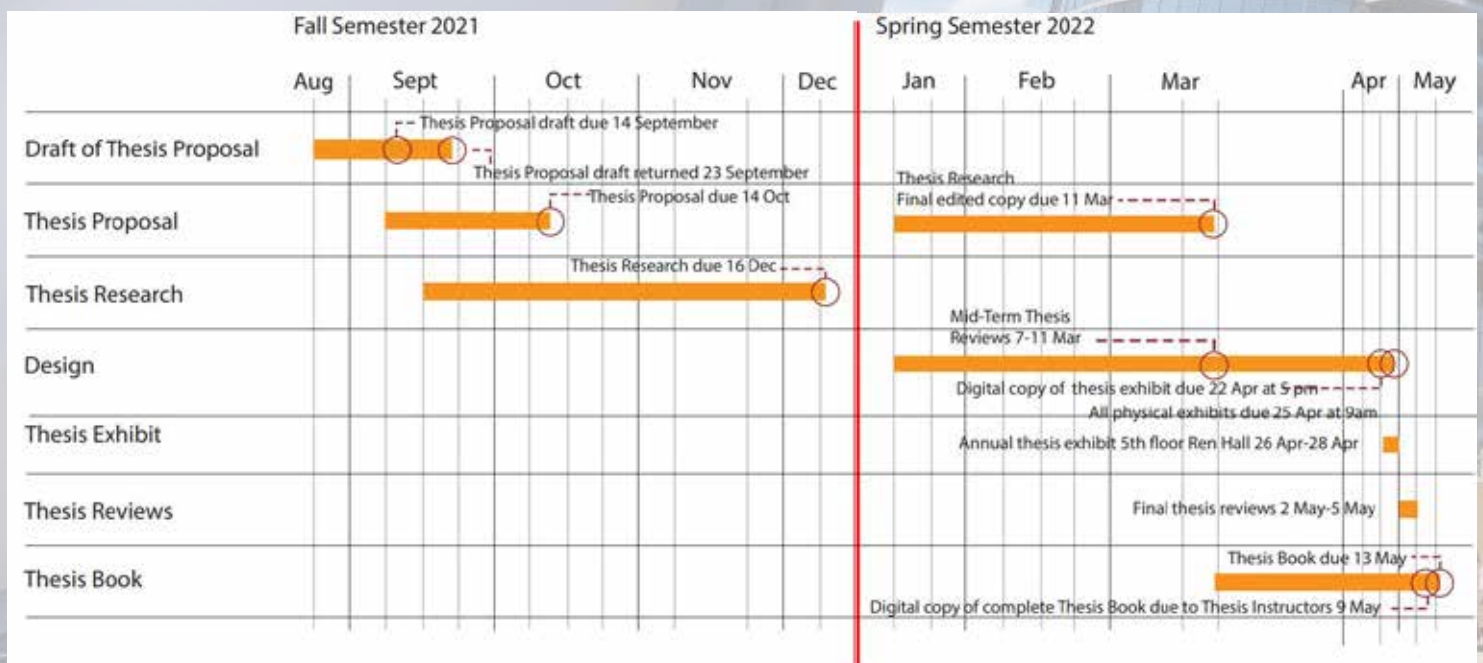
PHYSICAL SPATIAL DESIGN - MY LAST GOAL HAS THE HIGHEST IMPORTANCE ON THE COMFORT, SATISFACTION, AND CONTENTMENT OF THE BUILDINGS USERS. IN AN EVER EXPANDING DIGITAL WORLD, ITS CRITICAL THAT WE MAINTAIN OUR CONNECTIONS WITH SOCIETY. BEFORE COVID, WHEN IT WAS MUCH LESS COMMON TO ORDER FOOD TO YOUR DOOR OR WORK FROM HOME, PEOPLE WERE ACTIVE IN PUBLIC SPACES AND REALLY CONNECTED WITH THE COMMUNITY IN THE CITY... AND CITIES ARE PRINCIPALLY ABOUT THE PEOPLE. WHERE PEOPLE GO, WHERE THEY MEET, AND HOW THEY CONNECT WITH EACH OTHER IS WHAT MAKES A CITY WORK. THE SPATIAL CONNECTION ELEMENT OF MY THESIS IS FOCUSES ON HOW WE AS DESIGNERS CAN TAKE THE INDIVIDUAL COMPONENTS THAT MAKE A CITY INSPIRING, AND INTERCONNECT THEM WITHIN A SINGULAR STRUCTURE

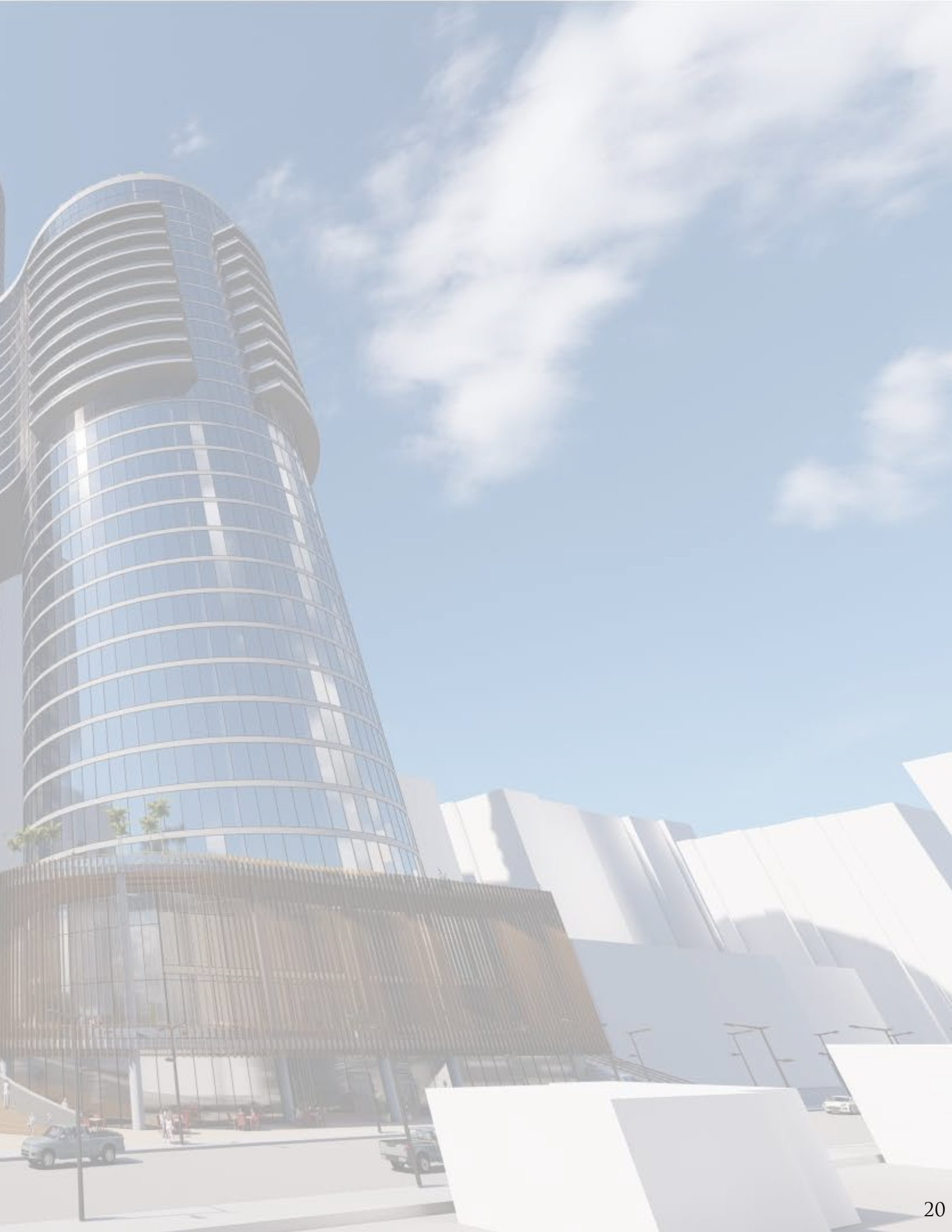
PLAN FOR PROCEEDING

RESEARCH DIRECTION - RESEARCH WILL BE CONDUCTED THROUGH CASE STUDIES OF SUSTAINABLE BUILDINGS AND DESIGNS THAT APPLY TO MY TYPOLOGY. I WILL ALSO BE DOING A THOROUGH ANALYSIS OF LOS ANGELES AND ITS CODES AND PHYSICAL SITE THAT I HAVE CHOOSE.

DESIGN METHODOLOGY - MIXED METHOD ANALYSIS - QUANTITATIVE AND QUALITATIVE ANALYSIS. ALL RESEARCH WILL BE THOROUGHLY ANALYZED, STUDIED, AND USED WHEN AND WHERE I FEEL IT WILL BE BEST APPLIED.

DESIGN PROCESS DOCUMENTATION PLAN - DESIGN PROCESS WILL BE DOCUMENTED BOTH DIGITALLY AND PHYSICALLY THOUGH SKETCHES AND MODELS. BOTH WILL BE STORED ON A HARD DRIVE FOR SAFETY AND WILL ALL BE ORGANIZED FOR FINAL PRESENTATIONS.





THESIS RESEARCH:





“OUR DECISION TO PIONEER WELL CERTIFICATION REFLECTS OUR BELIEF THAT THE OFFICE ENVIRONMENT CAN, AND SHOULD, ADD TO THE HEALTH OF OUR PEOPLE, AND THAT TRUE MARKET LEADERSHIP IS ABOUT TAKING BOLD STEPS FOR THE FUTURE.”

-MARK RENZONI, PRESIDENT AND CEO, CBRE LIMITED, CANADA

PRELIMINARY FINDINGS

The background of the page is a semi-transparent architectural rendering of a modern urban development. It features a prominent, curved glass skyscraper on the right side. In the foreground, there is a multi-level transit station with a train on tracks, a pedestrian walkway with people, and a road with several cars. The overall scene is set against a clear blue sky.

THE GOALS OF THE PRELIMINARY RESEARCH PHASE INCLUDE:

1. TYPOLOGICAL RESEARCH: THE TYPOLOGICAL RESEARCH WAS BASED PRIMARILY ON THE GENERAL SATISFACTION WITH A BUILDING, WORKPLACE, OFFICE LAYOUT, OFFICE FURNISHINGS, THERMAL COMFORT, AIR QUALITY, LIGHTING, ACOUSTIC QUALITY, AND CLEANLINESS AND MAINTENANCE PROVIDED IN A BUILDING.

2. HISTORY: THE HISTORY OF THE SITE IS VERY IMPORTANT ASPECT OF THIS THESIS BECAUSE OF THE STEADY INCREASING POPULATION OF LOS ANGELES. THE RESEARCH CONDUCTED PRIMARILY FOCUSED ON THE POPULATION AND OVERALL GROWTH IN THE AREA.

3. SITE ANALYSIS: BEGINNING EVERY DESIGN PROCESS, SITE ANALYSIS IS ALWAYS IN THE BEGINNING AS IT IS CRUCIAL TO MAKING SURE YOUR TYPOLOGY WILL SURVIVE IN THAT ENVIRONMENT. MY RESEARCH IN THIS CATEGORY WAS NOT TO MAKE SURE THAT MY BUILDING WOULD JUST SURVIVE, BUT TO SEE THAT IT WOULD THRIVE AND MAKE A DIFFERENCE IN THE AREA.

TYPOLOGICAL RESEARCH FINDINGS

A PRIMARY FINDING IN MY TYPOLOGICAL RESEARCH MOSTLY INVOLVES EFFICIENT AND SUCCESSFUL OFFICE DESIGN. THE MOST INFLUENTIAL PIECE OF INFORMATION THAT I FOUND WAS COLLECTED FROM A CBRE WELLNESS REPORT. CBRE'S ELEMENTS OF A HEALTHY WORKPLACE PROVIDED IN THEIR 2016 REPORT 'WELLNESS IN THE WORKPLACE: UNLOCKING FUTURE PERFORMANCE', INCLUDE:

IN BUILDING DESIGN AND CONSTRUCTION:

- STAIRWAYS THAT ENHANCE PEOPLES MOTIVATION TO USE THEM THROUGH LIGHTING, ARTWORK AND OTHER DESIGN ELEMENTS.
- BIOPHILIC AIR TREATMENT CLEANS THE AIR WITH PLANTS THAT CAN DESTROY VOLATILE SUBSTANCES IN THE AIR.

IN OFFICE MANAGEMENT:

- CARDIOVASCULAR EQUIPMENT LIKE A GYM TO GET EMPLOYEES OUT OF THEIR CHAIR AND MOVE AROUND.
- ADVANCED WATER PURIFICATION SYSTEMS TO REDUCE HARMFUL CHEMICALS IN THE WATER.
- DRINKING WATER STATIONS AT CONVENIENT LOCATIONS ENCOURAGE EMPLOYEES TO HYDRATE.
- STRETCHING AND RELAXATION AREAS ON EACH FLOOR TO ALLOW EMPLOYEES TO REGATHER THEIR STRENGTH MENTALLY AND PHYSICALLY.

IN OFFICE PROGRAMMING:

- NUTRITIOUS SNACKS TO PROMOTE HEALTHY EATING HABITS.
- WORKOUT PROGRAMS TO PROMOTE HEALTHY LIVING.

HISTORICAL FINDINGS

FROM LOOKING INTO THE HISTORICAL NATURE OF MY SITE, I FOUND THAT THE MOST IMPORTANT PART OF MY SITE IS THE PEOPLE. THE LOCATION OF MY THESIS HAS A HIGH PEDESTRIAN COUNT WHICH MEANS HIGH TRAFFIC IN THE AREA.

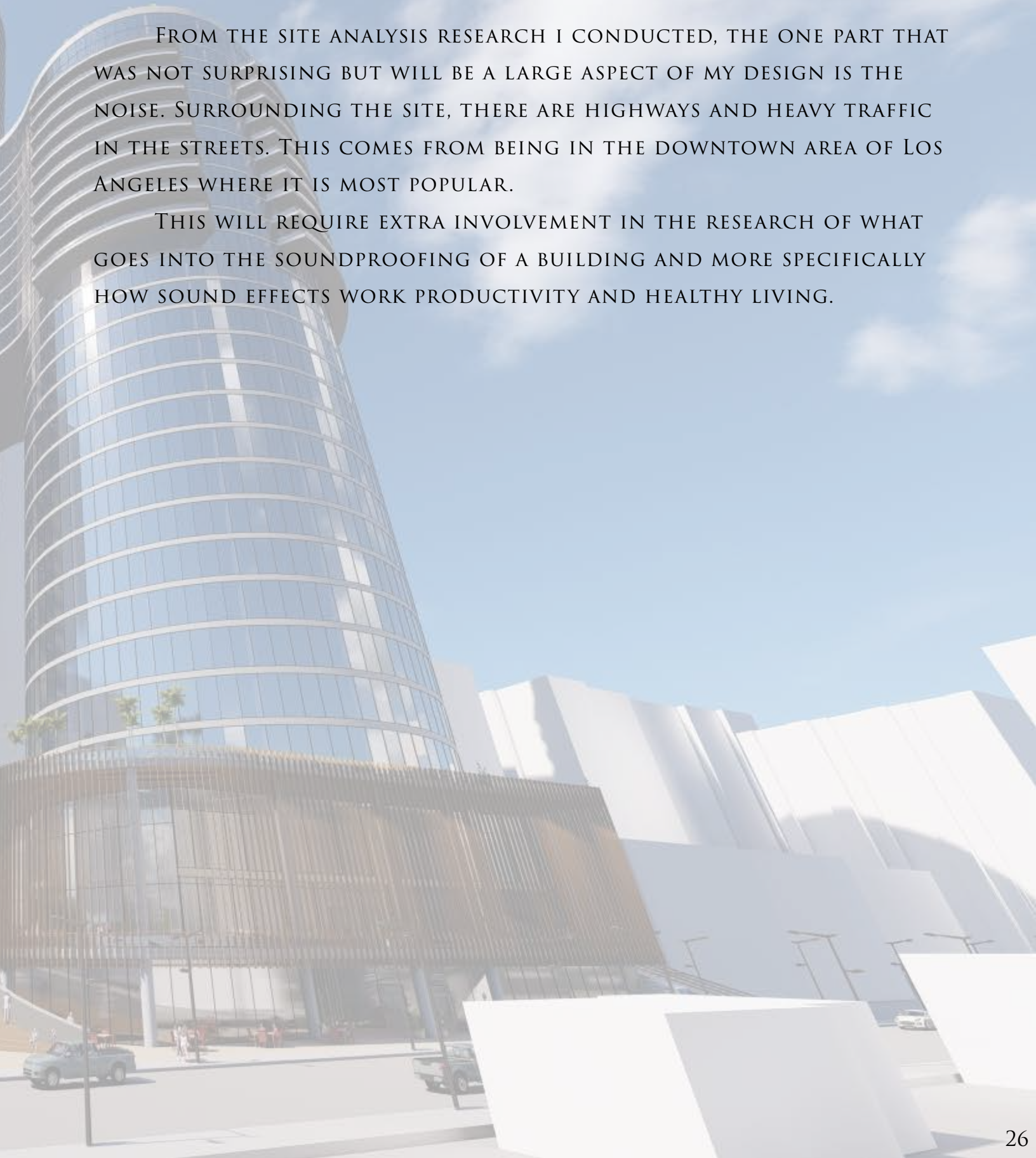
OVER THE YEARS, LOS ANGELES HAS GROWN EXPONENTIALLY TO A POINT IT NEEDS TO START BUILDING UP RATHER THAN OUT. THIS IS WHERE MY THESIS PROPOSAL WILL CREATE A POSITIVE IMPACT ON THE COMMUNITY.

ONE LAST FINDING FROM THE HISTORY OF LOS ANGELES IS FROM THE CLIMATE AND SOIL STUDIES. THE CLIMATE IN THE AREA HAS STRONG WINDS FROM THE WEST THAT WILL REQUIRE EXTRA STRUCTURAL SUPPORT FOR MY BUILDING. THE SOILS, BEING NEAR THE OCEAN, WILL FORCE THE STRUCTURE OF MY BUILDING TO GO DEEPER IN THE GROUND TO PROVIDE A STEADY FOUNDATION.

SITE ANALYSIS FINDINGS

FROM THE SITE ANALYSIS RESEARCH I CONDUCTED, THE ONE PART THAT WAS NOT SURPRISING BUT WILL BE A LARGE ASPECT OF MY DESIGN IS THE NOISE. SURROUNDING THE SITE, THERE ARE HIGHWAYS AND HEAVY TRAFFIC IN THE STREETS. THIS COMES FROM BEING IN THE DOWNTOWN AREA OF LOS ANGELES WHERE IT IS MOST POPULAR.

THIS WILL REQUIRE EXTRA INVOLVEMENT IN THE RESEARCH OF WHAT GOES INTO THE SOUNDPROOFING OF A BUILDING AND MORE SPECIFICALLY HOW SOUND EFFECTS WORK PRODUCTIVITY AND HEALTHY LIVING.



TYPOLOGICAL RESEARCH

CONSIDERATIONS

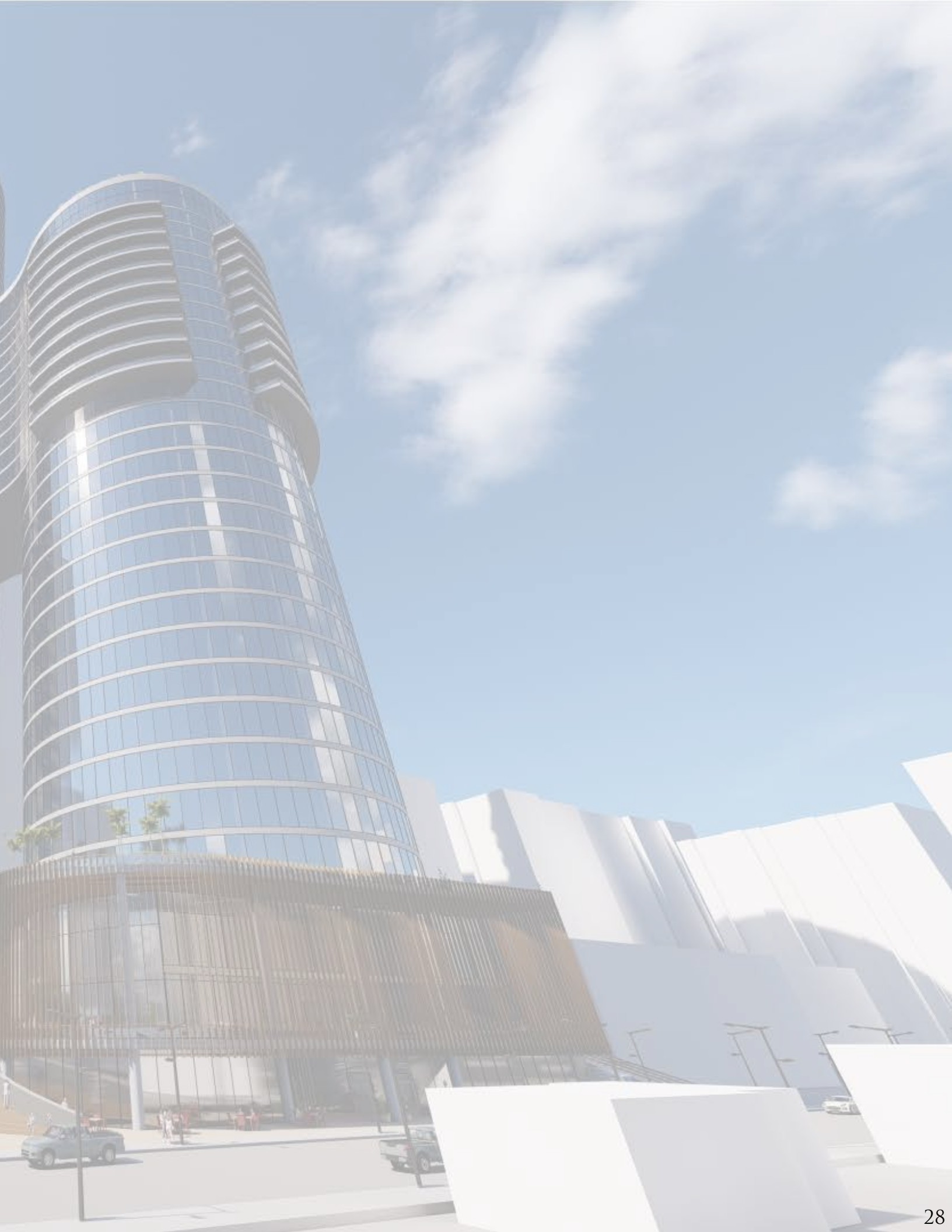
1. DESIGN STRATEGIES: WHEN LOOKING FOR CASE STUDIES, THE MOST IMPORTANT CONSIDERATION I HAD TO MAKE WAS THE DESIGN STRATEGIES THAT WERE FOLLOWED IN THE SPECIFIC PROJECT. MY SPECIFIC DESIGN STRATEGY I INTEND ON FOLLOWING REVOLVES AROUND THE USER AND OVERALL QUALITY OF LIFE THAT MY DESIGN CAN PROVIDE. THE STUDIES THAT I CHOSE ALSO REVOLVE AROUND IMPROVING THE SPACES CREATED TO FOCUS ON THE BENEFITS THAT IT CREATES FOR ITS EMPLOYEES AND CLIENTS.

2. PROJECT TYPOLOGY: WITH A HIGH-RISE TYPOLOGY WITH AN EMPHASIS ON QUALITY OF LIFE IN AN OFFICE SETTING, SO I CHOSE PROJECTS THAT ALSO HAVE AN EMPHASIS ON OFFICE DESIGN, SPECIALIZING ON A HEALTHY WORK ENVIRONMENT.

3. LOCATION: THE LOCATIONS OF THESE SPECIFIC PROJECTS CORRELATE WITH MY THESIS SITE LOCATION DUE TO THE FACT THAT THEY ARE IN DOWNTOWN LOCATION SURROUNDED BY HIGH-RISE ARCHITECTURE. THIS ALLOWS ME TO DRAW CONCLUSIONS FROM WHAT I SEE WORKS BEST FROM THE CASE STUDIES, AND WHAT POSITIVE ASPECTS OF THAT LOCATIONS DESIGN CORRELATE BEST TO MY DESIGN.

CHOSEN PROJECTS:

1. CBRE AT MNP TOWER, VANCOUVER BC, CANADA
2. CBRE AT 145 KING STREET WEST, TORONTO ON, CANADA
3. ARUP BOSTON OFFICE - BOSTON MA, USA



CBRE - VANCOUVER



TYOLOGY: OFFICE BUILDING

LOCATION: VANCOUVER BC, CANADA

SIZE: 28,327 SQ FT WITHIN A 270,000 SQ FT TOWER

REAL ESTATE AND INVESTMENT FIRM: CBRE GROUP

ARCHITECT: JOHN PEDERSON FOX

CERTIFICATIONS: WELL GOLD AND LEED GOLD

STATUS: RENOVATED 2014

SUMMARY:

CBRE GROUP, INC. (COLDWELL BANKER RICHARD ELLIS) IS THE WORLD'S LEADING FULL-SERVICE REAL ESTATE SERVICES AND INVESTMENT FIRM. WITH MORE THAN 100,000 EMPLOYEES CBRE HAS A VERY BROAD RANGE OF SERVICES INCLUDING PROJECT MANAGEMENT, STRATEGIC CONSULTING, DEVELOPMENT SERVICES, ETC.

IN CBRE'S VANCOUVER OFFICE, THEY ACHIEVED A WELL GOLD AND LEED GOLD CERTIFICATION FOR ITS FOUR FLOORS OF THE MNP TOWER. THE OVERALL DESIGN WAS CREATED TO ENCOURAGE MOVEMENT AND COLLABORATION WITH A HIGH AMOUNT OF GLAZING THAT OFFERS AN EXTENSIVE AMOUNT OF DAYLIGHT WITH A VIEW IN EVERY CORNER.

DESIGN FEATURES

IN ORDER TO RECEIVE WELL CERTIFICATION, AN ASSESSMENT MUST BE CONDUCTED ALONG SEVEN CATEGORIES:

1. AIR
2. WATER
3. NOURISHMENT
4. LIGHT
5. FITNESS
6. COMFORT
7. MIND

CBRE'S OFFICE SPACE PROVIDES AREAS THAT ENSURE A HIGH QUALITY OF WELLNESS. SOME OF THESE MEASURES INCLUDING AN HVAC SYSTEM IN THE TOP PERCENT OF OFFICES GLOBALLY. THIS HVAC SYSTEM IS CONSIDERED TO BE BETTER THAN MOST HOMES. THE OFFICE ALSO INCLUDES MULTIPLE INTERACTIVE AND SOCIAL SPACES, ACCESS TO DAYLIGHT WITHIN 25 FEET OF ANYWHERE IN THE OFFICE, AND NOISE DAMPENING OBJECTS (WHITE-NOISE DIODES) PLACED AROUND THE OFFICE.

TAKEAWAYS

EVEN THOUGH CBRE DID NOT OWN THE ENTIRE MNP TOWER, IT IS SEEN HERE THAT IT IS POSSIBLE FOR THE SMALLEST OF PEOPLE TO INVEST INTO SOMETHING WITH A BIGGER PURPOSE. CBRE ONLY OWNED 10.5% OF THE SPACE IN THE MNP TOWER, AND YET THEY WERE ABLE TO STEP UP AND MAKE A DIFFERENCE FOR THEIR OWN EMPLOYEES AND THOSE IN THE REST OF THE BUILDING TO PROVIDE A QUALITY INDOOR SPACE.

“AMERICANS SPEND APPROXIMATELY 90 PERCENT OF THEIR TIME INDOORS ON AVERAGE, AND INDOOR CONCENTRATIONS OF SOME POLLUTANTS HAVE INCREASED IN RECENT DECADES DUE TO FACTORS INCLUDING ENERGY-EFFICIENT BUILDING CONSTRUCTION AND INCREASED USE OF SYNTHETIC MATERIALS.”

- HUSSAIN SULEMAN

CBRE - TORONTO

TYOLOGY: OFFICE BUILDING

LOCATION: TORONTO ON, CANADA

SIZE: 38,850 SQ FT WITHIN A 4000,000 SQ FT TOWER

REAL ESTATE AND INVESTMENT FIRM: CBRE GROUP

CERTIFICATIONS: WELL SILVER

STATUS: RENOVATED IN 2015

SUMMARY:

LIKE STATED IN THE VANCOUVER CASE STUDY ABOVE, CBRE GROUP, INC. (COLDWELL BANKER RICHARD ELLIS) IS THE WORLD'S LEADING FULL-SERVICE REAL ESTATE SERVICES AND INVESTMENT FIRM. WITH MORE THAN 100,000 EMPLOYEES CBRE HAS A VERY BROAD RANGE OF SERVICES INCLUDING PROJECT MANAGEMENT, STRATEGIC CONSULTING, DEVELOPMENT SERVICES, ETC.

IN CBRE'S TORONTO OFFICE, THEY ACHIEVED A WELL SILVER CERTIFICATION FOR ITS 38,850 SQ FT IN THE BUILDING. THE OVERALL DESIGN IDEALS TRAILED ALONG BY RELOCATED A COUPLE HUNDRED EMPLOYEES WHILE IMPLEMENTING NEW WORKPLACE STRATEGIES ALONG THE WAY.

DESIGN FEATURES

THE OVERALL DESIGN IDEALS TRAILED ALONG FOUR ASPECTS:

1. WELLNESS
2. CHOICE
3. CONNECTION
4. MOBILITY

CBRE'S OFFICE SPACE IN TORONTO PROVIDES DESIGN STRATEGIES TO ENSURE A HIGH QUALITY OF WELLNESS. SOME OF THESE MEASURES INCLUDING AN HVAC SYSTEM IN THE TOP PERCENT OF OFFICES GLOBALLY. THIS HVAC SYSTEM IS CONSIDERED TO BE BETTER THAN MOST HOMES. THE OFFICE ALSO INCLUDES MULTIPLE INTERACTIVE AND SOCIAL SPACES, ACCESS TO DAYLIGHT WITHIN 25 FEET OF ANYWHERE IN THE OFFICE, AND NOISE DAMPENING OBJECTS (WHITE-NOISE DIODES) PLACED AROUND THE OFFICE, ALL INCLUDED IN THE VANCOUVER OFFICE AS WELL. A NEW FACTOR IN THIS DESIGN IS THE IMPLEMENTATION OF LED LIGHTING THAT WILL AUTOMATICALLY ADJUST TO THE BRIGHTNESS OF THE OUTDOOR SUNLIGHT.

TAKEAWAYS

IN A STUDY AND SURVEY CONDUCTED WITH CBRE'S EMPLOYEES, THE CONCLUDED THAT THE OVERALL SATISFACTION OF THEIR EMPLOYEES INCREASED EXPONENTIALLY. O'NEILL SAYS THAT WELL CERTIFICATION IS "HELPING TO DIFFERENTIATE US AS AN EMPLOYER THAT IS PREPARED TO INVEST IN THE HEALTH AND WELLNESS OF ITS PEOPLE. BECAUSE WELL REPRESENTS THE LEADING EDGE OF OFFICE DESIGN, IT'S ALSO DIFFERENTIATING US AS A COMMERCIAL REAL ESTATE ADVISER." WHICH SHOWS THAT RE-ADAPTATION OF OFFICE BUILDINGS CAN CONCLUDE IN AN OVERALL HIGH SATISFACTION RATE.

"IN THE WELL-CERTIFIED OFFICES, THE TOTAL EMPLOYEE TURNOVER RATE HAS FALLEN BY ALMOST A THIRD AND THE HIRING RATE FOR NEW TALENT HAS DOUBLED,"

- O'NEILL

ARUP - BOSTON

TYOLOGY: COMMERCIAL OFFICE

LOCATION: BOSTON MA, USA

SIZE: 16,175 SQ_FT

ARCHITECTURE FIRM: ARUP

CERTIFICATIONS: WELL GOLD, FITWEL 3 STARS, LEED PLATINUM ID+C:
COMMERCIAL INTERIORS V4

STATUS: COMPLETED 2017

SUMMARY:

ARUP IS A DEDICATED DESIGN FIRM WITH A HIGH FOCUS ON SUSTAINABLE DEVELOPMENT. WITH A COLLECTIVE TEAM OF 16,000 EMPLOYEES COLLECTIVELY WORKING ACROSS 140 COUNTRIES, ARUP PRIDES ITSELF ON ITS QUALITY COLLABORATION TIME WITH THEIR CLIENTS BY USING NEW TECHNOLOGIES AND IMAGINATION TO CREATE A BETTER WORLD. IN ARUP'S BOSTON OFFICE, THEY HAVE ACHIEVED NUMERAL HIGH LEVEL CERTIFICATIONS FOR A HIGH QUALITY DESIGN. THEY WERE ALSO THE FIRST FIRM IN NEW ENGLAND TO RECEIVE A WELL CERTIFICATION. THEY ARE ABLE TO ENSURE A HIGH QUALITY BUILD FOR A HEALTHY WORKPLACE FOR THEIR EMPLOYEES.

DESIGN FEATURES

ARUP PROVIDES MANY UNIQUE FEATURES IN THEIR OFFICE SPACES LOCATED IN BOSTON. ONE THAT PROVIDED THE HIGHEST LEVEL OF CHANGE WITH A UNIQUE DESIGN WAS A CIRCADIAN LIGHTING SYSTEM THROUGHOUT THE OFFICE. THIS SYSTEM WAS DESIGNED BY THE LIGHTING TEAM AT ARUP WHERE THEY HAVE THE ABILITY TO REPLICATE DAYLIGHT WITHIN THE ENTIRE OFFICE. THE LIGHTS AUTOMATICALLY ANALYZE THE EXACT BRIGHTNESS AND COLOR THAT THE SUN IS PRODUCING AND REPLICATED THAT INSIDE THE OFFICE. ANOTHER FEATURE THAT ALTERS ITS PERFORMANCE AUTOMATICALLY IS THEIR VENTILATION SYSTEM. THIS SYSTEM RESPONDS DIRECTLY TO THE OCCUPANCY LEVEL IN THE BUILDING TO OPTIMIZE THE AIR QUALITY IN THE MOST EFFICIENT WAY.

TAKEAWAYS

ARUP HAS A ENHANCED FOCUS ON BOTH THE HUMAN HEALTH AND ENVIRONMENTAL OUTCOMES THAT THEIR BUILDING DESIGN PROGRAM HAS WITH THE COMMUNITY. IN A SURVEY THAT ARUP CONDUCTED POST BUILDING CONSTRUCTION SHOWED THAT 83 PERCENT OF STAFF THOUGHT THAT THE NEW AND IMPROVED DESIGN PRODUCED A HIGHER LEVEL OF CREATIVITY AND PRODUCTIVITY WITHIN THE OFFICE. IF AN OFFICE DESIGN IS ABLE TO BRING JOY AND ENHANCE WORK PRODUCTION IN AN EFFICIENT WAY, THIS ALLOWS COMPANIES TO BECOME MORE PROFITABLE IN AN ENJOYABLE WAY.

“ARUP’S WELL CERTIFIED GOLD AWARD DEMONSTRATES OUTSTANDING HEALTHY BUILDING LEADERSHIP. IWBI’S MISSION IS TO BRING HUMAN HEALTH AND WELLNESS TO THE FOREFRONT OF BUILDING PRACTICES GLOBALLY, AND IT IS LEADERS IN THE BUILDING INDUSTRY LIKE ARUP THAT ARE HELPING TO ADVANCE THIS MOVEMENT.”

- RICK FEDRIZZI, CHAIRMAN AND CEO OF IWBI (THE INTERNATIONAL WELL BUILDING INSTITUTE)

PROJECT JUSTIFICATION

THE IMMENSE AMOUNT OF LOGIC AND LONG THOUGHT PROCESSES BEHIND THIS THESIS PROJECT COULD BE EXPLAINED TO CONVINCING ALMOST ANYONE OF ITS NEED FOR A QUALITY DESIGN SOLUTION BY MORAL PRINCIPALS ALONE. INSTEAD, I HAVE DECIDED TO STATE THE FACTS ON THE MATTER, WHICH IS WHY WE NEED TO PROVIDE A HIGHER QUALITY OF LIFE INSIDE OUR BUILDINGS.

1. JUSTIFICATION #1: WE SPEND 90% OF OUR DAY INDOORS

ACCORDING TO A REPORT TO CONGRESS ON INDOOR AIR QUALITY CONDUCTED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY, AMERICANS, ON AVERAGE, SPEND APPROXIMATELY 90 PERCENT OF THEIR TIME INDOORS, WHERE THE CONCENTRATIONS OF SOME POLLUTANTS ARE OFTEN 2 TO 5 TIMES HIGHER THAN TYPICAL OUTDOOR CONCENTRATIONS.

2. JUSTIFICATION #2: QUALITY OF LIFE IMPROVES QUALITY OF WORK

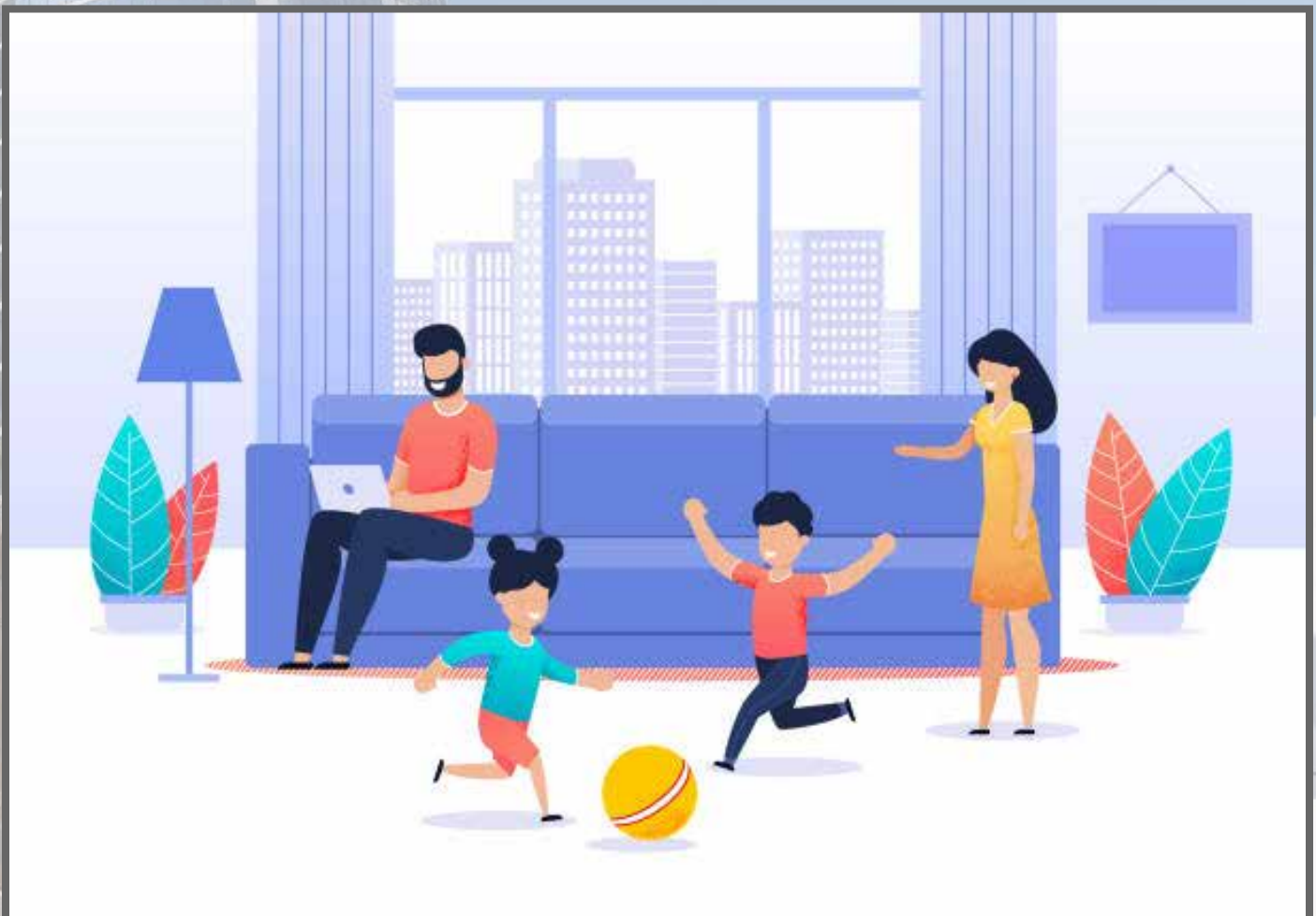
IN STUDIES CONDUCTED BY THE QUEENS SCHOOL OF BUSINESS AND BY THE GALLUP ORGANIZATION, A CONCLUSION WAS MADE THAT DISENGAGED WORKERS HAD 49 PERCENT MORE ACCIDENTS, 37 PERCENT HIGHER ABSENTEEISM, AND 60 PERCENT MORE ERRORS AND DEFECTS.

3. JUSTIFICATION #3: MORE AND MORE WORK IS BEING CONDUCTED AT HOME DUE TO UNSAFE BUILDING CONDITIONS

ACCORDING TO THE 2017 EMPLOYEE BENEFITS SURVEY REPORT CONDUCTED BY THE SOCIETY FOR HUMAN RESOURCE MANAGEMENT (SHRM), 62 PERCENT OF ORGANIZATIONS ALLOWED SOME SORT OF TELECOMMUTING AND 57 PERCENT OFFERED FLEXTIME, WHICH ALLOWS EMPLOYEES TO CHOOSE THEIR OWN WORK HOURS.

