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TEMPORAL MINDSET

RETROFITTING SENIOR LIVING

KENNESAW STATE UNIVERSITY

DEPARTMENT OF ARCHITECTURE
COLLEGE OF ARCHITECTURE AND CONSTRUCTION MANAGEMENT

THESIS COLLABORATIVE 2019-2020

CHRISTINE VU
TEMPORAL MINDSET: RETROFITTING SENIOR LIVING

Greyfield land is a term that originated around 2000 when the economy took a shift and there was an increasing amount of underused or abandoned land. Senior living should be able to develop and adapt with the changes in society and the way people live and grow. Retrofitting senior living investigates how to understand the development of land that is no longer being used and transform it through physical, social, and architectural means. The aim is to incorporate independent living and assisted living into different housing types that integrate commonalities in programs and separate them based on specific needs that the individual need. Looking at different developments allows opportunities to create interaction, learning, density, and walkability for the targeted demographics.

TEMPORAL MINDSET

RETROFITTING SENIOR LIVING

REQUEST FOR APPROVAL OF THESIS RESEARCH PROJECT BOOK PRESENTED TO

PETER PITTMAN

AND TO THE
FACULTY OF THE DEPARTMENT OF ARCHITECTURE
COLLEGE OF ARCHITECTURE AND CONSTRUCTION MANAGEMENT

BY

CHRISTINE PHUONG NGUYEN VU

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

BACHELOR OF ARCHITECTURE

KENNESAW STATE UNIVERSITY
MARIETTA, GEORGIA

MAY 1, 2020

DEDICATION

This Thesis is dedicated to:

MY MOM for being my everything through all my tough and happy moments in life, my friend, and the reason for this thesis

MY FAMILY for always supporting me no matter how many times I have screwed up and changed my mind about what I wanted to do in life

MY FRIENDS for reminding me that no matter how I am, they'll always be there to support me and annoy me to finish what I need to do

MY BEST FRIEND who puts up with everything including my bubbies, my craziness, and especially me.

THANK YOU FOR EVERYTHING

ACKNOWLEDGMENT

This thesis would not be possible without the council of my thesis advisors and the other faculty members

PROFESSOR PETER PITTMAN

for helping me be my best through all my lack of confidence in myself

PROFESSOR AMEEN FAROOQ

for being “my friend” here and understanding me better than i understand myself

PROFESSOR ELIZABETH MARTIN-MALIKIAN

for always being supportive and helping me through this thesis and my journey

PROFESSOR BRONNE DYTOC

for helping me grow and improve in the best way i can

PROFESSOR GIOVANNI LORETO

for never letting me give up no matter how bleak things got

DAVE PEEPLES

for never refusing to help me through the years

**PROFESSOR ARASH SOLEIMANI, PROFESSOR ZAMILA KARIMI, PROFESSOR PEGAH ZAMANI,
PROFESSOR EDWIN AKINS, PROFESSOR ARIEF SETIAWAN, RACHEL JOHNSON,
RACHEL KIDD-CHANCEY, JOHN VALENTINE AND DR. ANTHONY RIZZUTO**

THANK YOU FOR ALWAYS ADVISING ME HELPING THROUGHOUT MY ARCHITECTURAL JOURNEY!

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CHAPTER [ONE]
DESIGN THEOREM

| [1.0]

[1.1] DESIGN HYPOTHESIS

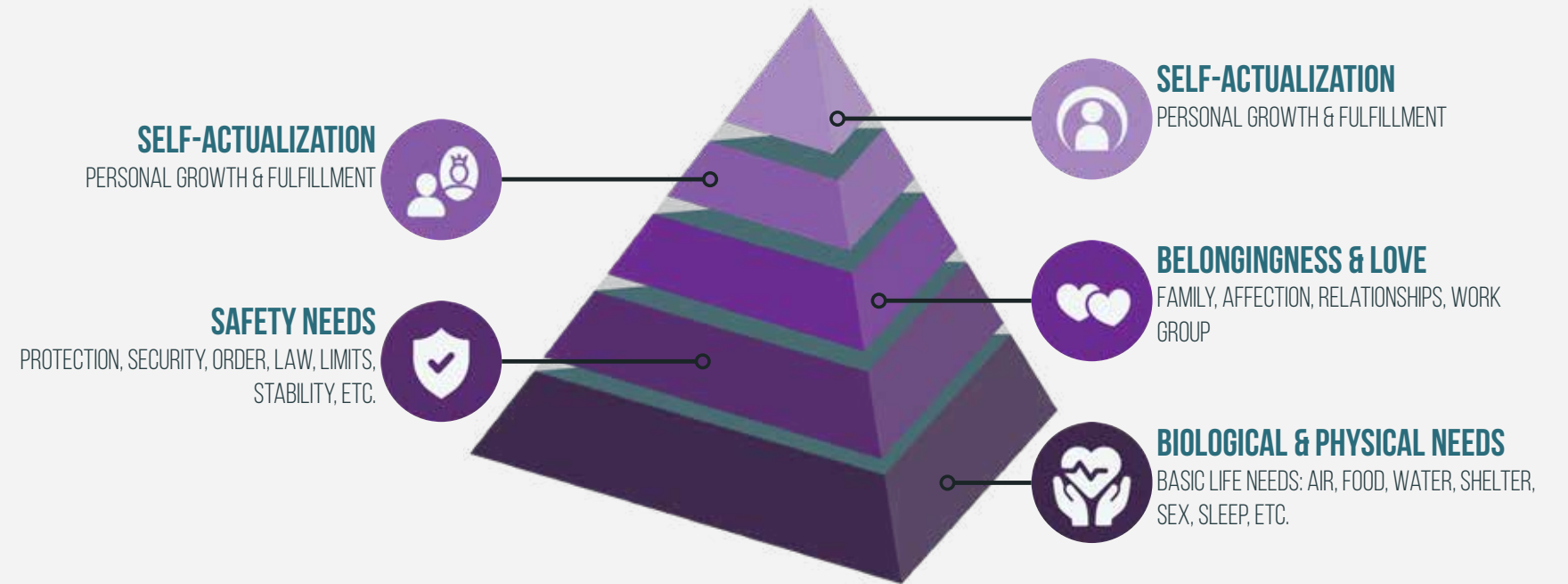
This thesis started by looking at malls that were no longer being used and the issues that developed with the decline of these places. I thought of how architecture could benefit and improve the quality of these spaces and the site.

The total population of the United States is approximately 325 million people. Out of the 325 million, approximately 53 million people will be over the age of 65. Between 1946 and 1964, the Baby Boomer generation increased more than any other generation. That generation is now reaching an age where the need for senior living options are more in demand.

Every society in every country has specific considerations and seek its own appropriate solution to improve and maintain the quality of life for its older citizens. Every culture approaches its difficulties, values, and expectations differently. People everywhere are seeking a quality of life that surpasses the need for shelter and medical care. There's not a correct model nor a best model, but there are numerous ways to approach this through thoughtful design that creates an appropriate model for a specific space in a specific time.

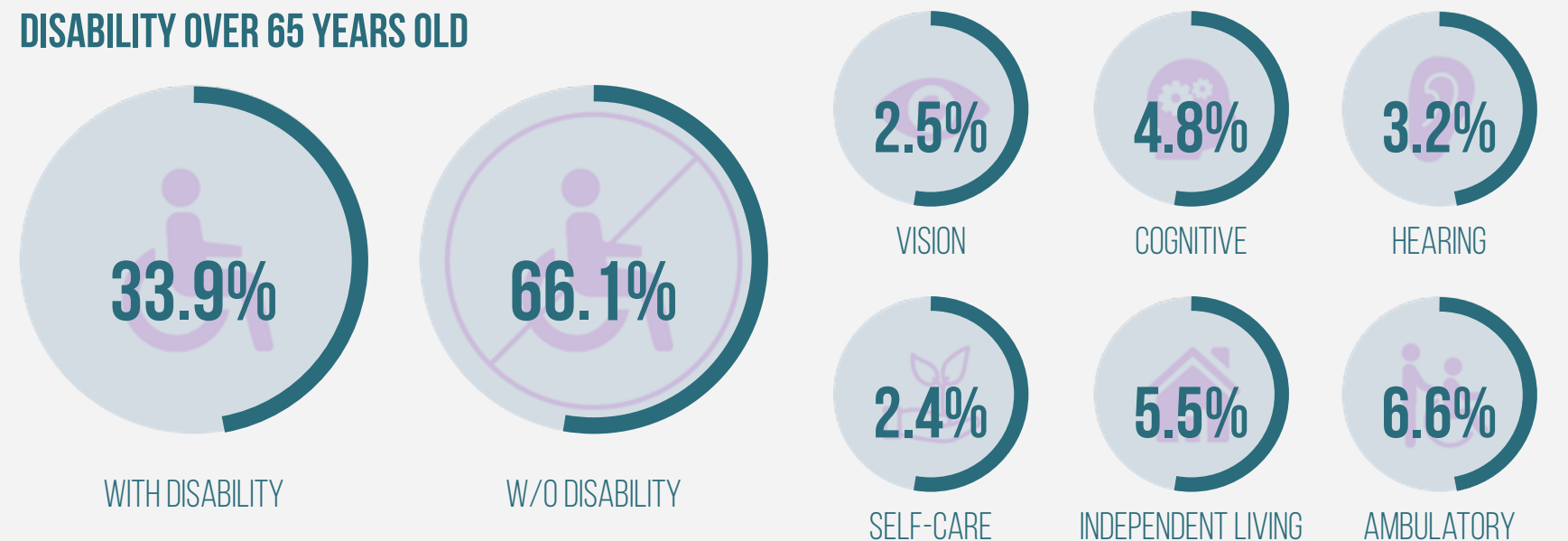
Greyfield land are typically not contaminated so there are advantages to reuse the site to conserve energy, develop economic growth, and reduce urban sprawl.

As future generations rethink the way we live and interact with each other, I believe that retrofitting greyfield land for a senior living community could be a way to explore independent and assisted living, and build cultural community strengths amongst the different senior age groups.