1. JUSTIFICATION #1: WE SPEND 90% OF OUR DAY INDOORS

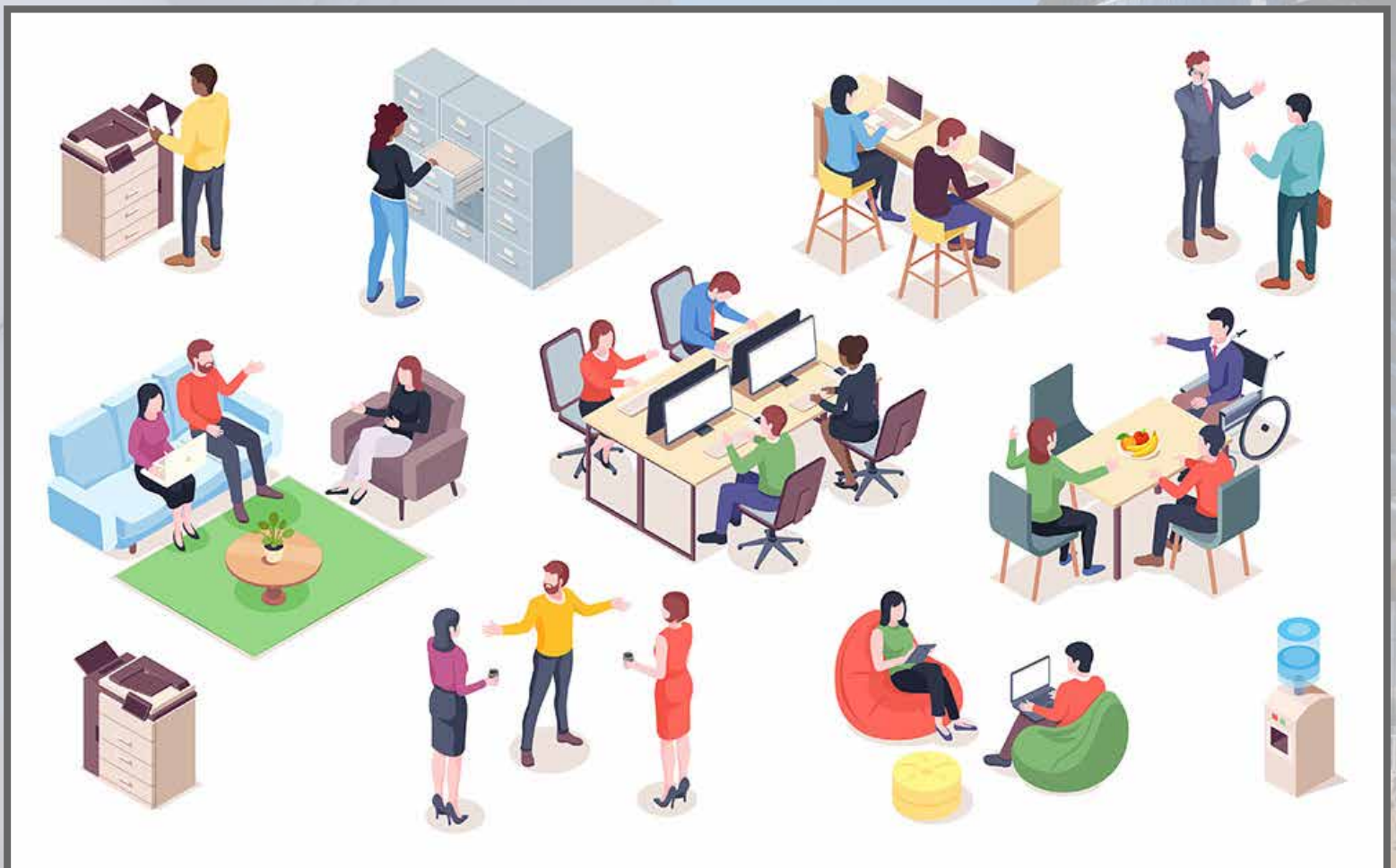
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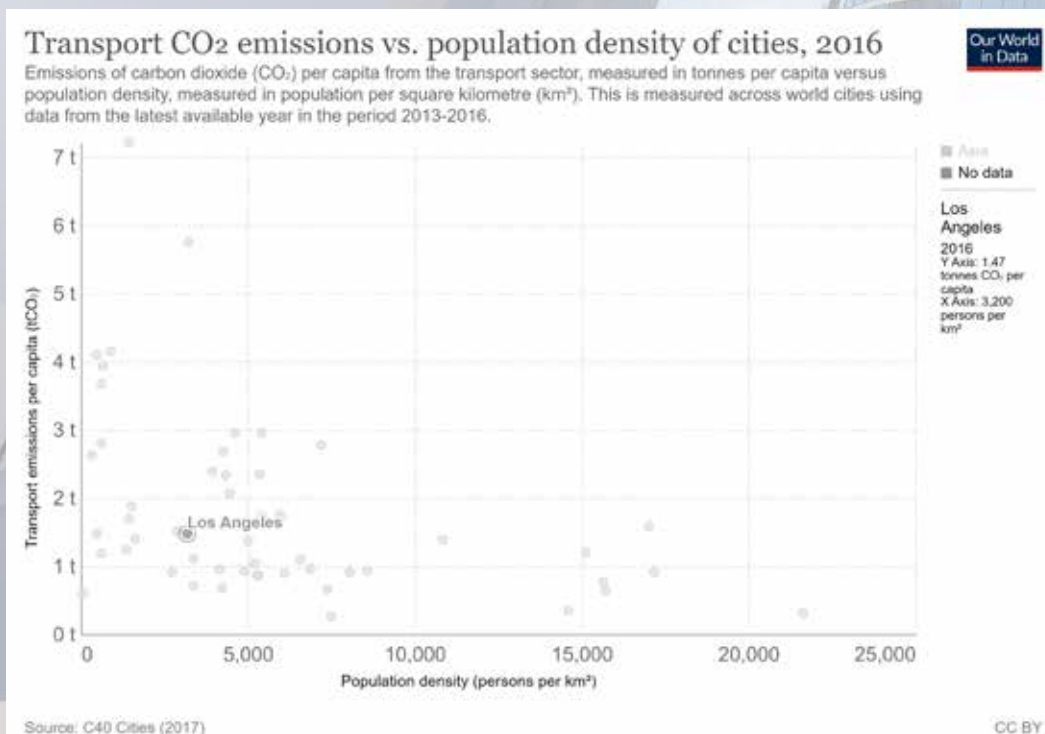
THESIS CONTEXT

SUMMARY:

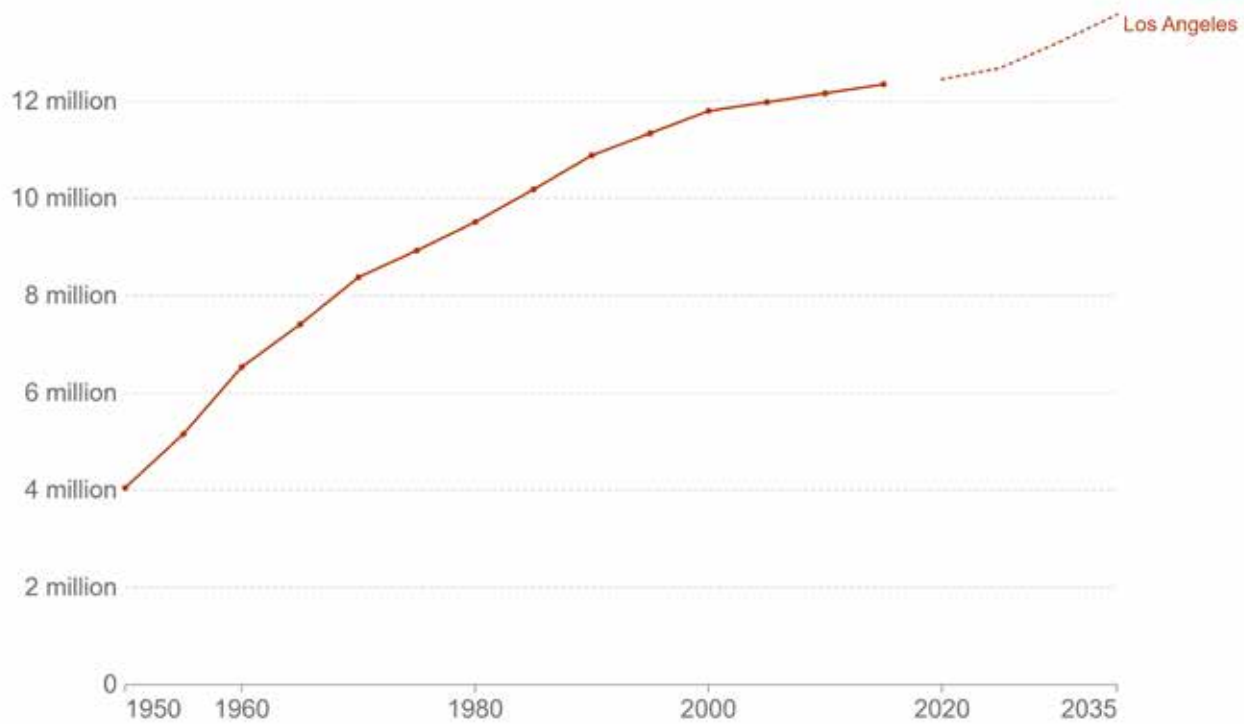
LOS ANGELES IS KNOWN FOR BEING ONE OF THE WORLDS MOST FAMOUS CITIES HOME TO THE RICH AND FAMOUS. BEING THE SECOND LARGEST CITY IN THE UNITED STATES, LOS ANGELES IS ALSO KNOWN FOR ITS BAD TRAFFIC AND BEING ETHNICALLY DIVERSE. THE CITY IS HOME TO MANY CELEBRITIES, THEME PARKS, CLUBS, BEACHES AND MUCH MORE.

BEING THAT LOS ANGELES IS WELL KNOWN FOR SO MANY THINGS, IT MAKES THE COST OF LIVING ONE OF THE MOST EXPENSIVE IN THE WORLD. EVEN THOUGH IT IS ONE OF THE MOST EXPENSIVE CITIES TO LIVE IN, IT IS ALSO ONE OF THE BIGGEST ECONOMIC CENTERS IN THE WORLD WITH A TRILLION DOLLARS A YEAR IN GDP. WITH SUCH A HIGH COST OF LIVING, SOME GO TO LOS ANGELES WITH HIGH HOPES OF MAKING IT BIG AND END UP IN A NEIGHBORHOOD CALLED SKID ROW. SKID ROW IS A NEIGHBORHOOD IN DOWNTOWN LA WITH THE LARGEST HOMELESS POPULATION IN THE UNITED STATES.

THE TOPOGRAPHY IN CALIFORNIA MAKES IT VERY DIFFICULT TO BUILD ON DUE TO THE PACIFIC OCEAN ON THE SIDE AND THE MOUNTAINOUS TERRAIN ON THE OTHER. WITH A MEDITERRANEAN CLIMATE, CALIFORNIA IS A WELL SOUGHT AFTER DESTINATION TO LIVE OR A VACATION SPOT.



City population, Los Angeles, 1950 to 2035



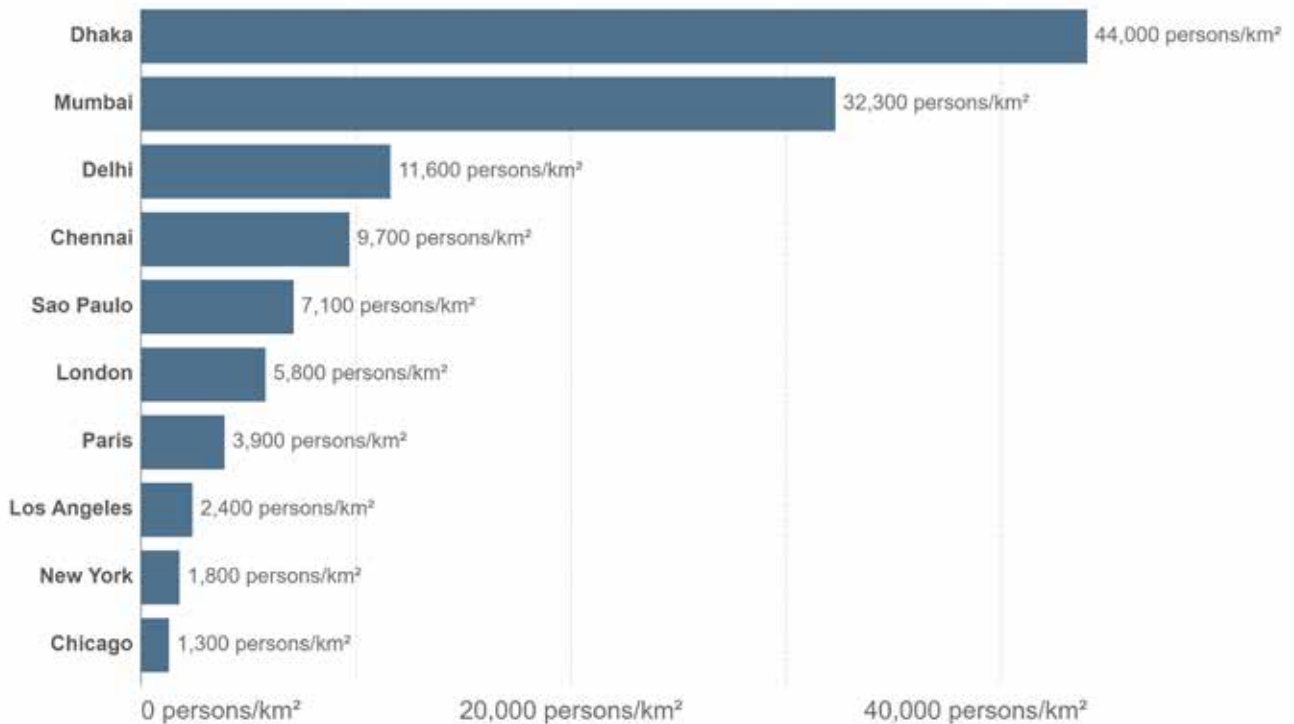
Source: UN World Urbanization Prospects (2018)

OurWorldInData.org/urbanization • CC BY

Note: Data is available for the world's largest 30 cities (by population, in 2015). UN projections are based on its medium fertility population growth scenario and urbanization rates.

Population density by city, 2014

Population density for the world's largest 100 cities (based on total population). Population density is measured as the number of people per square kilometre (km²).



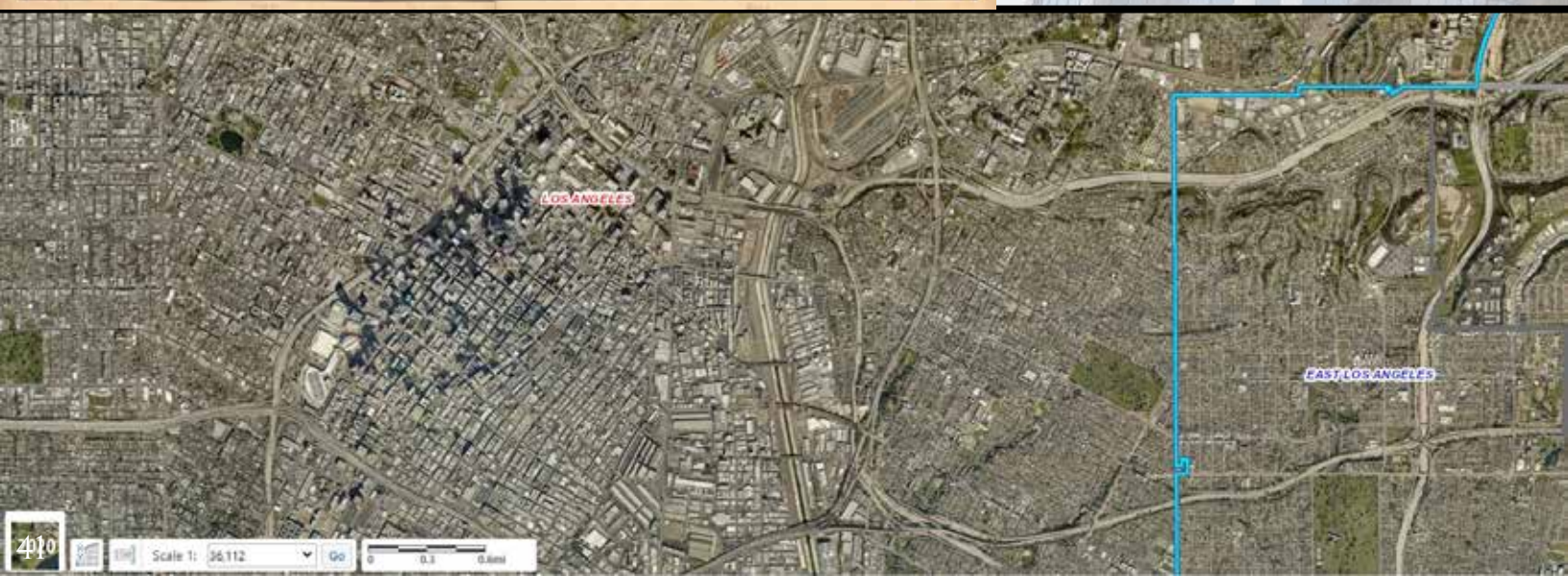
Source: UN Habitat Global Urban Observatory (2014)

CC BY

HISTORICAL CONTEXT

1
8
8
8
VS
2020

SUMMARY:
IN ONE OF THE FASTEST GROWING CITIES IN THE WORLD, THE HISTORICAL CONTEXT IN MAPS SHOWS EVER INCREASING DENSITY WITHIN THE CITY. SINCE 1950, THE POPULATION OF LOS ANGELES HAS NEARLY DOUBLED IN QUANTITY.



2002



2006



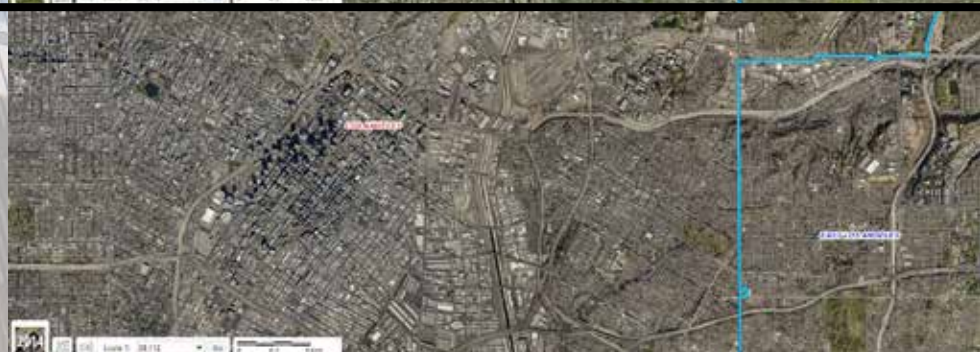
2008



2011



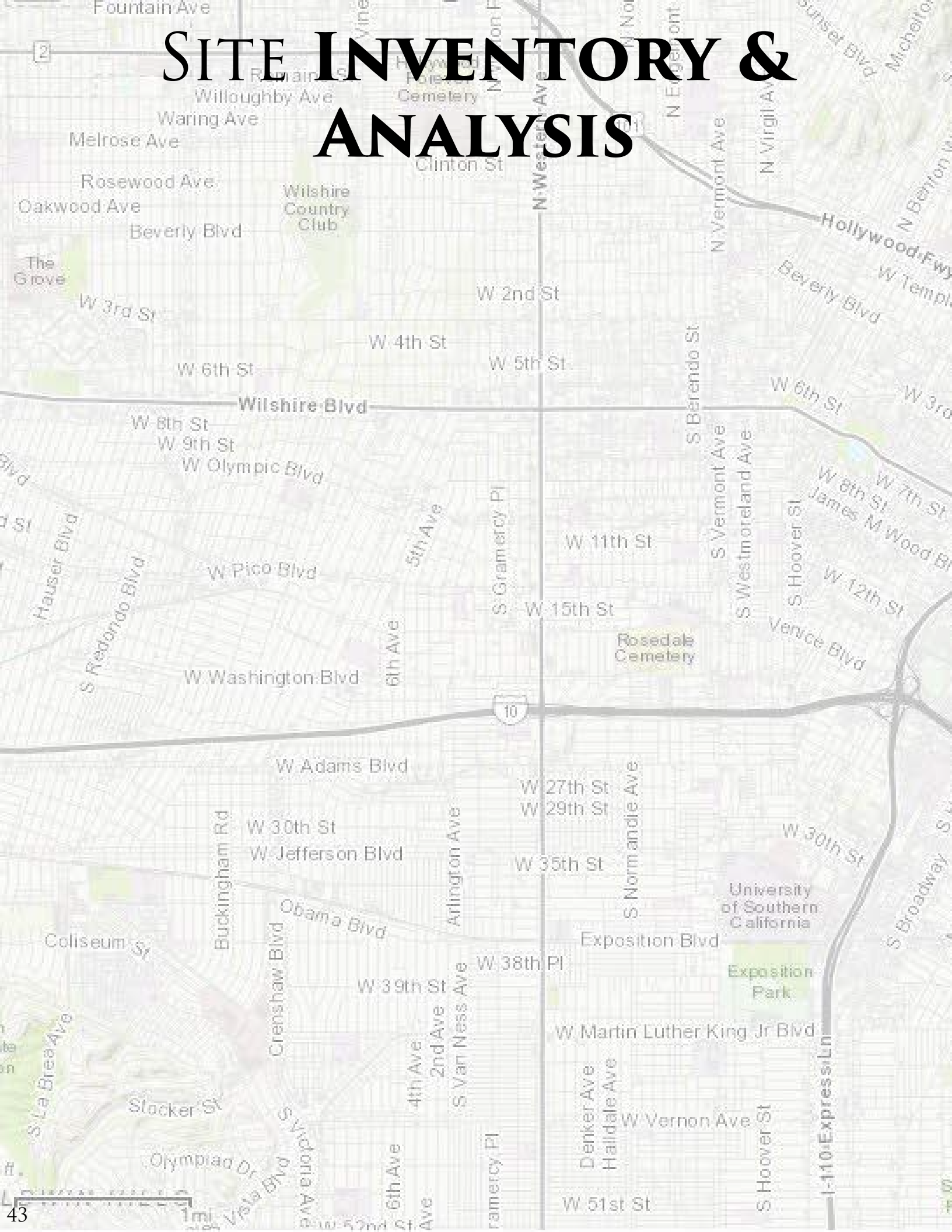
2014

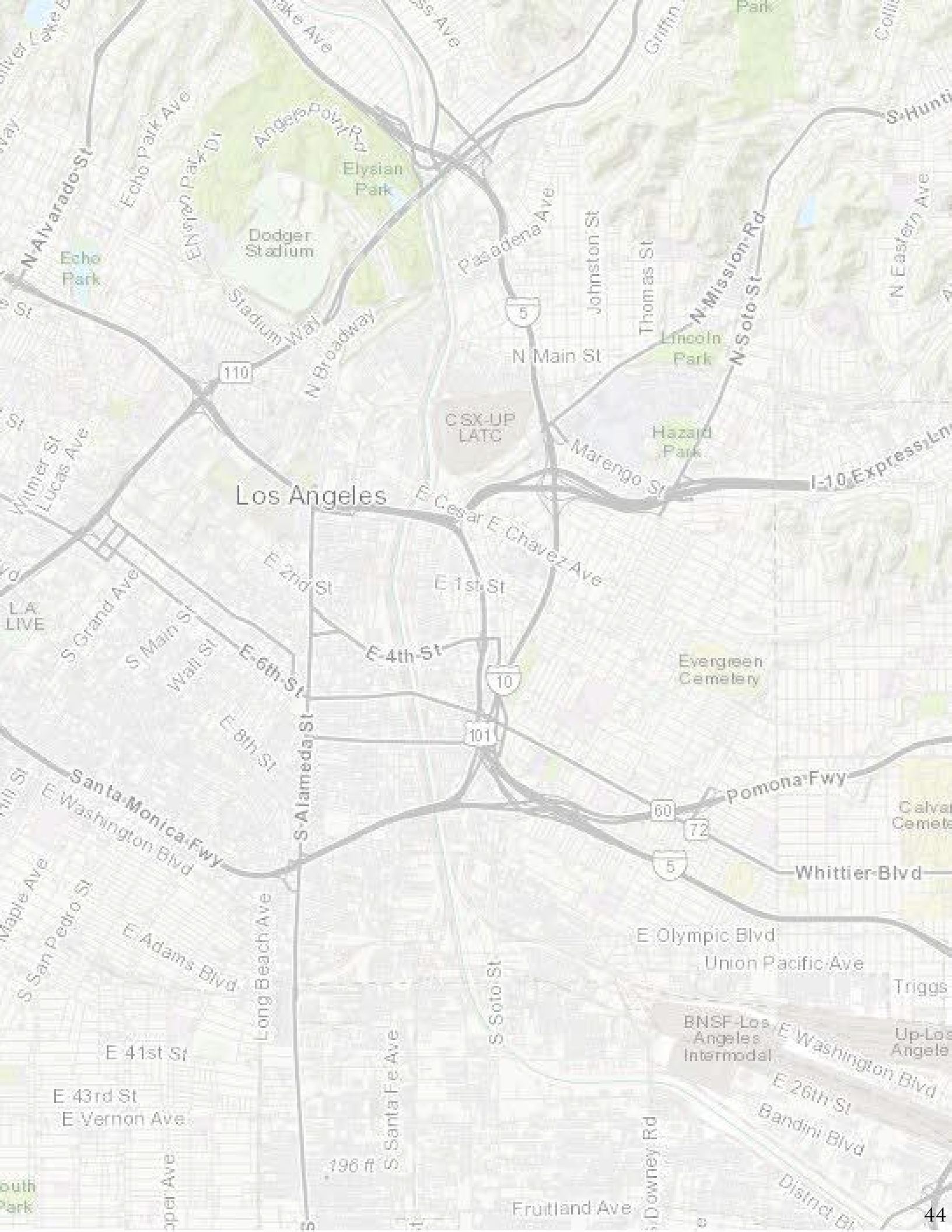


2017



SITE INVENTORY & ANALYSIS





Los Angeles

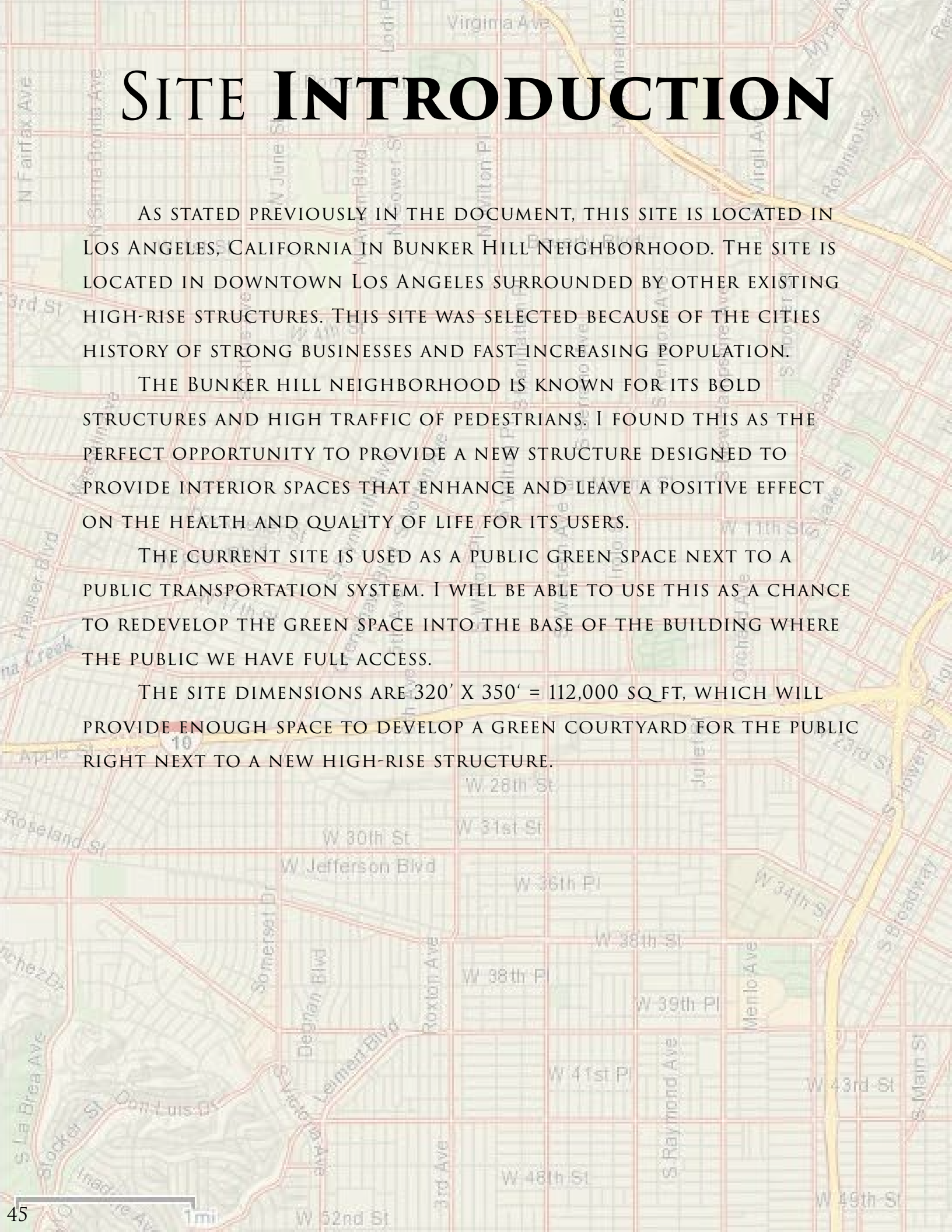
SITE INTRODUCTION

AS STATED PREVIOUSLY IN THE DOCUMENT, THIS SITE IS LOCATED IN LOS ANGELES, CALIFORNIA IN BUNKER HILL NEIGHBORHOOD. THE SITE IS LOCATED IN DOWNTOWN LOS ANGELES SURROUNDED BY OTHER EXISTING HIGH-RISE STRUCTURES. THIS SITE WAS SELECTED BECAUSE OF THE CITIES HISTORY OF STRONG BUSINESSES AND FAST-INCREASING POPULATION.

THE BUNKER HILL NEIGHBORHOOD IS KNOWN FOR ITS BOLD STRUCTURES AND HIGH TRAFFIC OF PEDESTRIANS. I FOUND THIS AS THE PERFECT OPPORTUNITY TO PROVIDE A NEW STRUCTURE DESIGNED TO PROVIDE INTERIOR SPACES THAT ENHANCE AND LEAVE A POSITIVE EFFECT ON THE HEALTH AND QUALITY OF LIFE FOR ITS USERS.

THE CURRENT SITE IS USED AS A PUBLIC GREEN SPACE NEXT TO A PUBLIC TRANSPORTATION SYSTEM. I WILL BE ABLE TO USE THIS AS A CHANCE TO REDEVELOP THE GREEN SPACE INTO THE BASE OF THE BUILDING WHERE THE PUBLIC WE HAVE FULL ACCESS.

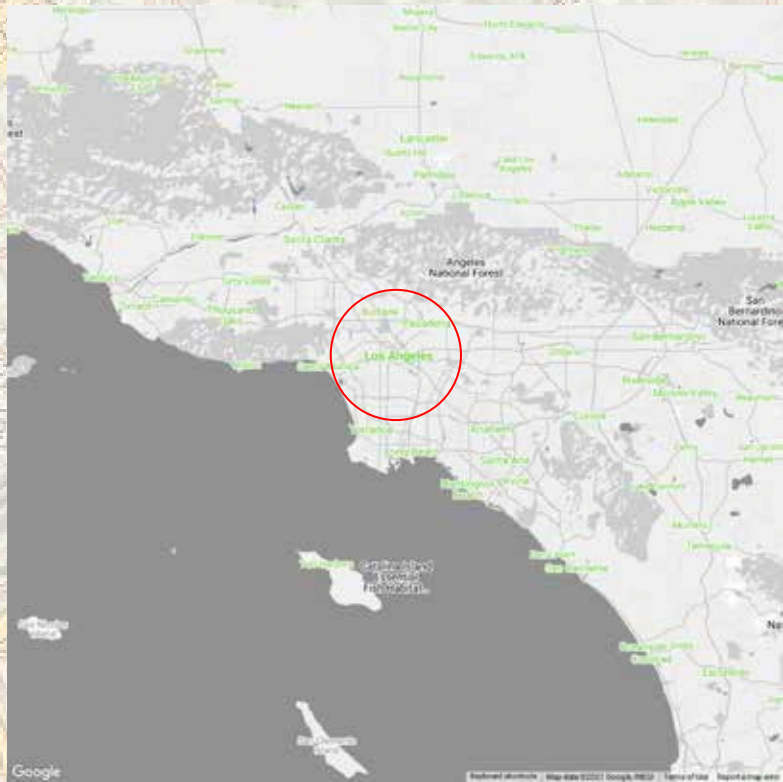
THE SITE DIMENSIONS ARE 320' X 350' = 112,000 SQ FT, WHICH WILL PROVIDE ENOUGH SPACE TO DEVELOP A GREEN COURTYARD FOR THE PUBLIC RIGHT NEXT TO A NEW HIGH-RISE STRUCTURE.



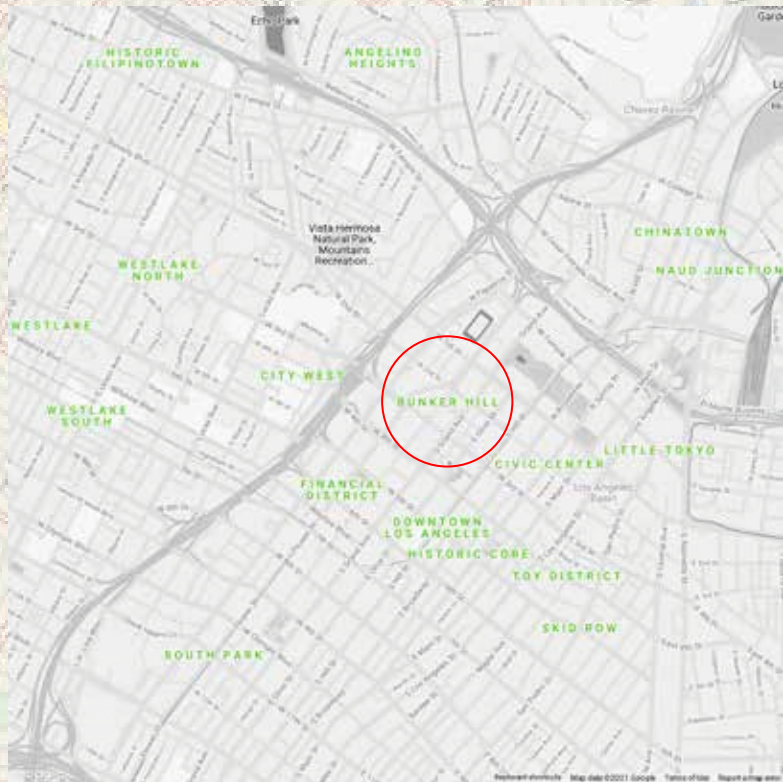
UNITED STATES



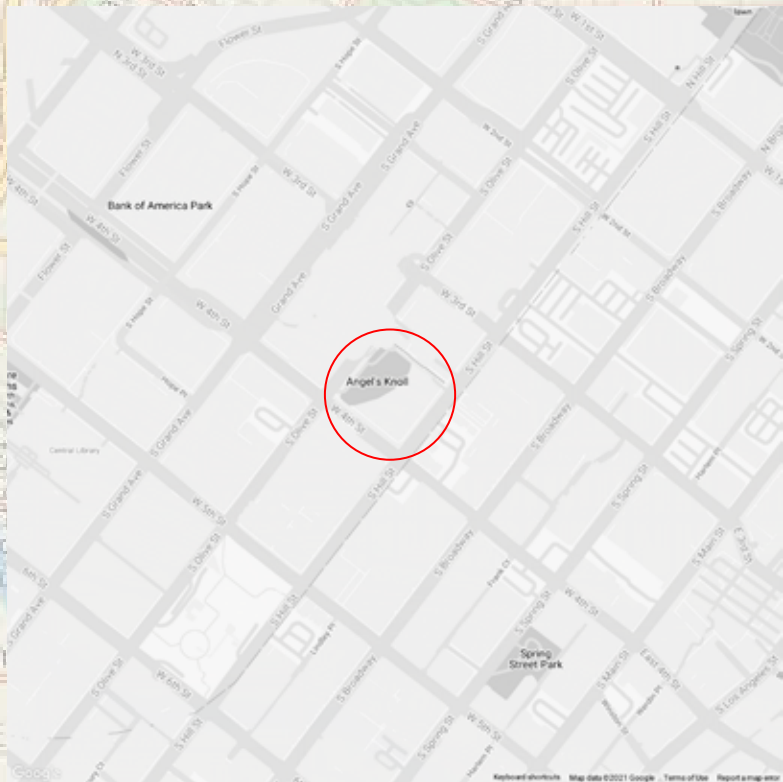
CALIFORNIA



LOS ANGELES

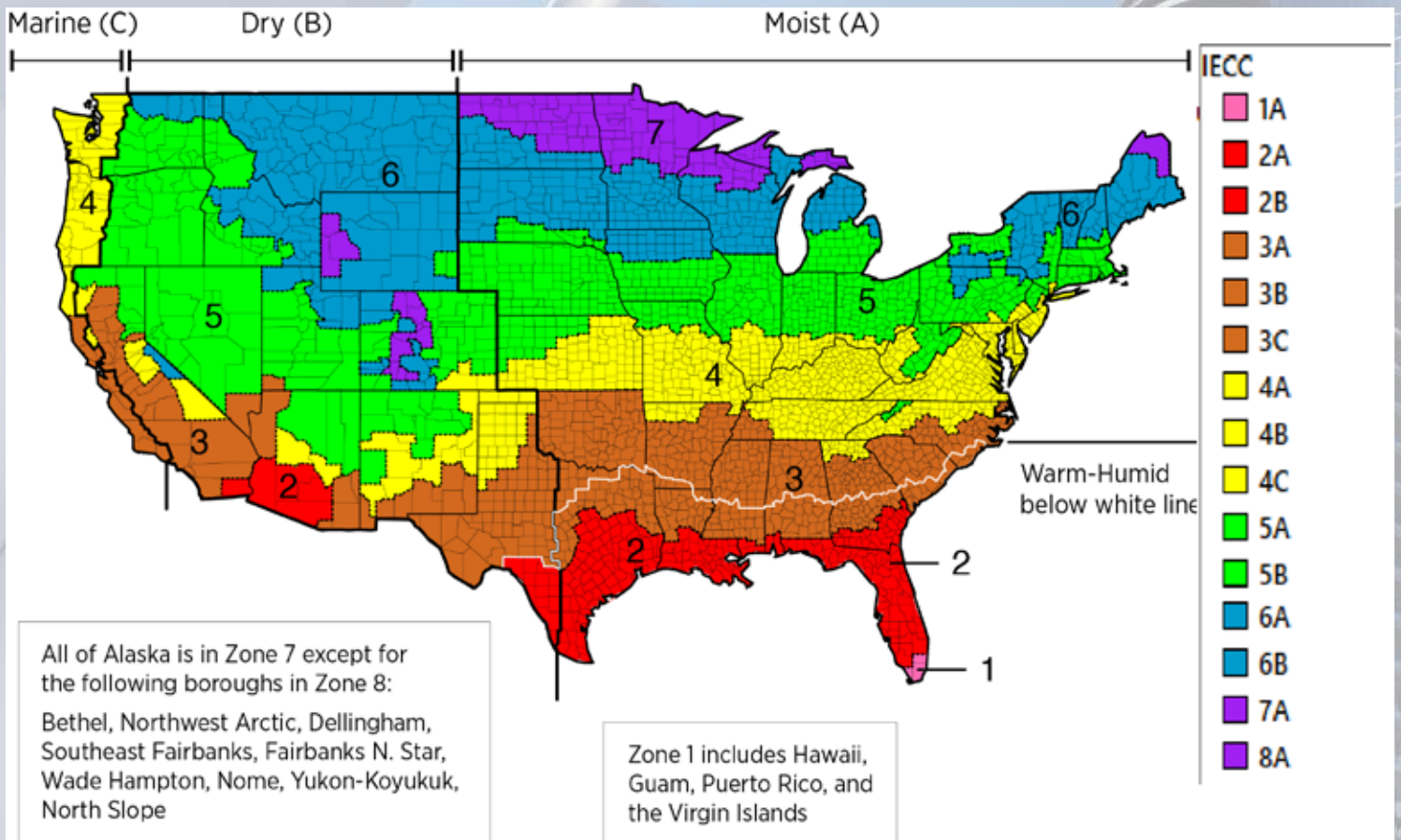


BUNKER HILL NEIGHBORHOOD

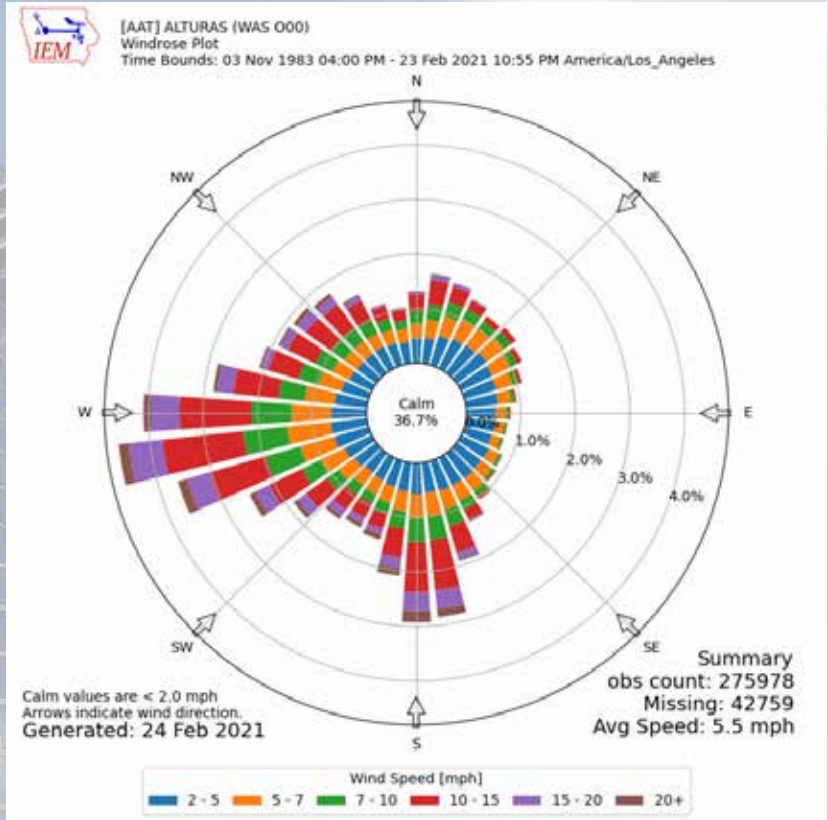


CLIMATE DATA

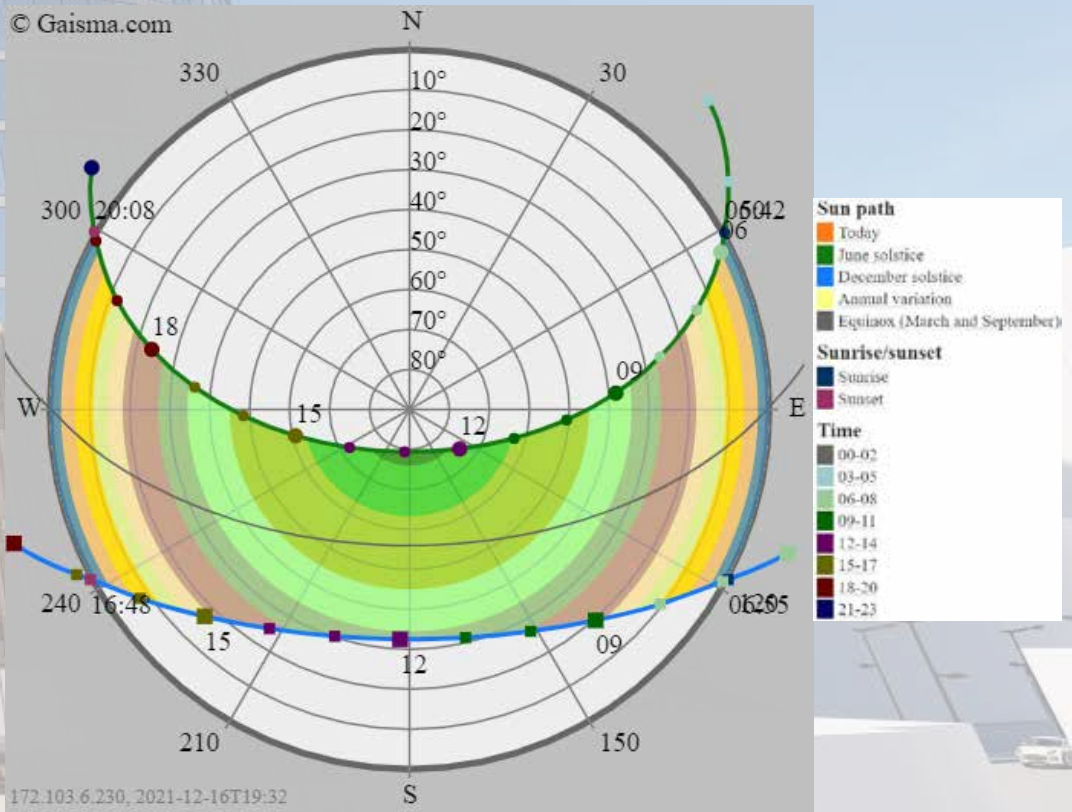
CLIMATE ZONE MAP



WIND ROSE

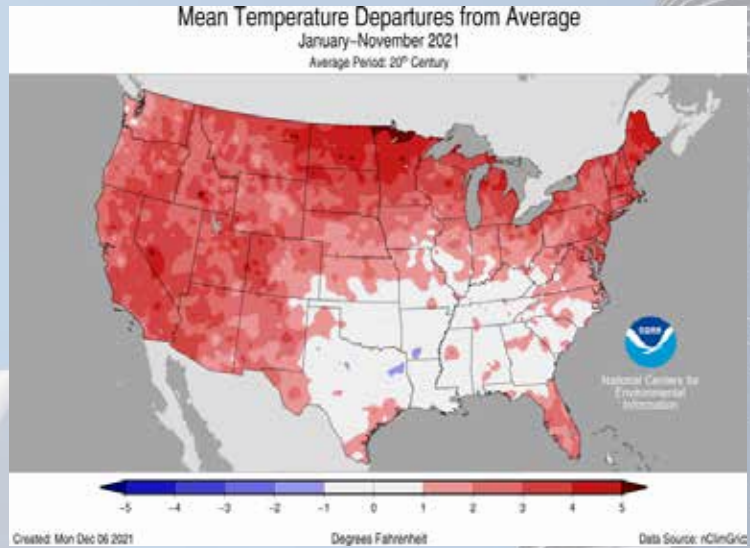


SUN PATH DIAGRAM

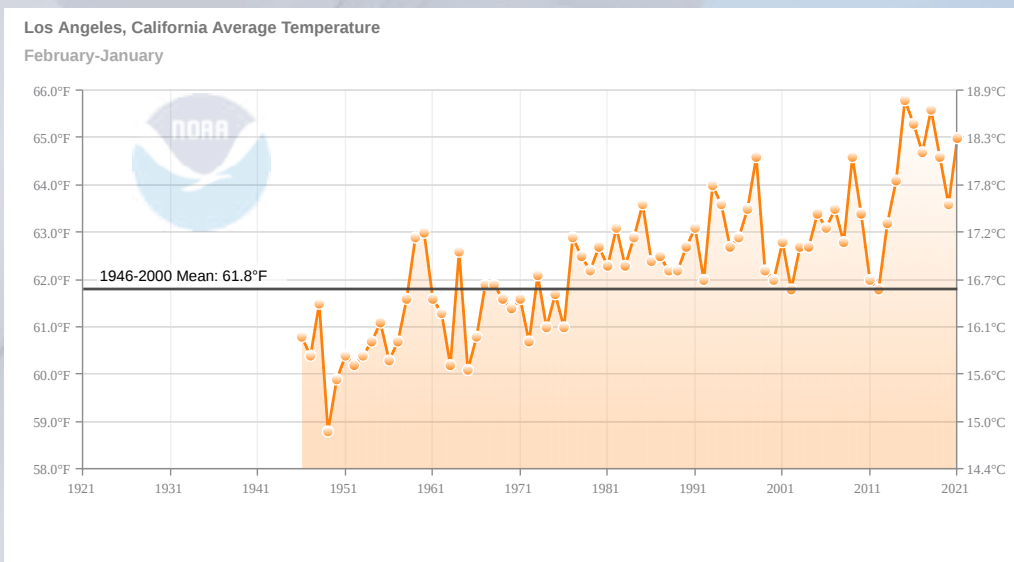


CLIMATE DATA

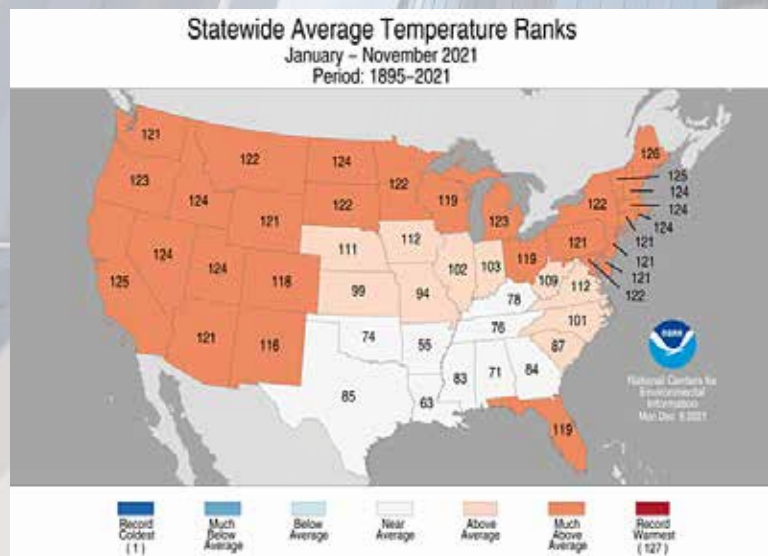
TEMPERATURE AVERAGES



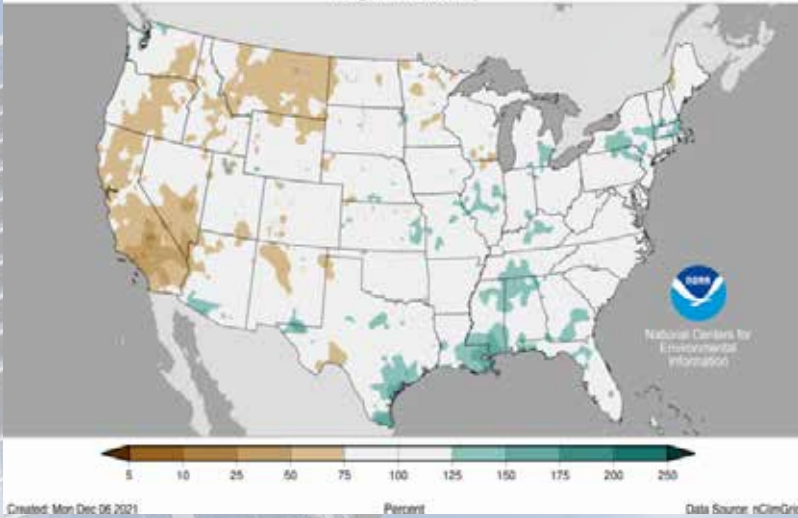
TEMPERATURE THROUGH THE YEARS



TEMPERATURE RANKS



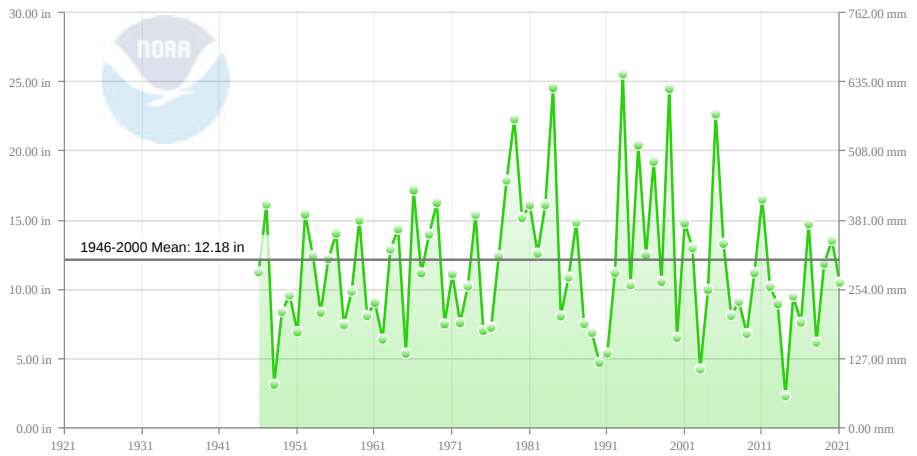
Precipitation Percent of Average
 January–November 2021
 Average Period: 20th Century



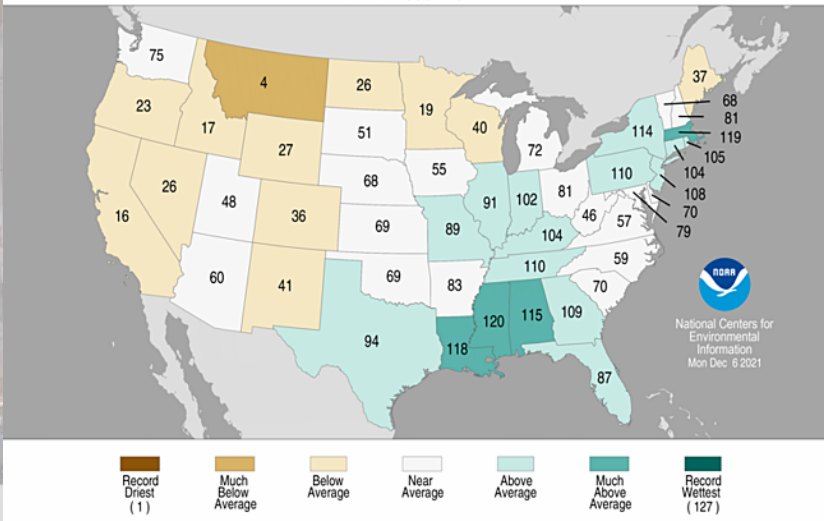
PRECIPITATION AVERAGES

PRECIPITATION THROUGH THE YEARS

Los Angeles, California Precipitation
 February–January



Statewide Precipitation Ranks
 January – November 2021
 Period: 1895–2021



PRECIPITATION RANKS

ANALYSIS MAPS

TOPOGRAPHIC MAP



TERRAIN MAP



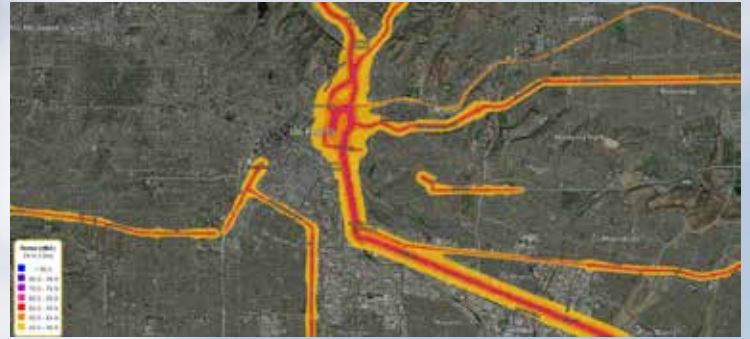
ROAD TRAFFIC MAP



AIR TRANSPORTATION NOISE MAP



TRAIN TRANSPORTATION NOISE MAP

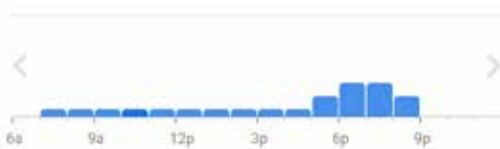


VEHICLE TRANSPORTATION NOISE MAP

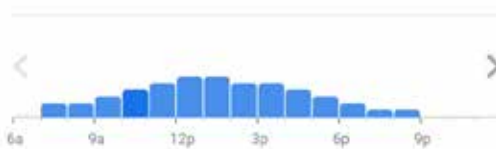


POPULAR PEDESTRIAN TRAFFIC TIMES

Popular times Mondays ▾



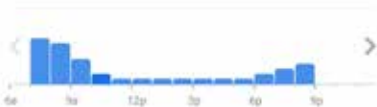
Popular times Tuesdays ▾



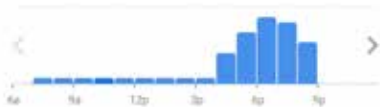
Popular times Wednesdays ▾



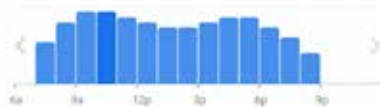
Popular times Thursdays ▾



Popular times Fridays ▾



Popular times Saturdays ▾



Popular times Sundays ▾



PERFORMANCE CRITERIA

1. SPACE ALLOCATION

SPACE ALLOCATION WILL BE FOCUSED ON FROM THE BEGINNING OF THE DESIGN AS IT PROVIDED MOVEMENT WITHIN A SPACE. I CAN GATHER INFORMATION FROM STUDIED TAKEN FROM OTHER OFFICE BUILDINGS AND SPACES WHERE I CAN ALSO DESIGN MY THESIS FROM PROGRAMS SPECIALIZING IN FLOOR PLANS. I WILL JUDGE MY PROJECT BASED ON ITS SIMILARITIES TO OTHER HIGH END SPACIAL ENVIRONMENTS.

2. ENERGY CONSUMPTION

ENERGY CONSUMPTION WILL BE A VERY LARGE PART OF MY THESIS AS IT IS INVOLVED IN SPECIALTY LIGHTING IN BUILDINGS. I WILL FIND RESOURCES THOUGH STUDIES ON LIGHTING CONDUCTED BY INDIVIDUAL RESEARCHERS. DIALUX IS A LIGHTING RESOURCE THAT I PLAN TO USE IN ANALYZING MY BUILDINGS LIGHT STRUCTURE. JUDGMENT ON THE QUALITY OF WORK WILL BE DECIDED BASED ON RELATION TO OTHER HIGH-RISE ENERGY COSTS.

3. ENVIRONMENTAL PERFORMANCE

ALONG WITH ENERGY CONSUMPTION, THIS WILL BE A LARGE FOCUS IN MY THESIS WHERE I CAN ALSO FIND RESOURCES ON OTHER STUDIES OF SIMILAR ENVIRONMENTS. I WILL BE ABLE TO USE THE PROGRAM INSIGHT TO TEST THE PERFORMANCE OF THE BUILDING WHERE I CAN ALSO JUDGE MY SUCCESS BASED ON THE ANALYZED RESULTS FROM THE PROGRAM.

4. BEHAVIORAL PERFORMANCE

THIS PORTION OF MY THESIS WILL BE THE MAIN PRIORITY OF THE PROJECT WHERE I CAN TEST SEVERAL SPATIAL PATTERNS WITHIN A BUILDING SIMULATION TO DETERMINE THE EFFICIENCY. THIS WILL ALSO BE WHERE I CAN DETERMINE MY SUCCESS BY FINDING THE BEST SOLUTION.

5. PSYCHOLOGICAL IMPACT

PSYCHOLOGICAL IMPACT WILL BE A FOCUS WITH INDIVIDUAL USERS OF THE BUILDING WHERE I WILL STUDY RESEARCH REPORTS ON THE IMPACTS THAT INDIVIDUAL INFLUENCES HAVE PSYCHOLOGICALLY. I CAN USE RENDERING SOFTWARE TO VISUALIZE SPACES AND MATERIALS OF INDIVIDUAL SPACES AND JUDGE MY WORK FROM CRITICS I GAIN FROM DIFFERENT PEOPLE.

6. ENVIRONMENTAL IMPACT

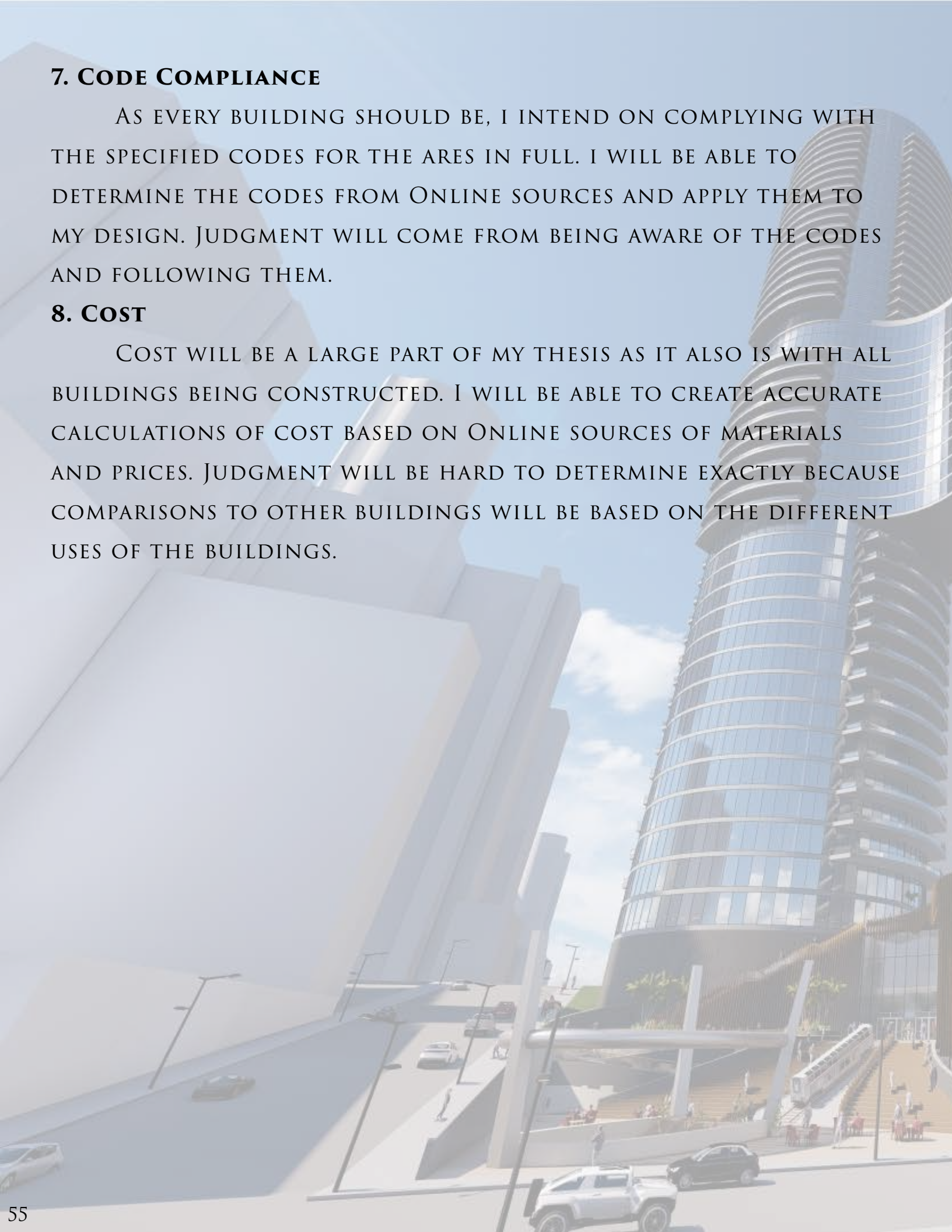
THE ENVIRONMENTAL IMPACT WILL BE A MINOR FOCUS IN MY DESIGN AS MY PRIMARY FOCUS IS ON THE INTERIOR USER IMPACT. I WILL STILL BE ABLE TO CONDUCT INVESTIGATIONS ON OTHER HIGH-RISE BUILDINGS AND THEIR IMPACTS ON THE ENVIRONMENT. THIS WILL BE MODELED IN THE PROGRAM INSIGHT LIKE I MENTIONED BEFORE TO ANALYZE EFFICIENCY BASED ON MY SPECIFIC SITE. JUDGMENT OF THE ENVIRONMENTAL IMPACT WILL BE BASED ON THE ANALYSIS INSIGHT PROVIDES.

7. CODE COMPLIANCE

AS EVERY BUILDING SHOULD BE, I INTEND ON COMPLYING WITH THE SPECIFIED CODES FOR THE AREAS IN FULL. I WILL BE ABLE TO DETERMINE THE CODES FROM ONLINE SOURCES AND APPLY THEM TO MY DESIGN. JUDGMENT WILL COME FROM BEING AWARE OF THE CODES AND FOLLOWING THEM.

8. COST

COST WILL BE A LARGE PART OF MY THESIS AS IT ALSO IS WITH ALL BUILDINGS BEING CONSTRUCTED. I WILL BE ABLE TO CREATE ACCURATE CALCULATIONS OF COST BASED ON ONLINE SOURCES OF MATERIALS AND PRICES. JUDGMENT WILL BE HARD TO DETERMINE EXACTLY BECAUSE COMPARISONS TO OTHER BUILDINGS WILL BE BASED ON THE DIFFERENT USES OF THE BUILDINGS.



EXECUTIVE SUMMARY:

OVERALL, THE PRIMARY FOCUS OF MY THESIS IS ON THE QUALITY OF LIFE FOR THE COMMUNITY AND USERS OF MY BUILDING. THAT BEING SAID, I WILL BE PUTTING MY PRIMARY FOCUS ON THE PSYCHOLOGICAL IMPACT THAT MY DESIGN WILL HAVE ON THE USERS. PROVIDING A DESIGN THAT PROMOTES HEALTHY MIND AND BODY IS ESSENTIAL TO THE SOLUTION AND FINALIZED DESIGN



APPENDIX

AKRHERZ@IASTATE.EDU, D. H. (N.D.). IEM :: SITE WIND ROSES. IOWA ENVIRONMENTAL MESONET. RETRIEVED DECEMBER 17, 2021, FROM [HTTPS://MESONET.AGRON.IASTATE.EDU/SITES/WINDROSE.PHTML?STATION=AAT&NETWO RK=CA_ASOS](https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=AAT&network=CA_ASOS)

ARCGIS WEB APPLICATION. (N.D.). RETRIEVED DECEMBER 17, 2021, FROM [HTTPS://MAPS.DOT.GOV/BTS/NATIONAL_TRANSPORTATION_ATLAS/](https://maps.dot.gov/BTS/NATIONAL_TRANSPORTATION_ATLAS/)

AUTHOR(S) INTERNATIONAL CODE COUNCIL. (N.D.). IECC CLIMATE ZONE MAP. IECC CLIMATE ZONE MAP | BUILDING AMERICA SOLUTION CENTER. RETRIEVED DECEMBER 17, 2021, FROM [HTTPS://BASC.PNNL.GOV/IMAGES/IECC-CLIMATE-ZONE-MAP](https://basc.pnnl.gov/images/iecc-climate-zone-map)

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DESIGN SOLUTION





PROCESS DOCUMENTATION

IN THE DESIGN PROCESS, THERE WERE FOUR GENEREAL ASPECTS THAT THE PROJECT WAS CATAGORIZED INTO. THE PROBLEM, POTENTIAL, PURPOSE, AND PRODUCT.

THE PROBLEM THAT I LOOKED TO SOLVE IS THE FACT THAT COVID-19 HAS PUSHED PEOPLE AWAY FROM PUBLIC LOCATIONS, IN-PERSON EDUCATIONAL SETTINGS, AND FACE TO FACE WORK ENVIRONMENTS AND HAS HINDERED OUR ABILITY TO PERSONALLY INTERACT WITH ONE ANOTHER.

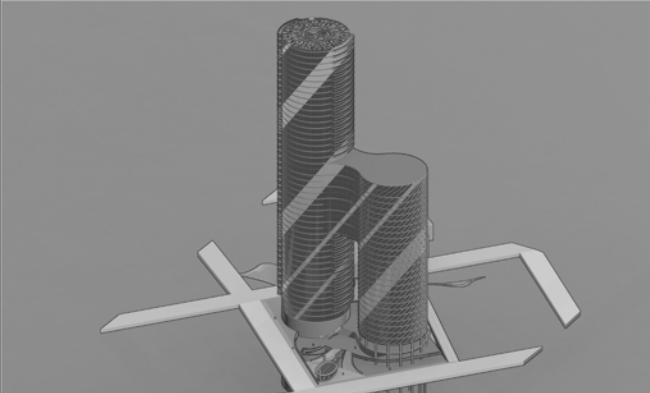
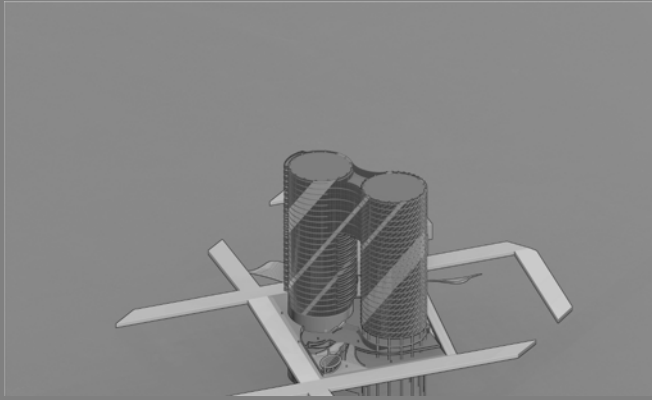
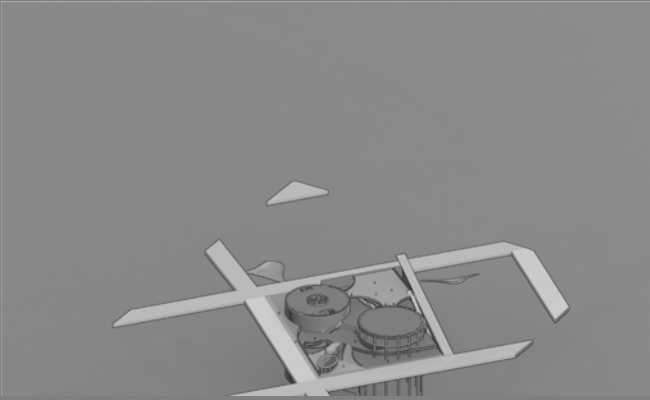
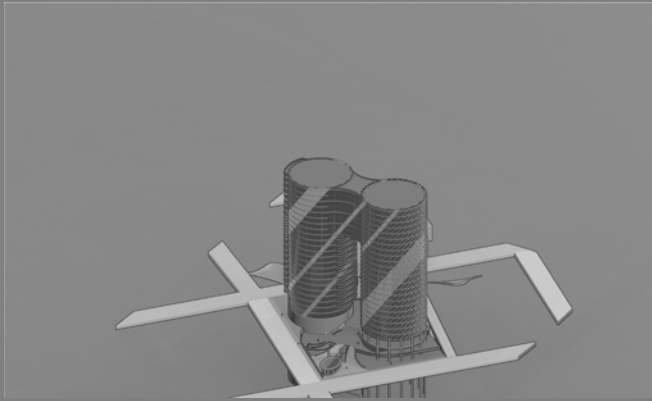
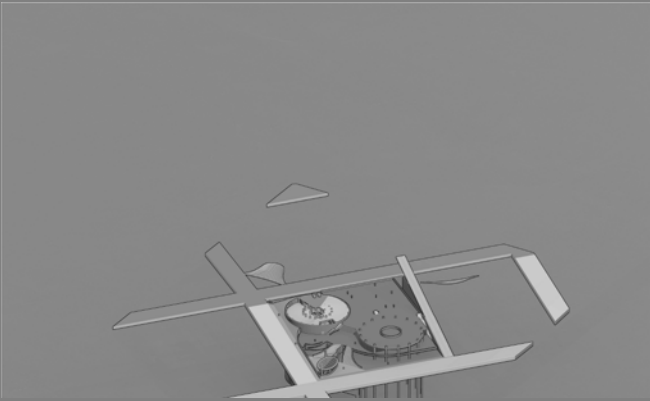
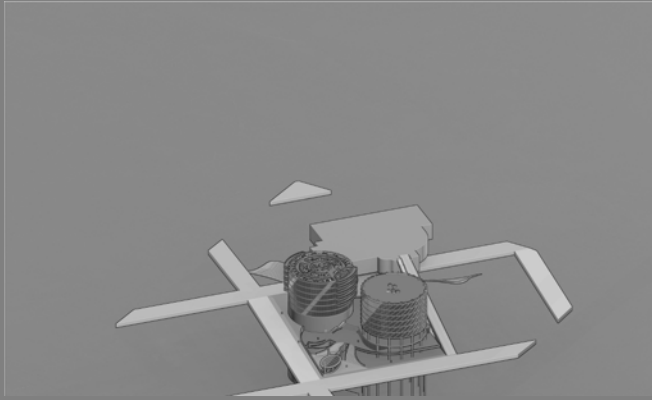
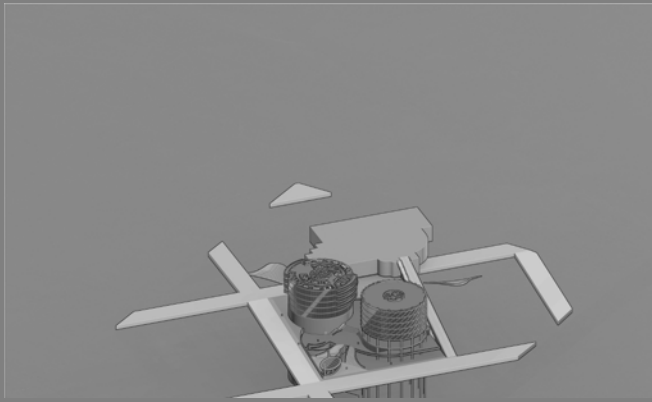
THE POTENTIAL IS PUSHED ON ARCHITECTURE AND HOW IT HAS THE CAPACITY TO IMPACT THE WAY PEOPLE INTERACT WITHIN THEIR BUILT ENVIRONMENTS.

THE PURPOSE IS TO ENCOURAGE PEOPLE TO GRASP THE IMPORTANCE OF HEALTHY INDOOR/OUTDOOR ENVIRONMENTS AND DETERMINE HOW CONTRASTING SPACE TYPOLOGIES CAN INTERACT WITH ONE ANOTHER.

THE PRODUCT OF MY THESIS EXPOUNDS ON HOW SYNCHRONIZING DISTINCTIVE TYPOLOGIES OF A MULTIPURPOSE SKYSCRAPER CAN REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE FOR ITS VISITORS/USERS IN A POST-COVID WORLD.

Problem	Potential	Purpose	Product
Pushing Away from Public Locations	Architectural Design	Promote Higher Quality of Life	Angels Ascent

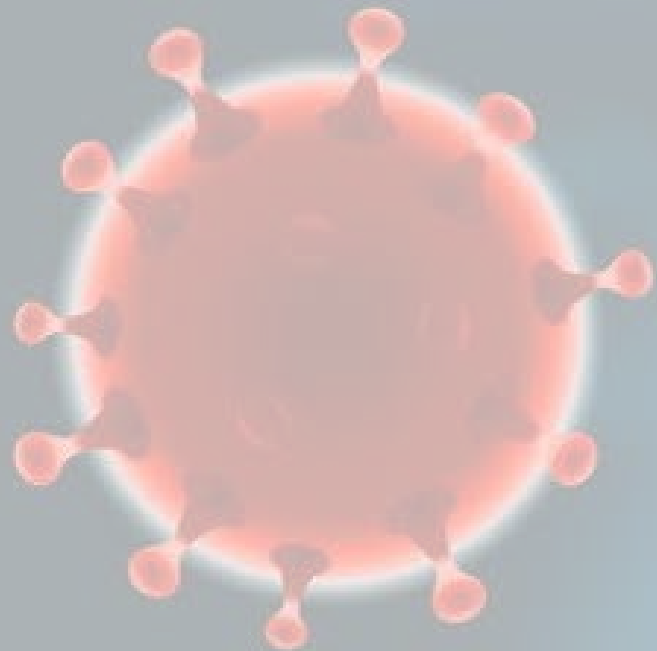




THE PROBLEM

THE PROBLEM THAT I LOOKED TO SOLVE IS THE FACT THAT COVID-19 HAS PUSHED PEOPLE AWAY FROM PUBLIC LOCATIONS, IN-PERSON EDUCATIONAL SETTINGS, AND FACE TO FACE WORK ENVIRONMENTS AND HAS HINDERED OUR ABILITY TO PERSONALLY INTERACT WITH ONE ANOTHER.

CO



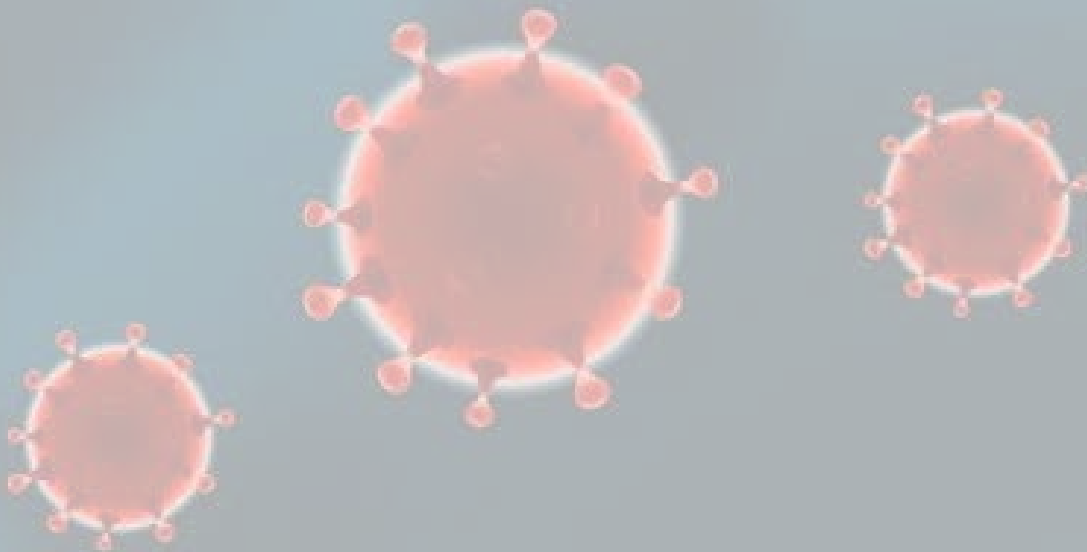
WHY IS THIS **THE PROBLEM** THAT NEEDS TO BE SOLVED?

WITH NO GUARANTEED CURE FOR COVID-19, THE VIRUS HAS MADE PHYSICAL SPACES A PLACE FOR SPREAD AND IN TURN FORCED CITIES TO KEEP OPEN ONLY THE MOST ESSENTIAL AND BASIC OF SPACES INDOORS AND OUTDOORS.

WITH THE HEALTH RISKS OF COVID-19 BEING SO SIGNIFICANT AT TIMES, PEOPLE HAVE CHANGED BEHAVIOR AND OVERALL THEIR ATTITUDE TOWARDS PUBLIC SPACES.

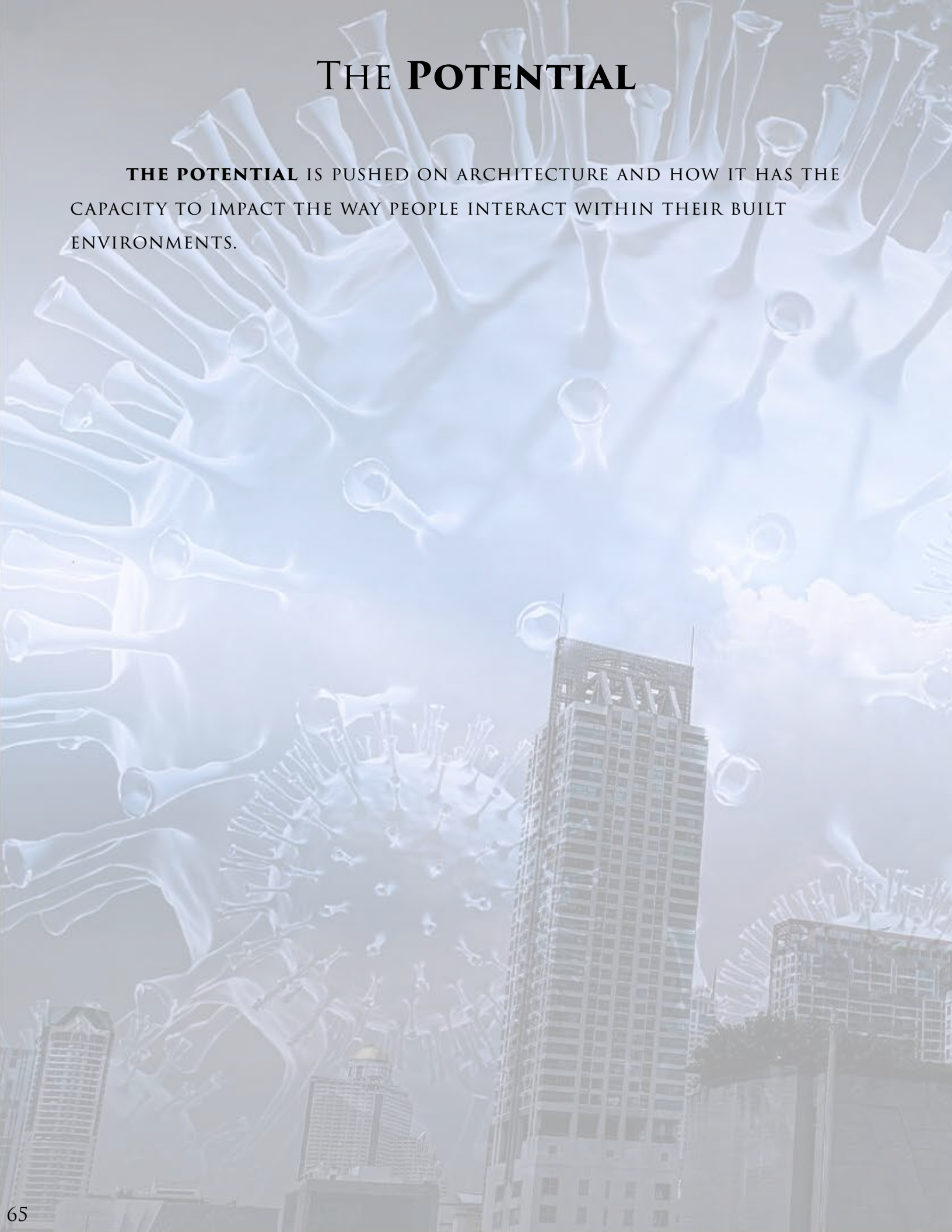
THE REASON THIS IS THE PROBLEM THAT NEEDS TO BE SOLVED IS BECAUSE PEOPLE NEED SOCIAL INTERACTIONS TO STAY HEALTHY. QUALITY OF LIFE IS ULTIMATLY IMPROVED WITH FACE TO FACE ENVIRONMENTS AND INTERACTIONS IN PUBLIC SPACES.

COVID-19



THE POTENTIAL

THE POTENTIAL IS PUSHED ON ARCHITECTURE AND HOW IT HAS THE CAPACITY TO IMPACT THE WAY PEOPLE INTERACT WITHIN THEIR BUILT ENVIRONMENTS.





WHAT IS **THE POTENTIAL** THAT ARCHITECTURE HAS?

ARCHITECTURE EXISTS TO CREATE PHYSICAL SPACES AND OVERALL ENVIRONMENT FOR A COMMUNITY. OUR BUILT ENVIRONMENTS EXPRESS HOW WE FEEL AND REPRESENT HOW WE SEE OURSELVES, BUT WHAT DOES THAT SAY ABOUT OURSELVES IF WE DON'T USE THESE SPACES?

ARCHITECTURE HAS THE OPPORTUNITY AND POTENTIAL TO CREATE A NEW BUILT ENVIRONMENT THAT ENCOURAGES SOCIAL INTERACTIONS AND TO ESSENTIALLY IMPROVE THE QUALITY OF LIFE FOR ALL USERS.

THE PURPOSE

THE PURPOSE IS TO ENCOURAGE PEOPLE TO GRASP THE IMPORTANCE OF HEALTHY INDOOR/OUTDOOR ENVIRONMENTS AND DETERMINE HOW CONTRASTING SPACE TYPOLOGIES CAN INTERACT WITH ONE ANOTHER.





HOW CAN **THE PURPOSE** BE EFFECTIVE IN TODAY'S WORLD?

WITH A MAJORITY OF OUR LIVES SPENT INDOORS NOW MORE THAN EVER, THE IMPORTANCE OF UNDERSTANDING WHY HEALTHY INDOOR/OUTDOOR ENVIRONMENTS ARE CRITICAL TO QUALITY OF LIFE IS AT AN ALL TIME HIGH.

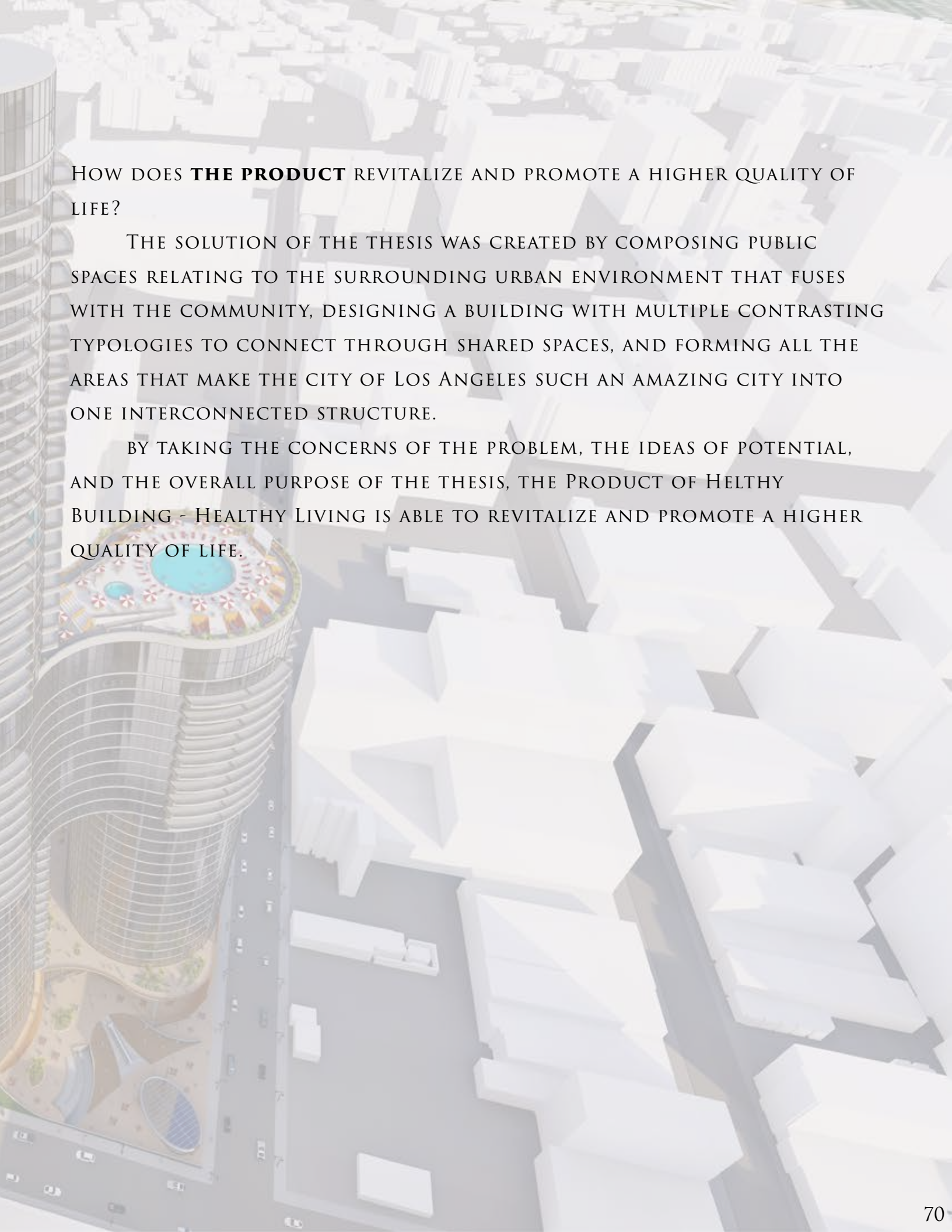
PEOPLE ARE WORKING FROM THEIR EVERYDAY INDOOR JOBS WITH NO CONNECTION TO THE OUTSIDE WORLD WHICH IN TURN CAN INCREASE CLAUSTROPHOBIA, DEPRESSION, AND ANXIETY. WHETHER IT BE IN YOUR HOME, OFFICE, OR EDUCATIONAL FACILITY, THE WALLS THAT WE ARE ENCLOSED BY CAN AFFECT OUR EVERYDAY LIVES BOTH MENTALLY AND PHYSICALLY.

THE PURPOSE OF ENCOURAGING PEOPLE TO GRASP THE IMPORTANCE OF HEALTHY INDOOR/OUTDOOR ENVIRONMENTS CAN BE MORE THAN EFFECTIVE IN TODAY'S WORLD DUE TO THE INCREASE IN INDOOR ACTIVITIES AND DECREASE IN OUTDOOR ACTIVITIES THAT IMPACT OUR QUALITY OF LIFE.

THE PRODUCT



THE PRODUCT OF MY THESIS EXPOUNDS ON HOW SYNCHRONIZING DISTINCTIVE TYPOLOGIES OF A MULTIPURPOSE SKYSCRAPER CAN REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE FOR ITS VISITORS/USERS IN A POST-COVID WORLD.

An aerial, top-down perspective of a city. On the left side, a tall, modern skyscraper with a curved facade and a glass exterior is visible. The top of the building features a circular rooftop garden with a blue pool and colorful plants. The rest of the city is composed of a dense grid of white, rectangular buildings of varying heights, creating a textured urban landscape. The overall scene is brightly lit, suggesting a clear day.

HOW DOES **THE PRODUCT** REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE?

THE SOLUTION OF THE THESIS WAS CREATED BY COMPOSING PUBLIC SPACES RELATING TO THE SURROUNDING URBAN ENVIRONMENT THAT FUSES WITH THE COMMUNITY, DESIGNING A BUILDING WITH MULTIPLE CONTRASTING TYPOLOGIES TO CONNECT THROUGH SHARED SPACES, AND FORMING ALL THE AREAS THAT MAKE THE CITY OF LOS ANGELES SUCH AN AMAZING CITY INTO ONE INTERCONNECTED STRUCTURE.

BY TAKING THE CONCERNS OF THE PROBLEM, THE IDEAS OF POTENTIAL, AND THE OVERALL PURPOSE OF THE THESIS, THE PRODUCT OF HELTHY BUILDING - HEALTHY LIVING IS ABLE TO REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE.

PROJECT SOLUTION DOCUMENTATION

BOARD DISPLAY



HEALTHY BUILDING - HEALTHY LIVING

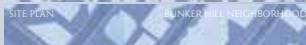


THE INVESTIGATION INTO HOW THE INTERCONNECTION OF CONTRASTING BUILDING TYPOLOGIES IN AN EVER-DENSIFYING WORLD CAN REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE POST-PANDEMIC.

SINCE 2020 COVID-19 HAS PUSHED PEOPLE AWAY FROM PUBLIC LOCATIONS, IN-PERSON EDUCATIONAL SETTINGS, AND FACE TO FACE WORK ENVIRONMENTS AND HAS DIMINISHED OUR ABILITY TO PERSONALLY INTERACT WITH ONE ANOTHER. AS THE PANDEMIC CONTINUED, WE LEARNED TO LIVE, WORK, AND PERFORM ESSENTIAL EVERYDAY ACTIVITIES FROM THE SINGULAR LOCATION OF OUR HOMES, AVOIDING COMMUNITY ACTIVITIES.

ARCHITECTURE HAS THE CAPACITY TO IMPACT THE WAY PEOPLE INTERACT WITHIN THEIR BUILT ENVIRONMENTS. IN AN EVER-DENSIFYING WORLD, OUR BUILT ENVIRONMENTS ARE STARTING TO BLEND DENSITY AND CONNECT VERTICALLY RATHER THAN ONLY EXPANDING HORIZONTALLY. ARCHITECTURALLY, THE INTERCONNECTION OF INDIVIDUAL SPACE TYPOLOGIES IS BECOMING MORE COMPLEX AND NEW SOLUTIONS ARE CRITICAL FOR INCREASING QUALITY OF LIFE FOR BUILDING USERS.

THE MOTIVATION BEHIND THIS THESIS WAS TO ENCOURAGE PEOPLE TO GRASP THE IMPORTANCE OF HEALTHY INDOOR/OUTDOOR ENVIRONMENTS AND DETERMINE HOW CONTRASTING SPACE TYPOLOGIES CAN INTERACT WITH ONE ANOTHER. ADDITIONALLY, THIS THESIS EXPLORES HOW SYNCHRONIZING DISTINCTIVE TYPOLOGIES OF A MULTI-PURPOSE OUTDOOR CAN REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE FOR ITS VISITORS/USERS IN A POST-COVID WORLD.

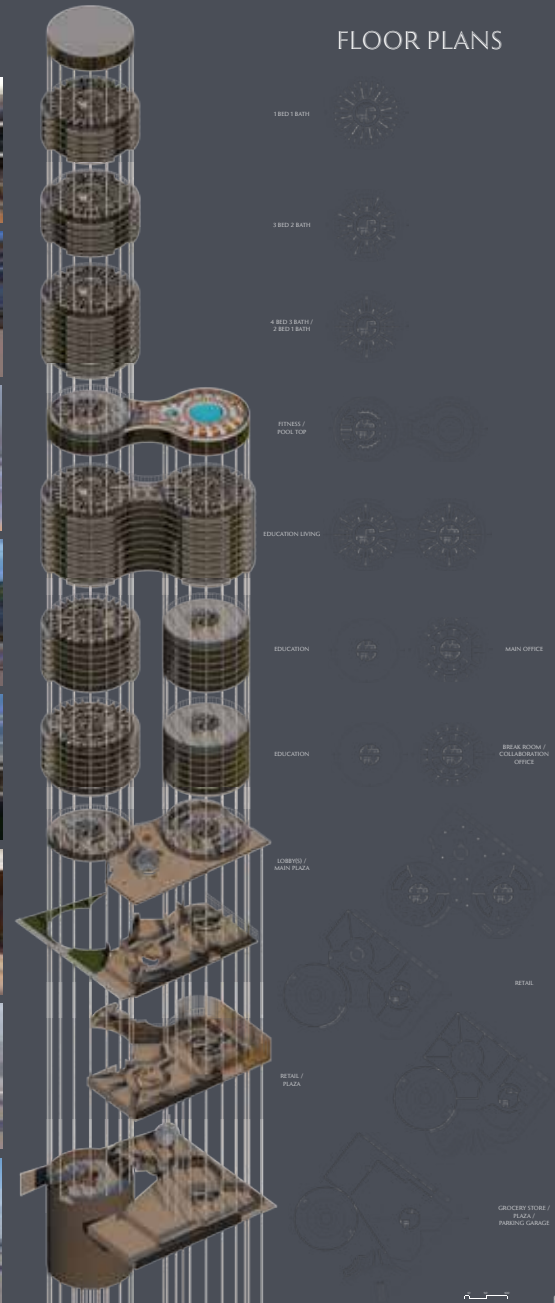


AXONOMETRIC PROJECTION

PERSPECTIVES



FLOOR PLANS



SCAN ME

ELEVATION 71

SECTION

SUMMARY:

THE DOCUMENTATION OF MY THESIS SOLUTION CONSISTED OF THREE PRESENTATION BOARDS. EACH BOARD HAD ITS OWN PURPOSE FOR PORTRAYING THE DESIGN SOLUTION FOR HEALTHY BUILDING - HEALTHY LIVING.

BOARD 1 INCLUDED ELEVATIONS, A SECTION, AND A QR CODE FOR AN ANIMATION OF THE BUILDING.

BOARD 2 PROVIDED SITE CONTEXT AND MAJOR RENDERINGS.

BOARD 3 PRESENTED THE FLOOR PLANS OF THE BUILDING, A LARGE AXONOMETRIC RENDER, AND MINOR RENDERING FOR SPECIFIED LEVELS.



SCAN ME

BOARD 1



B
O
A
R
D
2



HEALTHY BUILDING - HEALTHY LIVING



RETAIL PATIO PERSPECTIVE



PLAZA PERSPECTIVE



ANGELS ASCENT PERSPECTIVE

THE INVESTIGATION INTO HOW THE INTERCONNECTION OF CONTRASTING BUILDING TYPOLOGIES IN AN EVER-DENSIFYING WORLD CAN REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE POST PANDEMIC.