Maslow's hierarchy of needs (standard version) from A Little Bit of TLC (2011)

DISABILITY OVER 65 YEARS OLD



US Census Bureau. "Age and Sex Composition in the United States: 2018." Age and Sex Composition in the United States: 2018, July 11, 2019. <https://www.census.gov/data/tables/2018/demo/age-and-sex/2018-age-sex-composition.html>.

GIVING NEW LIFE TO GREYFIELD LAND

Redevelopment of greyfield land creates new opportunities to redevelop and adaptively reuse unused developments.

NEW LIFE TO GREYFIELD LAND BY INCORPORATING HOUSING FOR AGING

The reuse of unused developments for an increasing population gives one type of architectural design solution to incorporate a new outlook at what senior living could potentially be. The goal is to create architecture that addresses both respectfully.

INCREASING AGING POPULATION

On average there are about 360,000 births per day and 151,000 deaths per day. Due to the increase age of the Baby Boomers, the population over the age of 65 will increase by 20%

[1.2] ABSTRACT

Everyone has a story that is a little different when concerning their older loved ones. Here's my story. My family moved here in 1980 where there were three generations living at home. My grandma took care of me growing up and instilled parts of my culture into my upbringing. My parents are now entering the age of retirement and the life I want for my parents is not one where they are trapped and isolated in senior living housing, but one where they will have areas to maintain the quality of life that they have hoped for.

Some of the best senior communities have meandering gardens and farm land where they can grow crops to benefit themselves or the local community. Clinical services becomes an essential amenity to maintain a healthy life. Safe walkable areas promotes an active healthy lifestyle. Arts, music, and culture mentally stimulates the mind to improve a healthy psychological health.

Every society in every country has specific considerations and will see its own appropriate solution to maintain the quality of life for its older citizen. Everyone has their own appropriate solution to maintain the quality of life for its older citizen. Everyone has their own values and or expectations and is seeing a quality of life that surpasses the need for shelter and medical care. There is not a correct mode, but there are numerous responses that through thoughtful design that can create opportunities for a specific place in a specific time.

I propose to adapt greyfield land for a senior living community that incorporates independent and assisted living. I believe that it is possible to establish a better design intervention for the elders by taking spaces that are under-utilized and transform it into a new space for a new time for the aging. I explore how to integrate programs based on commonalities while separating them based on individual needs. Transforming greyfield land into a walkable community increases the relationship for the occupants which encourages interaction and experiences in an area that is no longer being utilized.

The determination of the site looks into the research and focuses on looking at areas that are under-utilized with value to the location. Between 1970 and 2000, 750 malls were being developed throughout the United States. Through economic declines and redefining of commerce, malls are struggling to find uses for the massive spaces that were once heavily utilized. The sites are now empty parking lots with large infrastructures that are trying to find a new purpose. I chose to pick a site that is under-utilized but is easily accessible for medical transport and needs of the occupants. In 2001, Congress for New Urbanism developed the term greyfield land to describe empty asphalt concrete sites that are economically obsolete or underused real estate or land. My proposal takes one of these sites to transform it into a senior living community that incorporates strategies from the research to design a proposal for senior living.

[1.3] DIFFERENT TYPES OF SENIOR LIVING

AGING IN PLACE

what is it: when an older adult lives in their own home with family.

who is it good for: older adults who are relatively independent or can get the needed level of help.

how it works: in-home caregivers, cleaning, meals, and other services can help with activities of daily living.

THE VILLAGE CONCEPT

what is it: model links neighborhood and neighbors to local businesses together to help each other stay in their homes as they grow older.

who is it for: older adults who wants help similar to what they would get from a retirement community without having to leave the comfort of their home

how it works: village doesn't provide services directly but act as a liaison. Help comes from other able-bodied members of the neighborhood or youth groups doing community service

INDEPENDENT LIVING

what is it: any housing designed exclusively for seniors, usually including retirement communities, retirement homes, senior housing, and senior apartments.

who is it for: older adults who wants to live in an active community without worries about daily chores like house maintenance, cooking, or housekeeping.

how it works: small campuses where similar age people live together in a community that provide opportunities for socialization. housing is compact, easier to navigate, include help with outside maintenance.

RESIDENTIAL CARE HOMES

what is it: small facilities that offer personalized services to small groups of adults, family homes, broad and care homes, and personal care homes.

who is it for: someone who needs more individual, home-setting care

how it works: provides lodging, meal services, and assistance with activities of daily living

CONTINUING CARE RETIREMENT COMMUNITY

what is it: communities are part of independent living, assisted living, and skilled nursing home

who is it for: older adults who want to live in one location for the rest of their lives. most of their future care is figured out and its good for living with spouses

how it works: residents starts by living in independent living areas and moves to different parts in the same community dependent on level of care needed.

ASSISTED LIVING

what is it: communities have a wide range of service

who is it for: older adults that are capable of living independently, but also require some assistance

how it works: typical service include available staff 24/7, meals, medication management, bathing, dressing, housekeeping, and transportation. Facilities may include group dining and common areas for social and recreational activities.

NURSING HOME OR SKILLED NURSING FACILITIES

what is it: older adults who need 24-hour supervised care with meals, activities, and health management, and support.

who is it for: older adults with severe or debilitating physical or mental illness who are unable to care for themselves.

how it works: licensed physicians supervises each resident's care and a nurse or other medical professional is always available. Some may have physical or occupational therapist on staff. Some provide care for Alzheimer's care with separate facilities and layouts for people who suffer from dementia.

[1.4] AGE-FRIENDLY CITY DOMAINS

The World Health Organization united for the World Congress of Gerontology and Geriatrics in Rio de Janeiro, Brazil to discuss the changes that were occurring in the world concerning Age-Friendly Cities. The project was headed by Alexandre Kalache and Louise Plouffe who were apart of WHO headquarters.

In their research, they looked at different statistics to quantify the global aging and urbanization through each continent by year and age. From their studies, their statistics concluded that the global population of people over the age of 60 will double from 11% in 2006 to 22% from 2050. The data showed that older people are starting to live in cities and the number of older and younger people living in cities in developed countries are equaling the younger population.

The idea of an age-friendly city was the initial framework for optimizing opportunities for health, participation, and security in order to enhance the quality of life as people age. In an age-friendly city, there are policies, services, setting and structure that supports how people actively age. It is dependent on the individuals, family, and nation. There are social factors as well as material conditions that can affect the notion of how an individual feels. Many urban settings reflect key characteristics of an age friendly city.



OUTDOOR SPACES & BUILDINGS

COMMUNICATES CLEARLY REGARDLESS OF DISABILITIES OR IMPAIRMENTS



TRANSPORTATION

MINIMIZES HAZARDS OR CONSEQUENCES OF ACCIDENTS UNINTENDED ACCIDENTS



HOUSING

EFFICIENT SPACES & MINIMIZES FATIGUE



SOCIAL PARTICIPATION

APPROPRIATE SIZE AND SPACE REGARDLESS OF BODY SIZE



RESPECT & SOCIAL INCLUSION

COMMUNICATES CLEARLY REGARDLESS OF DISABILITIES OR IMPAIRMENTS



CIVIC PARTICIPATION & EMPLOYMENT

MINIMIZES HAZARDS OR CONSEQUENCES OF ACCIDENTS UNINTENDED ACCIDENTS



COMMUNICATION & INFORMATION

EFFICIENT SPACES & MINIMIZES FATIGUE



COMMUNITY SUPPORT & HEALTH

APPROPRIATE SIZE AND SPACE REGARDLESS OF BODY SIZE

Active aging is a lifelong process and it is not just “elderly-friendly”. Barrier free buildings and streets enhance mobility and independence for people with disabilities of all ages. Families are usually less worried when their older members have community support and health services that they would need. The whole community benefits when older people participate with various volunteer or paid work.

The research took a bottom-up approach where they analyzed government policies and how society was contributing to empowering older people in decision-making.

The overlapping area of discussions were taken into account when developing the study. They valued outdoor spaces and building, transportation, and housing. These features have a strong influence on their personal mobility, safety, security, health behavior, and social participation. The social environment and culture affected the participation of the individual as well as the mental wellbeing.

The conclusion was that in a community, they needed all of these aspects and inclusion in order to grow and living in an age friendly domain free from barriers and gaps.

¹The eight domains of an Age-friendly City [from the Global Age-friendly Cities guide (2007)]

[1.5] SEVEN PRINCIPLES FOR DESIGN

Advances in medicine, technology, health care, nutrition and sanitation allows people to live longer. Even though the health of the older population is better than it was before, there are some things such as sensory, cognitive, physical health, mobility and dexterity changes that occurs which affects the way we think about people in the architectural world.

The generation of the baby boomer are people that were born between 1946 and 1964. Their generation has changed the way we view our civil rights, women's rights, workers' rights, gender identity rights, and the rights of those with disabilities. The development of the United Nations Principles for Older person recognized the importance of living conditions for the elderly and noted five categories relating to the status of the elder: independence, participation, care, self-fulfillment, and dignity.

Five key principles defined how housing for the aging should include: (1) access to food, water, shelter, clothing and health care, (2) ability to live in environments that are safe and adaptable, (3) ability to reside at home, (4) ability to utilize appropriate levels of institutional care, rehabilitation and social and mental stimulation, and (5) ability to enjoy human rights and fundamental freedoms where their dignity, beliefs, needs, and privacy to make decisions about the quality of their life.



EQUITABLE USE

USABLE BY EVERYONE



FLEXIBLE IN USE

ADAPTABLE TO USER



SIMPLE & INTUITIVE

EASY TO UNDERSTAND



PERCEPTIBLE INFORMATION

COMMUNICATES CLEARLY REGARDLESS OF DISABILITIES OR IMPAIRMENTS



TOLERANCE FOR ERROR

MINIMIZES HAZARDS OR CONSEQUENCES OF ACCIDENTS UNINTENDED ACCIDENTS



LOW PHYSICAL EFFORT

EFFICIENT SPACES & MINIMIZES FATIGUE



SIZE & SPACE FOR APPROACH & USE

APPROPRIATE SIZE AND SPACE REGARDLESS OF BODY SIZE

These principles promote active living for the elderly where connections and new model of living can create places. Most housing is design for the younger population and does not accommodate those with sensory, mobility, or cognitive limitations. Concepts of universal design explores a new basis for accessibility, safety, and health of the population.