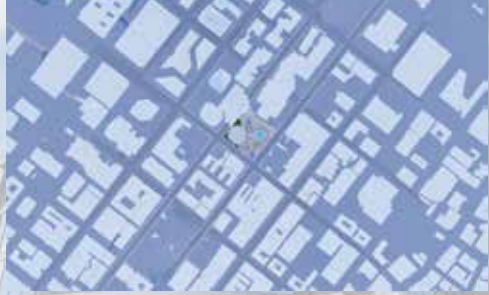
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SITE PLAN

LOS ANGELES, CA



SITE PLAN

BUNKER HILL NEIGHBORHOOD



SITE PLAN

ANGELS KNOLL

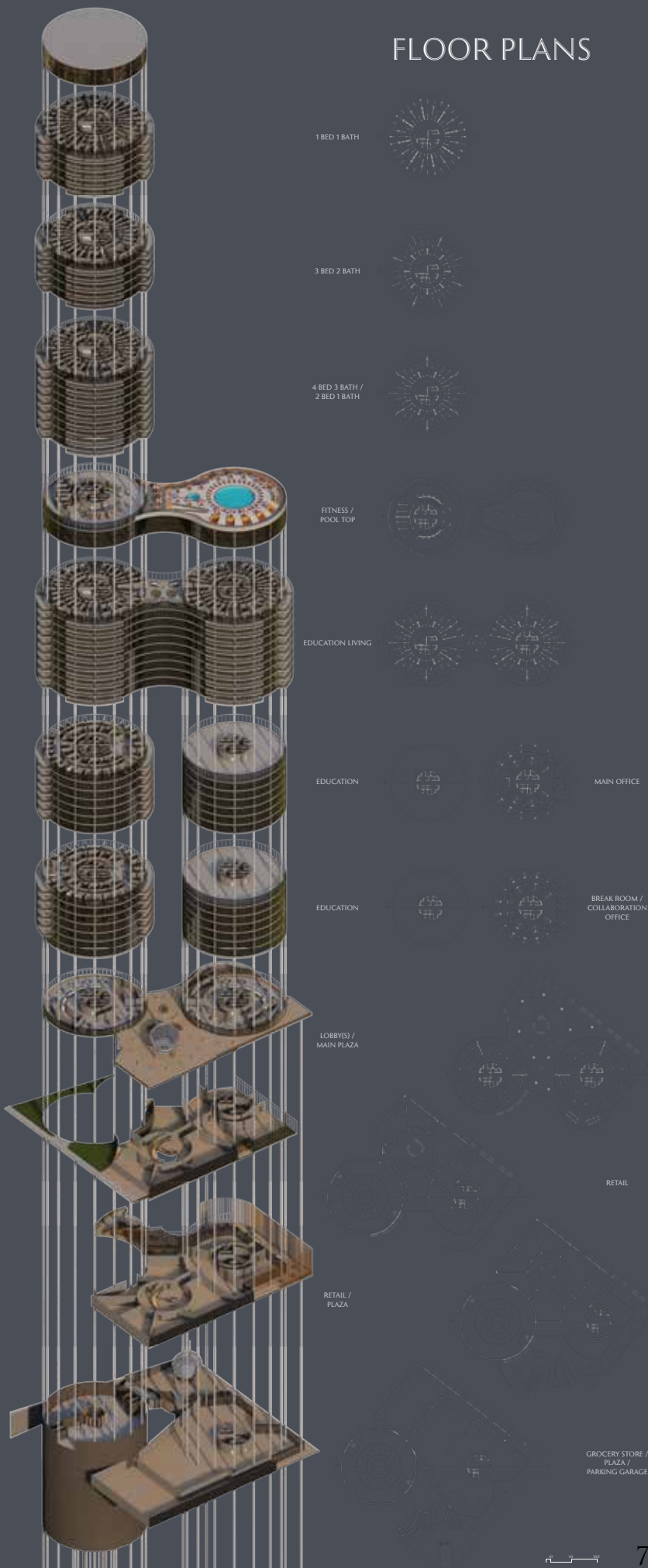


AXONOMETRIC PROJECTION

PERSPECTIVES



FLOOR PLANS



PERFORMANCE ANALYSIS

RESPONSE TO THE SITE CONTEXT

BUILDINGS ARE THE MOST OBSERVABLE ELEMENT OF URBAN DESIGN. THEY CREATE SPACES THROUGH THE FORJATIONS OF WALLS AND SIDEWALKS IN THE CITY, BUT IN ORDER TO MAKE A CONNETION TO THE EXISTING URBAN ENVIRONMETN WITHOUT PLACING WALLS AND SIDEWALKS IN UNCONVENTIONAL SPOTS THAT DISRUPT THE EXISTING SITE, I DIDNT WANT TO CHANGE WHAT WAS ALREADY THERE, I WANTED TO USE IT. MY PROJECT LOCATION IS IN DOWNTOWN LOS ANGELES, CALIFORNIA IN A NEIGHBORHOOD CALLED BUNKER HILL, AND THE SITE I CHOSE IS CALLED ANGELS KNOLL.

ANGELS KNOLL IS ONE OF THE FEW UNDERDEVELOPED PARVELS IN THE DOWNTOWN AREA THAT WAS PREVIOUSLY OPEN AS A PUBLIC PARK. CURRENTLY, THE SITE IS CLOSED DOWN AND FENCED OFF FROM THE PUBLIC WHILE BEING USED FOR NOTHING OTHER THAN A WASTE OF SPACE. AFTER CONDUCTING RESEARCH ON THE SITE, I FOUND TWO ATTRACITONS THAT I USED TO CREATE A CONNECTION TO THE URBAN ENVIRONMENT WHICH INCLUDE:

1. ANGELS FLIGHT RAILWAY

2. LOS ANGELES METRO RAIL

Urban connective plan that is smart, social, and fuses with the community

Urban Environment

- Site



United States



California



Los Angeles



Bunker Hill Neighborhood



Urban connective plan that is smart, social, and fuses with the community

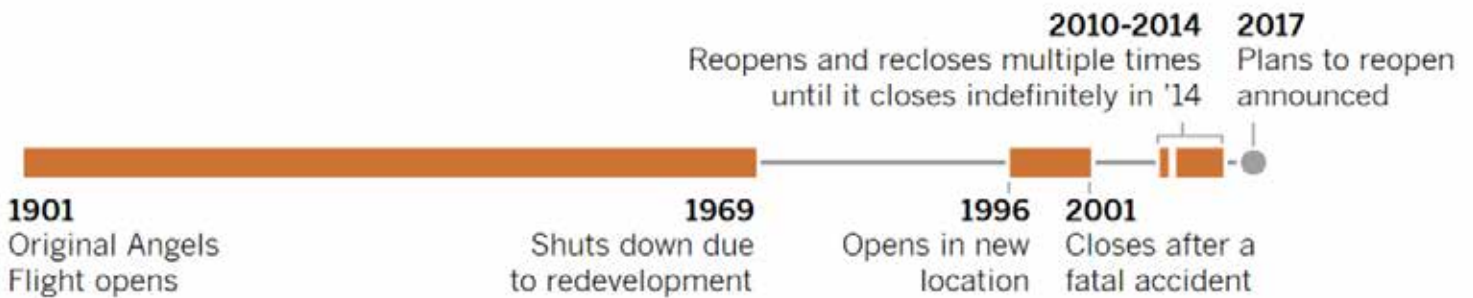
Urban Environment

- Angels Knoll



ANGELS FLIGHT RAILWAY

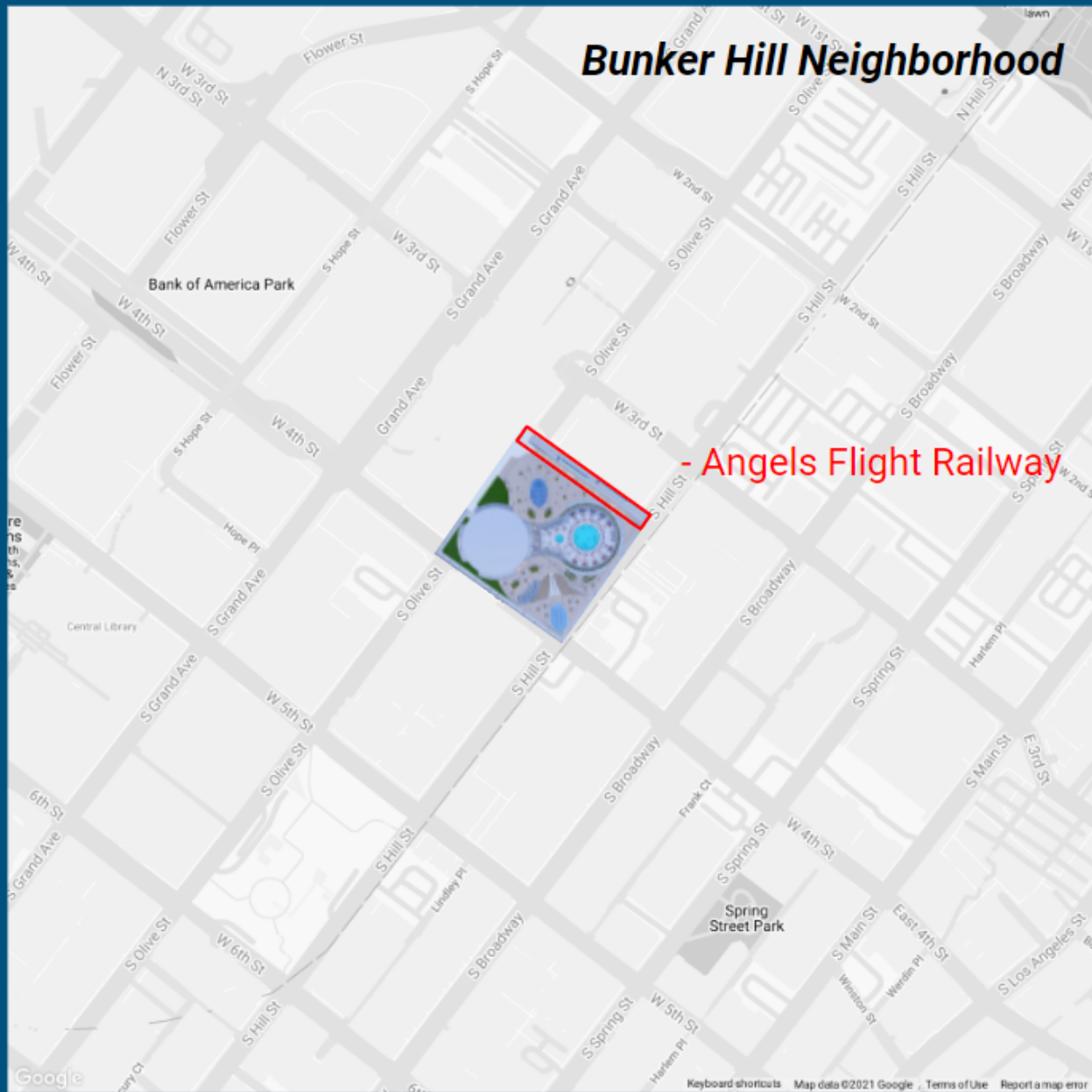
ANGELS FLIGHT RAILWAY HAS BEEN A LANDMARK FOR LOS ANGELES SINCE 1901, GIVING MORE THAN 100 MILLION RIDES ON ITS HILLSIDE TRACK AND IS DESCRIBED AS AN ESSENTIAL EXPERIENCE IN LOS ANGELES. THE RAILWAY CONSISTS OF TWO TRACKS WITH TWO RAIL CARS NAMED SINAI AND OLIVET. WITH THIS ATTRACTION BEING SUCH A BIG PART OF THE HISTORY IN THE AREA, IT WAS SOMETHING I NEEDED TO INCORPORATE INTO MY DESIGN.



Urban connective plan that is smart, social, and fuses with the community

Urban Environment

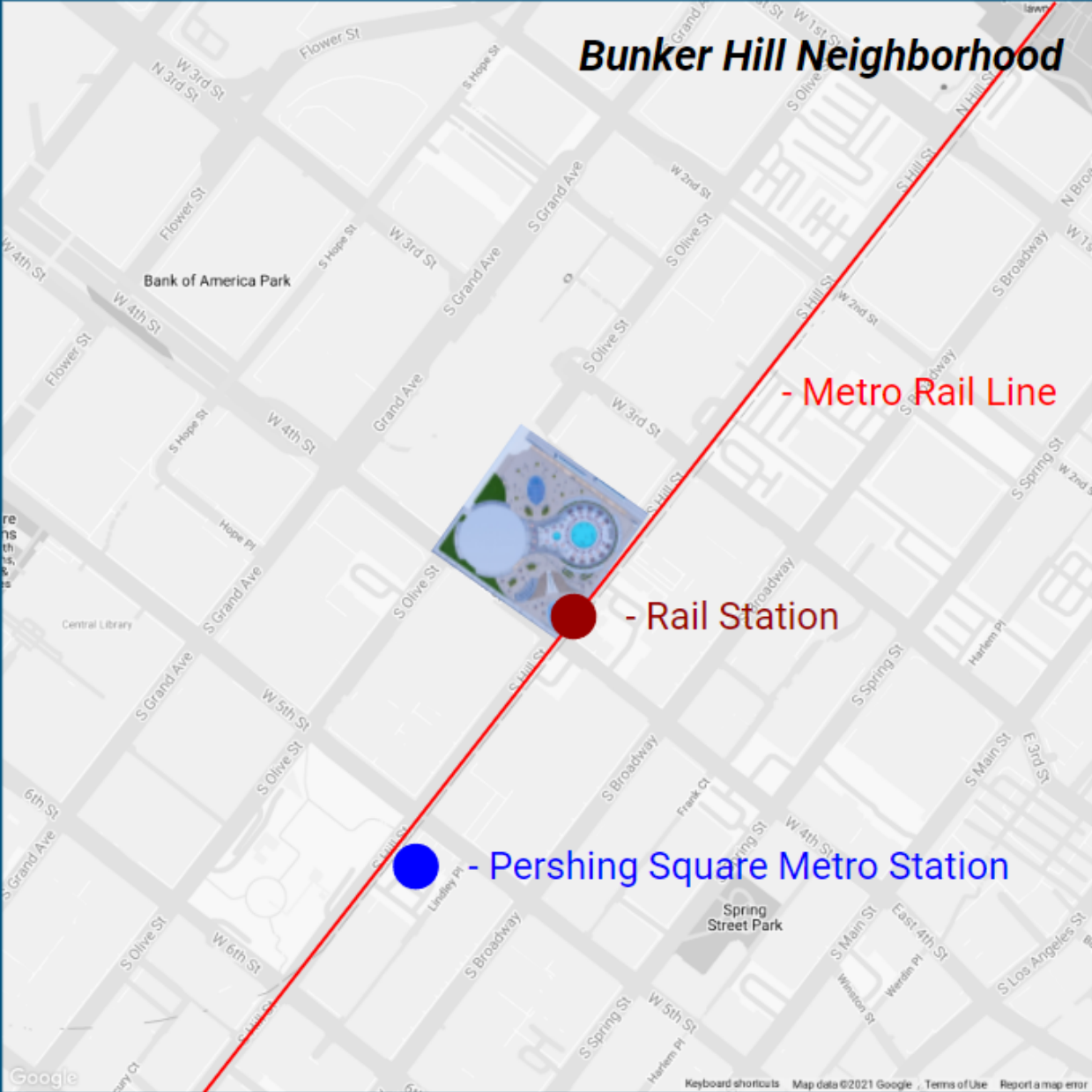
- Angels Flight Railway



Urban connective plan that is smart, social, and fuses with the community

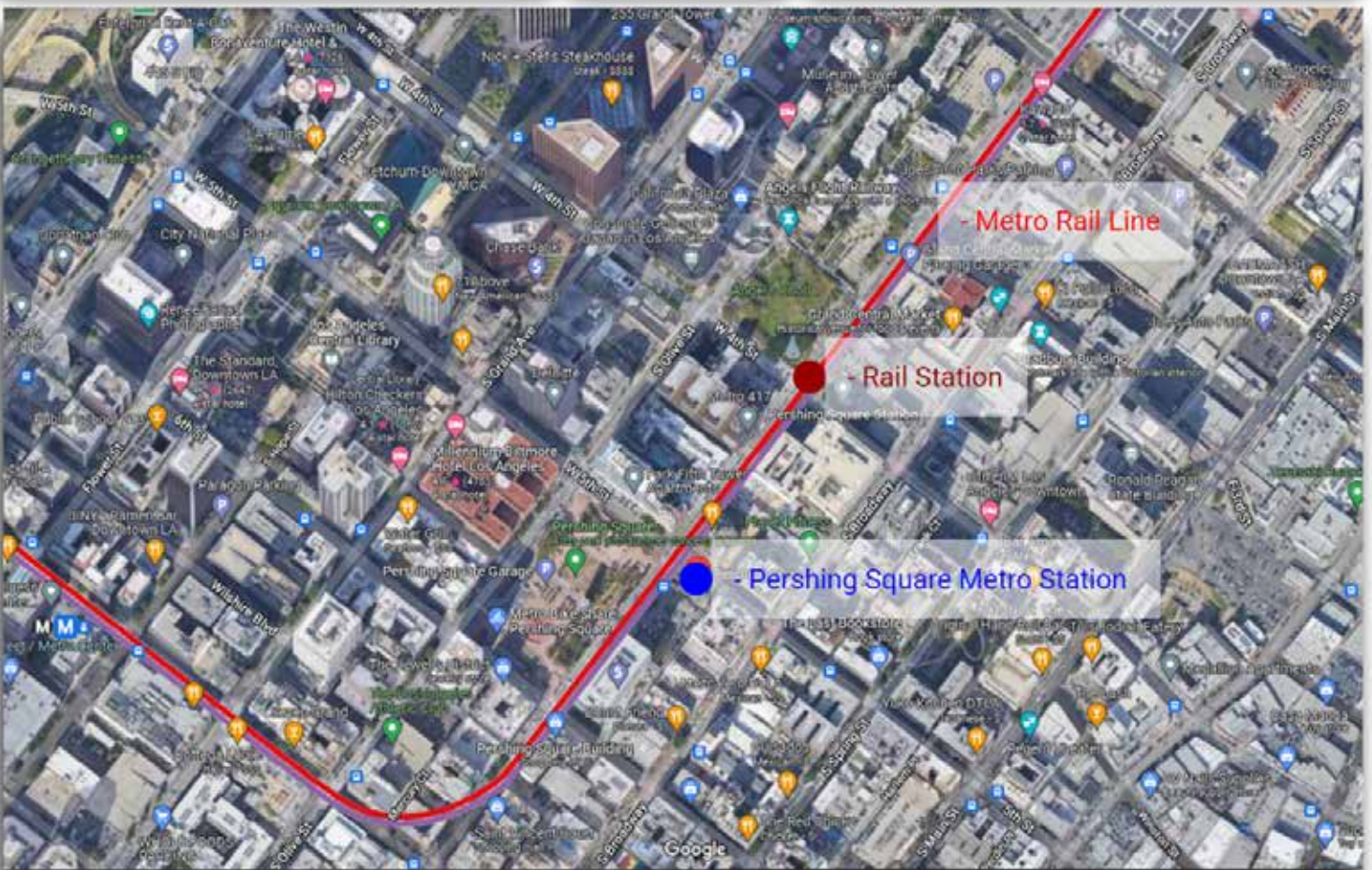
Urban Environment

- Pershing Square Metro Station & Rail Stop



LOS ANGELES METRO RAIL

THE SECOND ATTRACTION I INCORPORATED INTO MY THESIS DESIGN IS THE LOS ANGELES METRO RAIL WHICH IS AN UNDERGROUND RAPID TRANSIT SYSTEM THAT CONNECTS TO MOST PARTS OF LOS ANGELES. THERE ARE TWO LINES THAT TRAVEL UNDERGROUND IN FRONT OF THE ANGEL KNOLLS SITE WHERE MY BUILDING IS LOCATED, THE B LINE AND D LINE. WITH THE B LINE HAVING A 16.4 MILE TRACK AND THE D LINE HAVING A 6.4 MILE TRACK, MY BUILDING PROVIDES UNDERGROUND ACCESS TO A MAIN FORM OF TRANSPORTATION IN THE AREA, LINKING HUNDREDS OF DESIRED DESTINATIONS TO MY SITE.



PERFORMANCE ANALYSIS

RESPONSE TO THE TYPOLOGICAL RESEARCH

CASE STUDY CONSIDERATIONS

1. DESIGN STRATEGIES: WHEN LOOKING FOR CASE STUDIES, THE MOST IMPORTANT CONSIDERATION I HAD TO MAKE WAS THE DESIGN STRATEGIES THAT WERE FOLLOWED IN THE SPECIFIC PROJECT. MY SPECIFIC DESIGN STRATEGY I INTEND ON FOLLOWING REVOLVES AROUND THE USER AND OVERALL QUALITY OF LIFE THAT MY DESIGN CAN PROVIDE. THE STUDIES THAT I CHOSE ALSO REVOLVE AROUND IMPROVING THE SPACES CREATED TO FOCUS ON THE BENEFITS THAT IT CREATES FOR ITS EMPLOYEES AND CLIENTS.

2. PROJECT TYPOLOGY: WITH A HIGH-RISE TYPOLOGY WITH AN EMPHASIS ON QUALITY OF LIFE IN AN OFFICE SETTING, SO I CHOSE PROJECTS THAT ALSO HAVE AN EMPHASIS ON OFFICE DESIGN, SPECIALIZING ON A HEALTHY WORK ENVIRONMENT.

3. LOCATION: THE LOCATIONS OF THESE SPECIFIC PROJECTS CORRELATE WITH MY THESIS SITE LOCATION DUE TO THE FACT THAT THEY ARE IN DOWNTOWN LOCATION SURROUNDED BY HIGH-RISE ARCHITECTURE. THIS ALLOWS ME TO DRAW CONCLUSIONS FROM WHAT I SEE WORKS BEST FROM THE CASE STUDIES, AND WHAT POSITIVE ASPECTS OF THAT LOCATIONS DESIGN CORRELATE BEST TO MY DESIGN.

CHOSEN PROJECTS:

1. CBRE AT MNP TOWER, VANCOUVER BC, CANADA
2. CBRE AT 145 KING STREET WEST, TORONTO ON, CANADA
3. ARUP BOSTON OFFICE - BOSTON MA, USA

TYPOLOGICAL RESEARCH TAKEAWAYS:

CBRE - VANCOUVER:

EVEN THOUGH CBRE DID NOT OWN THE ENTIRE MNP TOWER, IT IS SEEN HERE THAT IT IS POSSIBLE FOR THE SMALLEST OF PEOPLE TO INVEST INTO SOMETHING WITH A BIGGER PURPOSE. CBRE ONLY OWNED 10.5% OF THE SPACE IN THE MNP TOWER, AND YET THEY WERE ABLE TO STEP UP AND MAKE A DIFFERENCE FOR THEIR OWN EMPLOYEES AND THOSE IN THE REST OF THE BUILDING TO PROVIDE A QUALITY INDOOR SPACE.

CBRE - TORONTO:

IN A STUDY AND SURVEY CONDUCTED WITH CBRE'S EMPLOYEES, THE CONCLUDED THAT THE OVERALL SATISFACTION OF THEIR EMPLOYEES INCREASED EXPONENTIALLY. O'NEILL SAYS THAT WELL CERTIFICATION IS "HELPING TO DIFFERENTIATE US AS AN EMPLOYER THAT IS PREPARED TO INVEST IN THE HEALTH AND WELLNESS OF ITS PEOPLE. BECAUSE WELL REPRESENTS THE LEADING EDGE OF OFFICE DESIGN, IT'S ALSO DIFFERENTIATING US AS A COMMERCIAL REAL ESTATE ADVISER." WHICH SHOWS THAT RE-ADAPTATION OF OFFICE BUILDINGS CAN CONCLUDE IN AN OVERALL HIGH SATISFACTION RATE.

ARUP - BOSTON:

ARUP HAS A ENHANCED FOCUS ON BOTH THE HUMAN HEALTH AND ENVIRONMENTAL OUTCOMES THAT THEIR BUILDING DESIGN PROGRAM HAS WITH THE COMMUNITY. IN A SURVEY THAT ARUP CONDUCTED POST BUILDING CONSTRUCTION SHOWED THAT 83 PERCENT OF STAFF THOUGHT THAT THE NEW AND IMPROVED DESIGN PRODUCED A HIGHER LEVEL OF CREATIVITY AND PRODUCTIVITY WITHIN THE OFFICE. IF AN OFFICE DESIGN IS ABLE TO BRING JOY AND ENHANCE WORK PRODUCTION IN AN EFFICIENT WAY, THIS ALLOWS COMPANIES TO BECOME MORE PROFITABLE IN AN ENJOYABLE WAY.



RESIDENTIAL **HOUSING**



POOL **TOP**



EDUCATION **HOUSING**



OFFICE **RECEPTION**



CBRE - VANCOUVER RESEARCH RESPONSE

RESEARCH SUMMARY:

CBRE'S OFFICE SPACE PROVIDES AREAS THAT ENSURE A HIGH QUALITY OF WELLNESS. SOME OF THESE MEASURES INCLUDING AN HVAC SYSTEM IN THE TOP PERCENT OF OFFICES GLOBALLY. THIS HVAC SYSTEM IS CONSIDERED TO BE BETTER THAN MOST HOMES. THE OFFICE ALSO INCLUDES MULTIPLE INTERACTIVE AND SOCIAL SPACES, ACCESS TO DAYLIGHT WITHIN 25 FEET OF ANYWHERE IN THE OFFICE, AND NOISE DAMPENING OBJECTS (WHITE-NOISE DIODES) PLACED AROUND THE OFFICE.

PROJECT IMPLEMENTATION:

BY CONDUCTING THE RESEARCH ON CBRE - VANCOUVER, I LOOKED TO ALSO PRODUCE SPACES THROUGHOUT THE BUILDING THAT INCLUDED INTERACTIVE AND SOCIAL SPACES ALONG WITH ACCESS TO DAYLIGHT BY ONLY TAKING A FEW STEPS IN ANY DIRECTION YOU CHOOSE.

THE CYLINDRICAL DESIGN OF THE BUILDING ALLOWS FOR EACH FLOOR, NO MATTER THE TYPOLOGICAL SPACE, TO ACCESS A HIGH AMOUNT OF DAYLIGHT.

ON THE RESIDENTIAL FLOORS, EACH ROOM TYPE HAS ACCESS TO BALCONY SPACE ALONG WITH WINDOWS IN EVERY ROOM.

THE FITNESS LEVEL OF THE BUILDING HAS A ROOF TOP POOL AREA TO SPEND TIME OUTSIDE IN THE DAYLIGHT ALONG WITH EXERCISING WITH AN OPEN VIEW OF THE OUTDOORS WITH DAYLIGHT RUSHING INTO THE SPACES INSIDE.

BEING THAT THE EDUCATIONAL HOUSING FLOORS HAVE CLOSE TO AN IDENTICAL LAYOUT TO THE REESIDENTIAL FLOORS, EACH ROOM IS FLOODED WITH SUNLIGHT. IN ADDITION, THE BUILDINGS DESIGN INCLUDED A LOUNGING SPACE FOR THE STUDENTS THAT HAS AN OPEN DESIGN TO SOAK UP THE MOST AMOUNT OF SUNLIGHT POSSIBLE.

THE OFFICE FLOORS HAVE A SIMILAR DESIGN WITH BALCONY SPACE ALONG WITH MOST PERSONAL OFFICES AND CONFERENCE ROOMS HAVING MOSTLY GLAZING WALLS ON THE EXTERIOR OF THE BUILDING.

CBRE - TORONTO RESEARCH RESPONSE

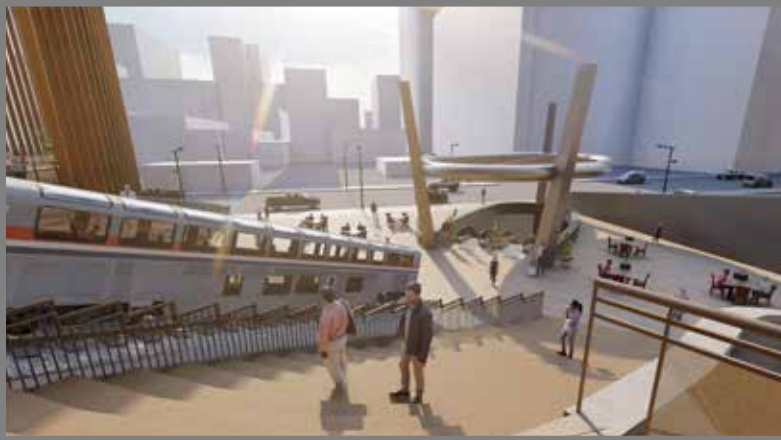
RESEARCH SUMMARY:

CBRE'S OFFICE SPACE IN TORONTO PROVIDES DESIGN STRATEGIES TO ENSURE A HIGH QUALITY OF WELLNESS. SOME OF THESE MEASURES INCLUDING AN HVAC SYSTEM IN THE TOP PERCENT OF OFFICES GLOBALLY. THIS HVAC SYSTEM IS CONSIDERED TO BE BETTER THAN MOST HOMES. THE OFFICE ALSO INCLUDES MULTIPLE INTERACTIVE AND SOCIAL SPACES, ACCESS TO DAYLIGHT WITHIN 25 FEET OF ANYWHERE IN THE OFFICE, AND NOISE DAMPENING OBJECTS (WHITE-NOISE DIODES) PLACED AROUND THE OFFICE, ALL INCLUDED IN THE VANCOUVER OFFICE AS WELL. A NEW FACTOR IN THIS DESIGN IS THE IMPLEMENTATION OF LED LIGHTING THAT WILL AUTOMATICALLY ADJUST TO THE BRIGHTNESS OF THE OUTDOOR SUNLIGHT.

PROJECT IMPLEMENTATION:

IN MY STUDY OF CBRE'S OFFICE IN TORONTO, I FOUND THAT A MAJORITY OF THEIR PROJECTS INCLUDE THE RE-ADAPTATION OF OFFICE BUILDINGS. SIMILAR TO CBRE, I LOOKED TO RE-ADAPT THE SPACE THAT WAS ONCE A PUBLIC PARK AND REPURPOSE IT AS ANOTHER PUBLIC SPACE FOR THE COMMUNITY.

THE FIRST THREE FLOORS OF THE BUILDING INCLUDE A GROCERY STORE AND MULTIPLE RETAIL STORES. THESE SPACES WERE DEVELOPED AS A WAY FOR THE COMMUNITY THAT IS OUT AND ABOUT SHOPPING OR LOOKING TO PURCHASE GROCERIES TO BE DRIVEN TO A SPACE THAT ENCOURAGES OUTDOOR ACTIVITY AND SOCIAL INTERACTIONS



**GRAND STAIRCASE & ANGELS
FLIGHT MONUMENT**

METRO ENTRANCE/EXIT



RETAIL SEATING

PARKING GARAGE





MAIN PLAZA

RETAIL ENTRANCE/EXIT TO PLAZA



MAIN PLAZA

POOL TOP



ARUP - BOSTON RESEARCH RESPONSE

RESEARCH SUMMARY:

ARUP PROVIDES MANY UNIQUE FEATURES IN THEIR OFFICE SPACES LOCATED IN BOSTON. ONE THAT PROVIDED THE HIGHEST LEVEL OF CHANGE WITH A UNIQUE DESIGN WAS A CIRCADIAN LIGHTING SYSTEM THROUGHOUT THE OFFICE. THIS SYSTEM WAS DESIGNED BY THE LIGHTING TEAM AT ARUP WHERE THEY HAVE THE ABILITY TO REPLICATE DAYLIGHT WITHIN THE ENTIRE OFFICE. THE LIGHTS AUTOMATICALLY ANALYZE THE EXACT BRIGHTNESS AND COLOR THAT THE SUN IS PRODUCING AND REPLICATED THAT INSIDE THE OFFICE. ANOTHER FEATURE THAT ALTERS ITS PERFORMANCE AUTOMATICALLY IS THEIR VENTILATION SYSTEM. THIS SYSTEM RESPONDS DIRECTLY TO THE OCCUPANCY LEVEL IN THE BUILDING TO OPTIMIZE THE AIR QUALITY IN THE MOST EFFICIENT WAY.

PROJECT IMPLEMENTATION:

FROM MY RESEARCH ON ARUP AS A COMPANY, THEIR ENHANCED FOCUS ON BOTH THE HUMAN HEALTH AND ENVIRONMENTAL OUTCOMES THAT THEIR BUILDING DESIGN PROGRAM HAS WITH THE COMMUNITY INSPIRED MY TO CREATE A DEEPER CONNECTION WITH THE COMMUNITY WHILE GIVING BACK TO THAT SAME COMMUNITY.

TO ENHANCE MY FOCUS ON THE CUMMUNITY IN A WAY THAT BENEFITED HUMAN HEALTH, I FOCUSED ON THE DESIGN OF OUTDOOR SPACES. THESE INCLUDED PUBLIC PLAZA SPACE AND A ROOFTOP POOL.

THE PLAZA SPACES AROUND THE BUILDING ARE OPEN TO THE PUBLIC AND HAVE A LARGE QUANTITY OF GREEN SPACES AND SEATING FOR RELAXATION AND SOCIAL INTERACTIONS. THESE SPACES PROMOTE WALKING AND CONNECTIONS IN A PUBLIC AREA WHICH BOTH PROVIDE A SENSE OF COMMUNITY.

SIMILAR TO THE PUBLIC PLAZAS ON THE LOWER FLOORS OF THE BUILDING, THE ROOFTOP POOL GIVES ACCESS, TO ALL BUILDING USERS, TO A SPACE FOR SOCIAL INTERACTIONS WITH OTHERS THAT SHARE THE BUILDING WITH ONE ANOTHER. THIS SPACE INCLUDES A POOL, HOT TUB, LOUNGING SPACES, AND A GREEN RAILING ALONG A MAJORITY OF THE BUILDINGS EDGE.

PERFORMANCE ANALYSIS

RESPONSE TO GOALS AND PROJECT ELEMENTS

PROJECT EMPHASIS

HEALTHY BUILDING - THE MAIN CONTROLLING FACTOR OF THIS THESIS IS DESIGNING A HEALTHY BUILDING. A HEALTHY BUILDING REFERS TO SUPPORTING THE PHYSICAL, PSYCHOLOGICAL, AND SOCIAL HEALTH AND WELL-BEING OF THE BUILT ENVIRONMENT. THIS WILL BE THE BASE LINE THAT WILL BE EMPHASIZED IN THIS THESIS PROJECT.

QUALITY OF LIFE - QUALITY OF LIFE IN THIS THESIS SPECIFICALLY SPECIFIES TOWARDS THE OVERALL WELL-BEING OF THE COMMUNITY AND THE USERS OF THE BUILDING. THE COMPREHENSIVE DESIGN OF THE BUILDING WILL DIRECTLY RELATE TO THE QUALITY OF LIFE AND HOW THE BUILDINGS COMPOSITION EFFECTS THE MOOD, CHARACTER, AND COMFORT OF THE USERS.

HEALTHY ENVIRONMENT - KNOWING THE NEEDS OF THE SURROUNDING ENVIRONMENT WILL DIRECTLY EFFECT THE DESIGN, OVERALL EFFICIENCY, AND HOW THE BUILDING CAN GIVE BACK. EMPHASIZING A HEALTHY ENVIRONMENT IN THIS THESIS PROJECT WILL PROVIDED NOT JUST SMALL SCALE SINGULAR BUILDING PERFORMANCE, BUT A LARGE SCALE MODERNIZATION AND IMPROVEMENT TO THE SURROUNDING COMMUNITY AND STANDARD OF LIVING IN THE AREA.

PROJECT GOALS

URBAN ENVIRONMENT - DESIGNING A BUILDING FOR AN URBAN ENVIRONMENT REQUIRES A BALANCED PLAN TO CREATE AN AREA THAT CONNECTS THE BUILDING AND ITS SITE TO THE SPACES AROUND IT. UNDERSTANDING THE URBAN ENVIRONMENT CREATES OPPORTUNITIES FOR THE BUILDINGS COMPOSITION TO CONNECT THE CITY FROM A SINGULAR LOCATION.

ARCHITECTURAL DESIGN - WHEN WORKING ON THE ARCHITECTURAL DESIGN ELEMENT, I LOOKED TO COMPOSE A BUILDING THAT IS VIABLE, DEPENDABLE, AND EQUIPPED WITH THE SPACES NEEDED TO CREATE A SENSE OF COMMUNITY WITHIN AND AROUND THE STRUCTURE.

PHYSICAL SPATIAL DESIGN - MY LAST GOAL HAS THE HIGHEST IMPORTANCE ON THE COMFORT, SATISFACTION, AND CONTENTMENT OF THE BUILDINGS USERS. IN AN EVER EXPANDING DIGITAL WORLD, ITS CRITICAL THAT WE MAINTAIN OUR CONNECTIONS WITH SOCIETY. BEFORE COVID, WHEN IT WAS MUCH LESS COMMON TO ORDER FOOD TO YOUR DOOR OR WORK FROM HOME, PEOPLE WERE ACTIVE IN PUBLIC SPACES AND REALLY CONNECTED WITH THE COMMUNITY IN THE CITY... AND CITIES ARE PRINCIPALLY ABOUT THE PEOPLE. WHERE PEOPLE GO, WHERE THEY MEET, AND HOW THEY CONNECT WITH EACH OTHER IS WHAT MAKES A CITY WORK. THE SPATIAL CONNECTION ELEMENT OF MY THESIS IS FOCUSES ON HOW WE AS DESIGNERS CAN TAKE THE INDIVIDUAL COMPONENTS THAT MAKE A CITY INSPIRING, AND INTERCONNECT THEM WITHIN A SINGULAR STRUCTURE

EMPHASIS ADDRESSED

HEALTHY BUILDING - THE MAIN CONTROLLING FACTOR OF THIS THESIS IS DESIGNING A HEALTHY BUILDING. THIS WAS ADDRESSED BY CREATING A BUILDING THAT PROMOTES OUTDOOR ACTIVITY. TO ENHANCE MY FOCUS ON THE OUTDOORS IN A WAY THAT BENEFITED HUMAN HEALTH, I FOCUSED ON CREATING SPACES THAT ENCOURAGED BEING OUTDOORS. THESE INCLUDED PUBLIC PLAZA SPACE AND A ROOFTOP POOL.

THE PLAZA SPACES AROUND THE BUILDING ARE OPEN TO THE PUBLIC AND HAVE A LARGE QUANTITY OF GREEN SPACES AND SEATING FOR RELAXATION AND SOCIAL INTERACTIONS. THESE SPACES PROMOTE WALKING AND CONNECTIONS IN A PUBLIC AREA WHICH BOTH PROVIDE A SENSE OF COMMUNITY.

SIMILAR TO THE PUBLIC PLAZAS ON THE LOWER FLOORS OF THE BUILDING, THE ROOFTOP POOL GIVES ACCESS, TO ALL BUILDING USERS, TO A SPACE FOR SOCIAL INTERACTIONS WITH OTHERS THAT SHARE THE BUILDING WITH ONE ANOTHER. THIS SPACE INCLUDES A POOL, HOT TUB, LOUNGING SPACES, AND A GREEN RAILING ALONG A MAJORITY OF THE BUILDINGS EDGE.



QUALITY OF LIFE - QUALITY OF LIFE IN THIS THESIS SPECIFICALLY SPECIFIES TOWARDS THE OVERALL WELL-BEING OF THE COMMUNITY AND THE USERS OF THE BUILDING. I LOOKED TO PRODUCE SPACES THROUGHOUT THE BUILDING THAT INCLUDED INTERACTIVE AND SOCIAL SPACES ALONG WITH ACCESS TO DAYLIGHT BY ONLY TAKING A FEW STEPS IN ANY DIRECTION YOU CHOOSE.

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ON THE RESIDENTIAL FLOORS, EACH ROOM TYPE HAS ACCESS TO BALCONY SPACE ALONG WITH WINDOWS IN EVERY ROOM.

THE FITNESS LEVEL OF THE BUILDING HAS A ROOF TOP POOL AREA TO SPEND TIME OUTSIDE IN THE DAYLIGHT ALONG WITH EXERCISING WITH AN OPEN VIEW OF THE OUTDOORS WITH DAYLIGHT RUSHING INTO THE SPACES INSIDE.

BEING THAT THE EDUCATIONAL HOUSING FLOORS HAVE CLOSE TO AN IDENTICAL LAYOUT TO THE RESIDENTIAL FLOORS, EACH ROOM IS FLOODED WITH SUNLIGHT. IN ADDITION, THE BUILDING'S DESIGN INCLUDED A LOUNGING SPACE FOR THE STUDENTS THAT HAS AN OPEN DESIGN TO SOAK UP THE MOST AMOUNT OF SUNLIGHT POSSIBLE.

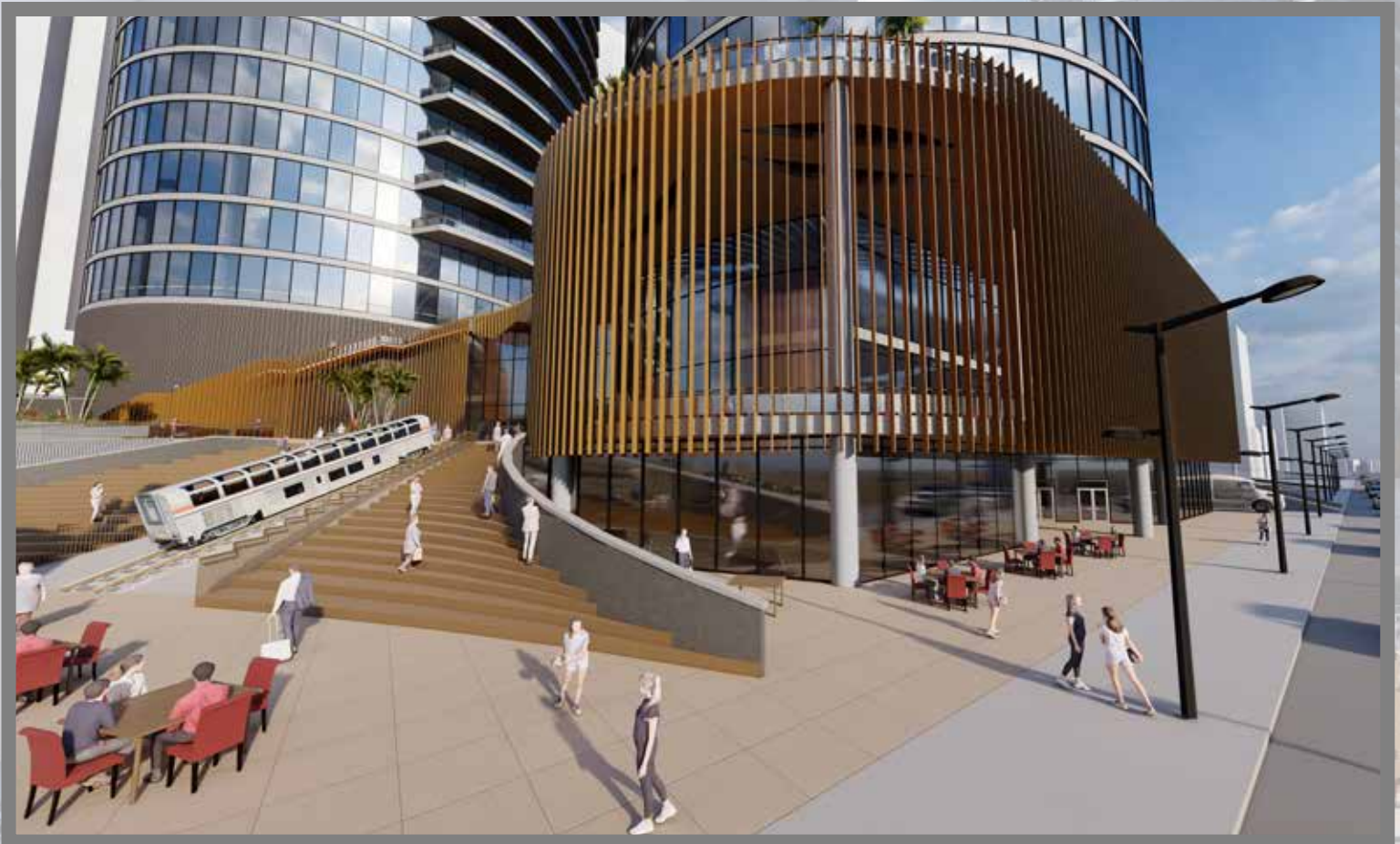
THE OFFICE FLOORS HAVE A SIMILAR DESIGN WITH BALCONY SPACE ALONG WITH MOST PERSONAL OFFICES AND CONFERENCE ROOMS HAVING MOSTLY GLAZING WALLS ON THE EXTERIOR OF THE BUILDING.



EMPHASIS ADDRESSED CONTINUED

HEALTHY ENVIRONMENT - KNOWING THE NEEDS OF THE SURROUNDING ENVIRONMENT WILL DIRECTLY EFFECT THE DESIGN, OVERALL EFFICIENCY, AND HOW THE BUILDING CAN GIVE BACK. IN THIS PART OF THE THESIS EMPHASIS, I LOOKED TO RE-ADAPT THE SPACE THAT WAS ONCE A PUBLIC PARK AND REPURPOSE IT AS ANOTHER PUBLIC SPACE FOR THE COMMUNITY.