Using universal design techniques integrate usability by everyone to include different groups of often overlooked design process. The Seven Principles of Universal Design was developed as a design approach that could be adapted to any given situation. These ideas are a basis for principles and practical solutions to other issues that affect the elderly as well as everyone.

[1.6] DESIGN FOR AGING

Gensler's researched and documented trends for baby boomers and the aging. They focused on demographic shifts on how different unique physical, mental, and social needs affect the population. Their research summarized research lead by government organizations, professional associates, academia, corporations, and popular press. The elderly don't view aging as a physical decline and want to continue to live life to the fullest. The baby boomers account for 50 percent of consumer spending in the US.

Their research identified the intersection of two themes when coming to their conclusion: design approach and project scale. The research focused on the health and well-being, residential planning, master planning, inclusion, and sustainability.

Through research, there were four major themes that were identified that facilitated in the design approach for an active aging population. They are connectivity, choice, independence, and wellness.



CONNECTIVITY

COMMUNICATES CLEARLY REGARDLESS OF DISABILITIES OR IMPAIRMENTS



CHOICE

MINIMIZES HAZARDS OR CONSEQUENCES OF ACCIDENTS UNINTENDED ACCIDENTS



INDEPENDENCE

EFFICIENT SPACES & MINIMIZES FATIGUE



WELLNESS

APPROPRIATE SIZE AND SPACE REGARDLESS OF BODY SIZE

Gensler researched different design strategies for the active aging population.

"Design for Active Aging: Gensler Research Institute: Research & Insight." Gensler, September 1, 2015.

<https://www.gensler.com/research-insight/gensler-research-institute/design-for-active-aging>.



IMAGE 1-61



POPULATION



SPENDING



HOUSING

CHAPTER [TWO]
RESEARCH

| [2.0]

[2.1] DEMOGRAPHICS

On average, there are about 360,000 births per day and 151,600 deaths per day. In the United States, the projected population of people over the age of 65 will increase by 20%.¹¹ This influx of the 65 and up demographics will change and affect the way people live, work, and interact with each other because the need for senior living arrangements will increase.

With senior living, there are major factors that comes into consideration such as the physical and mental wellness of the individual. The current age of a senior is 65 according to Social Security. Culturally, the way Southeast Asians senior communities are different than America. Elder communities in Southeast Asia are socially interactive and engaging with the community and numerous age groups.