THE FIRST THREE FLOORS OF THE BUILDING INCLUDE A GROCERY STORE AND MULTIPLE RETAIL STORES. THESE SPACES WERE DEVELOPED AS A WAY FOR THE COMMUNITY THAT IS OUT AND ABOUT SHOPPING OR LOOKING TO PURCHASE GROCERIES TO BE DRIVEN TO A SPACE THAT ENCOURAGES OUTDOOR ACTIVITY AND SOCIAL INTERACTIONS



GOALS ADDRESSED

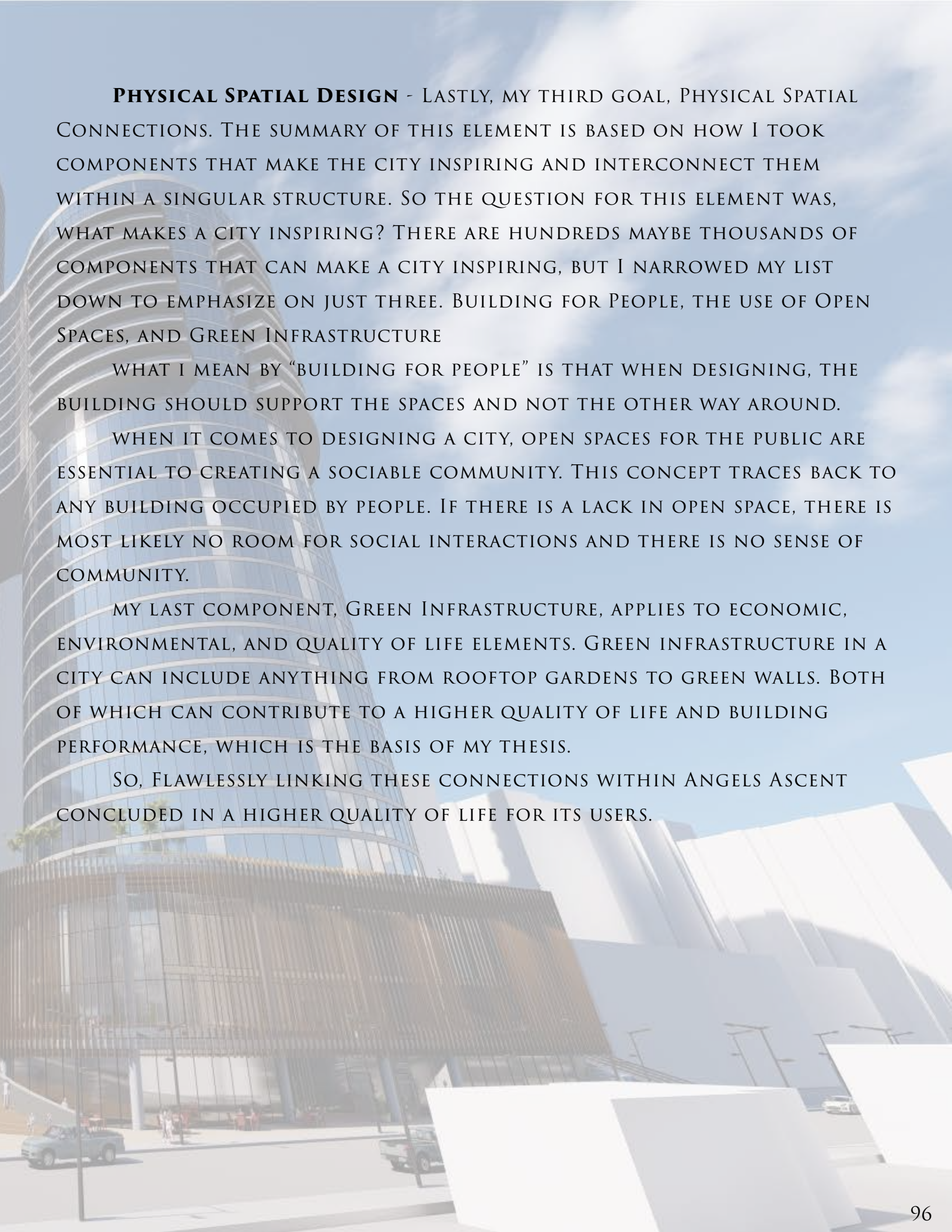
URBAN ENVIRONMENT - DESIGNING A BUILDING FOR AN URBAN ENVIRONMENT REQUIRES A BALANCED PLAN TO CREATE AN AREA THAT CONNECTS THE BUILDING AND ITS SITE TO THE SPACES AROUND IT. UNDERSTANDING THE URBAN ENVIRONMENT CREATES OPPORTUNITIES FOR THE BUILDINGS COMPOSITION TO CONNECT THE CITY FROM A SINGULAR LOCATION.

BUILDINGS ARE THE MOST OBSERVABLE ELEMENT OF URBAN DESIGN. THEY CREATE SPACES THROUGH THE FORMATIONS OF WALLS AND SIDEWALKS IN THE CITY, BUT IN ORDER TO MAKE A CONNECTION TO THE EXISTING URBAN ENVIRONMENT WITHOUT PLACING WALLS AND SIDEWALKS IN UNCONVENTIONAL SPOTS THAT DISRUPT THE EXISTING SITE, I DIDN'T CHANGE WHAT WAS ALREADY THERE, I USED IT. WITH MY PROJECT LOCATION IN DOWNTOWN LOS ANGELES, CALIFORNIA IN A NEIGHBORHOOD CALLED BUNKER HILL, ON A PLOT OF LAND CALLED ANGELS KNOLL, I FOUND TWO ATTRACTIONS THAT I USED TO CREATE A CONNECTION TO THE URBAN ENVIRONMENT. ONE BEING ANGELS FLIGHT RAILWAY, AND TWO BEING THE LOS ANGELES METRO RAIL

ANGELS FLIGHT RAILWAY IS A HISTORICAL LANDMARK ON THE NORTH EAST SIDE OF THE SITE. IT CONSISTS OF TWO HILLSIDE TRACKS WITH RAILCARS NAMES SINAI AND OLIVET.

LOS ANGELES METRO RAIL IS AN UNDERGROUND RAPID TRANSIT SYSTEM THAT CONNECTS TO MOST PARTS OF LOS ANGELES. THERE ARE TWO LINES THAT TRAVEL UNDERGROUND IN FRONT OF THE ANGEL KNOLLS SITE WHERE MY BUILDING IS LOCATED, THE B LINE AND D LINE.

THIS GOAL WAS ADDRESSED BY USING THE INSPIRATION OF THE TWO RAIL CARS TO FORM THE TWO TOWERED STRUCTURE OF ANGELS ASCENT. THE GOAL WAS ALSO ADDRESSED BY TAKING THE LOS ANGELES METRO RAIL AND USING THE B LINE WITH A 16.4 MILE TRACK AND THE D LINE WITH A 6.4 MILE TRACK, AND PROVIDING UNDERGROUND ACCESS TO A MAIN FORM OF TRANSPORTATION IN THE AREA, LINKING HUNDREDS OF DESIRED DESTINATIONS TO MY SITE.



PHYSICAL SPATIAL DESIGN - LASTLY, MY THIRD GOAL, PHYSICAL SPATIAL CONNECTIONS. THE SUMMARY OF THIS ELEMENT IS BASED ON HOW I TOOK COMPONENTS THAT MAKE THE CITY INSPIRING AND INTERCONNECT THEM WITHIN A SINGULAR STRUCTURE. SO THE QUESTION FOR THIS ELEMENT WAS, WHAT MAKES A CITY INSPIRING? THERE ARE HUNDREDS MAYBE THOUSANDS OF COMPONENTS THAT CAN MAKE A CITY INSPIRING, BUT I NARROWED MY LIST DOWN TO EMPHASIZE ON JUST THREE. BUILDING FOR PEOPLE, THE USE OF OPEN SPACES, AND GREEN INFRASTRUCTURE

WHAT I MEAN BY “BUILDING FOR PEOPLE” IS THAT WHEN DESIGNING, THE BUILDING SHOULD SUPPORT THE SPACES AND NOT THE OTHER WAY AROUND.

WHEN IT COMES TO DESIGNING A CITY, OPEN SPACES FOR THE PUBLIC ARE ESSENTIAL TO CREATING A SOCIABLE COMMUNITY. THIS CONCEPT TRACES BACK TO ANY BUILDING OCCUPIED BY PEOPLE. IF THERE IS A LACK IN OPEN SPACE, THERE IS MOST LIKELY NO ROOM FOR SOCIAL INTERACTIONS AND THERE IS NO SENSE OF COMMUNITY.

MY LAST COMPONENT, GREEN INFRASTRUCTURE, APPLIES TO ECONOMIC, ENVIRONMENTAL, AND QUALITY OF LIFE ELEMENTS. GREEN INFRASTRUCTURE IN A CITY CAN INCLUDE ANYTHING FROM ROOFTOP GARDENS TO GREEN WALLS. BOTH OF WHICH CAN CONTRIBUTE TO A HIGHER QUALITY OF LIFE AND BUILDING PERFORMANCE, WHICH IS THE BASIS OF MY THESIS.

SO, FLAWLESSLY LINKING THESE CONNECTIONS WITHIN ANGELS ASCENT CONCLUDED IN A HIGHER QUALITY OF LIFE FOR ITS USERS.

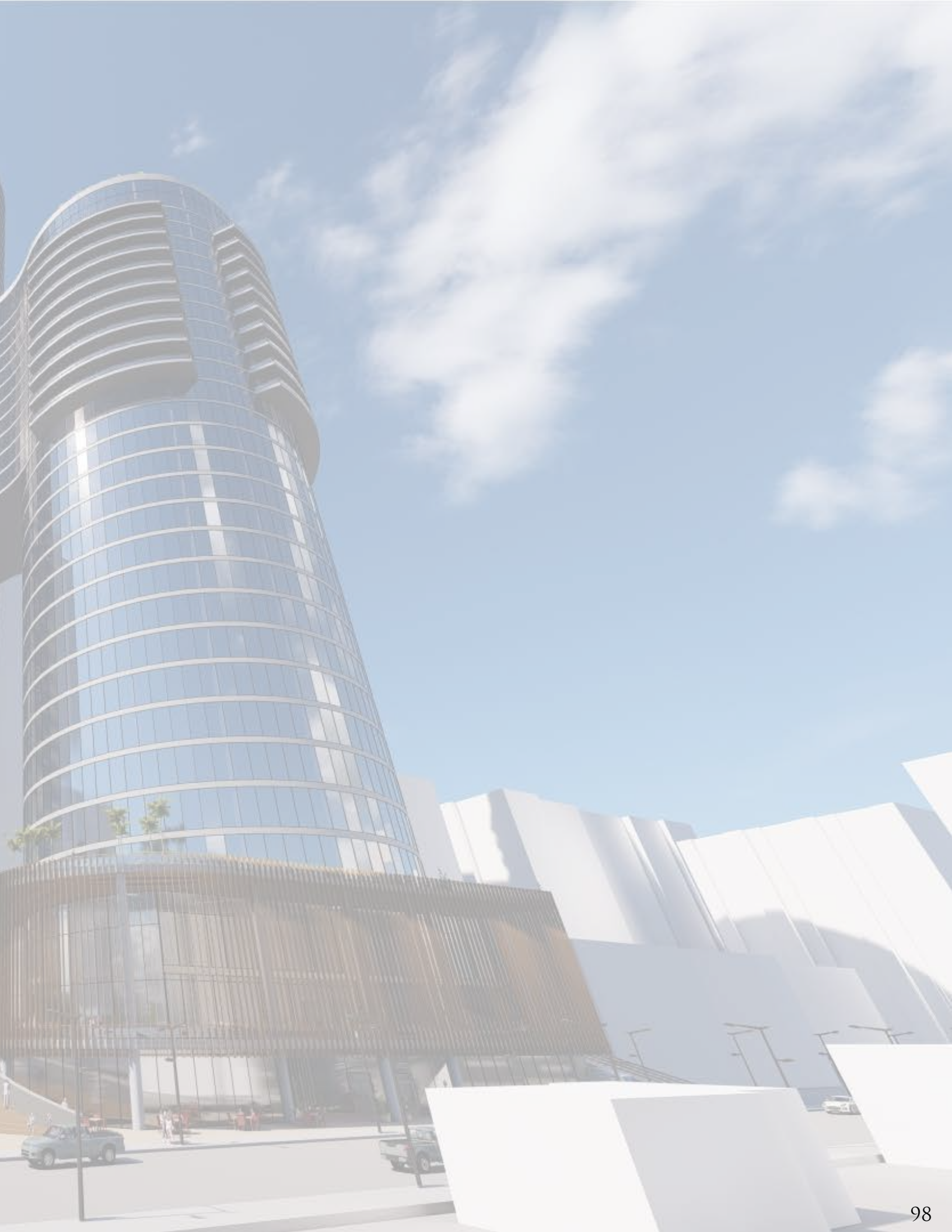
CITIQUE OF APPLIED RESEARCH METHODS USED IN THE THESIS PROJECT

SUMMARY:

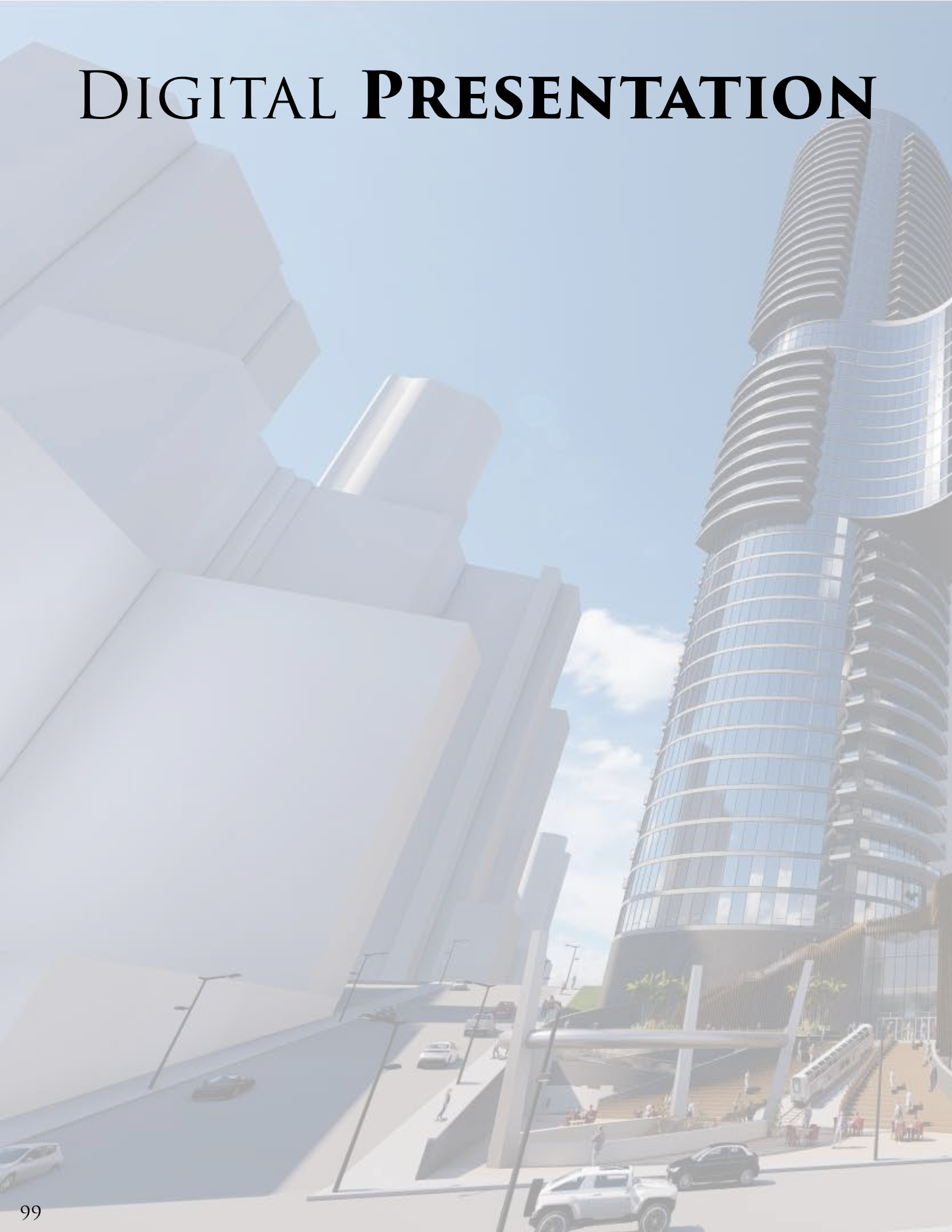
THE RESEARCH METHODS USED IN THIS THESIS PROJECT WERE PURPOSED FOR THE BENEFIT OF THE PULLING PEOPLE BACK TO PUBLIC LOCATIONS, IN-PERSON EDUCATIONAL SETTINGS, AND FACE TO FACE WORK ENVIRONMENTS IN A WAY THAT REPAIRS OUR ABILITY TO PERSONALLY INTERACT WITH ONE ANOTHER.

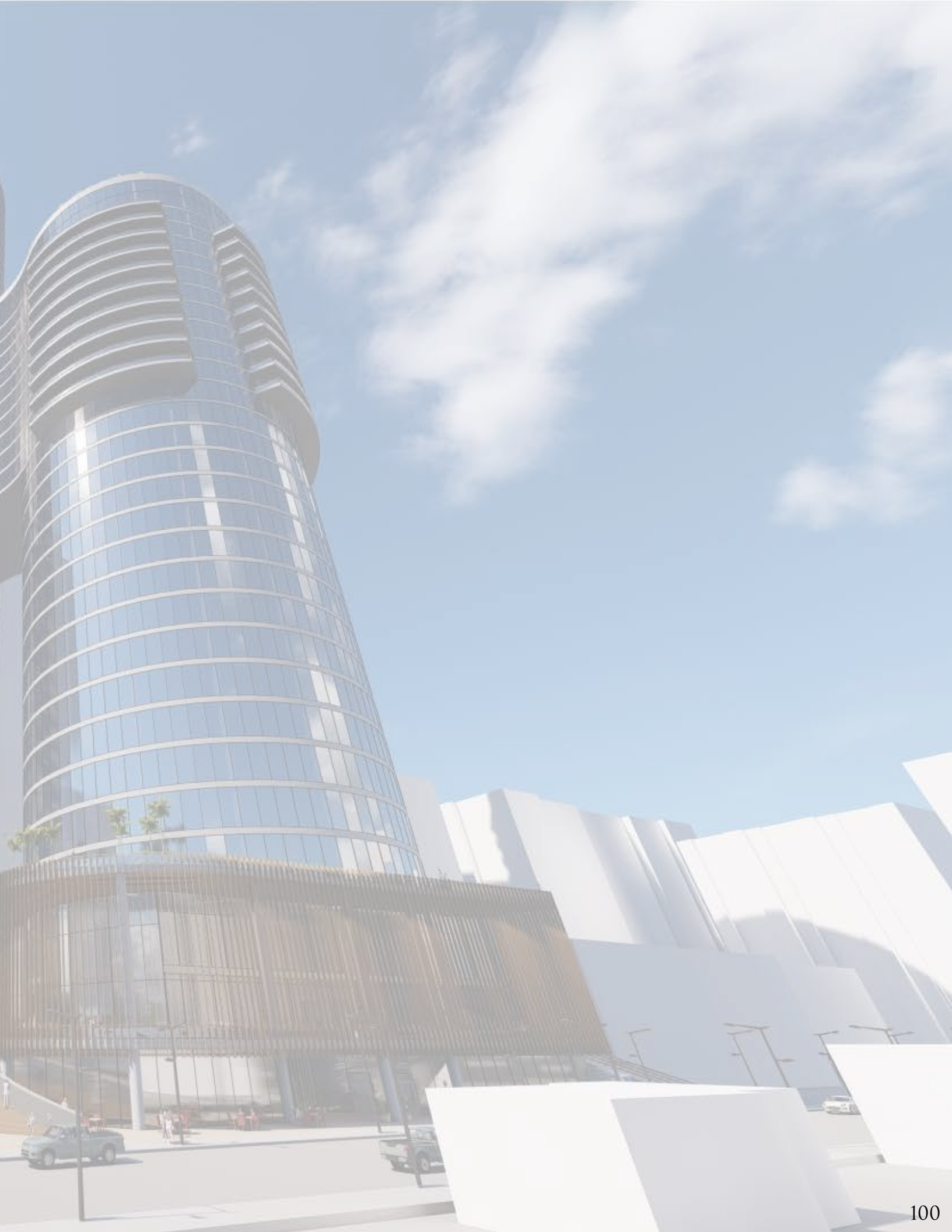
THE TYPOLOGICAL RESEARCH ON ARCHITECTURAL DESIGN CREATES AN IMPACT ON THE WAY PEOPLE INTERACT WITHIN THEIR BUILT ENVIRONMENTS. IN AN EVER-DENSIFYING WORLD, OUR BUILT ENVIRONMENTS ARE STARTING TO ALSO DENSIFY AND CONNECT VERTICALLY RATHER THAN ONLY EXPANDING HORIZONTALLY. THROUGH THE RESEARCH ON SPECIFIED TYPOLOGICAL BUILDINGS, THIS THESIS WAS ABLE TO CREATE AN INTERCONNECTION OF INDIVIDUAL SPACE TYPOLOGIES IN A COMPLEX AND NEW DESIGN THAT WAS CRITICAL FOR INCREASING QUALITY OF LIFE FOR BUILDING USERS.

THE MOTIVATION BEHIND THIS THESIS WAS TO ENCOURAGE PEOPLE TO GRASP THE IMPORTANCE OF HEALTHY INDOOR/OUTDOOR ENVIRONMENTS AND DETERMINE HOW CONTRASTING SPACE TYPOLOGIES CAN INTERACT WITH ONE ANOTHER. THROUGH AN EXTENSIVE RESEARCH PROCESS, THIS THESIS WAS ABLE TO EXPOUND ON HOW SYNCHRONIZING DISTINCTIVE TYPOLOGIES OF A MULTIPURPOSE SKYSCRAPER CAN REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE FOR ITS VISITORS/USERS IN A POST-COVID WORLD.



DIGITAL PRESENTATION



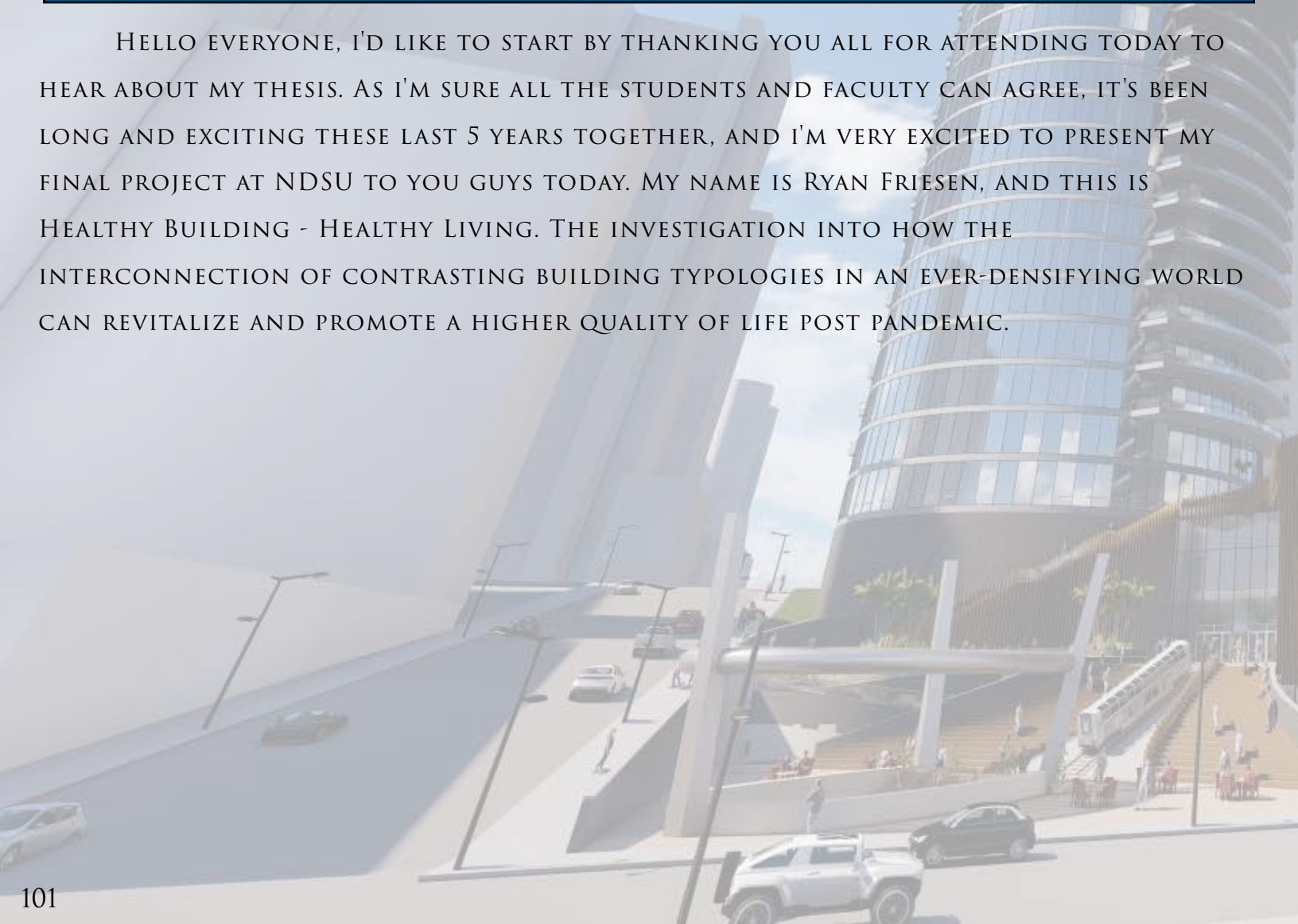




Healthy Building Healthy Living

Ryan Friesen

HELLO EVERYONE, I'D LIKE TO START BY THANKING YOU ALL FOR ATTENDING TODAY TO HEAR ABOUT MY THESIS. AS I'M SURE ALL THE STUDENTS AND FACULTY CAN AGREE, IT'S BEEN LONG AND EXCITING THESE LAST 5 YEARS TOGETHER, AND I'M VERY EXCITED TO PRESENT MY FINAL PROJECT AT NDSU TO YOU GUYS TODAY. MY NAME IS RYAN FRIESEN, AND THIS IS HEALTHY BUILDING - HEALTHY LIVING. THE INVESTIGATION INTO HOW THE INTERCONNECTION OF CONTRASTING BUILDING TYPOLOGIES IN AN EVER-DENSIFYING WORLD CAN REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE POST PANDEMIC.



SINCE 2020, COVID-19 HAS PUSHED PEOPLE AWAY FROM PUBLIC LOCATIONS, IN-PERSON EDUCATIONAL SETTINGS, AND FACE TO FACE WORK ENVIRONMENTS AND HAS HINDERED OUR ABILITY TO PERSONALLY INTERACT WITH ONE ANOTHER. AS THE PANDEMIC CONTINUED, WE LEARNED TO LIVE, WORK, AND PERFORM ESSENTIAL EVERYDAY ACTIVITIES FROM THE SINGULAR LOCATION OF OUR HOMES, AVOIDING COMMUNITY ACTIVITIES.

ARCHITECTURE HAS THE CAPACITY TO IMPACT THE WAY PEOPLE INTERACT WITHIN THEIR BUILT ENVIRONMENTS. IN AN EVER-DENSIFYING WORLD, OUR BUILT ENVIRONMENTS ARE STARTING TO ALSO DENSIFY AND CONNECT VERTICALLY RATHER THAN ONLY EXPANDING HORIZONTALLY. ARCHITECTURALLY, THE INTERCONNECTION OF INDIVIDUAL SPACE TYPOLOGIES IS BECOMING MORE COMPLEX AND NEW SOLUTIONS ARE CRITICAL FOR INCREASING QUALITY OF LIFE FOR BUILDING USERS.

THE MOTIVATION BEHIND THIS THESIS WAS TO ENCOURAGE PEOPLE TO GRASP THE IMPORTANCE OF HEALTHY INDOOR/OUTDOOR ENVIRONMENTS AND DETERMINE HOW CONTRASTING SPACE TYPOLOGIES CAN INTERACT WITH ONE ANOTHER. ADDITIONALLY, THIS THESIS EXPOUNDS ON HOW SYNCHRONIZING DISTINCTIVE TYPOLOGIES OF A MULTIPURPOSE SKYSCRAPER CAN REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE FOR ITS VISITORS/USERS IN A POST-COVID WORLD.

THIS IS WHERE THE SOLUTION OF MY BUILDING, ANGELS ASCENT, WAS CREATED.

Abstract

Problem	Potential	Purpose	Product
Pushing Away from Public Locations	Architectural Design	Promote Higher Quality of Life	Angels Ascent

Question/Project Elements

Question: How can the interconnection of contrasting building typologies in an ever-densifying world revitalize and promote a higher quality of life post pandemic?

1. Urban Environment
 - Urban connective plan that is smart, social, and fuses with the community
2. Architectural Design
 - Design that is viable, dependable, and connected
3. Physical Spatial Connections
 - Taking components that make a city inspiring and interconnecting them within a singular structure

THE QUESTION FOR MY THESIS IS, HOW CAN THE INTERCONNECTION OF CONTRASTING BUILDING TYPOLOGIES IN AN EVER-DENSIFYING WORLD REVITALIZED AND PROMOTE A HIGHER QUALITY OF LIFE POST PANDEMIC? TO ANSWER THIS QUESTION, I FOCUSED ON THREE PROJECT ELEMENTS THAT CATEGORIZE INTO DIFFERENT RANGES OF SCALE AND CONTENT IN MY PROJECT. THESE WILL INCLUDE (1) THE SURROUNDING URBAN ENVIRONMENT, (2) THE OVERALL ARCHITECTURAL DESIGN, (3) AND THE SPACIAL CONNECTIONS THAT THE BUILDING HAS WITHIN AND AROUND IT.

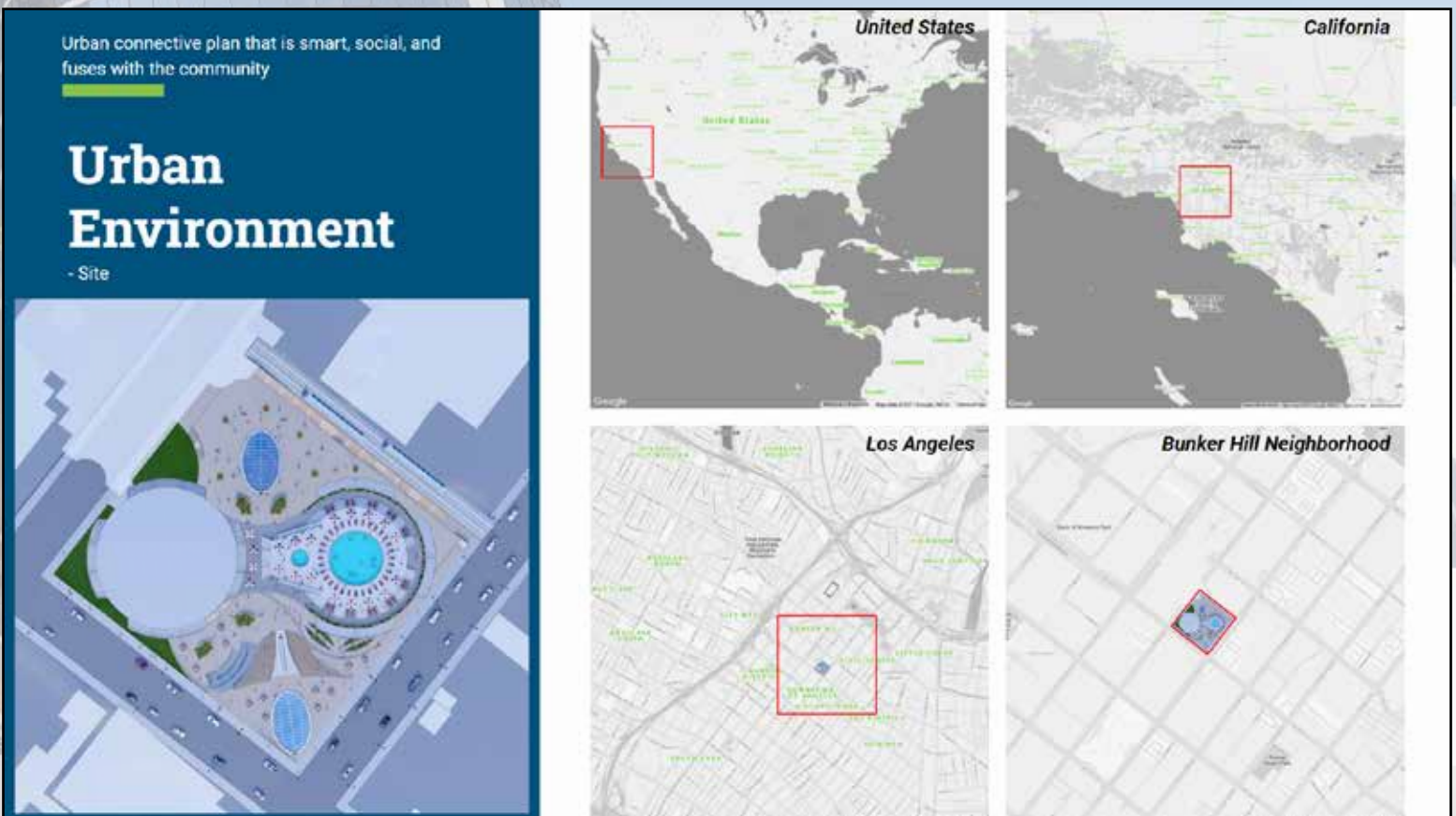
(1)URBAN ENVIRONMENT- DESIGNING A BUILDING FOR AN URBAN ENVIRONMENT REQUIRES A BALANCED PLAN TO CREATE AN AREA THAT CONNECTS THE BUILDING AND ITS SITE TO THE SPACES AROUND IT. UNDERSTANDING THE URBAN ENVIRONMENT CREATED OPPORTUNITIES FOR THE BUILDINGS COMPOSITION TO CONNECT THE CITY FROM A SINGULAR LOCATION.

(2)ARCHITECTURAL DESIGN- WHEN WORKING ON THE ARCHITECTURAL DESIGN ELEMENT, I LOOKED TO COMPOSE A BUILDING THAT IS VIABLE, DEPENDABLE, AND EQUIPPED WITH THE SPACES NEEDED TO CREATE A SENSE OF COMMUNITY WITHIN AND AROUND THE STRUCTURE.

(3)SPATIAL CONNECTIONS- MY LAST ELEMENT HAD THE HIGHEST IMPORTANCE ON THE COMFORT, SATISFACTION, AND CONTENTMENT OF THE BUILDINGS USERS. IN AN EVER EXPANDING DIGITAL WORLD, ITS CRITICAL THAT WE MAINTAIN OUR CONNECTIONS WITH SOCIETY. BEFORE COVID, WHEN IT WAS MUCH LESS COMMON TO ORDER FOOD TO YOUR DOOR OR WORK FROM HOME, PEOPLE WERE ACTIVE IN PUBLIC SPACES AND REALLY CONNECTED WITH THE COMMUNITY IN THE CITY... AND CITIES ARE PRINCIPALLY ABOUT THE PEOPLE. WHERE PEOPLE GO, WHERE THEY MEET, AND HOW THEY CONNECT WITH EACH OTHER IS WHAT MAKES A CITY WORK. THE SPATIAL CONNECTION ELEMENT OF MY THESIS IS FOCUSED ON HOW WE AS DESIGNERS CAN TAKE THE INDIVIDUAL COMPONENTS THAT MAKE A CITY INSPIRING, AND INTERCONNECT THEM WITHIN A SINGULAR STRUCTURE

OVERALL, THESE ELEMENTS WORKED TOWARDS A CONNECTIVE COMPOSITION THAT PROMOTES A HEALTHY LIFESTYLE, AND ULTIMATELY IMPROVES THE QUALITY OF LIFE FOR ITS USERS WHILE GIVING BACK TO THE CITY.

BUILDINGS ARE THE MOST OBSERVABLE ELEMENT OF URBAN DESIGN. THEY CREATE SPACES THROUGH THE FORMATIONS OF WALLS AND SIDEWALKS IN THE CITY... BUT IN ORDER TO MAKE A CONNECTION TO THE EXISTING URBAN ENVIRONMENT WITHOUT PLACING WALLS AND SIDEWALKS IN UNCONVENTIONAL SPOTS THAT DISRUPT THE EXISTING SITE, I DIDN'T WANT TO CHANGE WHAT'S ALREADY THERE, I WANTED TO USE IT. MY PROJECT LOCATION IS IN DOWNTOWN LOS ANGELES, CALIFORNIA IN A NEIGHBORHOOD CALLED BUNKER HILL, AND THE SITE THAT I CHOSE IS CALLED ANGELS KNOLL.



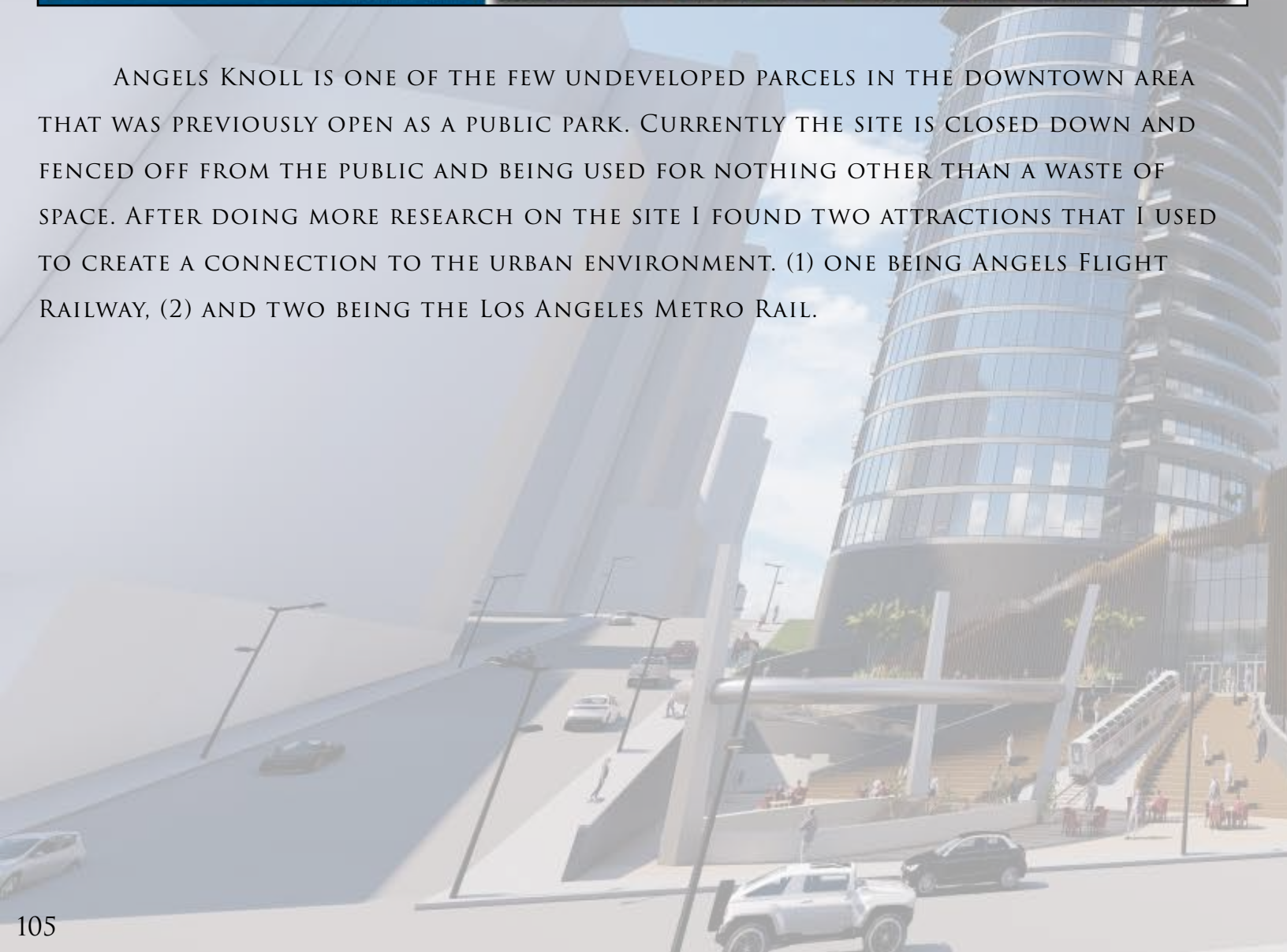
Urban connective plan that is smart, social, and fuses with the community

Urban Environment

- Angels Knoll



ANGELS KNOLL IS ONE OF THE FEW UNDEVELOPED PARCELS IN THE DOWNTOWN AREA THAT WAS PREVIOUSLY OPEN AS A PUBLIC PARK. CURRENTLY THE SITE IS CLOSED DOWN AND FENCED OFF FROM THE PUBLIC AND BEING USED FOR NOTHING OTHER THAN A WASTE OF SPACE. AFTER DOING MORE RESEARCH ON THE SITE I FOUND TWO ATTRACTIONS THAT I USED TO CREATE A CONNECTION TO THE URBAN ENVIRONMENT. (1) ONE BEING ANGELS FLIGHT RAILWAY, (2) AND TWO BEING THE LOS ANGELES METRO RAIL.

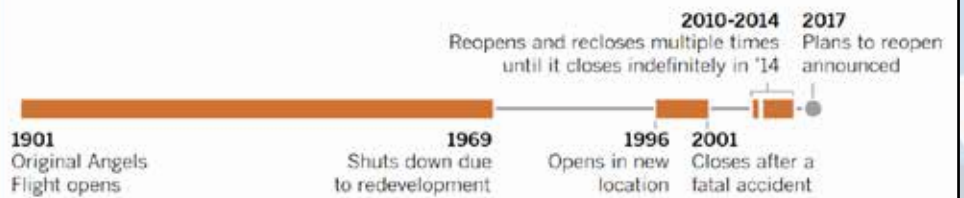


ON THE NORTH-EAST SIDE OF THE SITE, ANGELS FLIGHT RAILWAY HAS BEEN A LANDMARK FOR LOS ANGELES SINCE 1901, GIVING MORE THAN 100 MILLION RIDES ON ITS HILLSIDE TRACK AND IS DESCRIBED AS AN ESSENTIAL EXPERIENCE IN LOS ANGELES. THE RAILWAY CONSISTS OF TWO TRACKS WITH TWO RAIL CARS NAMED SINAI AND OLIVET. AND WITH THIS ATTRACTION BEING SUCH A BIG PART OF HISTORY IN THE AREA, IT WAS SOMETHING THAT I NEEDED TO INCORPORATE INTO MY DESIGN.

Urban connective plan that is smart, social, and fuses with the community

Urban Environment

- Angels Flight Railway



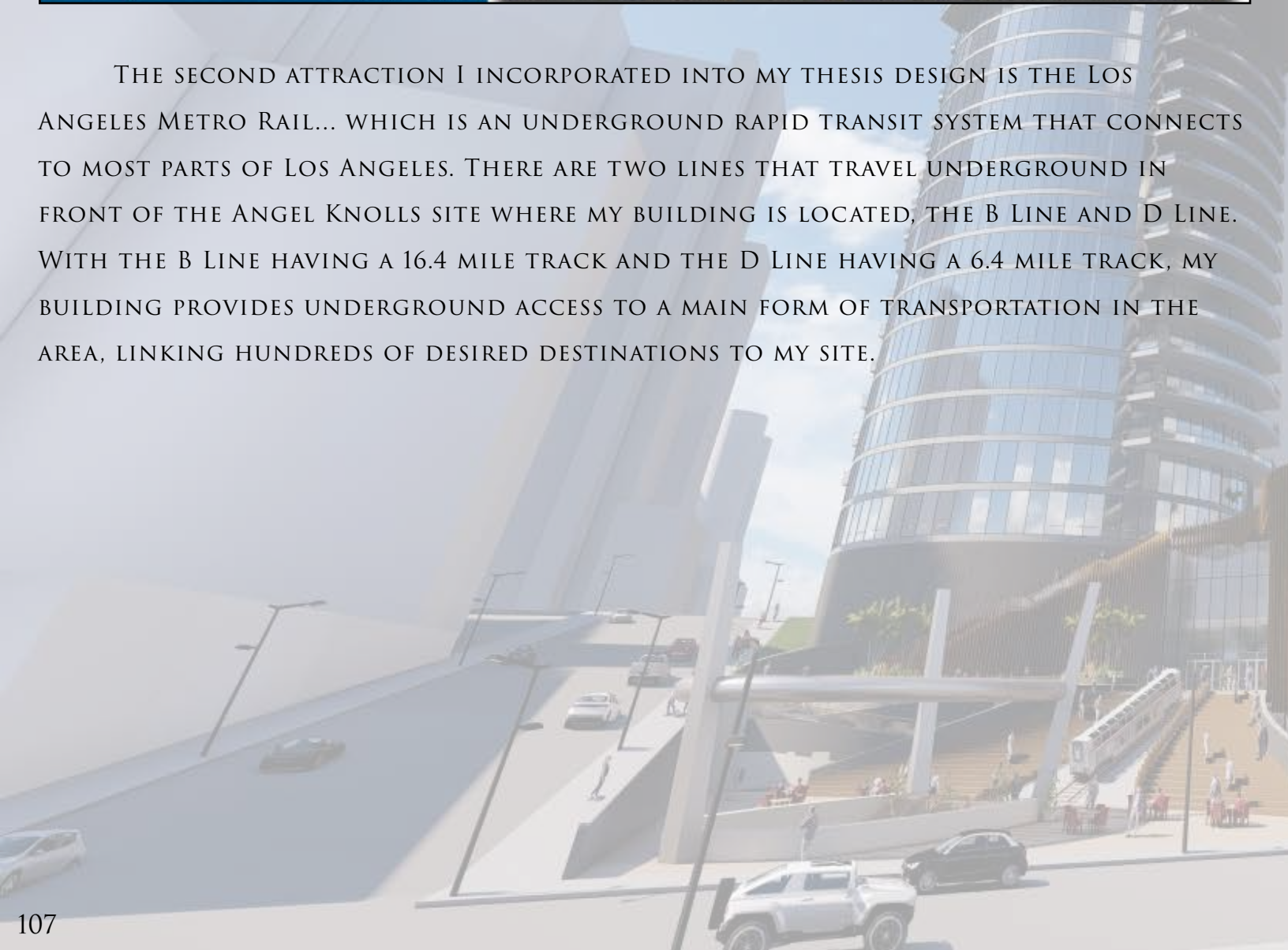
Urban connective plan that is smart, social, and fuses with the community

Urban Environment

- Pershing Square Metro Station & Rail Stop



THE SECOND ATTRACTION I INCORPORATED INTO MY THESIS DESIGN IS THE LOS ANGELES METRO RAIL... WHICH IS AN UNDERGROUND RAPID TRANSIT SYSTEM THAT CONNECTS TO MOST PARTS OF LOS ANGELES. THERE ARE TWO LINES THAT TRAVEL UNDERGROUND IN FRONT OF THE ANGEL KNOLLS SITE WHERE MY BUILDING IS LOCATED, THE B LINE AND D LINE. WITH THE B LINE HAVING A 16.4 MILE TRACK AND THE D LINE HAVING A 6.4 MILE TRACK, MY BUILDING PROVIDES UNDERGROUND ACCESS TO A MAIN FORM OF TRANSPORTATION IN THE AREA, LINKING HUNDREDS OF DESIRED DESTINATIONS TO MY SITE.