20%

INCREASE IN POPULATION



750

MALLS BUILT 1970-2000



20

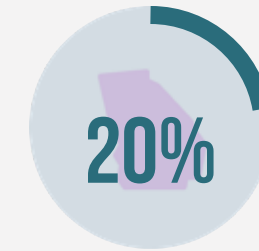
SENIOR LIVING IN GWINNETT

TOTAL POPULATION



327,167,439

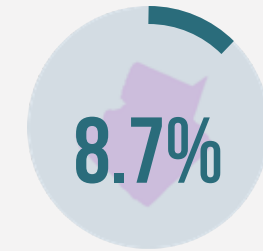
UNITED STATES



20%

10,519,475

GEORGIA

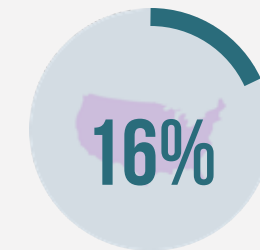


8.7%

920,260

GWINNETT

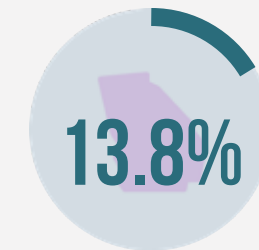
POPULATION OVER 65 YEARS OLD



16%

52,423,114

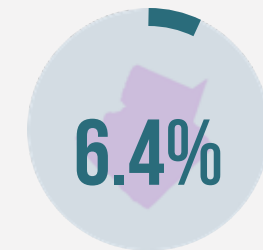
UNITED STATES



13.8%

1,451,687

GEORGIA

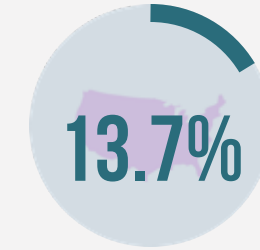


6.4%

92,946

GWINNETT

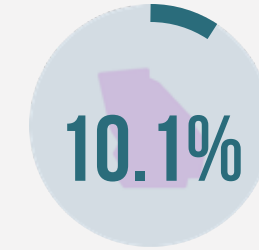
FOREIGN BORN OVER 65 YEARS OLD



13.7%

6,815,004

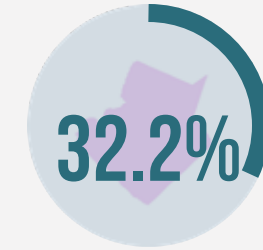
UNITED STATES



10.1%

146,620

GEORGIA

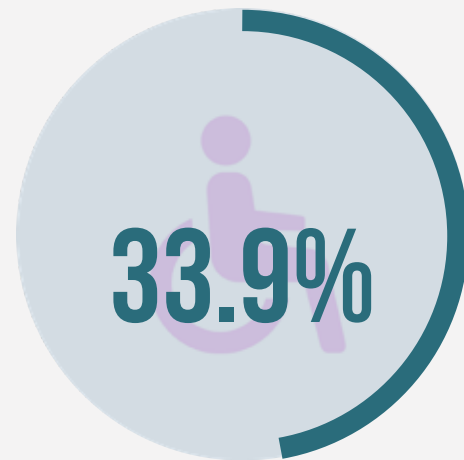


32.2%

29,928

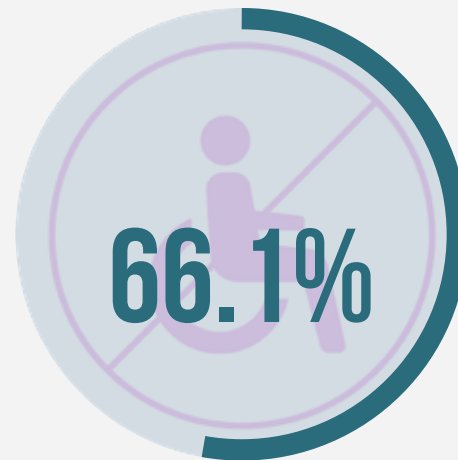
GWINNETT

DISABILITY OVER 65 YEARS OLD



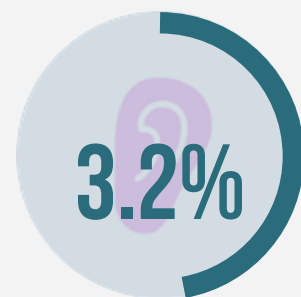
33.9%

WITH DISABILITY



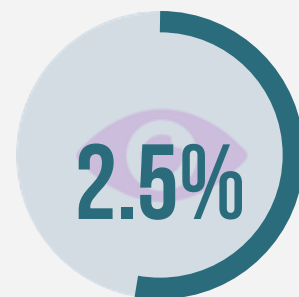
66.1%

W/O DISABILITY



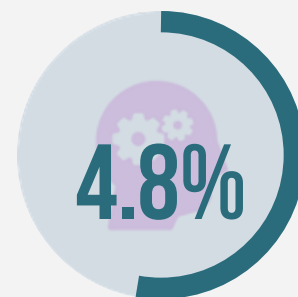
3.2%

HEARING



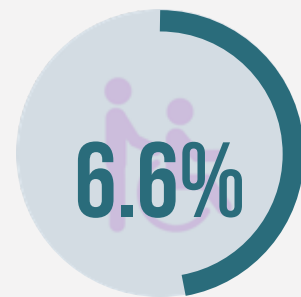
2.5%

VISION



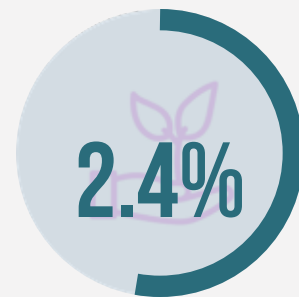
4.8%

COGNITIVE



6.6%

AMBULATORY



2.4%

SELF-CARE



5.5%

INDEPENDENT LIVING

GENDER OVER 65 YEARS OLD



44.4%

MALE



55.6%

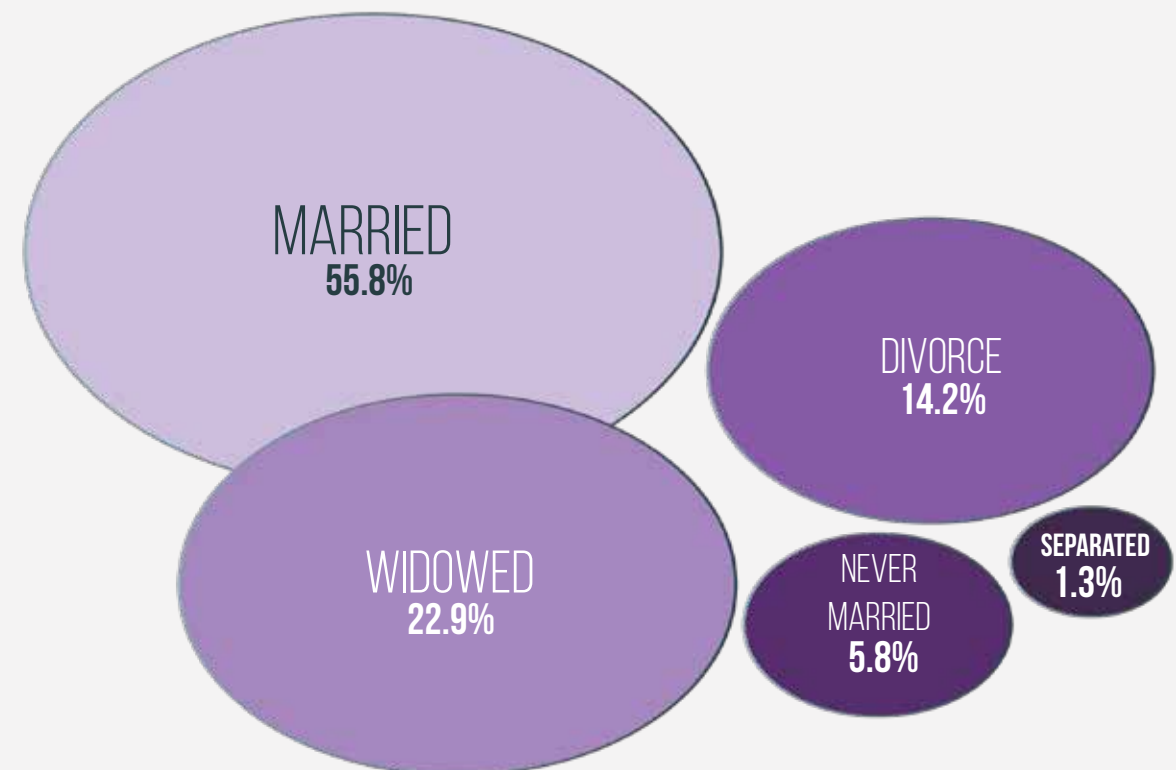
FEMALE



73

AVERAGE AGE

HOUSEHOLD TYPE



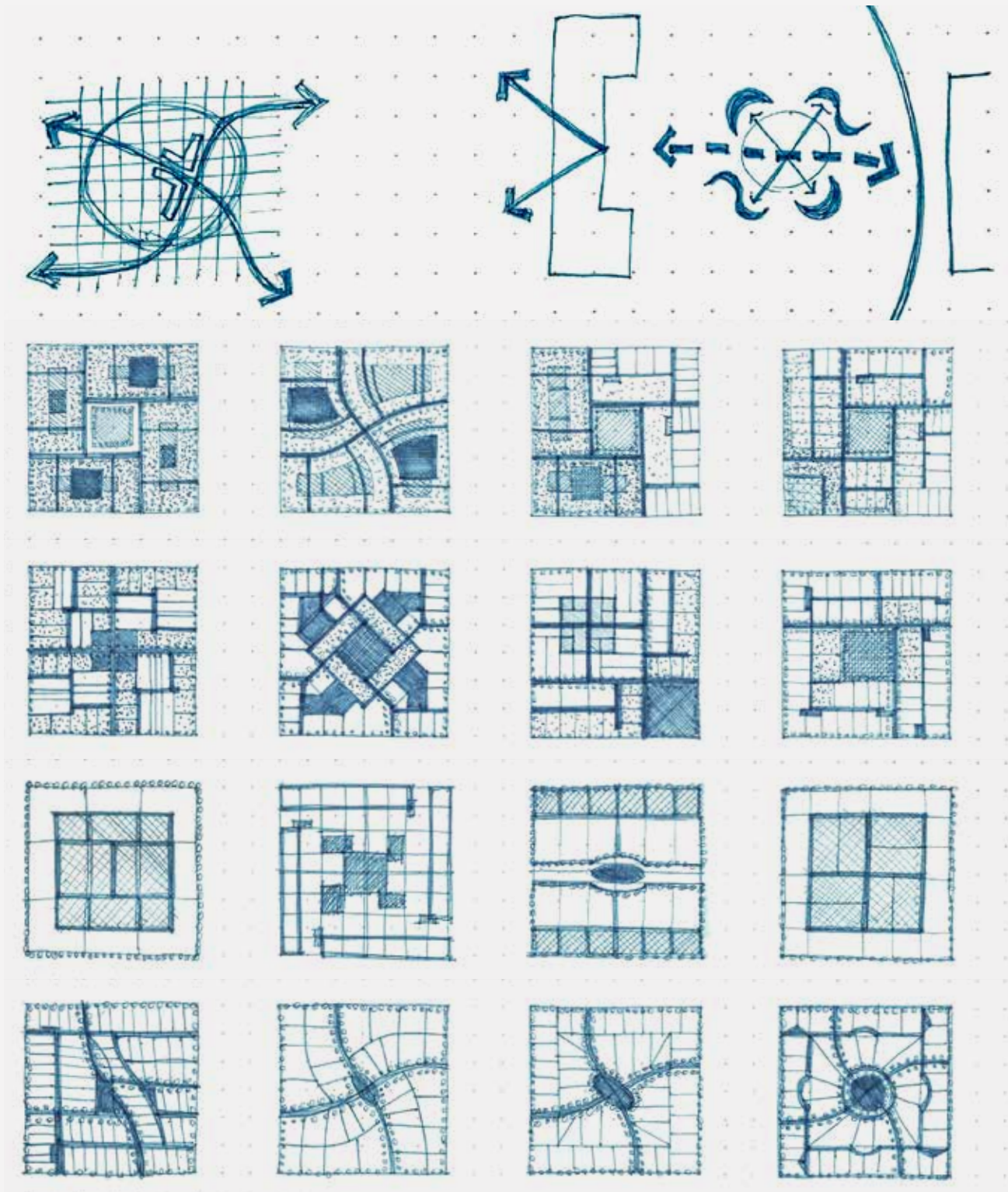
[2.2] DESIGN STRATEGIES

The initial design of the project began through the understanding of block developments and how to design walkable environments.

Precedents of street conditions were taken from Atlanta Beltline and the National Association of City Transportation Official Street to propose a new type of street condition of the site.

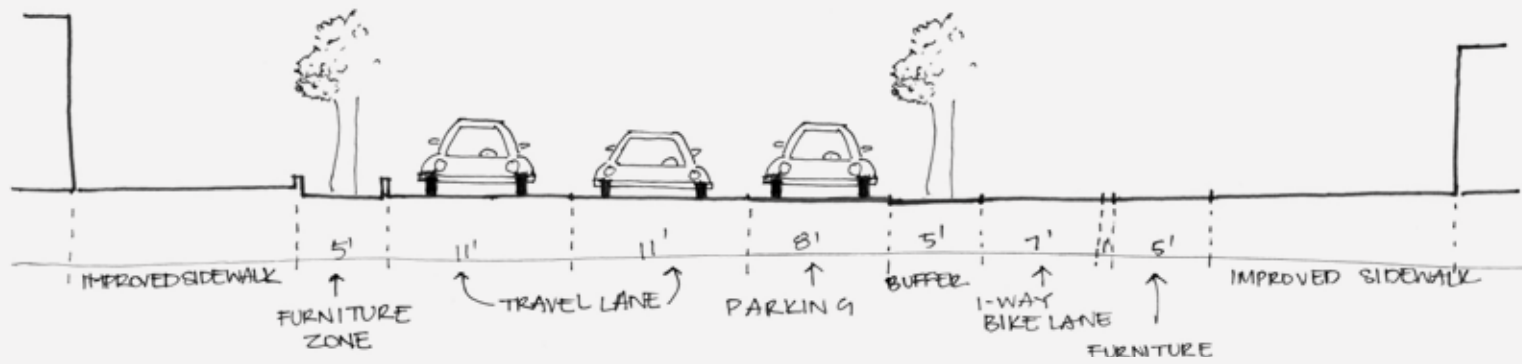
The design of the project originated from taking the existing conditions and structural grid from the existing site to create smaller blocks that would be walkable and interactive for the targeted demographics.

BLOCK DEVELOPMENT LANDSCAPE ORGANIZATIONS

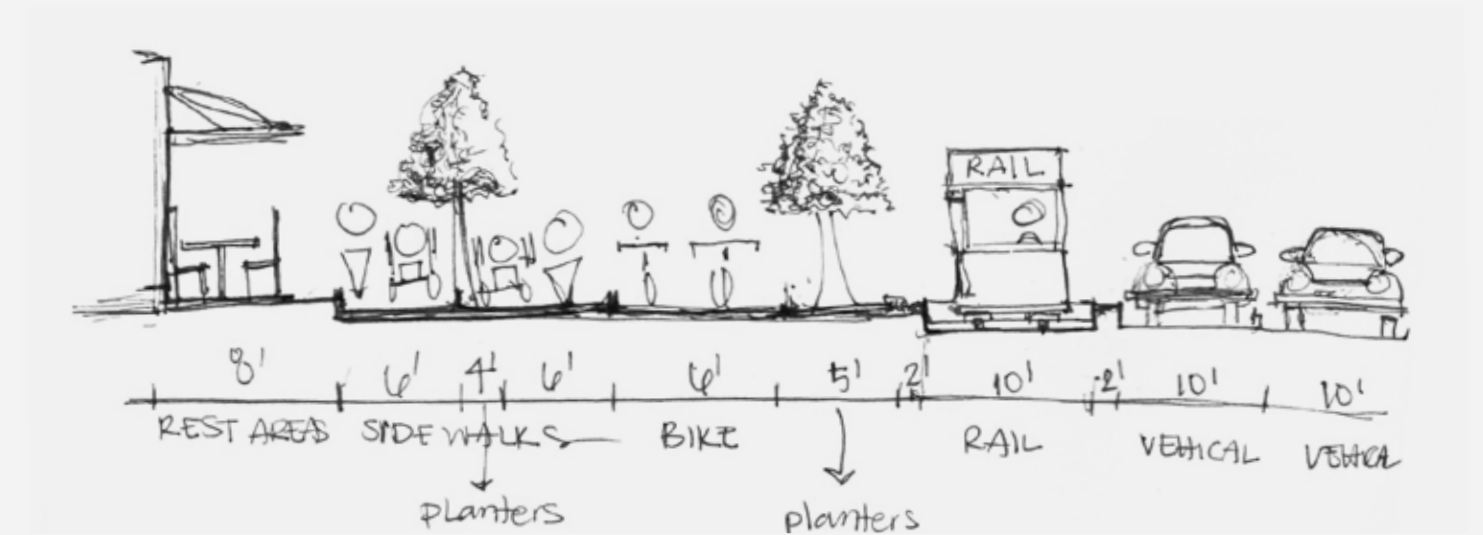


ANALYSIS OF EXISTING STREET CONDITIONS

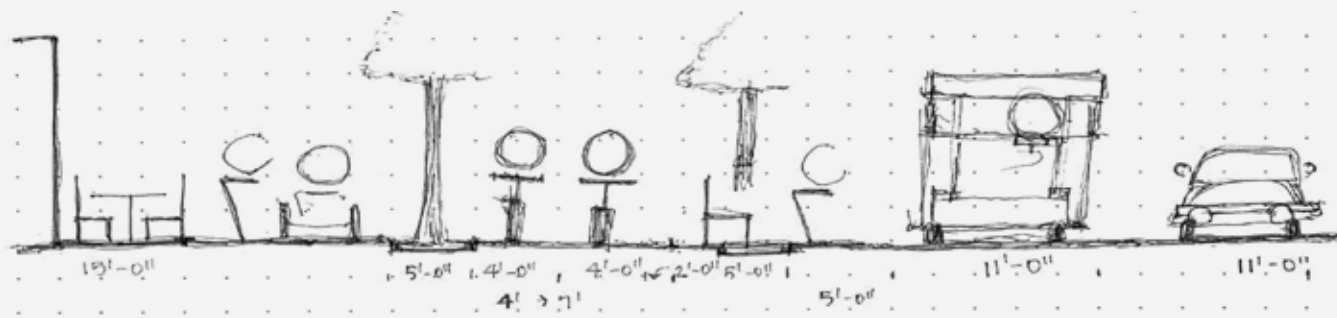
ATLANTA BELTLINE COMPLETED STREET



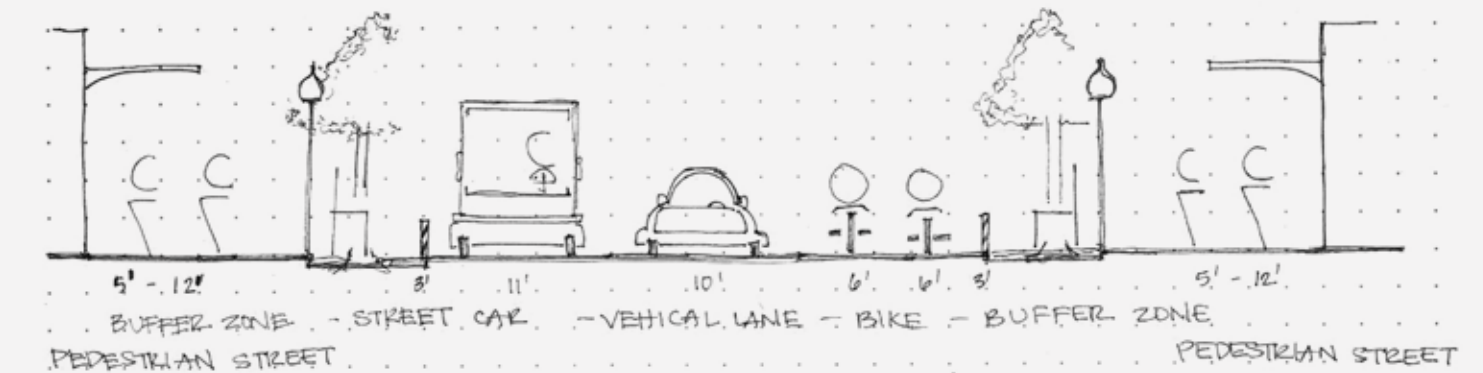
PROPOSED PRIMARY STREET FOR SITE



NATIONAL ASSOCIATION OF CITY TRANSPORTATION OFFICIAL STREET



PROPOSED SECONDARY STREET FOR SITE



CHAPTER [THREE]
PRECEDENT | CASE STUDIES

| [3.0]

[3.1] CASE STUDIES OF EXISTING BLOCK DEVELOPMENTS

Eastgate Town Center and Winter Park Village take existing greyfield land developments and utilize the existing structure to break down the existing grid into smaller blocks that can create walkable spaces. By doing so, the blocks become more interactive and is at a human scale.

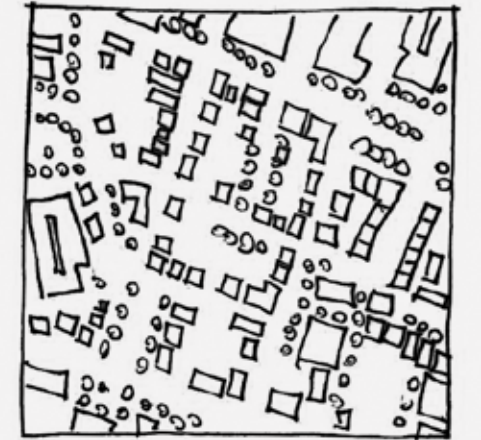
This allows for opportunities where people can interact with each other and the street. It utilizes less of a need to condition a large space and allows each building to have a unique sense of character within the larger scale.

EASTGATE TOWN CENTER

BRAINERD, TENNESSEE
DOVER, KHOL, & PARTNERS



EXISTING BLOCK STRUCTURE

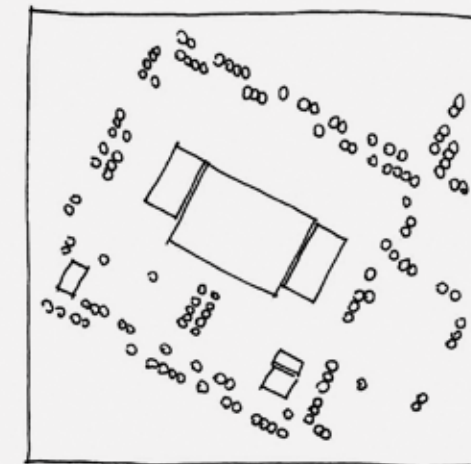


RE-DEVELOPED STRUCTURE

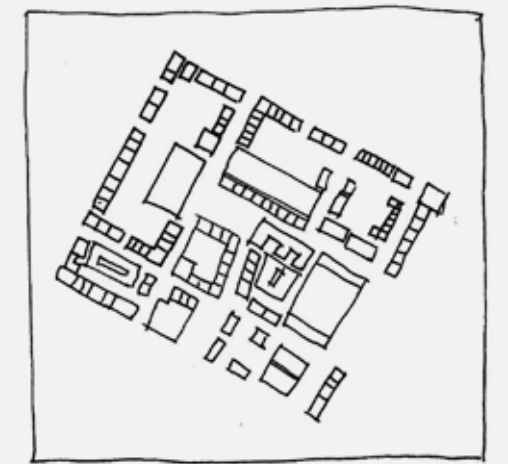
FIGURE 3-11

WINTER PARK VILLAGE

WINTER PARK, FLORIDA
DORKSY HODGSON & PARTNERS



EXISTING BLOCK STRUCTURE



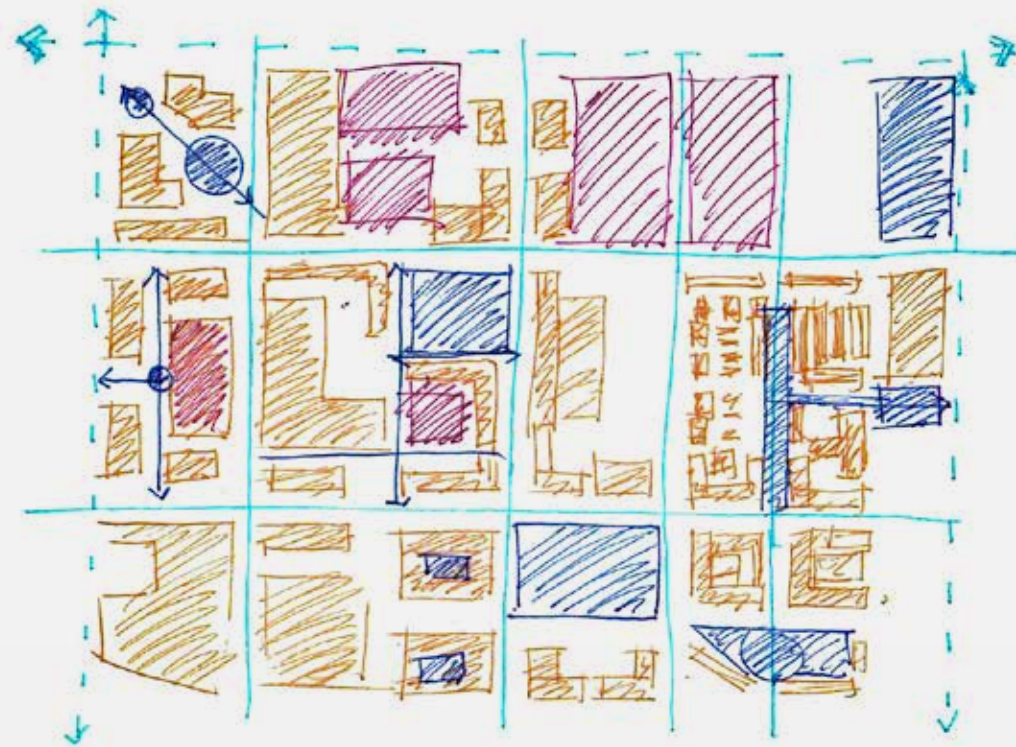
RE-DEVELOPED STRUCTURE

FIGURE 3-12

BELMAR

LAKWOOD, COLORADO

ELKUS-MANFREDI ARCHITECTS, LTD



Elkus-Manfredi Architects, LTD breaks down the city blocks to create smaller developments that incorporates mixed-use, retail, office, multi-family, and live-work-apartments. By being able to incorporate the different typologies, it allows for diversity and density within a site that was a sprawling development. Breaking down the blocks creates walkable spaces by adding unique outdoor activities throughout the blocks.