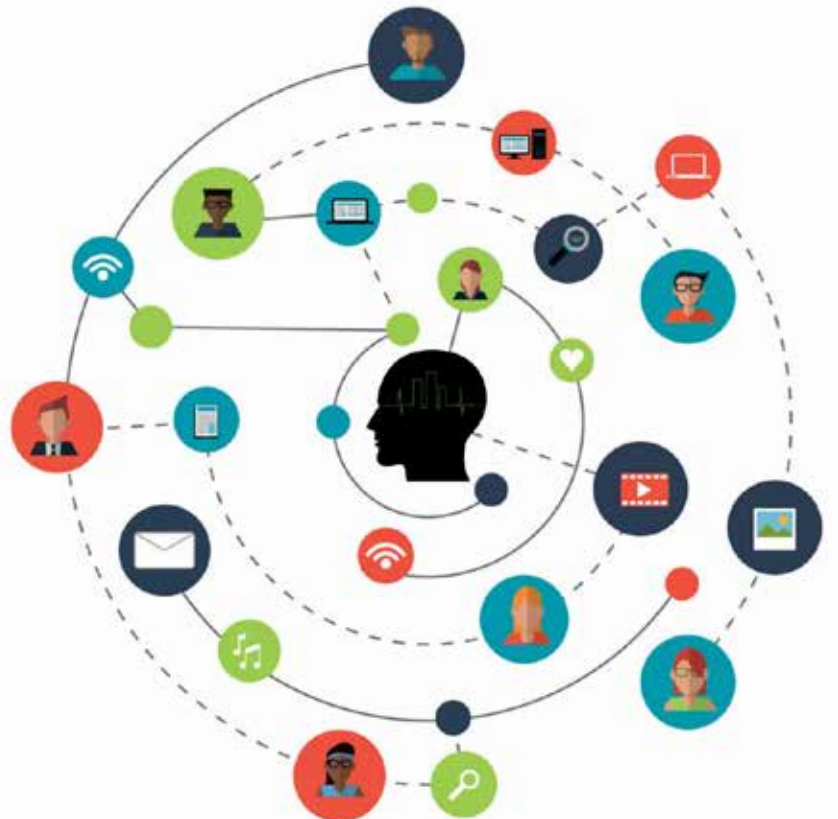


WHEN WORKING ON THE ARCHITECTURAL DESIGN ELEMENT, I LOOKED TO COMPOSE A BUILDING THAT IS VIABLE, DEPENDABLE, AND EQUIPPED WITH THE SPACES NEEDED TO CREATE A SENSE OF COMMUNITY WITHIN AND AROUND THE STRUCTURE AND OVERALL DESIGN A BUILDING THAT CONNECTS MULTIPLE CONTRASTING TYPOLOGIES THROUGH SHARED SPACES.

Design that is viable, dependable, and connected

Architectural Design

- Creating a Sense of Community



Taking components that make a city inspiring and interconnecting them within a singular structure

Physical Spatial Connections

- Interconnecting Components

What makes a city inspiring?

- Building for People
- Open Spaces
- Green Infrastructure



THE BENEFITS OF GREAT PLACES



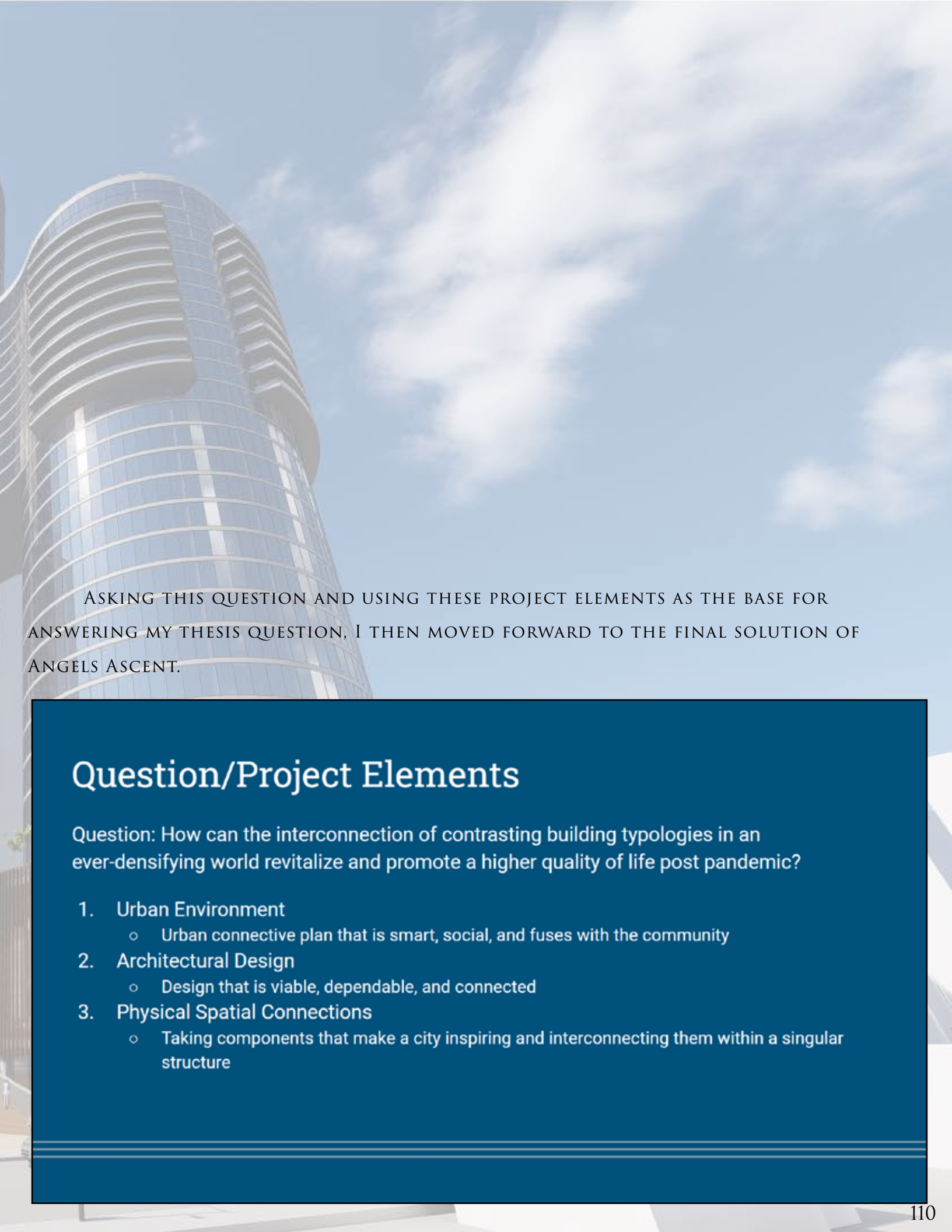
LASTLY, MY THIRD ELEMENT, PHYSICAL SPATIAL CONNECTIONS. THE SUMMARY OF THIS ELEMENT IS BASED ON HOW I TOOK COMPONENTS THAT MAKE THE CITY INSPIRING AND INTERCONNECT THEM WITHIN A SINGULAR STRUCTURE. SO THE QUESTION FOR THIS ELEMENT IS, WHAT MAKES A CITY INSPIRING? THERE ARE HUNDREDS MAYBE THOUSANDS OF COMPONENTS THAT CAN MAKE A CITY INSPIRING, BUT I NARROWED MY LIST DOWN TO EMPHASIZE ON JUST THREE. (1) BUILDING FOR PEOPLE, (2) THE USE OF OPEN SPACES, AND (3) GREEN INFRASTRUCTURE

(1) BUILDING FOR PEOPLE - WHAT I MEAN BY "BUILDING FOR PEOPLE" IS THAT WHEN DESIGNING, THE BUILDING SHOULD SUPPORT THE SPACES AND NOT THE OTHER WAY AROUND.

(2) OPEN SPACES - WHEN IT COMES TO DESIGNING A CITY, OPEN SPACES FOR THE PUBLIC ARE ESSENTIAL TO CREATING A SOCIABLE COMMUNITY. THIS CONCEPT TRACES BACK TO ANY BUILDING OCCUPIED BY PEOPLE. IF THERE IS A LACK IN OPEN SPACE, THERE IS MOST LIKELY NO ROOM FOR SOCIAL INTERACTIONS AND THERE IS NO SENSE OF COMMUNITY.

(3) GREEN INFRASTRUCTURE - MY LAST COMPONENT, GREEN INFRASTRUCTURE, APPLIES TO ECONOMIC, ENVIRONMENTAL, AND QUALITY OF LIFE ELEMENTS. GREEN INFRASTRUCTURE IN A CITY CAN INCLUDE ANYTHING FROM ROOFTOP GARDENS TO GREEN WALLS. BOTH OF WHICH CAN CONTRIBUTE TO A HIGHER QUALITY OF LIFE AND BUILDING PERFORMANCE, WHICH IS THE BASIS OF MY THESIS.

SO, FLAWLESSLY LINKING THESE CONNECTIONS WITHIN ANGELS ASCENT CONCLUDES IN A



ASKING THIS QUESTION AND USING THESE PROJECT ELEMENTS AS THE BASE FOR ANSWERING MY THESIS QUESTION, I THEN MOVED FORWARD TO THE FINAL SOLUTION OF ANGELS ASCENT.

Question/Project Elements

Question: How can the interconnection of contrasting building typologies in an ever-densifying world revitalize and promote a higher quality of life post pandemic?

1. Urban Environment
 - Urban connective plan that is smart, social, and fuses with the community
2. Architectural Design
 - Design that is viable, dependable, and connected
3. Physical Spatial Connections
 - Taking components that make a city inspiring and interconnecting them within a singular structure



Angels Ascent

THROUGH THE DESIGN PROCESS, I WAS ABLE TO COME UP WITH THE SOLUTION FOR ANGELS ASCENT, WHICH IS WHAT I NAMED THE STRUCTURE. SIMILAR TO THE SCOPE OF TIME THAT MY THESIS IS DESIGNED FOR, MY TITLE REPRESENTS BOTH THE PAST AND FUTURE OF THE LOCATION. THE FIRST PART OF THE NAME, ANGEL, COMES FROM THE PAST, WHERE THE ANGELS FLIGHT RAILWAY ORIGINATES AND GIVES MEANING BACK TO THE COMMUNITY AND THE SPACE. THE SECOND PART OF THE NAME, ASCENT, COMES WITH THE FUTURE OF THE LOCATION, WHICH IS WHERE THE CITY OF LOS ANGELES WILL ASCEND TOWARDS THE SKY AS AN INTERCONNECTED COMMUNITY.

AS A PART OF THE CONCEPTUALIZATION PROCESS, I LOOKED TO KEEP A HIGH CONNECTION AND MEANINGFUL RELATIONSHIP WITH THE SITE, AND THAT IS WHERE MY IDEA BEHIND A TWO TOWERED STRUCTURE COMES FROM. PULLING INSPIRATION FROM THE TWO RAIL CARS OF ANGELS FLIGHT, THE TWO TOWERS RESEMBLE SINAI AND OLIVET, WHICH REPRESENT WHAT IT TRULY MEANS TO BE CONNECTED AS A SOCIETY WITHIN A SHARED SPACE.

WITH MOST BUILDINGS IN THE AREA FORMING TO A BASIC SQUARE OR RECTANGLE, I WANTED TO DESIGN A BUILDING THAT DOESNT CONFORM TO THE SURROUNDING BUILDINGS, AND PUSHES ITS OWN UNIQUENESS WHILE USING THE AREA TO ITS FULL CAPACITY. THIS IS WHERE I BEGAN ADVANCING TOWARDS A CYLINDRICAL DESIGN FOR MY FINAL SOLUTION.

Conceptualization: Sinai & Olivet

Elevations/Perspectives



South Elevation

East Elevation

West Elevation

North Elevation

Program/Users

Primary Program Typologies:

1. Parking/Transportation
2. Public Spaces
3. Shopping
4. Education
5. Office
6. Fitness
7. Housing

User Groups:

- Los Angeles community
- Students and Educators
- General Public

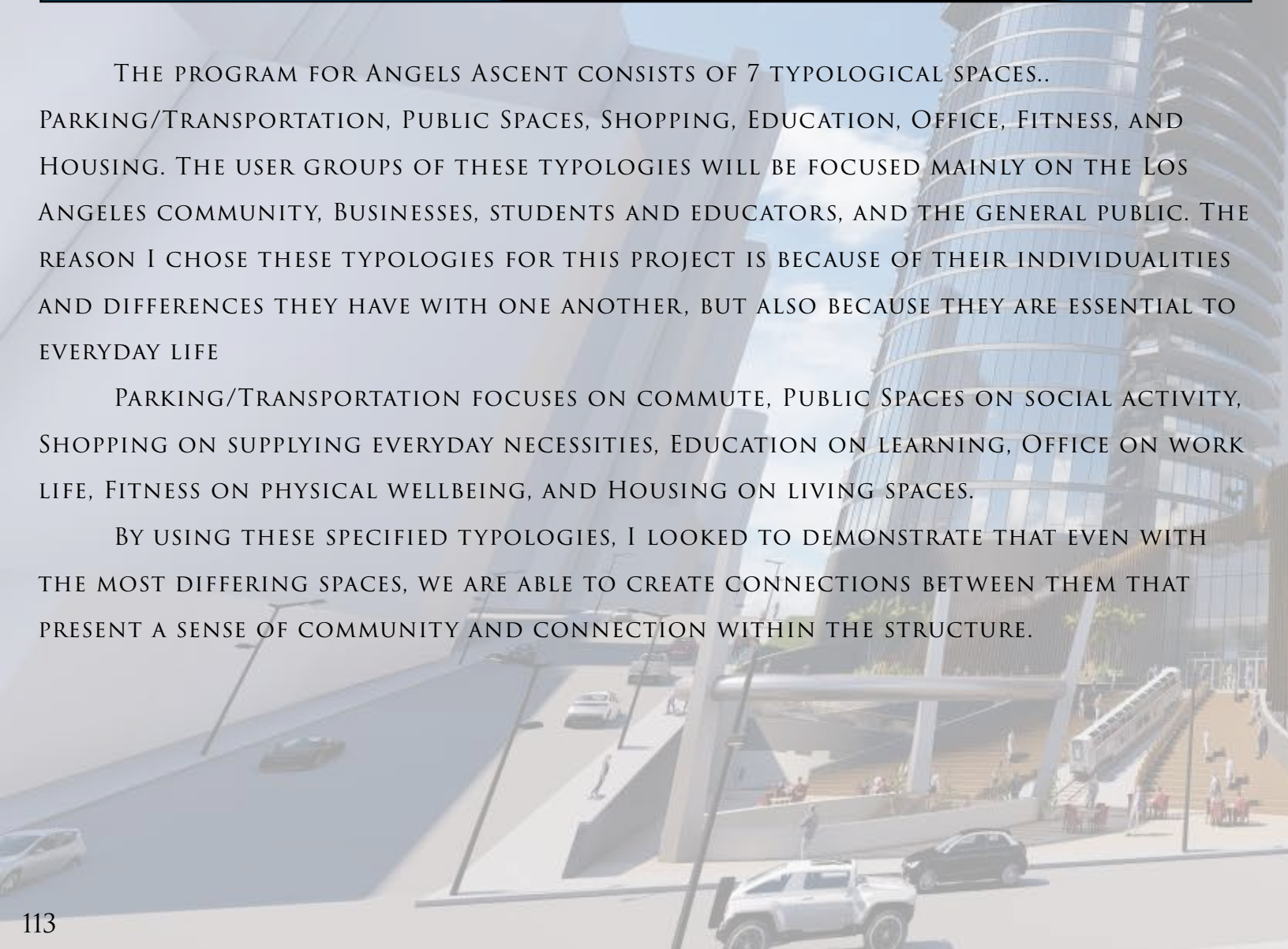


THE PROGRAM FOR ANGELS ASCENT CONSISTS OF 7 TYPOLOGICAL SPACES..

PARKING/TRANSPORTATION, PUBLIC SPACES, SHOPPING, EDUCATION, OFFICE, FITNESS, AND HOUSING. THE USER GROUPS OF THESE TYPOLOGIES WILL BE FOCUSED MAINLY ON THE LOS ANGELES COMMUNITY, BUSINESSES, STUDENTS AND EDUCATORS, AND THE GENERAL PUBLIC. THE REASON I CHOSE THESE TYPOLOGIES FOR THIS PROJECT IS BECAUSE OF THEIR INDIVIDUALITIES AND DIFFERENCES THEY HAVE WITH ONE ANOTHER, BUT ALSO BECAUSE THEY ARE ESSENTIAL TO EVERYDAY LIFE

PARKING/TRANSPORTATION FOCUSES ON COMMUTE, PUBLIC SPACES ON SOCIAL ACTIVITY, SHOPPING ON SUPPLYING EVERYDAY NECESSITIES, EDUCATION ON LEARNING, OFFICE ON WORK LIFE, FITNESS ON PHYSICAL WELLBEING, AND HOUSING ON LIVING SPACES.

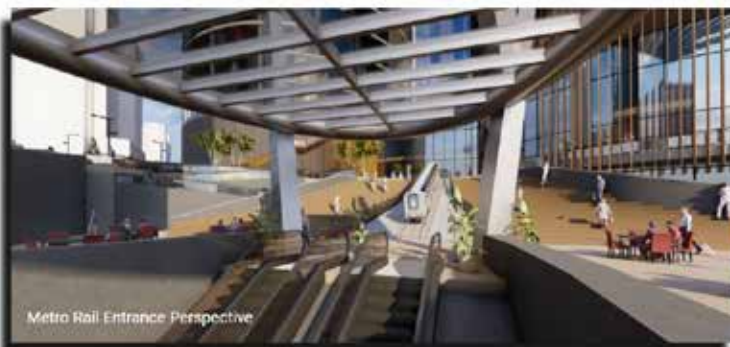
BY USING THESE SPECIFIED TYPOLOGIES, I LOOKED TO DEMONSTRATE THAT EVEN WITH THE MOST DIFFERING SPACES, WE ARE ABLE TO CREATE CONNECTIONS BETWEEN THEM THAT PRESENT A SENSE OF COMMUNITY AND CONNECTION WITHIN THE STRUCTURE.



LIKE I MENTIONED BEFORE, ONE PART OF THE URBAN ENVIRONMENT THAT IS INCORPORATED IN MY DESIGN IS THE LOS ANGELES METRO RAIL WHICH MAKES COMMUTING TO AND FROM THE SITE MUCH EASIER. AND FOR THOSE THAT PREFER TO DRIVE PERSONAL VEHICLES, I INCORPORATED A 14 LEVEL UNDERGROUND PARKING GARAGE ON SITE FOR PUBLIC USE.

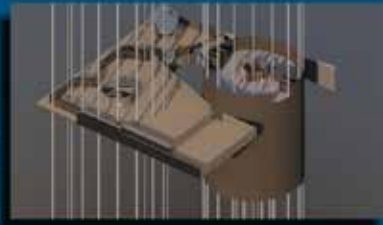
Parking/Transportation - Commute

Rail Line Connection and Parking Garage



Parking/Transportation Features:

- 12 Floor parking garage
 - 408 parking spaces
- Los Angeles Metro Rail
 - B line (16.4 miles)
 - D line (6.4 miles)



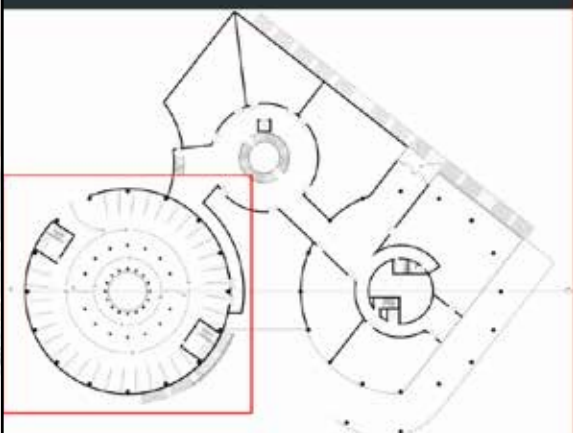
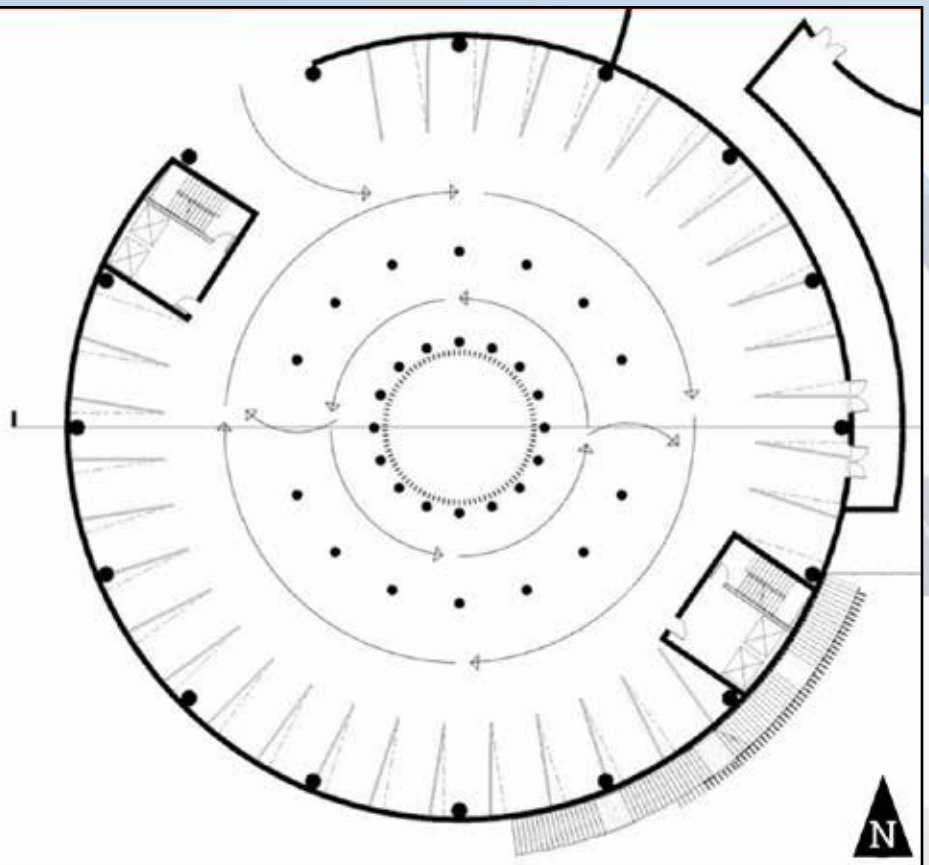
THE PARKING GARAGE CONSISTS OF 408 PARKING SPACES ACCESSIBLE FOR THE PUBLIC AT ALL HOURS OF THE DAY AND NIGHT. THE LOS ANGELES METRO RAIL RUNS FROM 4AM - 12:30AM EVERY DAY OF THE WEEK, WITH TWO RAIL LINES CONNECTING A LARGE PORTION OF LOS ANGELES TO THE SITE. ACCESS TO THE RAIL LINE IS LOCATED AT STREET LEVEL ON THE SOUTH SIDE OF THE BUILDING.



EACH LEVEL OF THE GARAGE HAS 34 PARKING SPACES, AND ACCESS TO ELEVATORS AND STAIRCASES THAT WILL BRING YOU UP TO THE GROUND FLOOR FROM YOUR VEHICLE, AND VICE VERSA. THE CIRCULAR DESIGN OF THE GARAGE MAKES PARKING EASY AND SIMPLE FOR PULLING IN AND OUT OF EACH PARKING SPACE.

Parking Garage Floor Plan

- 34 Parking Spaces per Level
- Elevator Access
- Staircase Access
- Circular Floor Design



Public Spaces - Social Activity

Public Plaza and Lobbies



LIKE I MENTIONED BEFORE, SPATIAL CONNECTIONS IN ANY DESIGN ARE ESSENTIAL TO CREATING A SOCIABLE COMMUNITY. IN MY PUBLIC PLAZA DESIGN PROCESS, I LOOKED TO CREATE AN AREA THAT PROMOTES SAFE SOCIAL INTERACTIONS, ENCOURAGES WALKING, AND OVERALL DEFINES A SENSE OF A HEALTHY COMMUNITY.



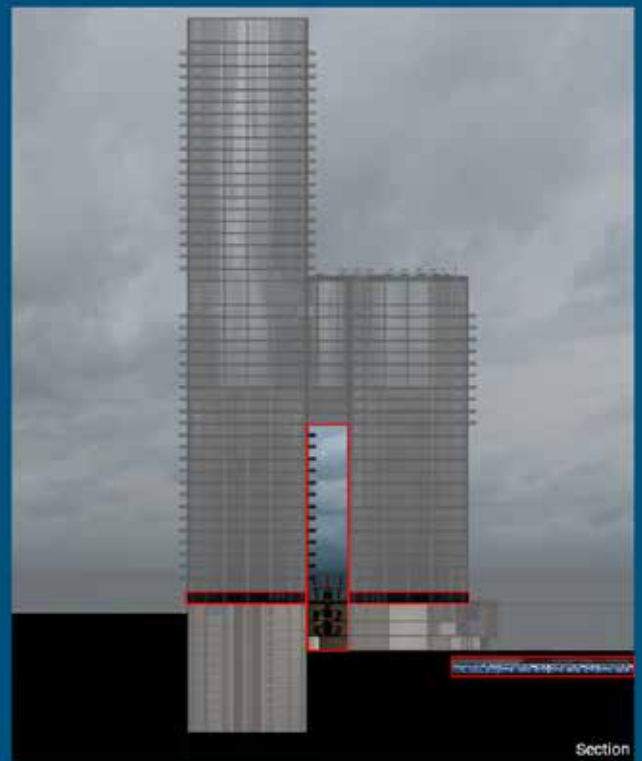
BY DEFINITION, A PLAZA IS A PUBLIC SPACE IN A CITY OR TOWN. AND THIS IS WHERE PEOPLE ARE ABLE TO RELAX AND SOCIALIZE AND BASICALLY DO AS THEY PLEASE. AND THAT IS WHAT MAKES IT THE MAIN SOCIAL COMPONENT OF THE TYPOLOGIES.

THE FEATURES OF MY PLAZA CONSIST OF PUBLICLY ACCESSIBLE OPEN SPACES, AN ANGELS FLIGHT MONUMENT, AN ELEVATED TERRACE, LOBBIES FOR BOTH TOWERS, AND LIKE I MENTIONED BEFORE, ACCESS TO THE METRO RAIL IS AT THE BASE OF THE PLAZA.

THESE FEATURES ARE DESIGNED TO ENCOURAGE WALKING AND TO ENJOY THE OUTDOORS IN A GREENERY FILLED PUBLIC SETTING

Plaza Features:

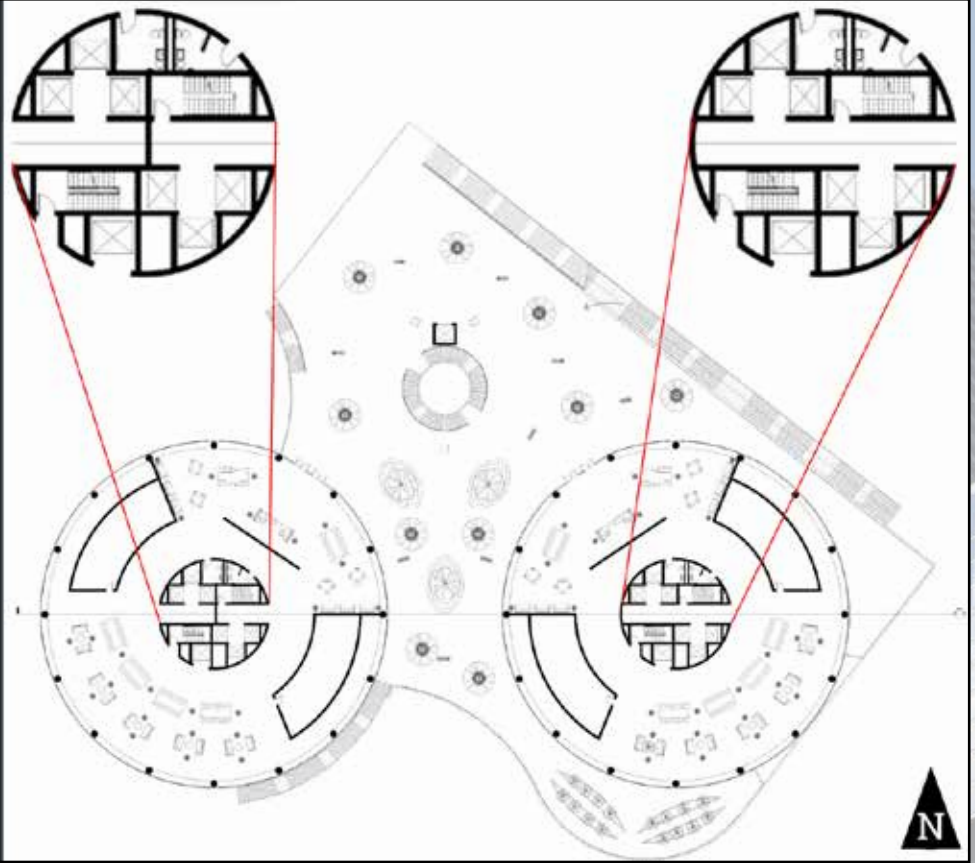
- Publicly Accessible Open Space
 - Encourages Walking
- Angels Flight Monument
 - Honors Angels Flight
- Elevated Terrace
 - Outdoor Seating
- Lobbies
 - Office/Fitness/Housing
 - Education/Education Housing
- Rail Line Access



Section

Plaza Floor Plan

- Outdoor Plaza
 - Vegetation Planters
 - Seating
 - Circular Atrium Staircase
 - Angels Flight Staircase
- Lobbies
 - Reception
 - Lounge
 - Mail Room



THE MAIN OUTDOOR PLAZA PLAN INCLUDES PLENTY OF VEGETATION AND SEATING TO GO AROUND FOR PUBLIC ACCESS. AND BOTH LOBBY FLOORS CAN BE ACCESSED FROM THE NORTH SIDE OF THE TOWERS. EACH LOBBY FLOOR IS IDENTICAL IN SPATIAL ORGANIZATION AS THEY BOTH NEED A RECEPTION AREA FOR GUESTS, LOUNGE SPACE, MAIL ROOMS, AND ADDITIONAL SPACES FOR SPECIFIC NEEDS THAT TOWERS TYPOLOGIES REQUIRES.

BOTH CORES OF THE TOWERS INCLUDE 6 ELEVATORS AND TWO STAIRCASES. THE ELEVATORS IN THE RIGHT LOBBY ARE PROVIDED STRICTLY FOR EDUCATION TOWER USES, WHERE 3 OF THE ELEVATORS IN THE LEFT LOBBY ARE FOR HOUSING USES ONLY AND THE OTHER THREE ARE SEPARATED FOR OFFICE USE ONLY TO PROVIDE MORE SECURITY FOR EACH INDIVIDUAL TYPOLOGY IN THE BUILDING.

THE SHOPPING TYPOLOGY WAS INCLUDED TO PROVIDED ALL PHYSICAL NECESSITIES LIKE FOOD, CLOTHING, AND ANYTHING ELSE YOU WOULD NEED FROM A CONVENIENCE STORE.

Shopping - Everyday Supplies

Retail and Grocery Store



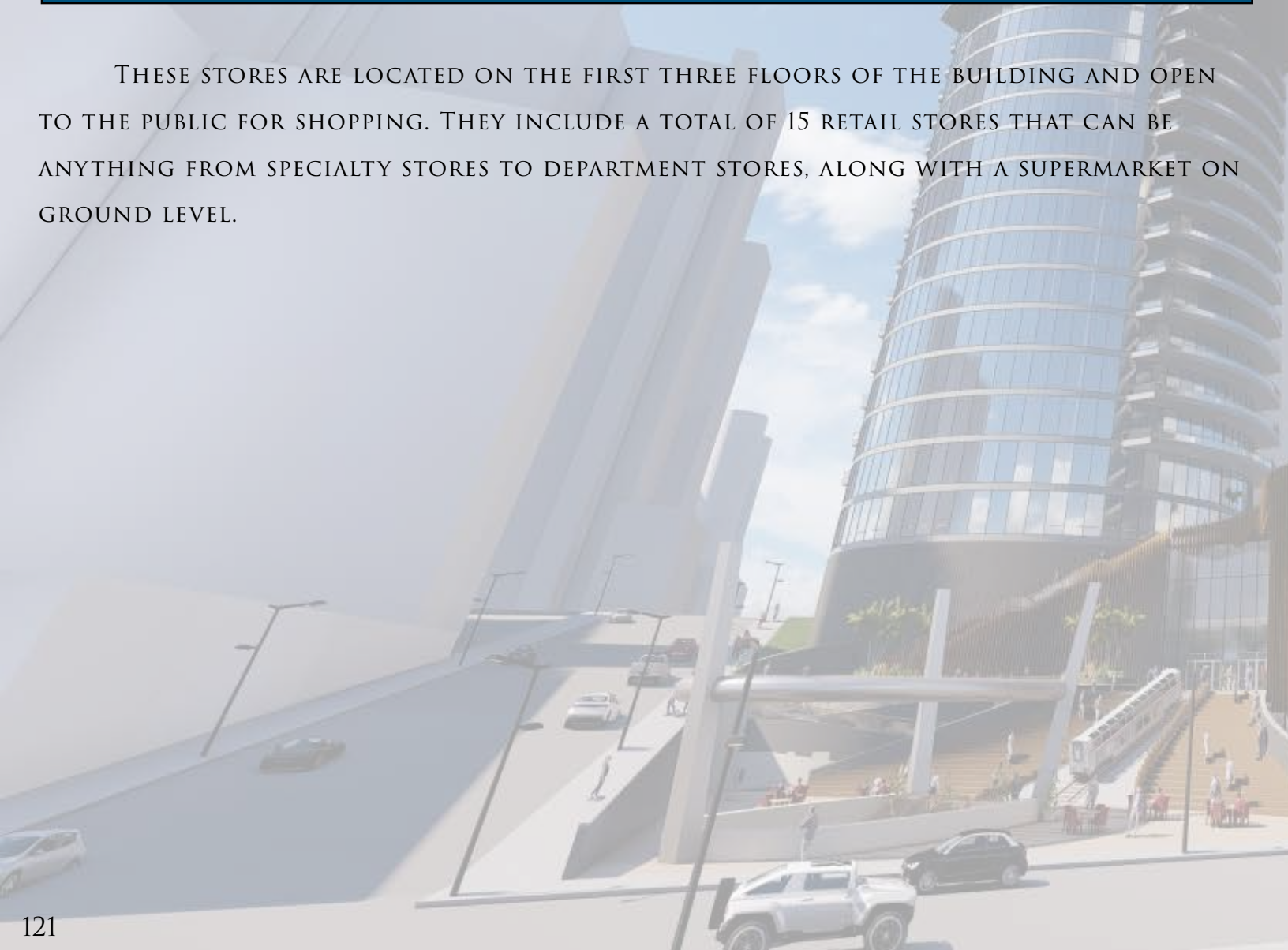
Shopping Stores:

Three Floors

- 15 Retail Stores
 - Specialty Stores
 - Department Stores
- Grocery Store
 - Supermarket



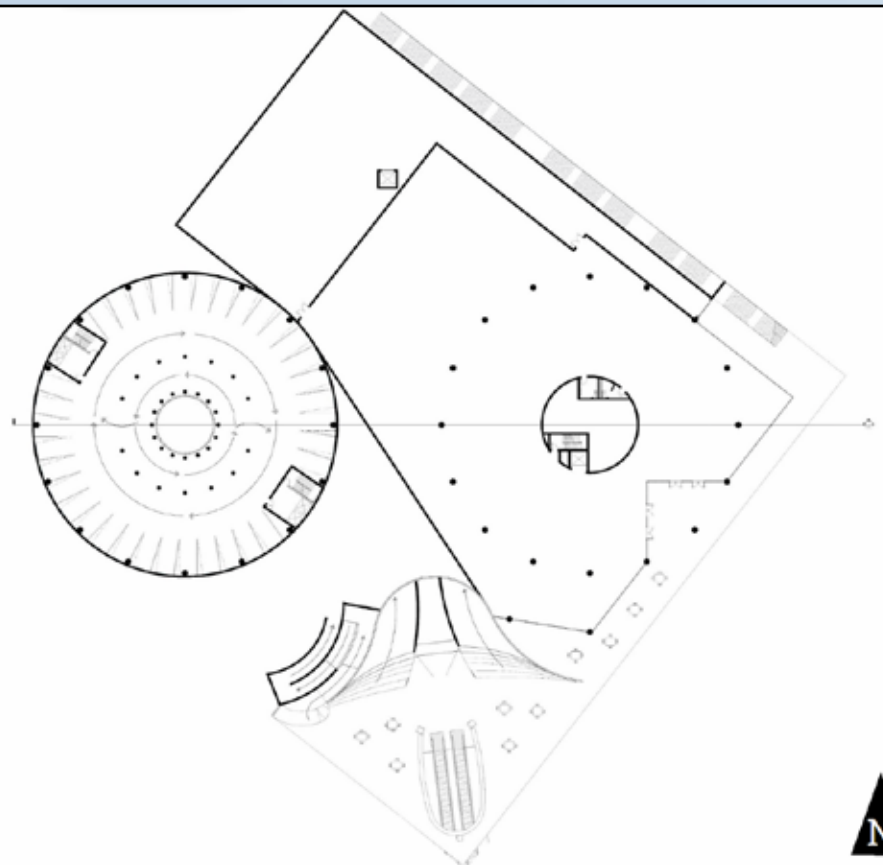
THESE STORES ARE LOCATED ON THE FIRST THREE FLOORS OF THE BUILDING AND OPEN TO THE PUBLIC FOR SHOPPING. THEY INCLUDE A TOTAL OF 15 RETAIL STORES THAT CAN BE ANYTHING FROM SPECIALTY STORES TO DEPARTMENT STORES, ALONG WITH A SUPERMARKET ON GROUND LEVEL.



THE GROCERY STORE INCLUDES ALL THE BASICS THAT A SUPERMARKET WOULD INCLUDE LIKE A PRODUCT FLOOR AND PRODUCT STORAGE ALONG WITH A LOADING DOCK ON THE NORTH EAST SIDE OF THE STORE NEXT TO THE ANGELS FLIGHT STAIRWAY. YOU CAN ACCESS THE STORE FROM THE STREET LEVEL ON THE SOUTH EAST SIDE OF THE BUILDING.

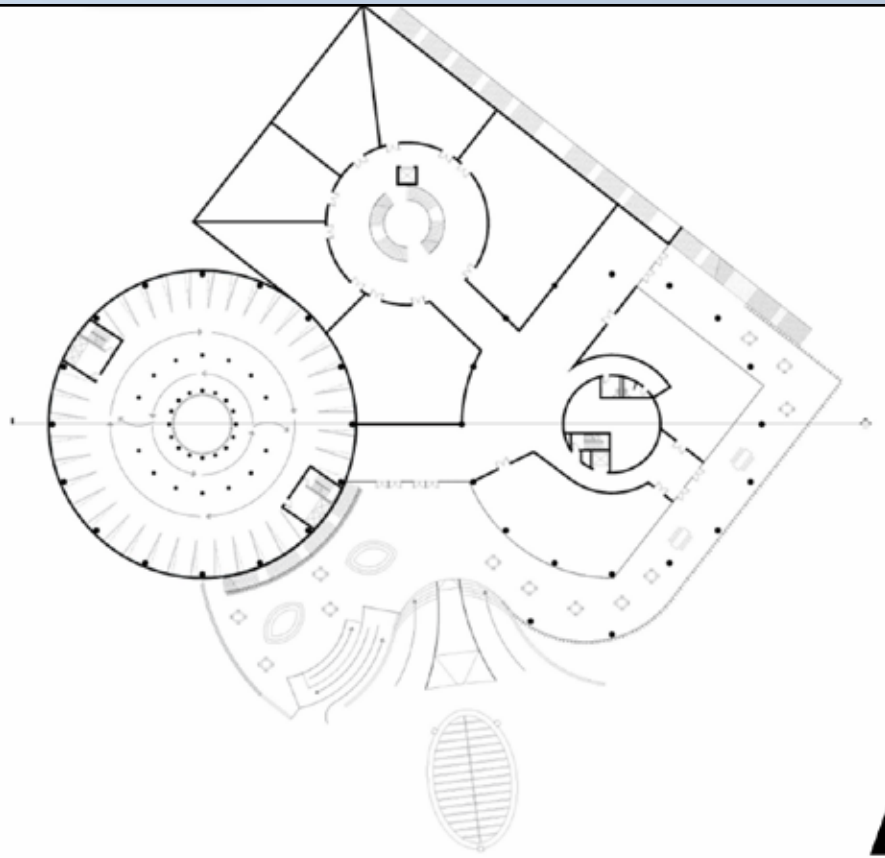
Grocery Store - Floor Plan

- Product Floor
- Product Storage
- Restrooms
- Loading Dock
- Angels Flight Staircase

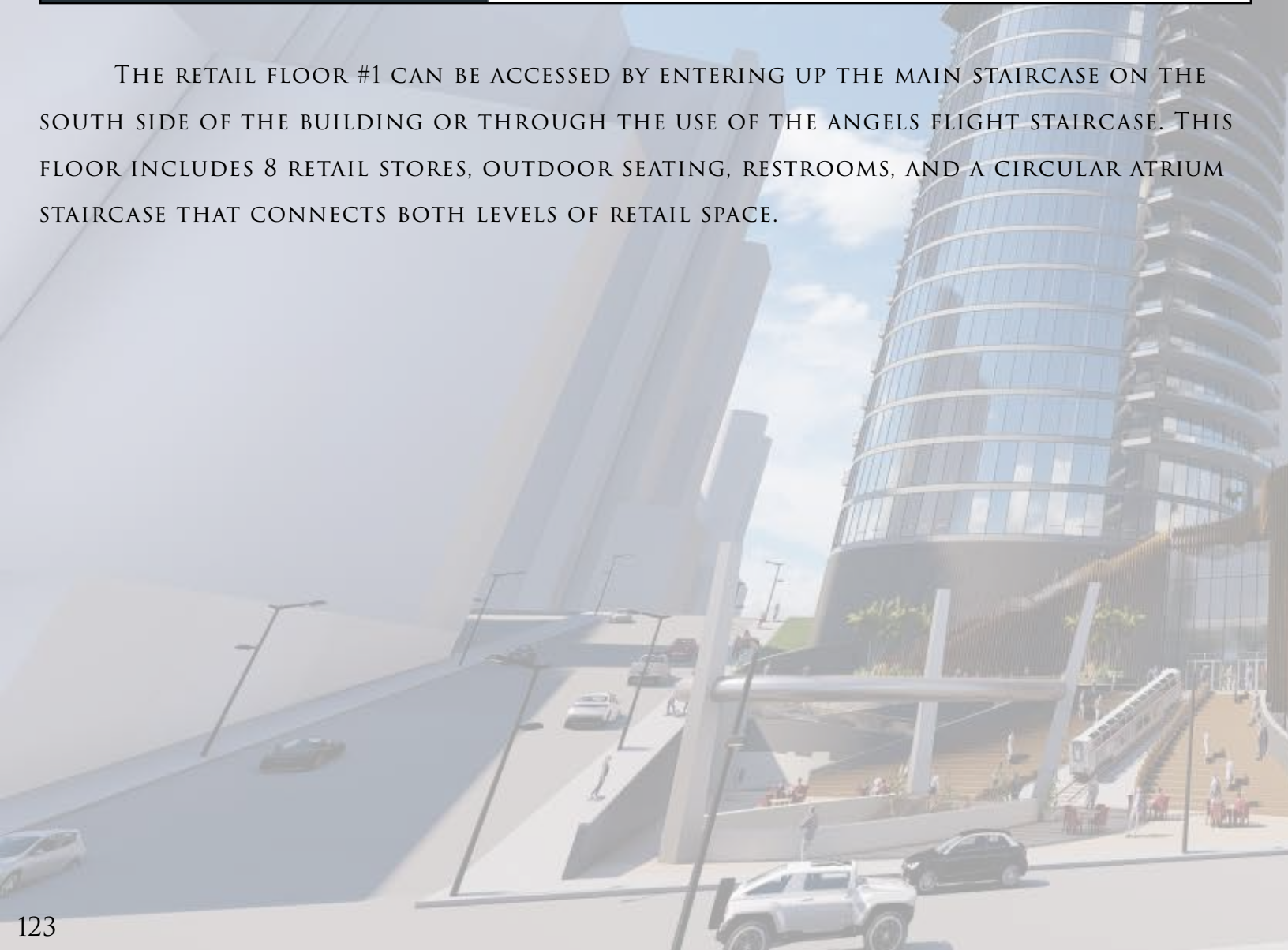


Retail - Floor Plan #1

- Main Plaza Entrance
- Eight Stores
- Circular Atrium Staircase
- Outdoor Seating
- Restrooms
- Angels Flight Staircase



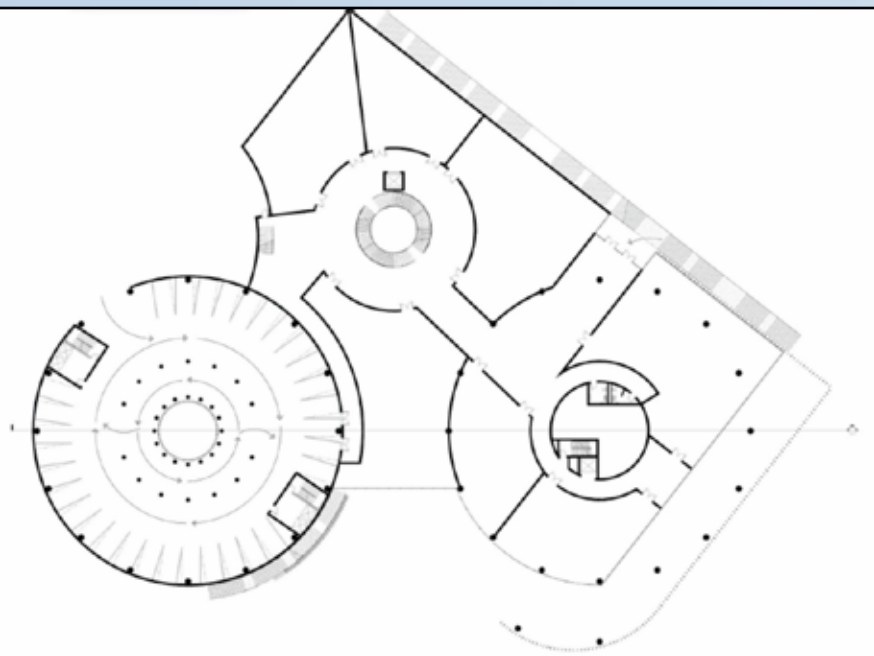
THE RETAIL FLOOR #1 CAN BE ACCESSED BY ENTERING UP THE MAIN STAIRCASE ON THE SOUTH SIDE OF THE BUILDING OR THROUGH THE USE OF THE ANGELS FLIGHT STAIRCASE. THIS FLOOR INCLUDES 8 RETAIL STORES, OUTDOOR SEATING, RESTROOMS, AND A CIRCULAR ATRIUM STAIRCASE THAT CONNECTS BOTH LEVELS OF RETAIL SPACE.