All of these smaller blocks then creates opportunities for outdoor public spaces that are accessible to all the major circulation. The mixed-used with offices and retails are all off the minor roads to allow for less vehicular circulation.

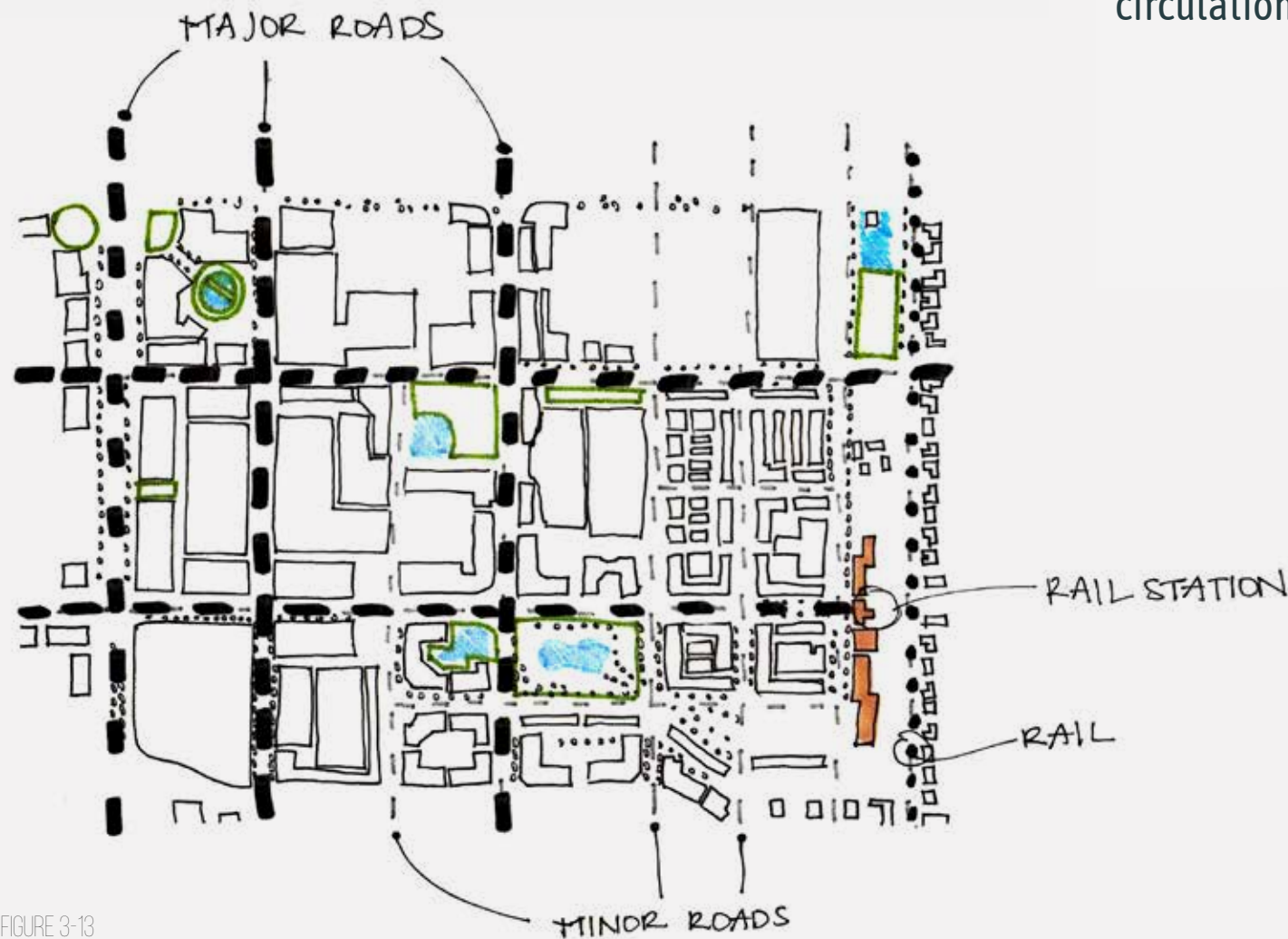


FIGURE 3-13

[3.2] CASE STUDY | HOMEFARM

Homefarm
Singapore
SPARK ARCHITECTS

Homefarm was a conceptual way to understand an urban retirement housing option for the elderly in Singapore. The concept combines residential and commercial farming that is horizontal and vertical. The site allows for high density where the occupants have an opportunity to work and live in the community.

Within the region, the suspected population is to grow by 20%. The demand for food is increasing while the influx in demand create a food price inflation within the area. If the occupants could grow their own supply, then it would decrease the need for outside sources for food.



IMAGE 3-21



FIGURE 3-21

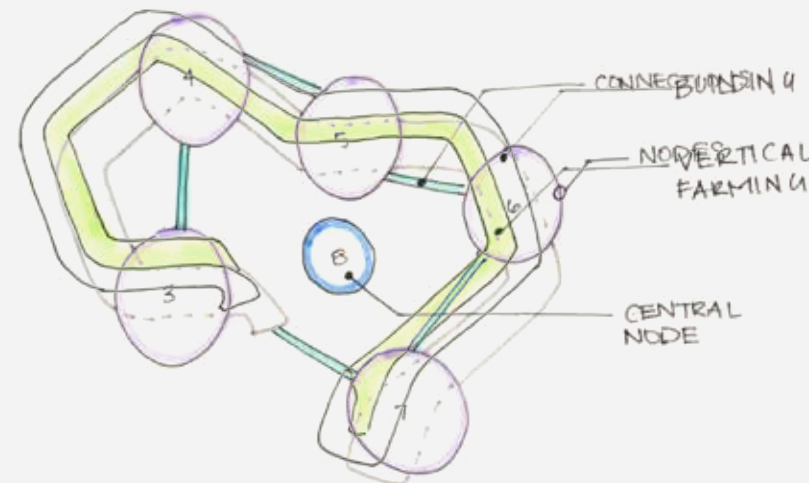


FIGURE 3-22

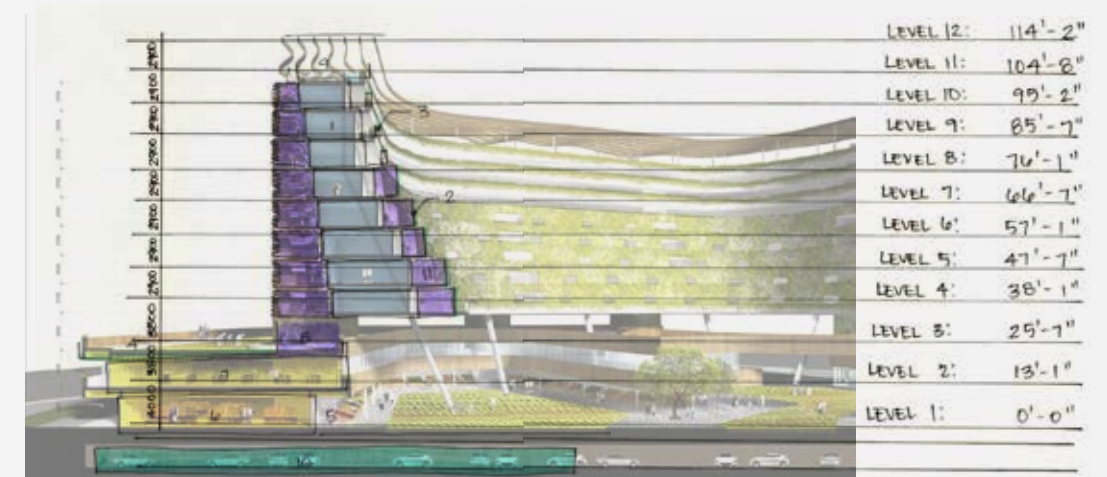


FIGURE 3-23

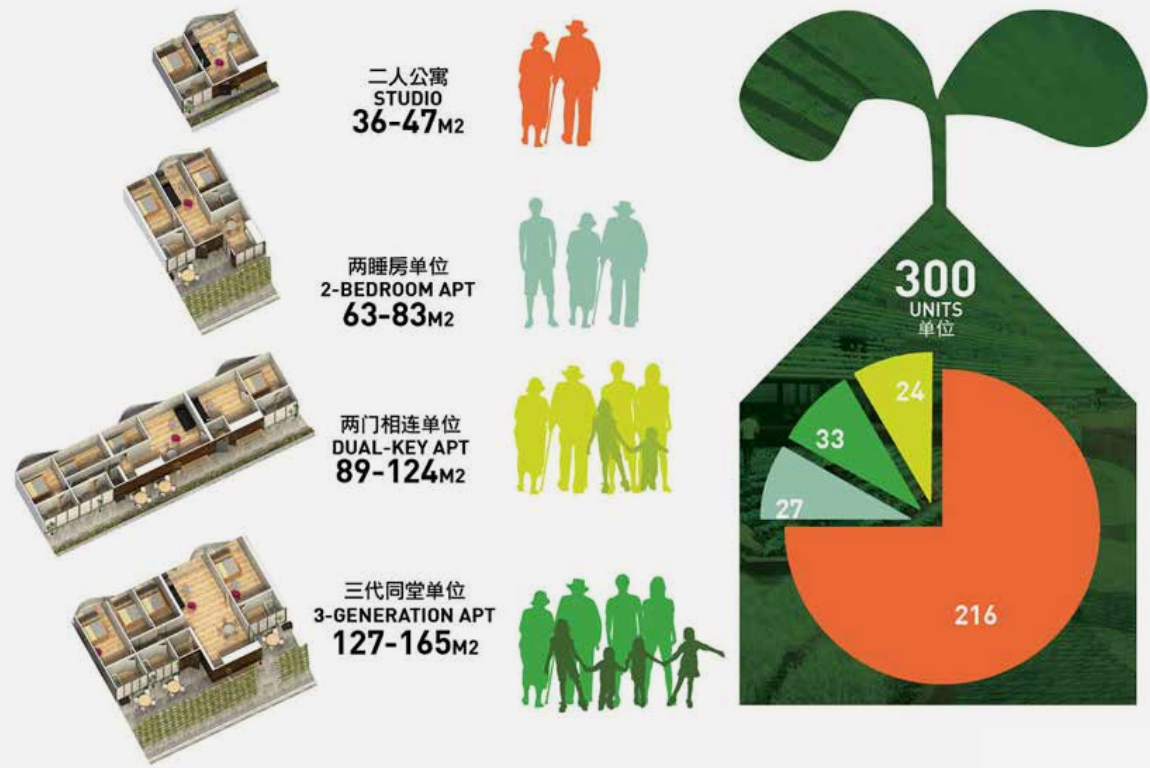


FIGURE 3-24



IMAGE 3-25



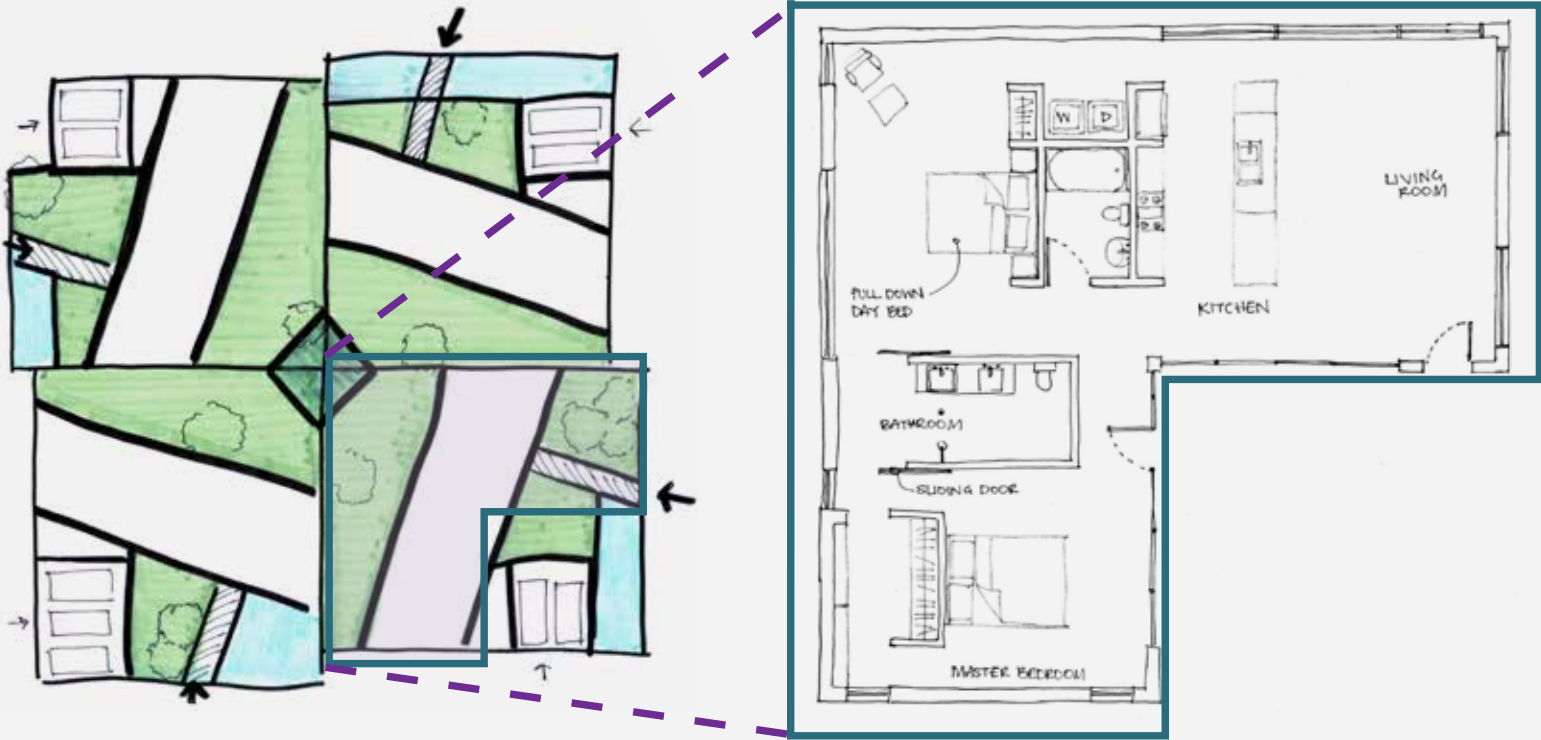
IMAGE 3-26

[3.3] ANALYSIS OF PRECEDENT SENIOR LIVING UNITS

Each analysis takes into account the average square footage that is needed for each type of unit for a senior living unit. Three projects were taken and then each area was analyzed to find commonalities to develop the unit types.

HOUSES FOR AGING SOCIALLY

UNIVERSITY OF ARKANSAS COMMUNITY DESIGN CENTER



HOUSING TYPE B "THE INTIMATE"

POSSIBLE ACCESSIBLE UNIT FOR PRECEDENT

FLEMING FARMS SENIOR LIVING HUNTSVILLE, ALABAMA RULE, JOY, TRAMMELL + RUBIO ARCHITECTS



ONE BEDROOM



TWO BEDROOM



THREE BEDROOM

THE BRIDGE AT LAWRENCEVILLE

LOCAL SENIOR LIVING FACILITY



STUDIO BEDROOM



ONE BEDROOM



TWO BEDROOM

LINWOOD ESTATES

LOCAL SENIOR LIVING FACILITY



STUDIO BEDROOM



ONE BEDROOM



TWO BEDROOM

CHAPTER [FOUR]
DESIGN SYNTHESIS

| [4.0]

[4.1] ZONING ANALYSIS OF EXISTING SITE

In intention of the project was to identify greyfield land that was once occupied that is no longer being use and identify it's zoning properties to better understand what are the existing conditions surrounding the intended site. The intention of the selection of the site was that it was in a location that was easily accessible through local and main roads.

The site intended use is C-3 which is Highway Business District.



GEORGIA

GWINNETT COUNTY

ZIP CODE - 30096

ZONING - C-3: HIGHWAY BUSINESS DISTRICT

CODE DESCRIPTION

RA-200: Agriculture-Residence District

RLL: Single-Family Residence Large Lot District

R-100: Single-Family Residence District

R-75: Single-Family Residence District

OSC: Open Space Conservation District

R-60: Single-Family Residence District

MH: Manufactured Housing

TND: Traditional Neighborhood Development District

R-SR: Senior Oriented Residence District

R-TH: Single-Family Residence Townhouse District

RM-13: Multifamily Residence District

RM-24: Multifamily Residence District

HRR: High Rise Residence District

O-R: Office-Residential District

O-I: Office-Institutional District

C-1: Neighborhood Business District

C-2: General Business District

C-3: Highway Business District

MU-N: Neighborhood Mixed-Use District

MU-C: Community Mixed-Use District

MU-R: Regional Mixed-Use District

M-1: Light Industry District

M-2: Heavy Industry District

Section 210-180. C-3 Highway Business District

| 210-180.1 Purpose and Intent |

The C-3 Highway Business District is intended for business uses which require locations accessible to major highways and arterials that serve significant portions of the community. The C-3 district allows an intensity of development and uses that is greater than in the C-2 General Business District because it is intended to serve a greater population and to offer a wider range of goods and services. Due to the nature of the businesses permitted within the C-3 district, the zoning district should be limited to property fronting on principal arterials, major arterials or minor arterials, not indicated as residential arterials, as shown on the Long Range Road Classification Map. C-3 Districts should provide an internal transition in intensity or provide a step-down to less intensive zoning districts when adjacent to residential districts.

| 210-180.2 Permitted Uses |

Uses permitted in the C-3 District are as listed in the UDO in Section 230-100 Table of Permitted and Special Uses provided that they comply with the Supplemental Use Standards of Section 230-130.

| 210-180.3 Accessory Uses and Structures |

Accessory uses and structures shall be permitted in the C-3 District in accordance with Section 230-100 Table of Permitted and Special Uses and provisions detailed in Section 230-120 Accessory Use Standards of the UDO.

| 210-180.4 Special Uses |

Special uses may be permitted in the C-3 District in accordance with Section 230-100 Table of Permitted Uses. Special uses shall be subject to approval of a Special Use Permit as provided in Section 270-30 and may be subject to the Additional Supplemental Use Standards established in Section 230-130 of the UDO.