THE SECOND RETAIL FLOOR CAN ALSO BE ACCESSED FROM THE ANGELS FLIGHT STAIRCASE OR FROM THE CIRCULAR ATRIUM STAIRCASE IN THE MIDDLE OF THE FLOOR. THE LAYOUT FOR THIS FLOOR CHANGES A LITTLE BIT TO ACCOMMODATE FOR LESS SPACE OUTDOORS AND MORE SPACE INDOORS, WHERE THERE ARE NOW 7 RETAIL STORES WITH A LARGER FLOOR AREA.

Retail - Floor Plan #2

- Side Stair Entrance
- Seven Stores
- Circular Atrium Staircase
- Restrooms
- Angels Flight Staircase



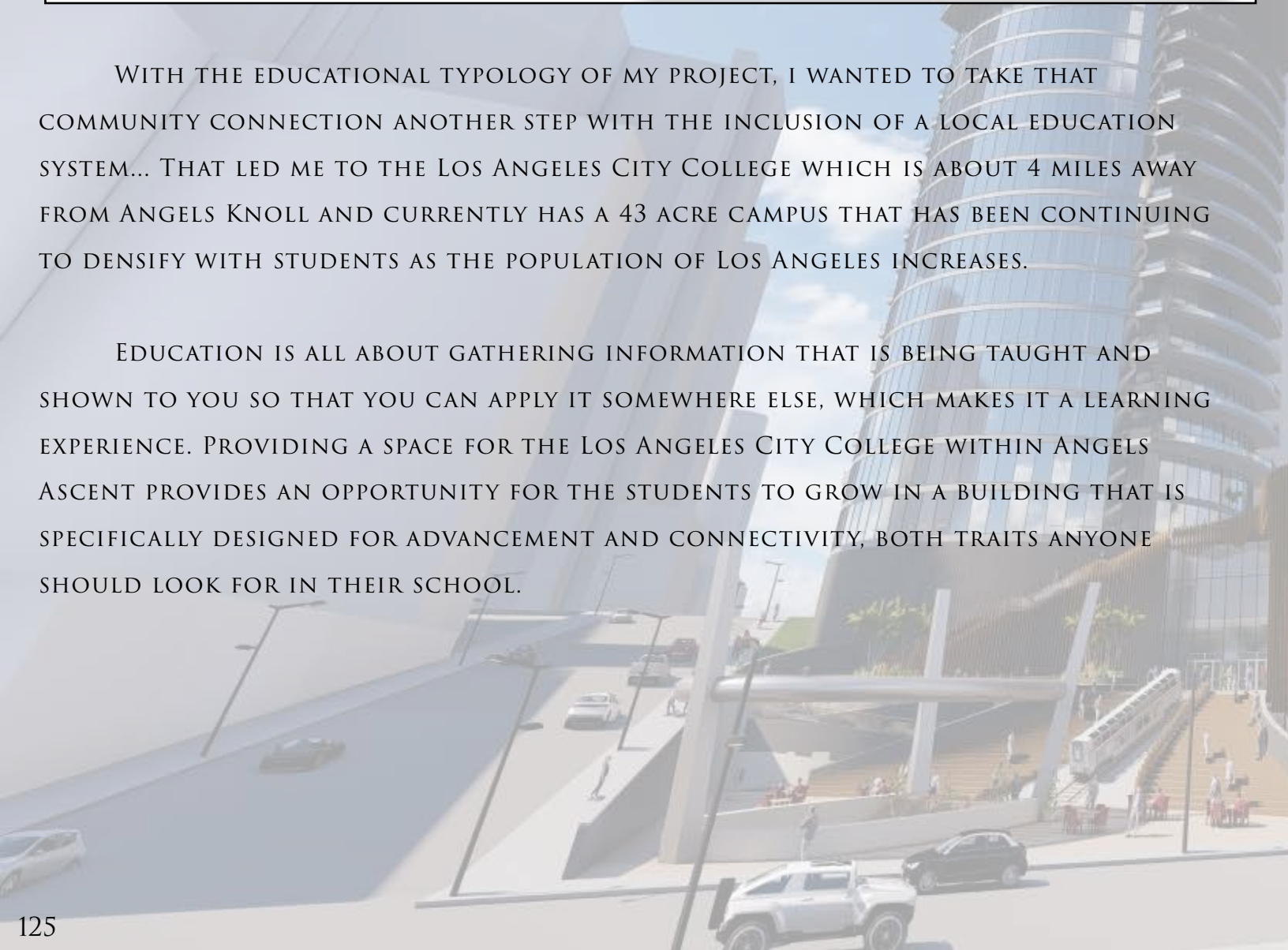
Education - Learning

Extension for Los Angeles City College



WITH THE EDUCATIONAL TYPOLOGY OF MY PROJECT, I WANTED TO TAKE THAT COMMUNITY CONNECTION ANOTHER STEP WITH THE INCLUSION OF A LOCAL EDUCATION SYSTEM... THAT LED ME TO THE LOS ANGELES CITY COLLEGE WHICH IS ABOUT 4 MILES AWAY FROM ANGELS KNOLL AND CURRENTLY HAS A 43 ACRE CAMPUS THAT HAS BEEN CONTINUING TO DENSIFY WITH STUDENTS AS THE POPULATION OF LOS ANGELES INCREASES.

EDUCATION IS ALL ABOUT GATHERING INFORMATION THAT IS BEING TAUGHT AND SHOWN TO YOU SO THAT YOU CAN APPLY IT SOMEWHERE ELSE, WHICH MAKES IT A LEARNING EXPERIENCE. PROVIDING A SPACE FOR THE LOS ANGELES CITY COLLEGE WITHIN ANGELS ASCENT PROVIDES AN OPPORTUNITY FOR THE STUDENTS TO GROW IN A BUILDING THAT IS SPECIFICALLY DESIGNED FOR ADVANCEMENT AND CONNECTIVITY, BOTH TRAITS ANYONE SHOULD LOOK FOR IN THEIR SCHOOL.



THE LOS ANGELES METRO RAIL IS THE PHYSICAL CONNECTION BETWEEN EDUCATION AND ANGELS ASCENT. WITH ONLY A 30 MIN COMMUTE, STUDENTS ARE ABLE TO GO TO OR FROM THEIR MAIN CAMPUS RAIL LINE CONNECTION AT VERMONT/SANTA MONICA, TO CONNECT WITH THEIR EXTENDED CAMPUS AT ANGELS ASCENT, ANYTIME FROM 4AM TILL 12:30 AM, EVERYDAY OF THE WEEK, MAKING THE STRESS OF COMMUTING BACK AND FORTH MUCH EASIER.

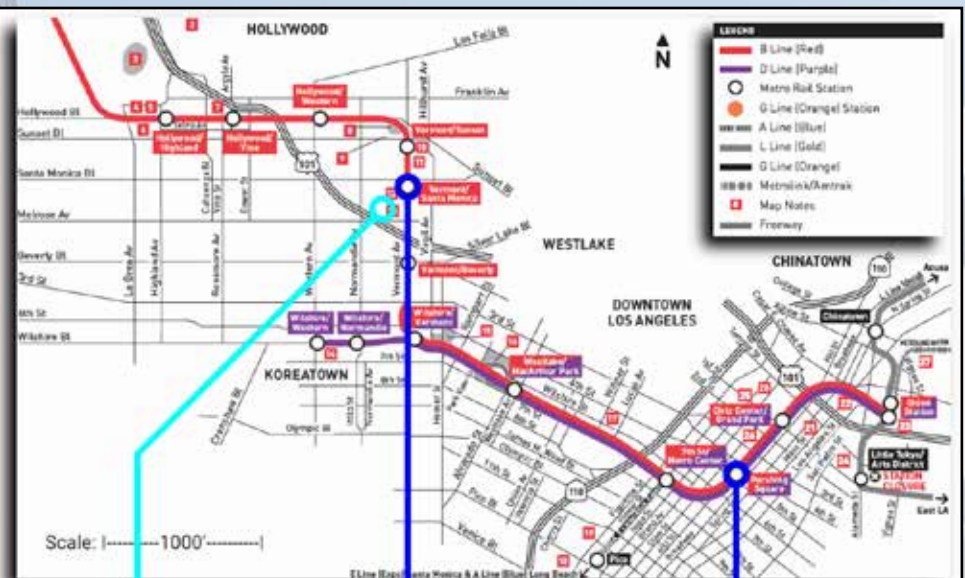
Rail Line Connection

A Connection to Education

B Line (Red) Schedule - Weekday/Weekend

Vermont/Santa Monica → Angels Ascent

- 30 minute Commute
- Schedule: 4:10 am - 12:30 am



Los Angeles City College

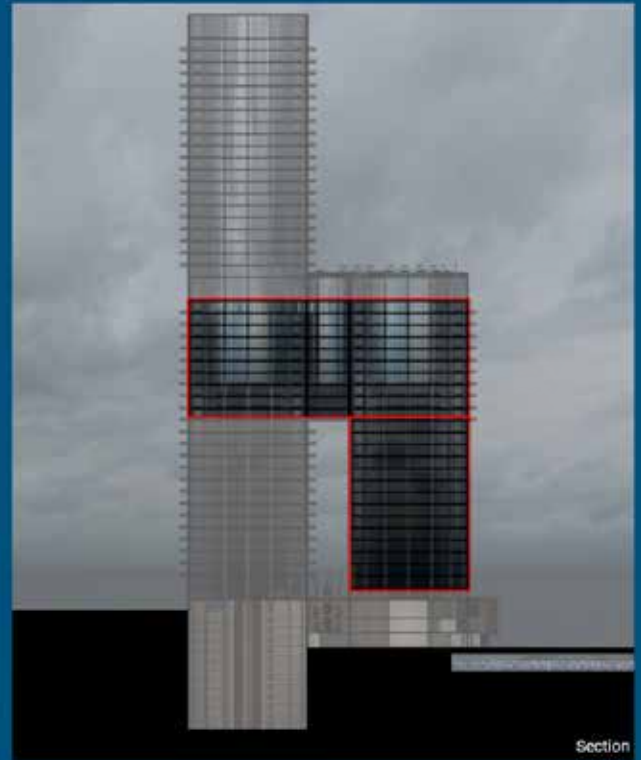
Vermont/Santa Monica Connection

Angels Ascent Connection

School Facilities:

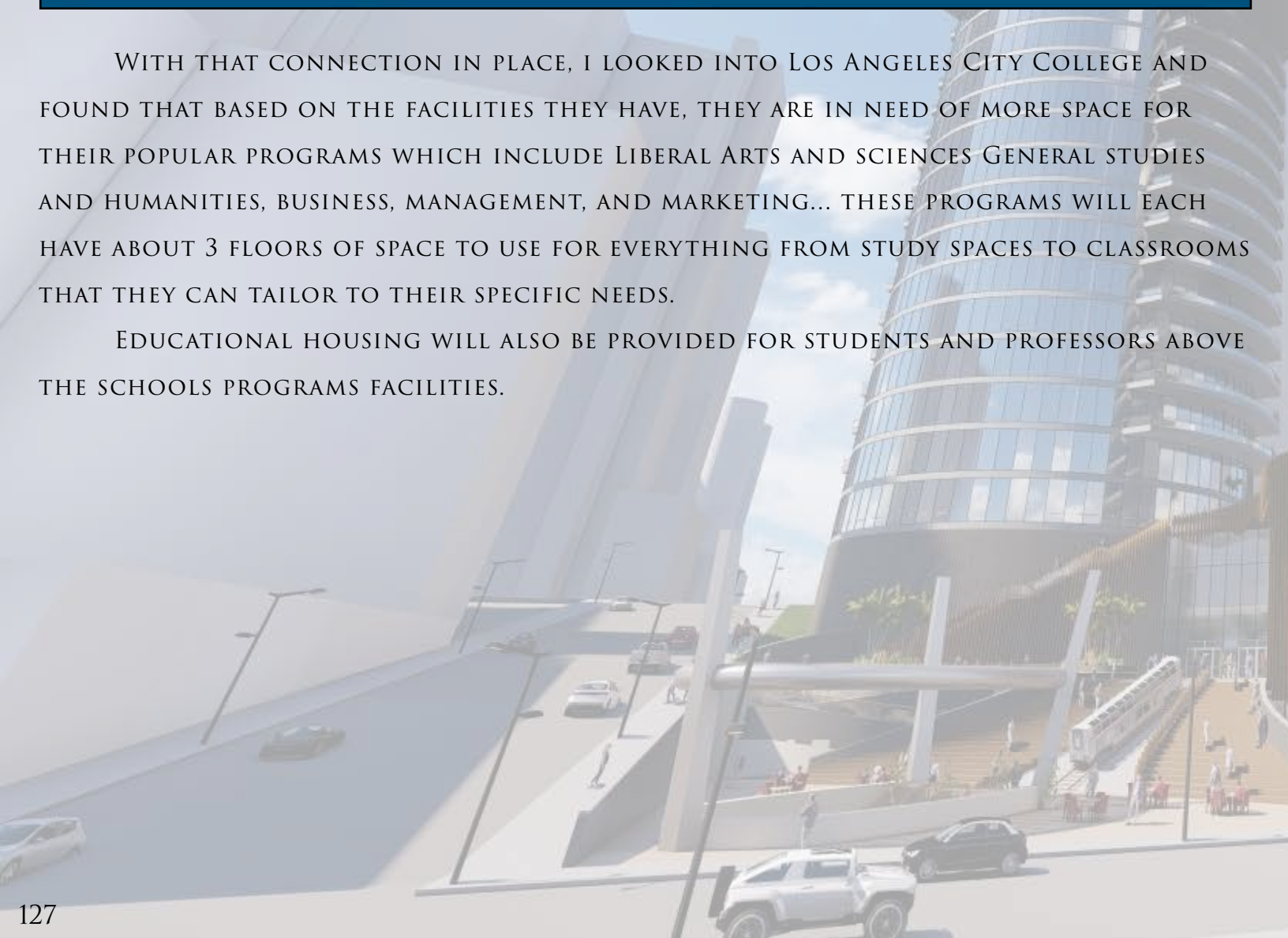
Floors 5-28

- Program Facilities
 - Liberal Arts and Sciences
 - General Studies and Humanities
 - Business
 - Management
 - Marketing
- Education Housing



WITH THAT CONNECTION IN PLACE, I LOOKED INTO LOS ANGELES CITY COLLEGE AND FOUND THAT BASED ON THE FACILITIES THEY HAVE, THEY ARE IN NEED OF MORE SPACE FOR THEIR POPULAR PROGRAMS WHICH INCLUDE LIBERAL ARTS AND SCIENCES GENERAL STUDIES AND HUMANITIES, BUSINESS, MANAGEMENT, AND MARKETING... THESE PROGRAMS WILL EACH HAVE ABOUT 3 FLOORS OF SPACE TO USE FOR EVERYTHING FROM STUDY SPACES TO CLASSROOMS THAT THEY CAN TAILOR TO THEIR SPECIFIC NEEDS.

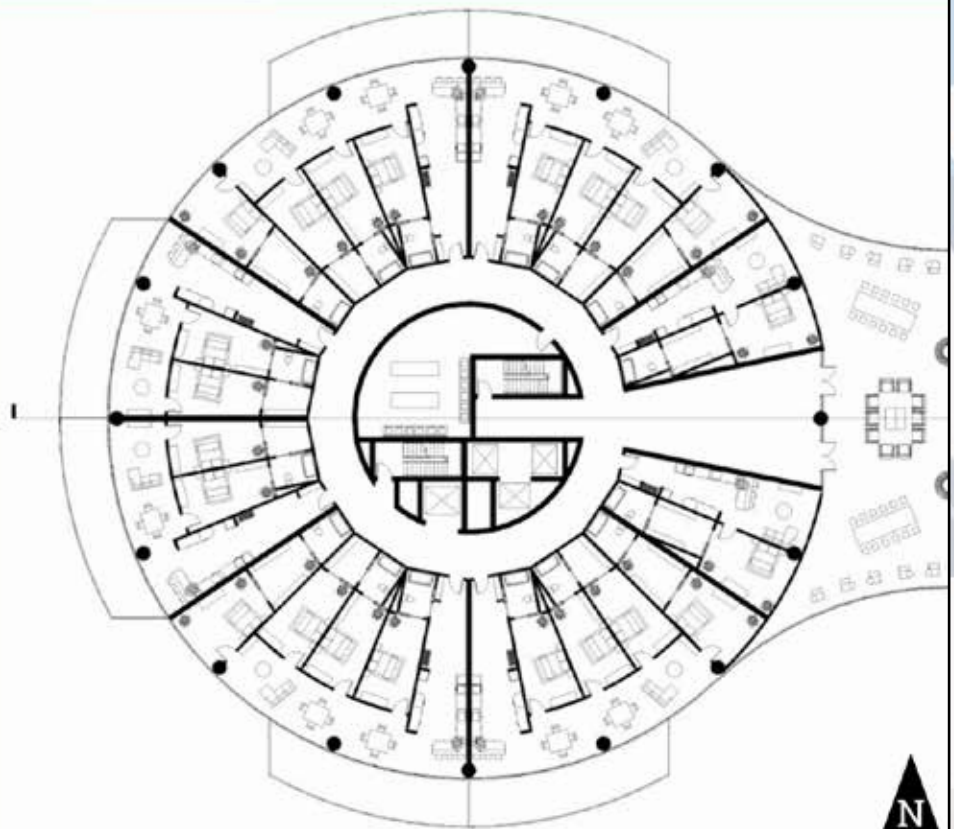
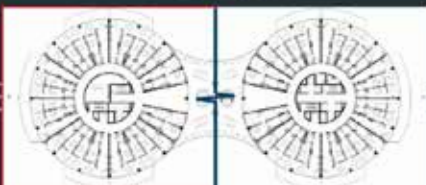
EDUCATIONAL HOUSING WILL ALSO BE PROVIDED FOR STUDENTS AND PROFESSORS ABOVE THE SCHOOLS PROGRAMS FACILITIES.



ON THE EDUCATION HOUSING FLOOR, THERE ARE MULTIPLE SIZED ROOMS TO ACCOMMODATE FOR BOTH STUDENTS AND PROFESSORS. THESE ROOMS RANGE FROM 4 BED 3 BATH TO SINGLE BED SINGLE BATH AND ALL INCLUDE A KITCHEN, LIVING ROOM, DINING ROOM, BEDROOMS, BALCONY SPACE, WALK IN CLOSET, AND BATHROOMS. EACH FLOOR SHARES A LOUNGE AREA FOR STUDYING AND SOCIAL GATHERING ALONG WITH A LAUNDRY ROOM AND TRASH SHOOT ON THE SAME FLOOR FOR EASY ACCESS.

Education - Floor Plan

- (8) Four Bed Three Bath -
- (4) Two Bed One Bath -
- (4) One Bed One Bath
 - Kitchen
 - Living Room
 - Dining Room
 - Bedrooms
 - Balcony
 - Walk-in Closet
 - Bathrooms
- Shared Spaces
 - Lounge
 - Laundry Room
 - Trash Shoot



Office - Work Life

Business Space



IN MY OFFICE DESIGN, I LOOKED TO CREATE AREAS THAT PROVIDE OPEN SPACES FOR INTERACTIONS WITH COWORKERS WHILE ALSO CREATING SPACES FOR PRIVACY WHEN NEEDED.

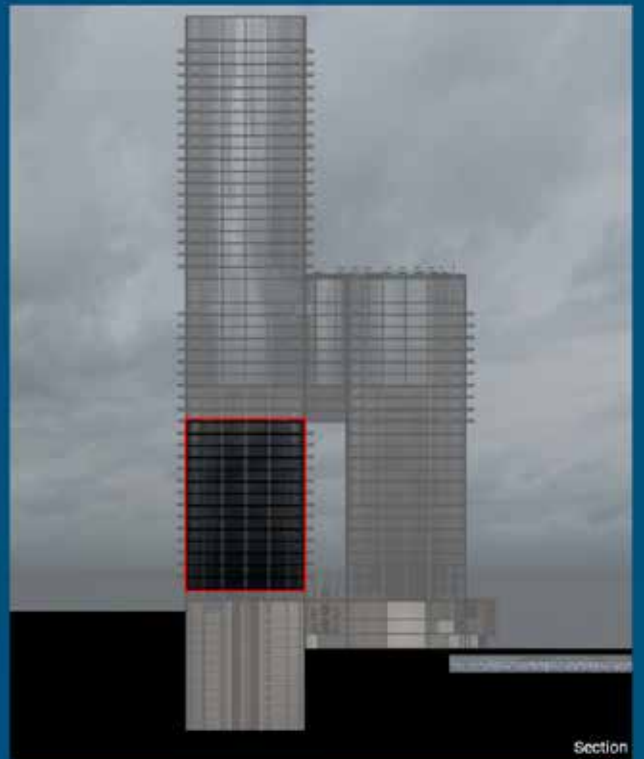
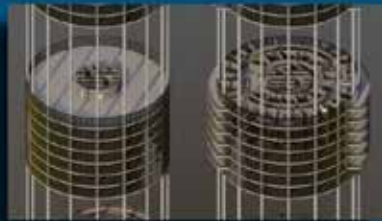


THERE ARE A TOTAL OF 14 FLOORS USED AS OFFICE FACILITIES THAT PROVIDE PRIVATE SMALL, LARGE, AND EXECUTIVE OFFICES, CONFERENCE ROOMS, RECEPTION AREAS, BALCONY SPACE, KITCHEN/BREAKOUT AREAS, STORAGE ROOMS, AND RESTROOMS ON EACH FLOOR.

Office Facilities:

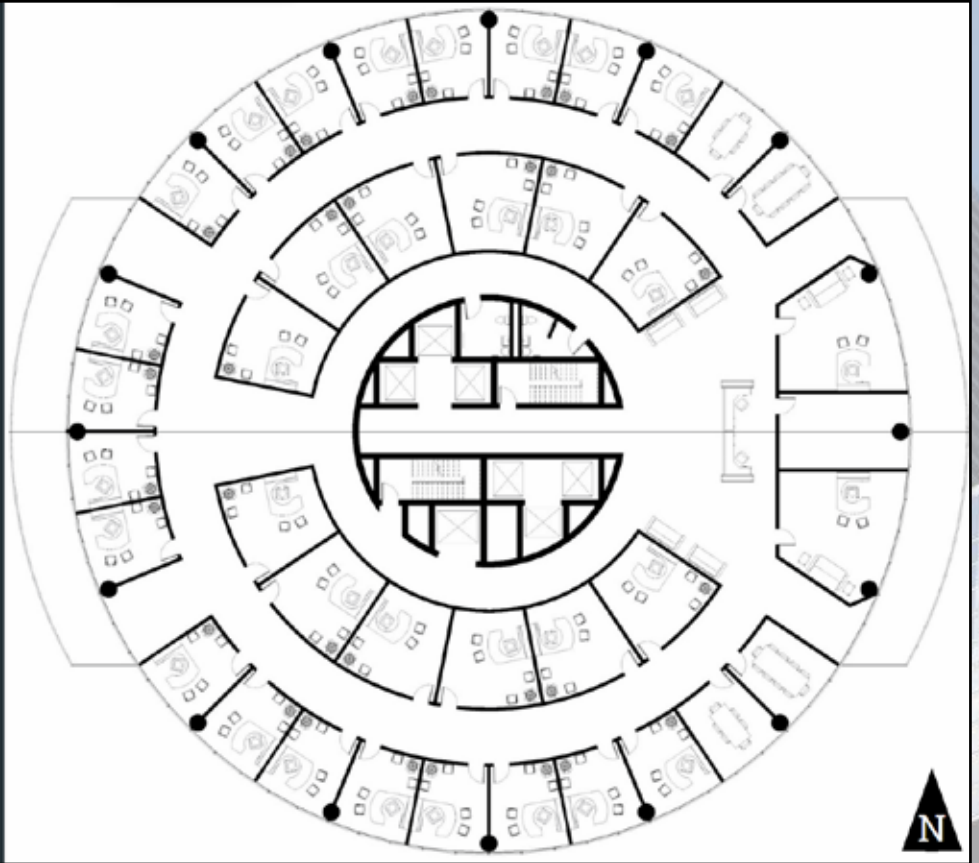
Floors 5-18 (14)

- Small Offices
- Large Offices
- Executive Offices
- Conference Rooms
- Reception Areas
- Balcony Spaces
- Kitchen/Breakout Areas
- Storage Rooms
- Restrooms



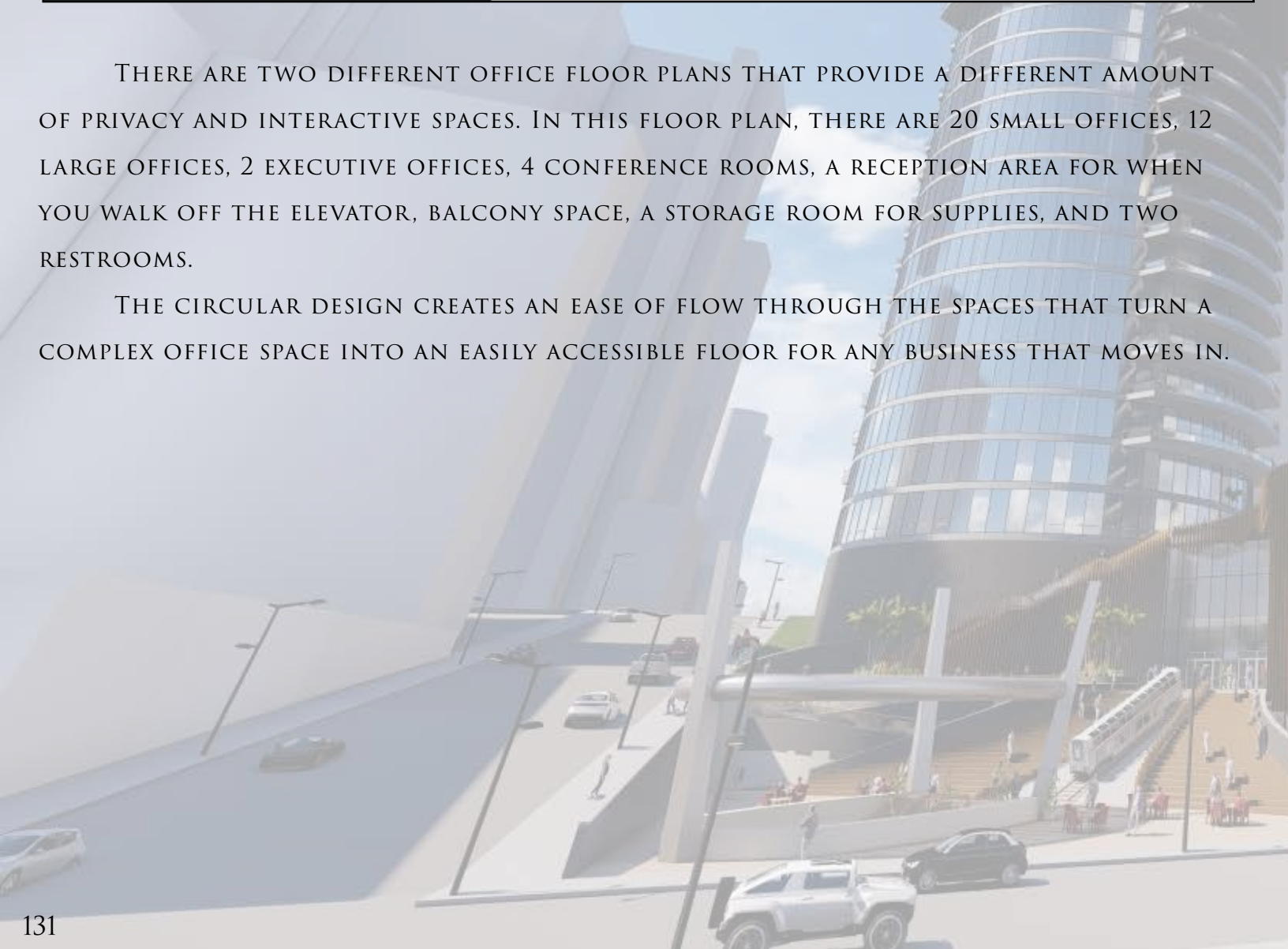
Office Floor Type #1

- 20 Small Offices
- 12 Large Offices
- Two Executive Offices
- Four Conference Rooms
- Reception Area
- Balcony Space
- Storage Room
- Restrooms



THERE ARE TWO DIFFERENT OFFICE FLOOR PLANS THAT PROVIDE A DIFFERENT AMOUNT OF PRIVACY AND INTERACTIVE SPACES. IN THIS FLOOR PLAN, THERE ARE 20 SMALL OFFICES, 12 LARGE OFFICES, 2 EXECUTIVE OFFICES, 4 CONFERENCE ROOMS, A RECEPTION AREA FOR WHEN YOU WALK OFF THE ELEVATOR, BALCONY SPACE, A STORAGE ROOM FOR SUPPLIES, AND TWO RESTROOMS.

THE CIRCULAR DESIGN CREATES AN EASE OF FLOW THROUGH THE SPACES THAT TURN A COMPLEX OFFICE SPACE INTO AN EASILY ACCESSIBLE FLOOR FOR ANY BUSINESS THAT MOVES IN.

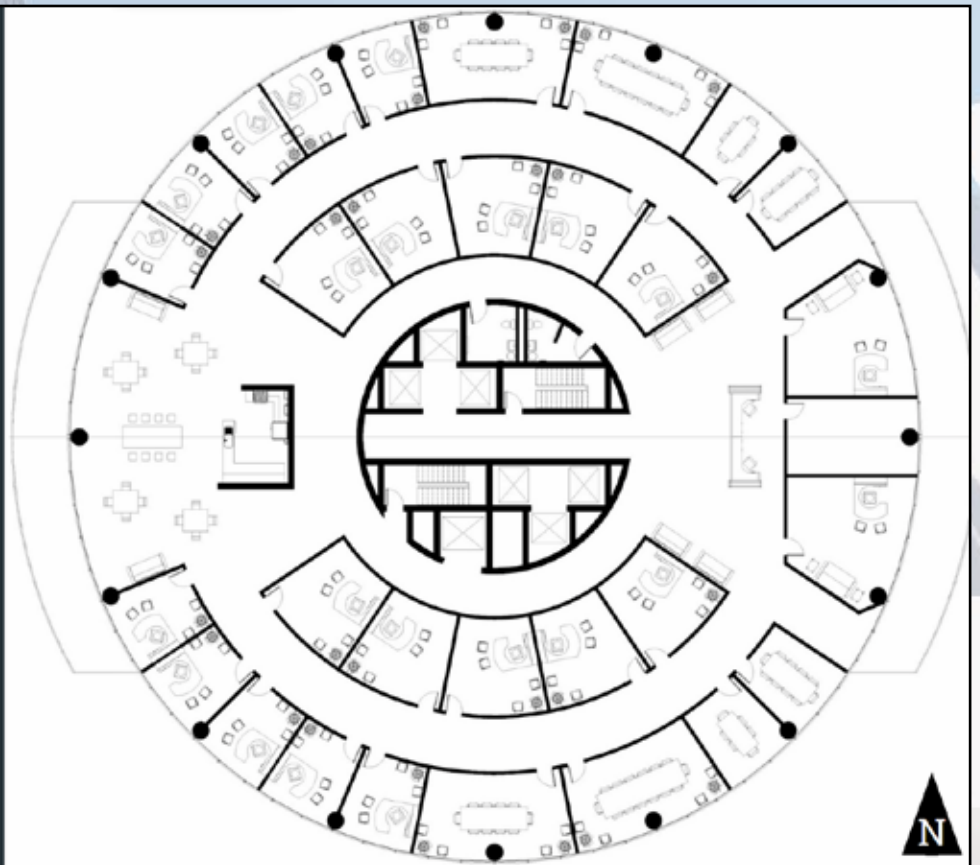


IN THIS FLOOR PLAN, WHICH IS VERY SIMILAR TO THE LAST, THERE ARE 10 SMALL OFFICES, 10 LARGE OFFICES, 2 EXECUTIVE OFFICES, 8 CONFERENCE ROOMS, A RECEPTION AREA FOR WHEN YOU WALK OFF THE ELEVATOR, BALCONY SPACE, A STORAGE ROOM FOR SUPPLIES, TWO RESTROOMS, AND A KITCHEN AND BREAKOUT AREA.

THE DIFFERENCE BETWEEN THE TWO FLOORS IS THE AMOUNT OF BREAKOUT SPACE PROVIDED. THIS SPECIFIC FLOOR INCLUDES MORE OPEN AREAS THAT ALLOWS FOR MORE OF AN INTERACTIVE SETTING FOR THE WORKERS TO BOND WITH EACH OTHER IN AN OPEN SPACE NEAR THEIR PRIVATE OFFICES.

Office Floor Type #2

- 10 Small Offices
- 10 Large Offices
- Two Executive Offices
- Eight Conference Rooms
- Reception Area
- Balcony Space
- Storage Room
- Restrooms
- Kitchen/Breakout Area

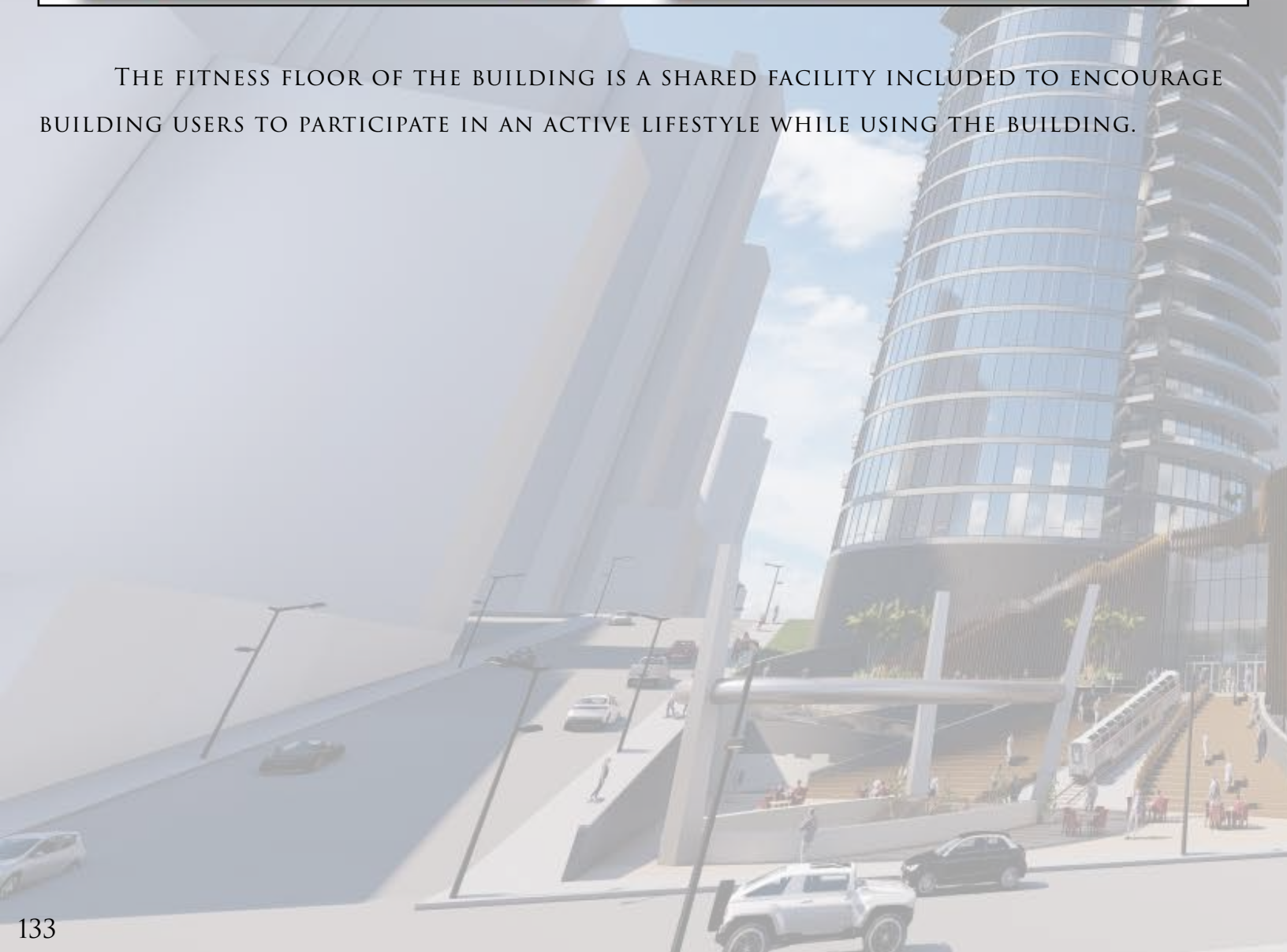


Fitness - Physical Well-being

Shared Facility



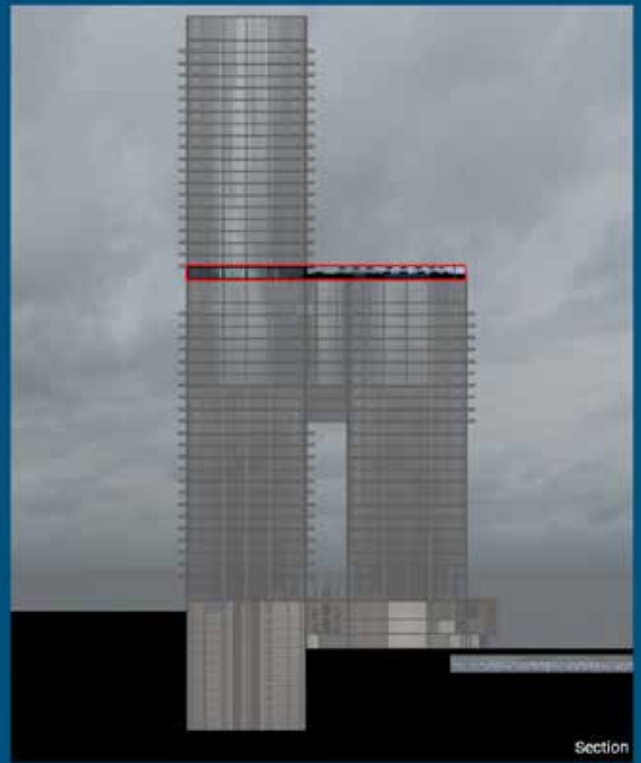
THE FITNESS FLOOR OF THE BUILDING IS A SHARED FACILITY INCLUDED TO ENCOURAGE BUILDING USERS TO PARTICIPATE IN AN ACTIVE LIFESTYLE WHILE USING THE BUILDING.



THIS FLOOR IS IN BETWEEN THE EDUCATION HOUSING AND NORMAL HOUSING. THE INDOOR PORTION OF THE FLOOR CONSISTS OF MANY DIFFERENT EXERCISE MACHINES WHERE THE OUTDOOR PORTION OF THE FLOOR CONSISTS OF A ROOFTOP POOL AREA FOR RELAXING, SWIMMING, AND ENJOYING THE OUTDOOR WEATHER AND SUN.

Fitness Floor Features:

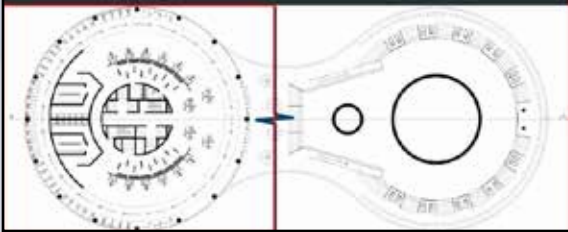
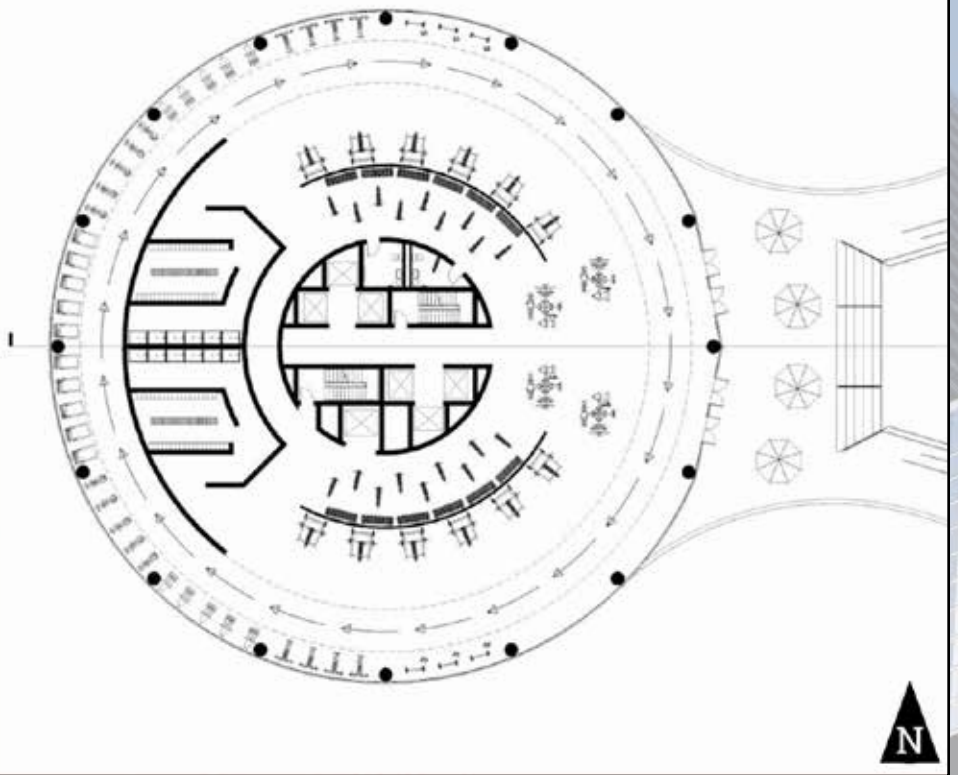
- Indoor Space
 - Weight Room
- Outdoor Space
 - Rooftop Pool



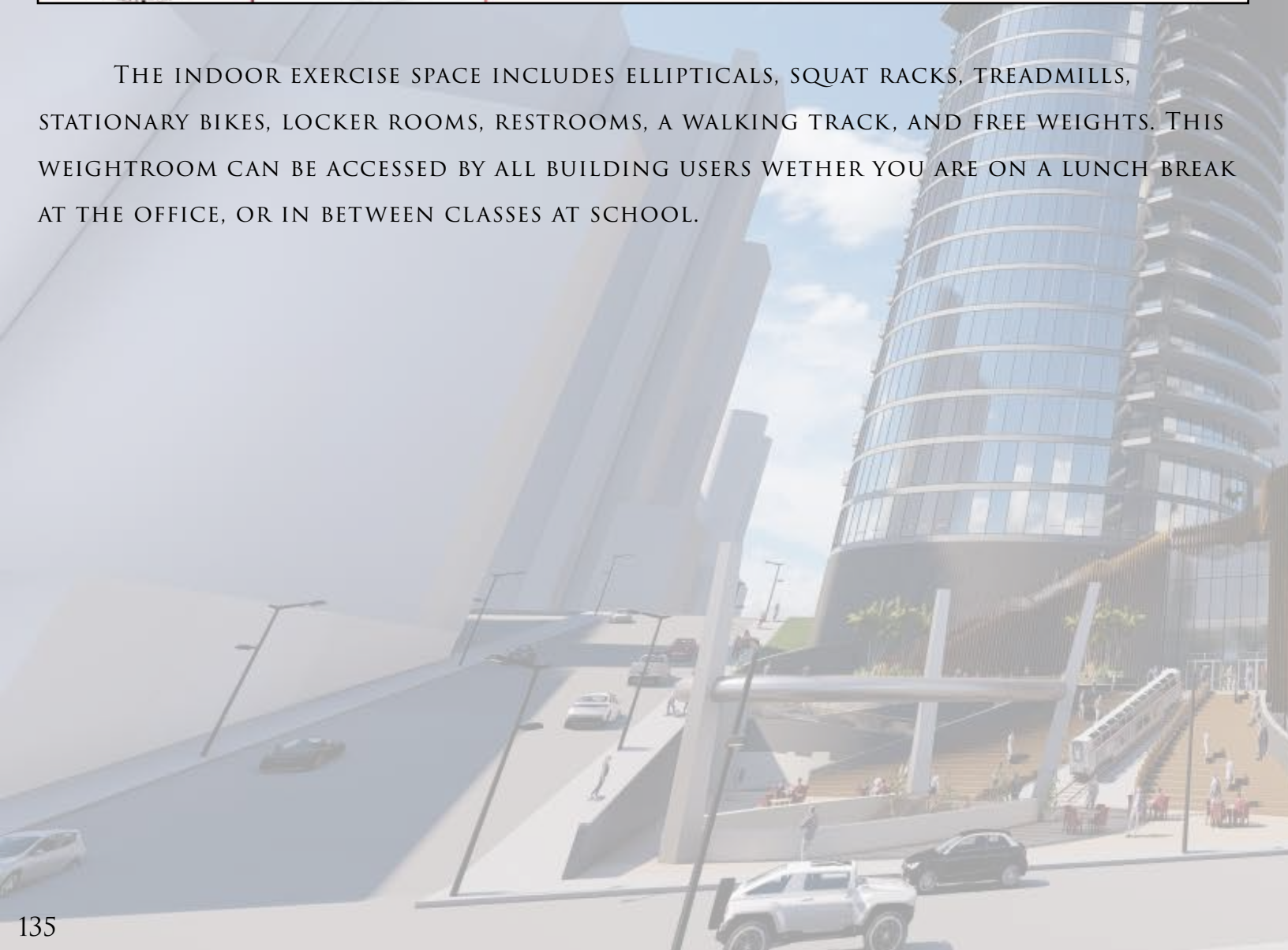
Section

Fitness Floor Plan -Indoor

- (18) Ellipticals
- (12) Squat Racks
- (10) Treadmills
- (10) Stationary Bikes
- (2) Locker Rooms
- (2) Restrooms
- Walking Track
- Free Weights



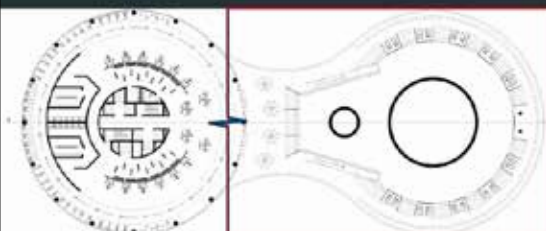
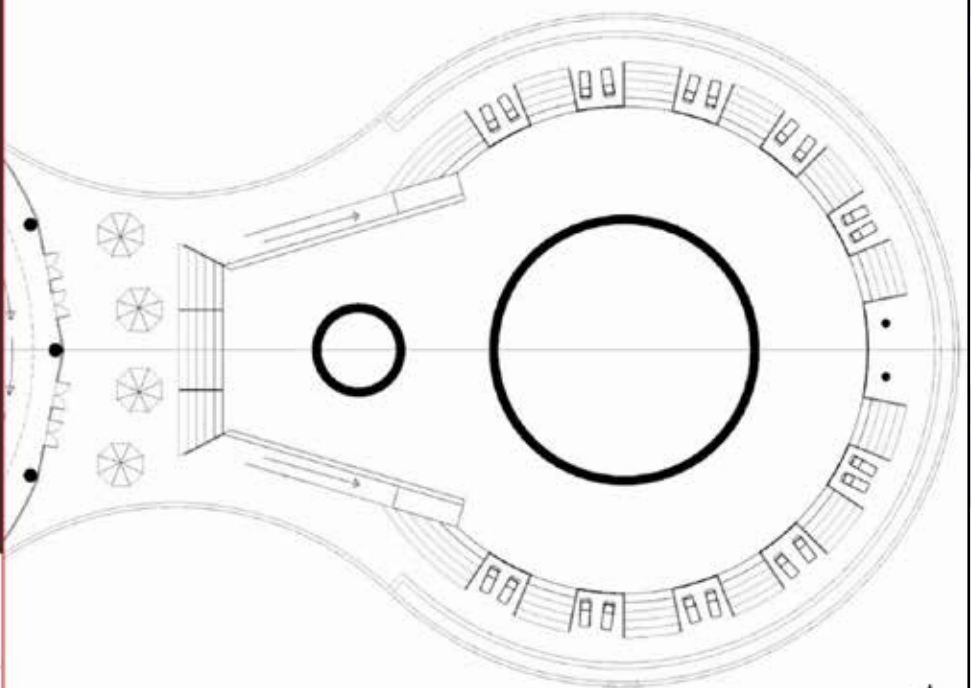
THE INDOOR EXERCISE SPACE INCLUDES ELLIPTICALS, SQUAT RACKS, TREADMILLS, STATIONARY BIKES, LOCKER ROOMS, RESTROOMS, A WALKING TRACK, AND FREE WEIGHTS. THIS WEIGHTROOM CAN BE ACCESSED BY ALL BUILDING USERS WHETHER YOU ARE ON A LUNCH BREAK AT THE OFFICE, OR IN BETWEEN CLASSES AT SCHOOL.



THE OUTDOOR PORTION OF THE FITNESS FLOOR INCLUDES A 30 FOOT DIAMETER POOL AND 10 FOOT DIAMETER HOT TUB THAT ARE ELEVATED 6 FEET FROM THE GROUND TO PROVIDE AN AMAZING VIEW OVER THE SIDE OF THE BUILDING. ALONG THE OUTSIDE OF THE POOL TOP ARE PLANTERS THAT ACT AS AN AESTHETICALLY PLEASING WALL FROM THE EDGE OF THE BUILDING. SIMILAR TO THE WEIGHTROOM, THIS POOLTOP CAN BE ACCESSED BY ALL BUILDING USERS

Fitness Floor Plan -Outdoor

- Elevated Hot Tub/Pool
- Vegetation Border
- Seating



Housing - Living Spaces

Mixed-Income Living

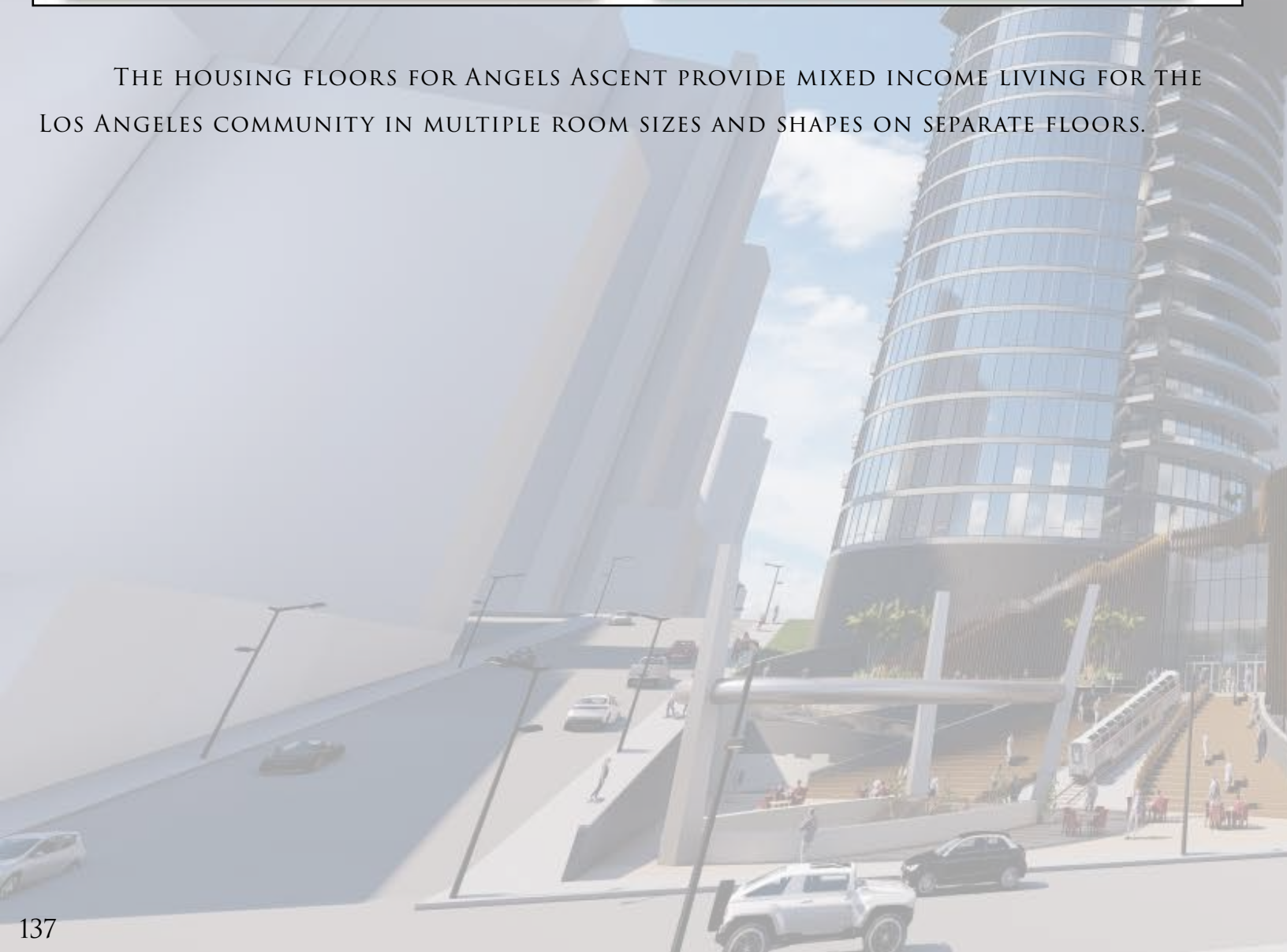


One Bed One Bath Perspective



Three Bed Two Bath Perspective

THE HOUSING FLOORS FOR ANGELS ASCENT PROVIDE MIXED INCOME LIVING FOR THE LOS ANGELES COMMUNITY IN MULTIPLE ROOM SIZES AND SHAPES ON SEPARATE FLOORS.



THERE ARE A TOTAL OF 80 SINGLE BED SINGLE BATH ROOMS THAT ARE ABOUT 875 SQFT EACH, 36 TWO BED ONE BATH ROOMS ABOUT 1325 SQFT EACH, 40 THREE BED TWO BATH ROOMS ABOUT 1775 SQFT EACH, AND 36 FOUR BED THREE BATH ROOMS ABOUT 2225 SQFT EACH.

THEY CYLINDRICAL DESIGN OF THE BUILDING GIVES EACH ROOM A QUALITY VIEW OF THE CITY FROM AN UPPER FLOOR AS WELL.

Housing Types:

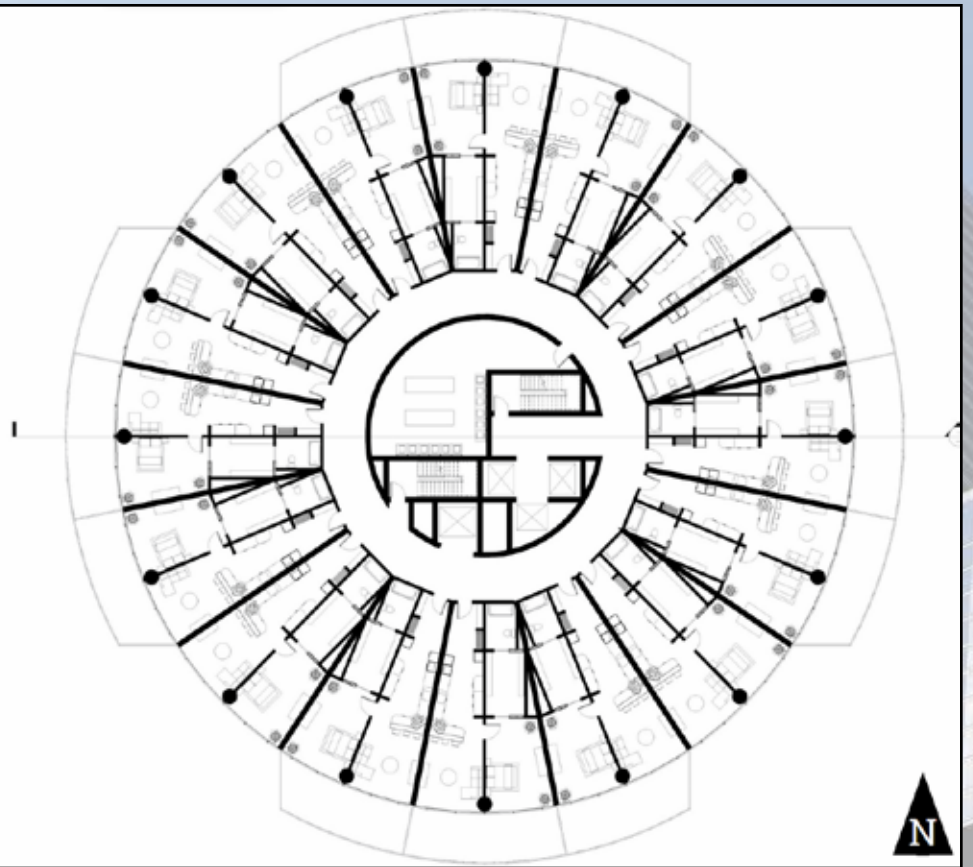
Floors 32-50

- (80) One Bed One Bath
 - 875 Sq Ft
- (36) Two Bed One Bath
 - 1325 Sq Ft
- (40) Three Bed Two Bath
 - 1775 Sq Ft
- (36) Four Bed Three Bath
 - 2225 Sq Ft

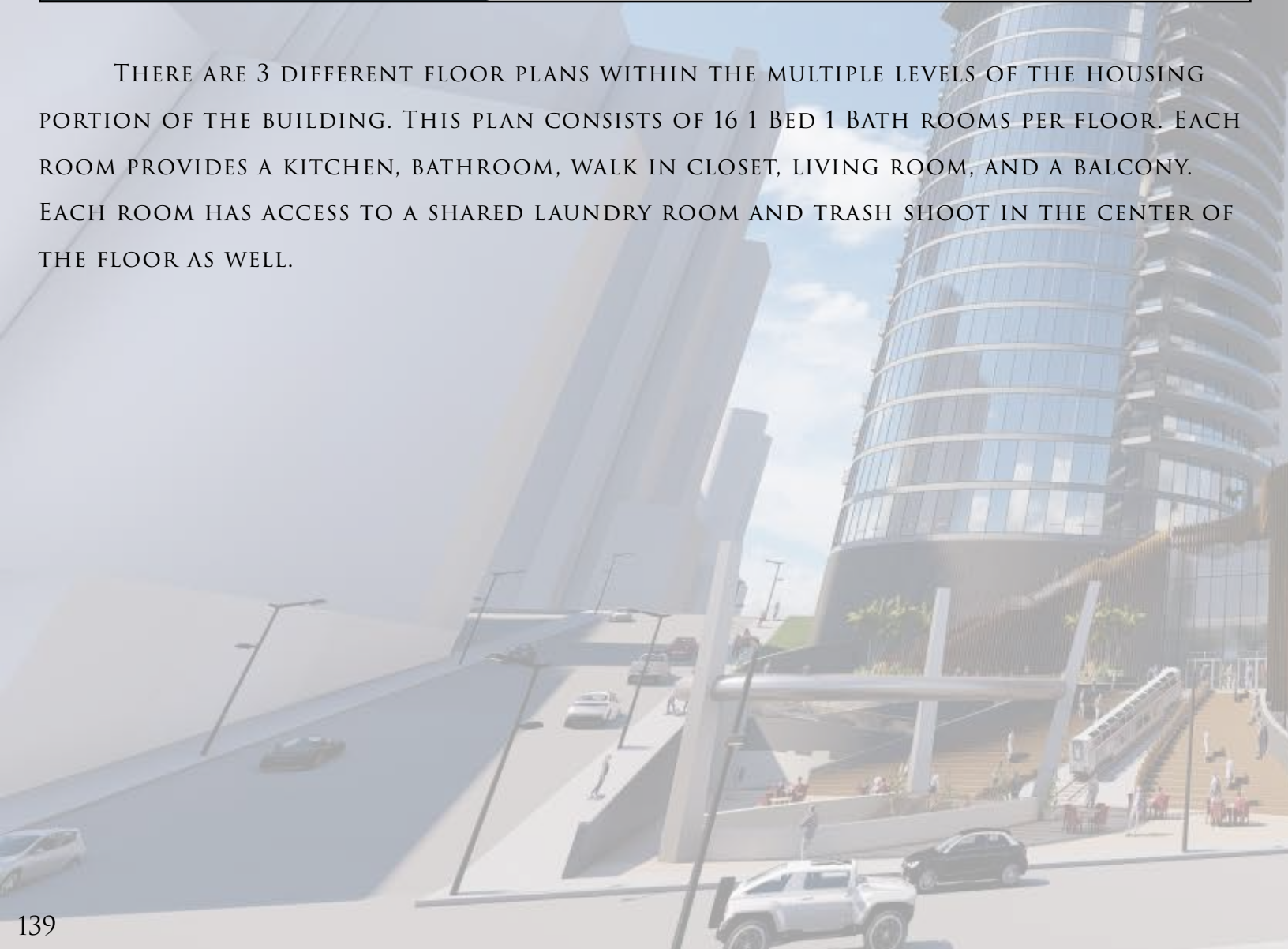


Housing Floor Type #1

- (16) One Bed One Bath
 - Kitchen
 - Living Room
 - Bedroom
 - Balcony
 - Walk-in Closet
 - Bathroom
- Shared Spaces
 - Laundry Room
 - Trash Shoot



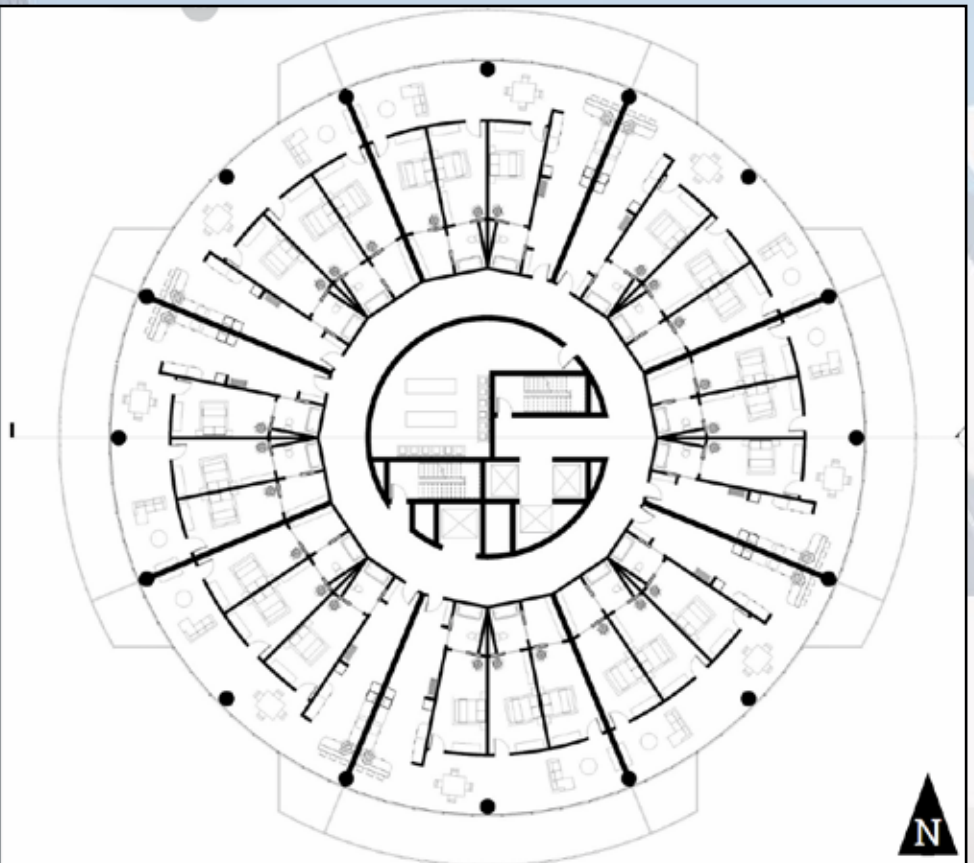
THERE ARE 3 DIFFERENT FLOOR PLANS WITHIN THE MULTIPLE LEVELS OF THE HOUSING PORTION OF THE BUILDING. THIS PLAN CONSISTS OF 16 1 BED 1 BATH ROOMS PER FLOOR. EACH ROOM PROVIDES A KITCHEN, BATHROOM, WALK IN CLOSET, LIVING ROOM, AND A BALCONY. EACH ROOM HAS ACCESS TO A SHARED LAUNDRY ROOM AND TRASH SHOOT IN THE CENTER OF THE FLOOR AS WELL.



PLAN TYPE #2 CONSISTS OF 8 3 BED 2 BATH ROOMS PER FLOOR. SIMILAR TO THE LAST FLOOR PLAN, EACH ROOM PROVIDES A KITCHEN, BATHROOM, WALK IN CLOSET, LIVING ROOM, AND A BALCONY BUT HAS AN ADDITIONAL DINING ROOM TO EACH ROOM. EACH ROOM STILL HAS ACCESS TO A SHARED LAUNDRY ROOM AND TRASH SHOOT IN THE CENTER OF THE FLOOR.

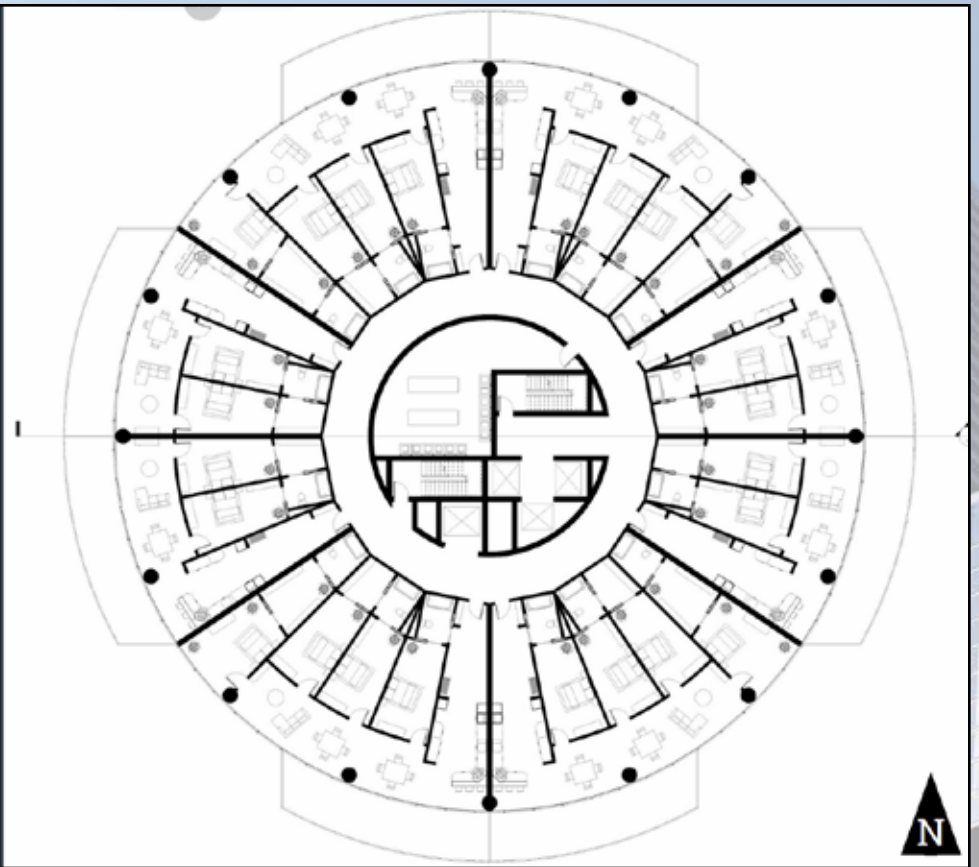
Housing Floor Type #2

- (8) Three Bed Two Bath
 - Kitchen
 - Living Room
 - Dining Room
 - Bedrooms
 - Balcony
 - Walk-in Closet
 - Bathrooms
- Shared Spaces
 - Laundry Room
 - Trash Shoot

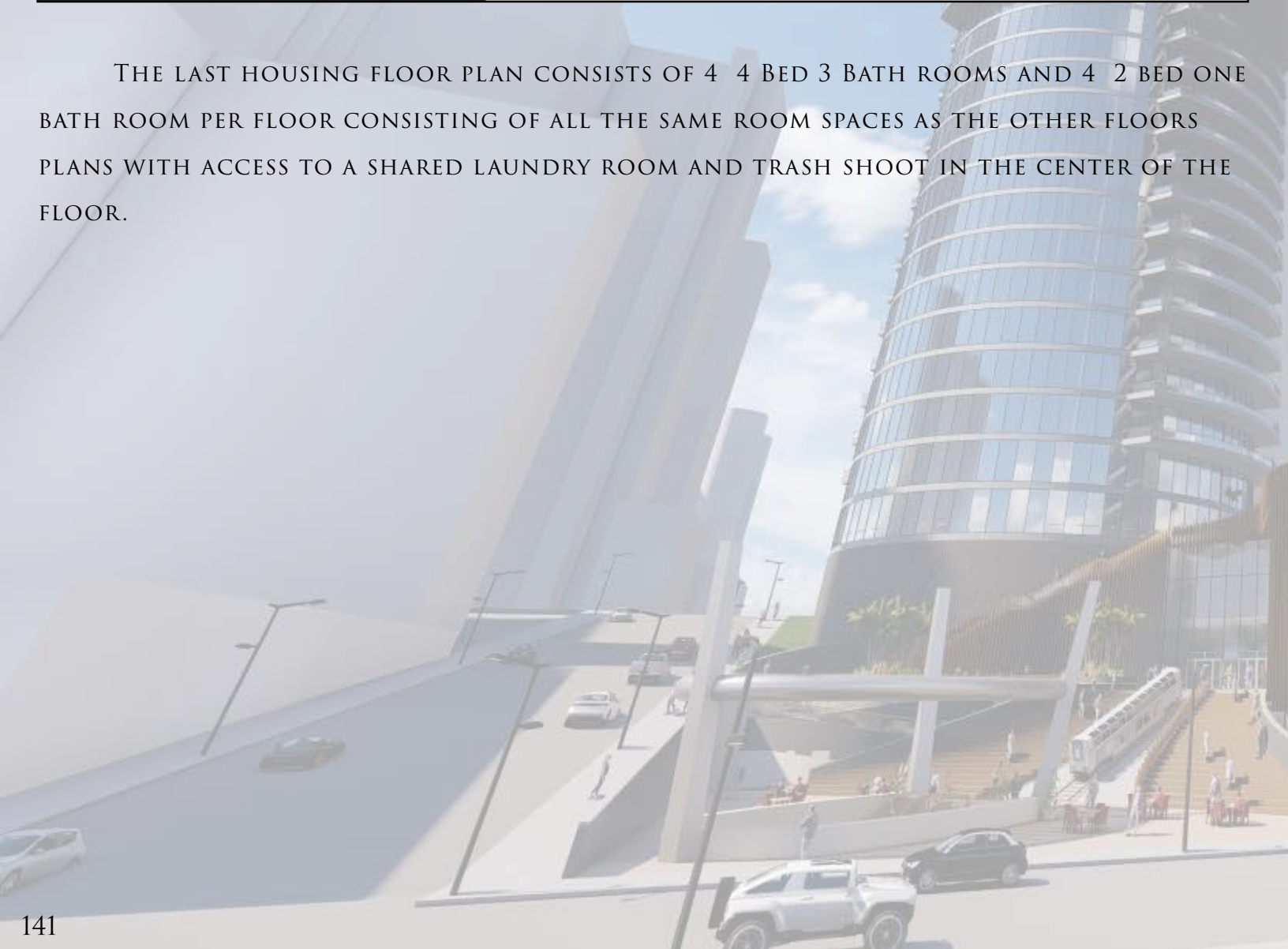


Housing Floor Type #3

- (4) Four Bed Three Bath -
- (4) Two Bed One Bath
 - Kitchen
 - Living Room
 - Dining Room
 - Bedrooms
 - Balcony
 - Walk-in Closet
 - Bathrooms
- Shared Spaces
 - Laundry Room
 - Trash Shoot



THE LAST HOUSING FLOOR PLAN CONSISTS OF 4 4 BED 3 BATH ROOMS AND 4 2 BED ONE BATH ROOM PER FLOOR CONSISTING OF ALL THE SAME ROOM SPACES AS THE OTHER FLOORS PLANS WITH ACCESS TO A SHARED LAUNDRY ROOM AND TRASH SHOOT IN THE CENTER OF THE FLOOR.



SO, RECAPPING ON MY THESIS QUESTION OF HOW CAN THE INTERCONNECTION OF CONTRASTING BUILDING TYPOLOGIES IN AN EVER-DENSIFYING WORLD REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE POST PANDEMIC?

BY FOLLOWING MY PROJECT ELEMENTS I WAS ABLE TO CREATE THE SOLUTION OF ANGELS ASCENT BY COMPOSING PUBLIC SPACES RELATING TO THE SURROUNDING URBAN ENVIRONMENT THAT FUSES WITH THE COMMUNITY, DESIGNING A BUILDING WITH MULTIPLE CONTRASTING TYPOLOGIES TO CONNECT THROUGH SHARED SPACES, AND FORMING ALL THE AREAS THAT MAKE THE CITY OF LOS ANGELES SUCH AN AMAZING CITY INTO ONE INTERCONNECTED STRUCTURE.

THE FINAL SOLUTION OF ANGELS ASCENT WILL REVITALIZE AND PROMOTE A HIGHER QUALITY OF LIFE IN A POST PANDEMIC WORLD.

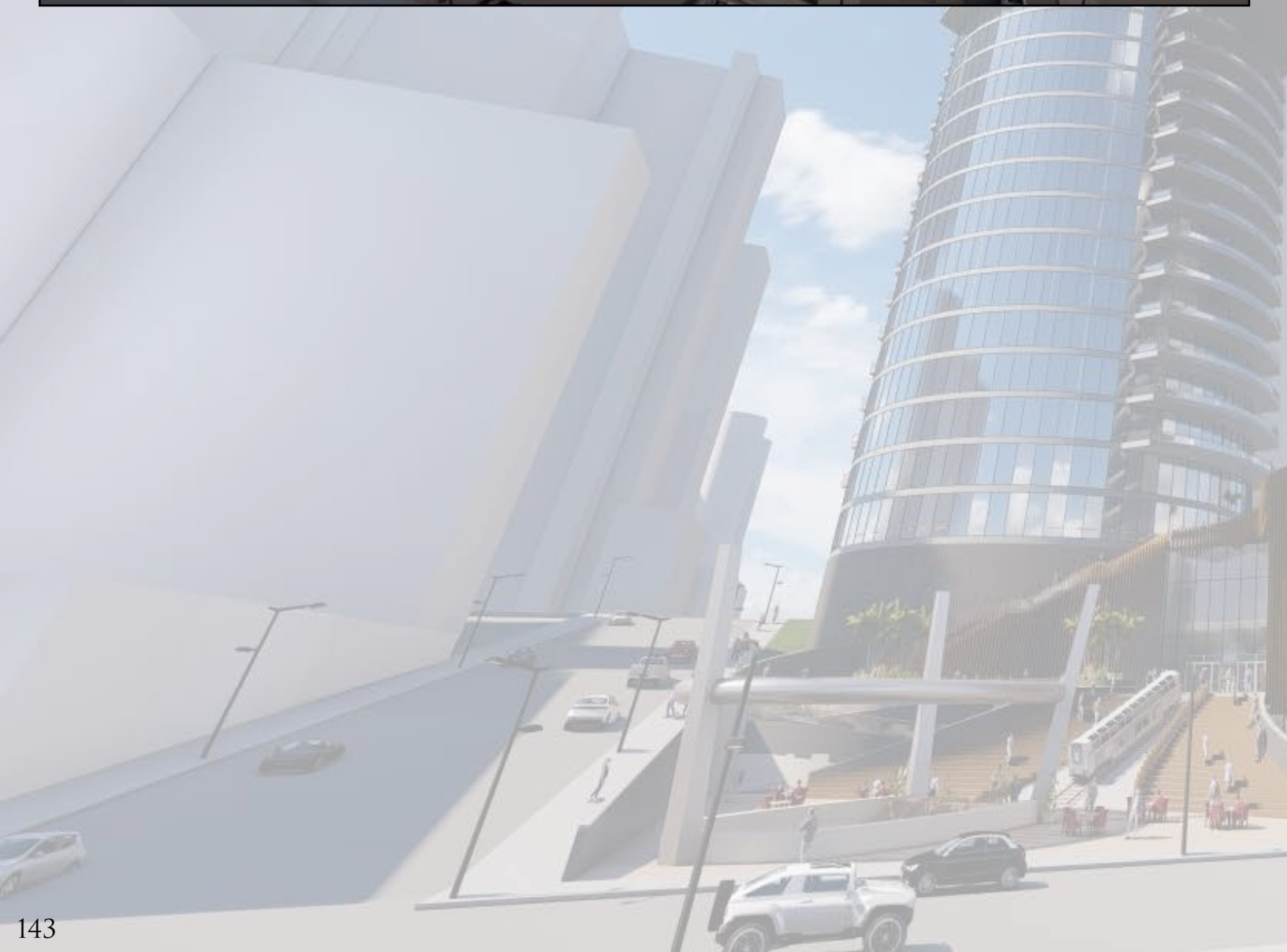
Question/Project Elements

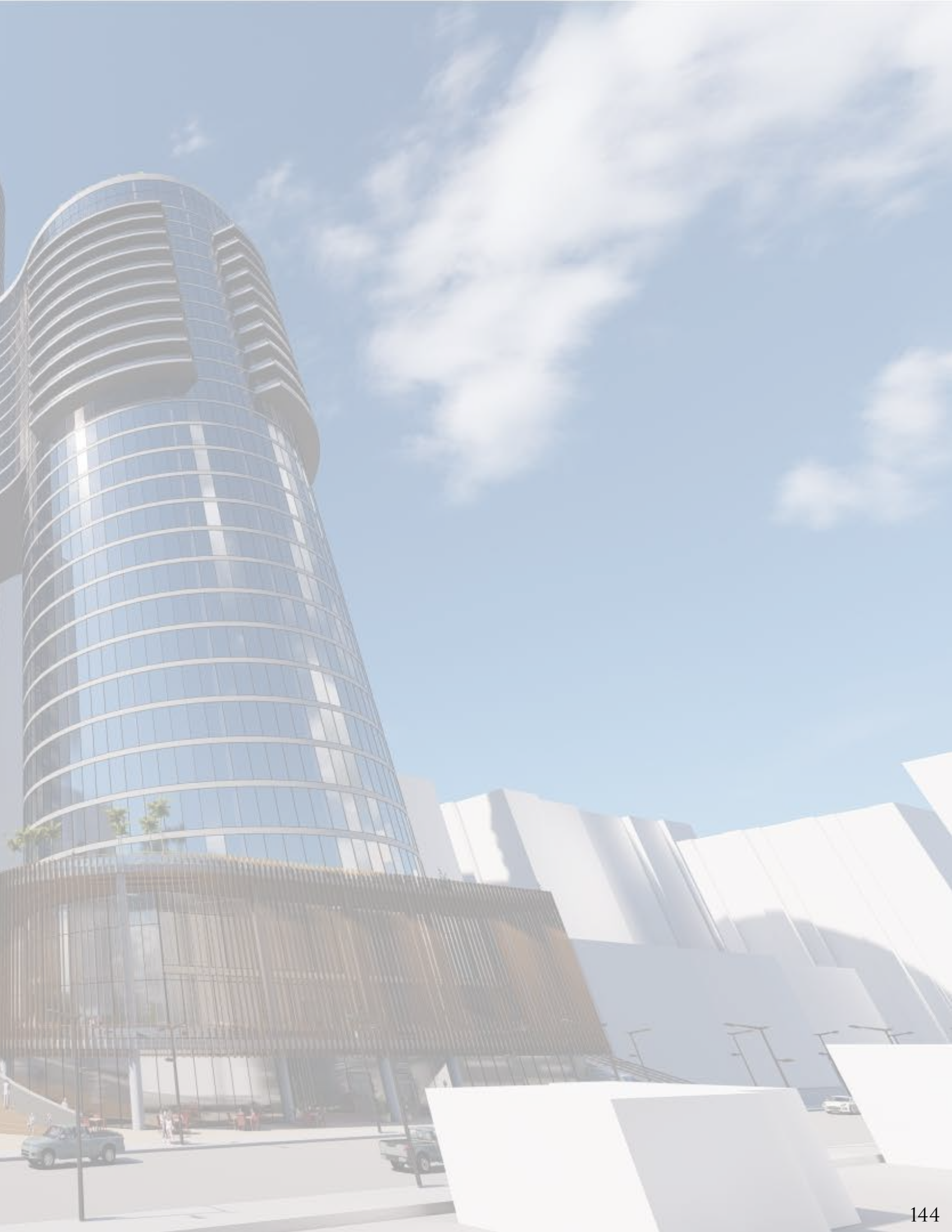
Question: How can the interconnection of contrasting building typologies in an ever-densifying world revitalize and promote a higher quality of life post pandemic?

1. Urban Environment
 - Urban connective plan that is smart, social, and fuses with the community
2. Architectural Design
 - Design that is viable, dependable, and connected
3. Physical Spatial Connections
 - Taking components that make a city inspiring and interconnecting them within a singular structure



Questions or Feedback





PROJECT INSTALATION



SUMMARY

THE DOCUMENTATION OF MY THESIS SOLUTION CONSISTED OF THREE PRESENTATION BOARDS. EACH BOARD HAD ITS OWN PURPOSE FOR PORTRAYING THE DESIGN SOLUTION FOR HEALTHY BUILDING - HEALTHY LIVING.

BOARD 1 INCLUDED ELEVATIONS, A SECTION, AND A QR CODE FOR AN ANIMATION OF THE BUILDING.

BOARD 2 PROVIDED SITE CONTEXT AND MAJOR RENDERINGS.

BOARD 3 PRESENTED THE FLOOR PLANS OF THE BUILDING, A LARGE AXONOMETRIC RENDER, AND MINOR RENDERING FOR SPECIFIED LEVELS.

HEALTHY BUILDING - HEALTHY LIVING

HEALTHY BUILDING - HEALTHY LIVING

Text describing the project's focus on creating a healthy living environment through architectural design and sustainable practices.

AXONOMETRIC PROJECTION

PERSPECTIVES

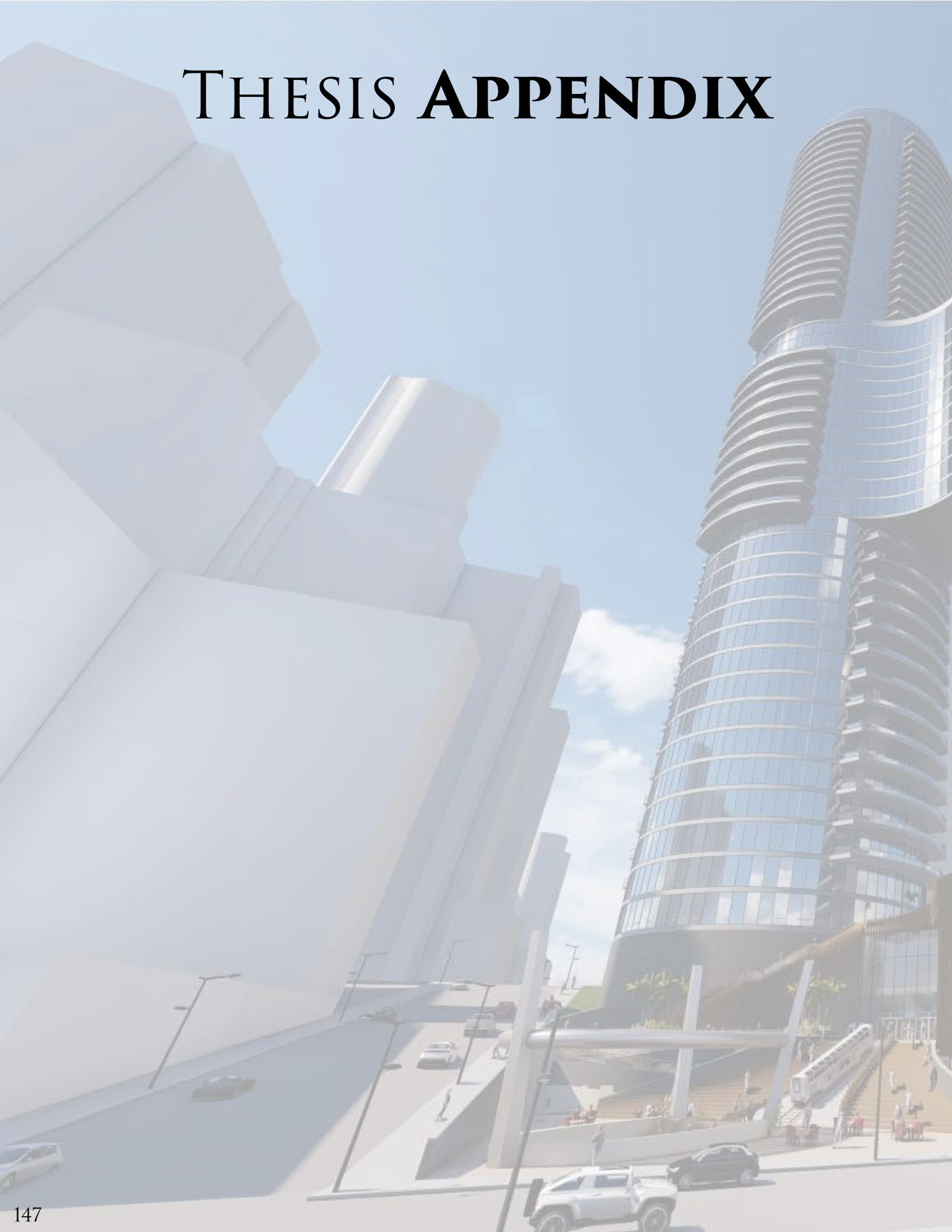
FLOOR PLANS

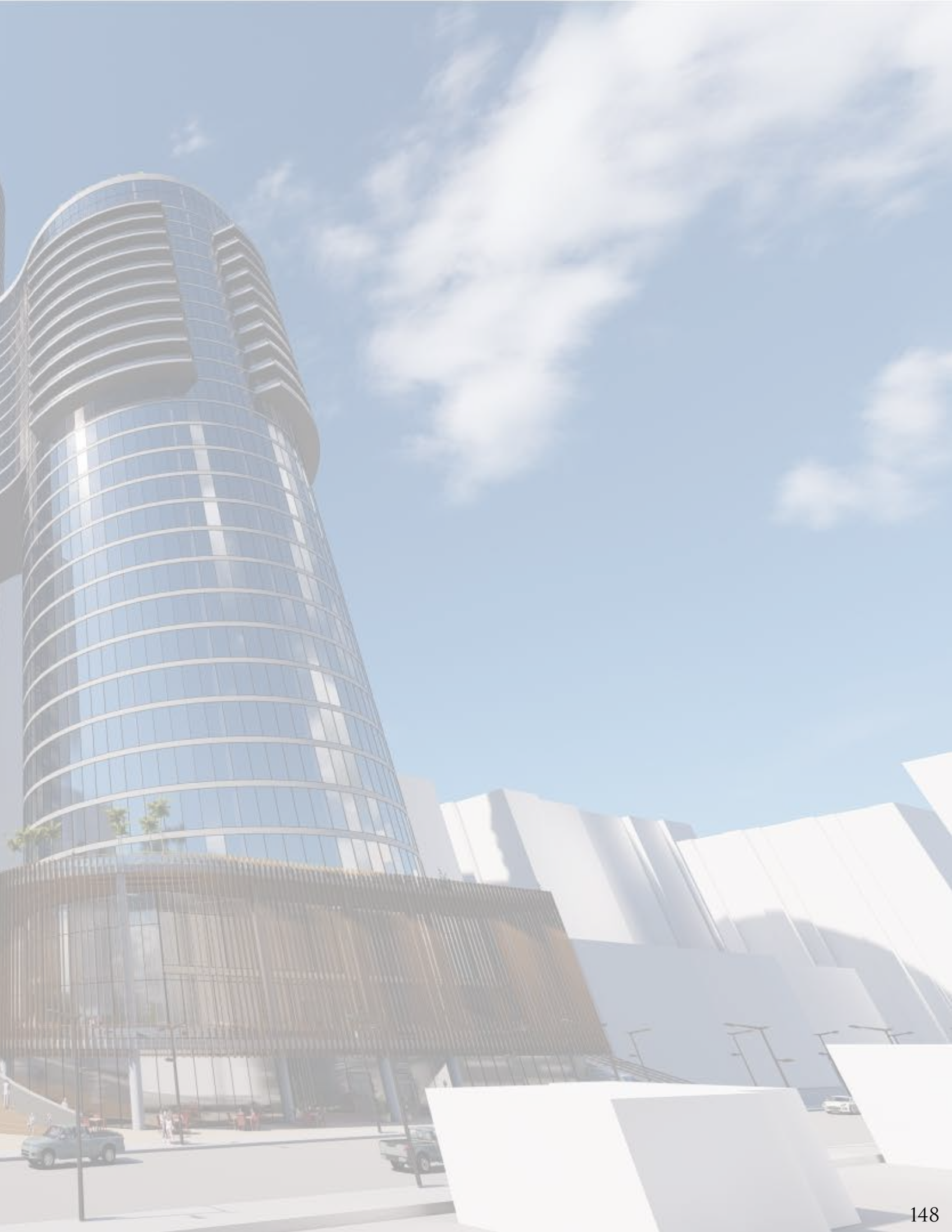
ELEVATIONS

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THESIS APPENDIX





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STUDIO EXPERIENCE

2ND YEAR

TERM:	FALL, 2018	SPRING, 2019
PROFESSOR:	MILTON YERGENS	AMAR HUSSEIN
PROJECTS:	BOAT HOUSE; MEDITATION HOME	DWELLING; MIXED-USE HOUSING

3RD YEAR

TERM:	FALL, 2019	SPRING, 2020
PROFESSOR:	PAUL GLEYE	BAKR ALY AHMED
PROJECTS:	VISITATION CENTER; STUDENT MIXED USE	RESIDENTIAL CONCRETE HOME; MIXED-USE STEEL BUILDING

4TH YEAR

TERM:	FALL, 2020	SPRING, 2021
PROFESSOR:	CINDY URNESS	DAVID CRUTCHFIELD
PROJECTS:	CAPSTONE HIGH-RISE	MARVIN WINDOWS; URBAN REDESIGN

5TH YEAR

TERM:	FALL, 2021	SPRING, 2022
PROFESSOR:	BAKR ALY AHMED	BAKR ALY AHMED
PROJECTS:	AQUARIUM	SKYCRAPER

PROFESSIONAL EXPERIENCE

YEAR:	AUGUST 2021-PRESENT
FIRM:	RLE
POSITION:	ARCHITECTURAL STUDENT INTERN