| 210-180.5 Property Development Standards |

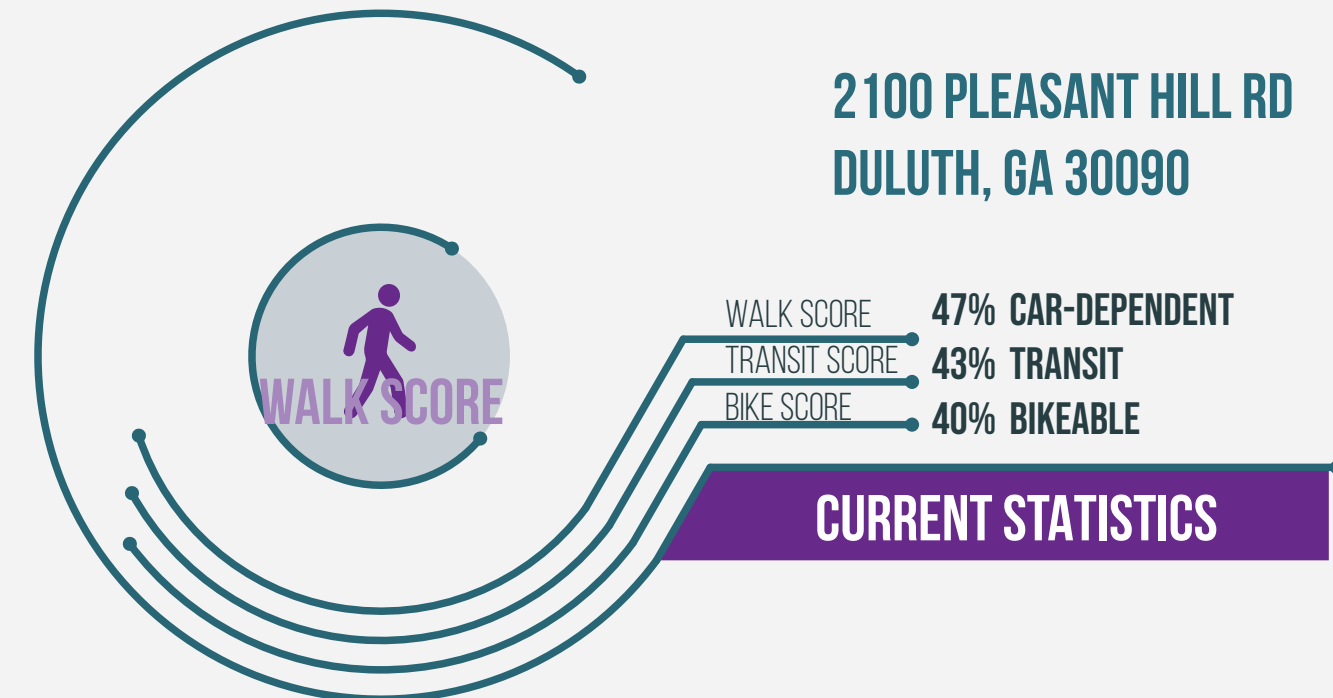
Property in the C-3 District shall be developed in accordance with Section 230-10 Dimensional Standards of Zoning Districts and the applicable site related provisions contained in Title 3 of the UDO.

[4.2] SITE ANALYSIS

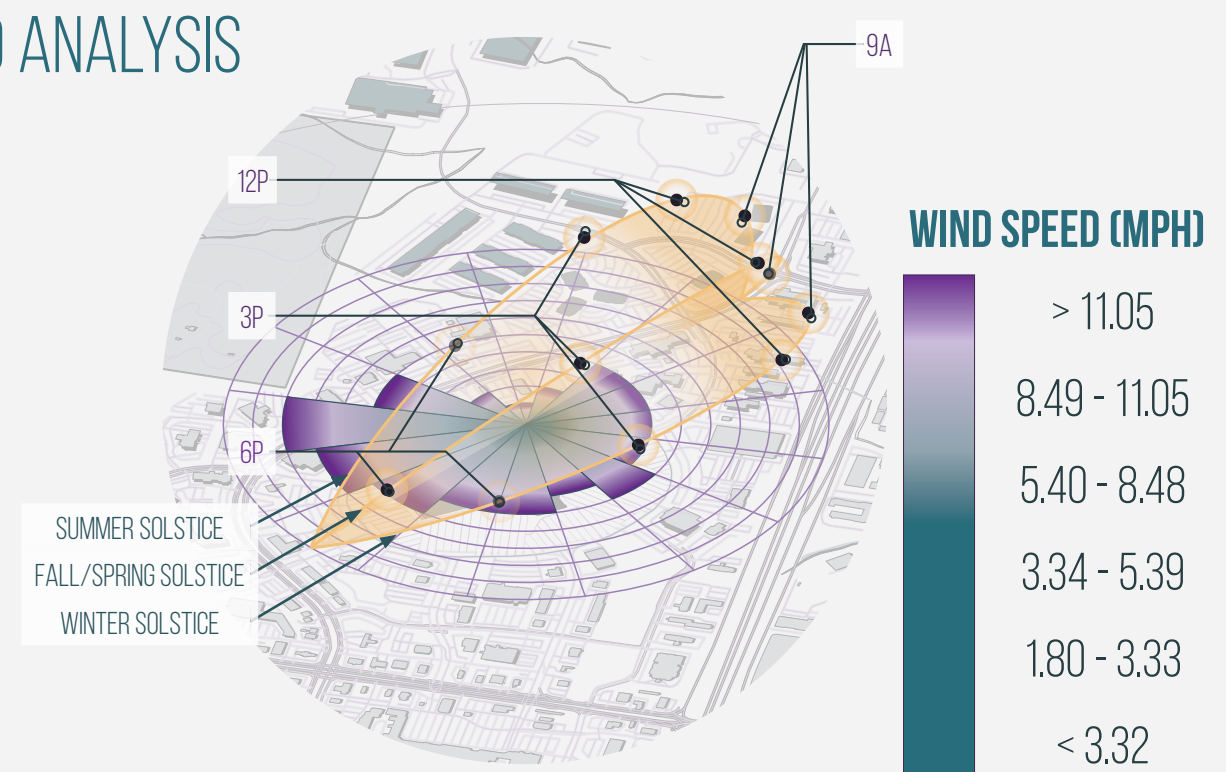
VIEWS OF EXISTING SITE



TRANSIT ANALYSIS



SOLAR & WIND ANALYSIS





SITE

1 MILE RADIUS

PLEASANT HILL RD

SATELLITE BLVD

SATELLITE BLVD

PLEASANT HILL RD

STEVE REYNOLDS BLVD

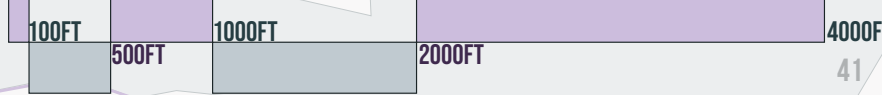
I-85

BRECKINRIDGE BLVD

OLD NORCROSS RD NW

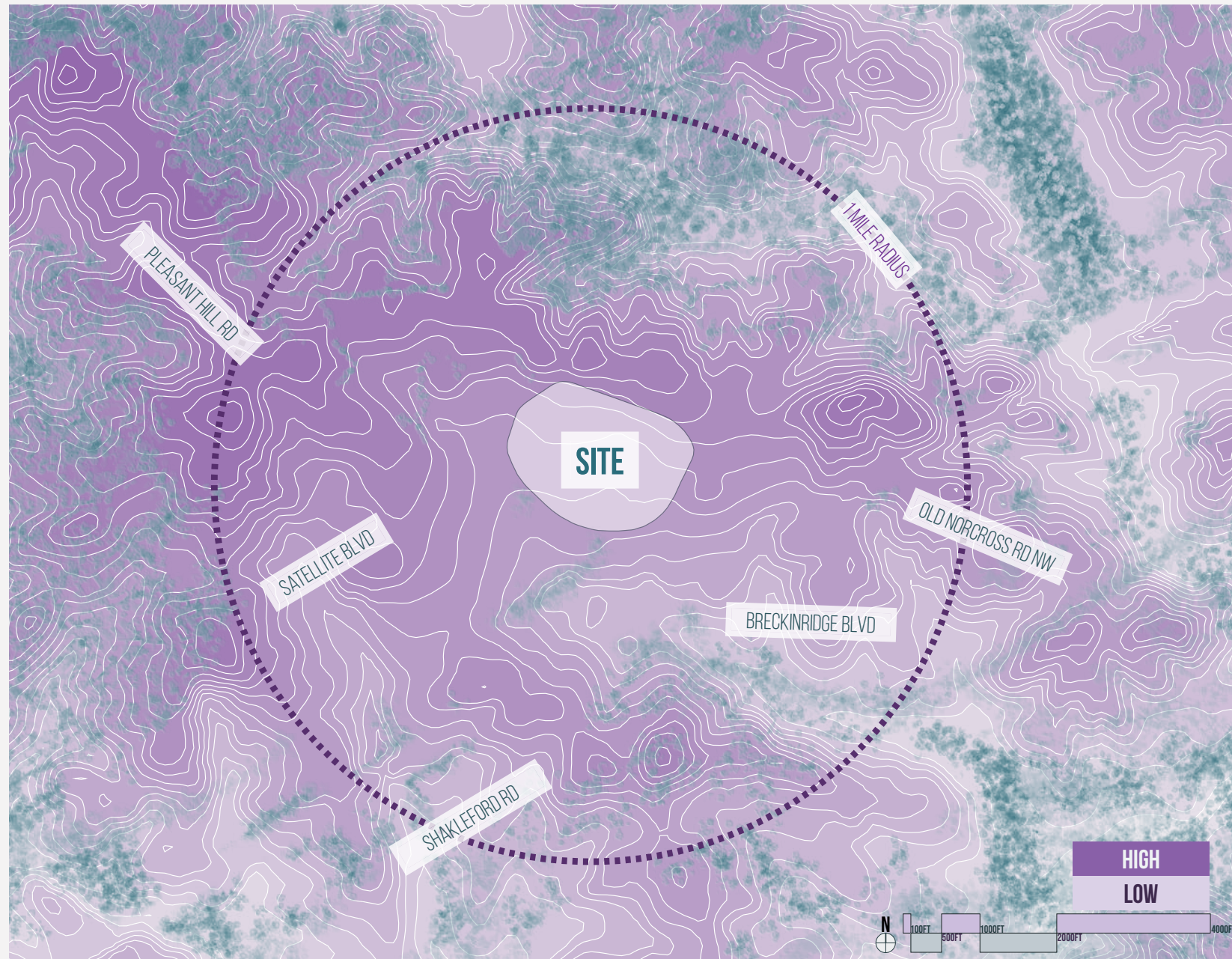
SHAKLEFORD RD

- 1-2 STOREY
- 3-4 STOREY
- 5+ STOREY



[4.3] SITE ANALYSIS

TOPOGRAPHY ANALYSIS





SITE

I-85

PLEASANT HILL RD

SATELITE BLVD

GUSON MIDDLE SCHOOL

WHITE CHAPEN MEMORIAL GARDENS

RADOFF MIDDLE SCHOOL

SUPERMARKET

HOME DEPOT

MALL CORNERS SHOPPING CENTER

MICROCENTER

GWINNETT PLACE HONDA

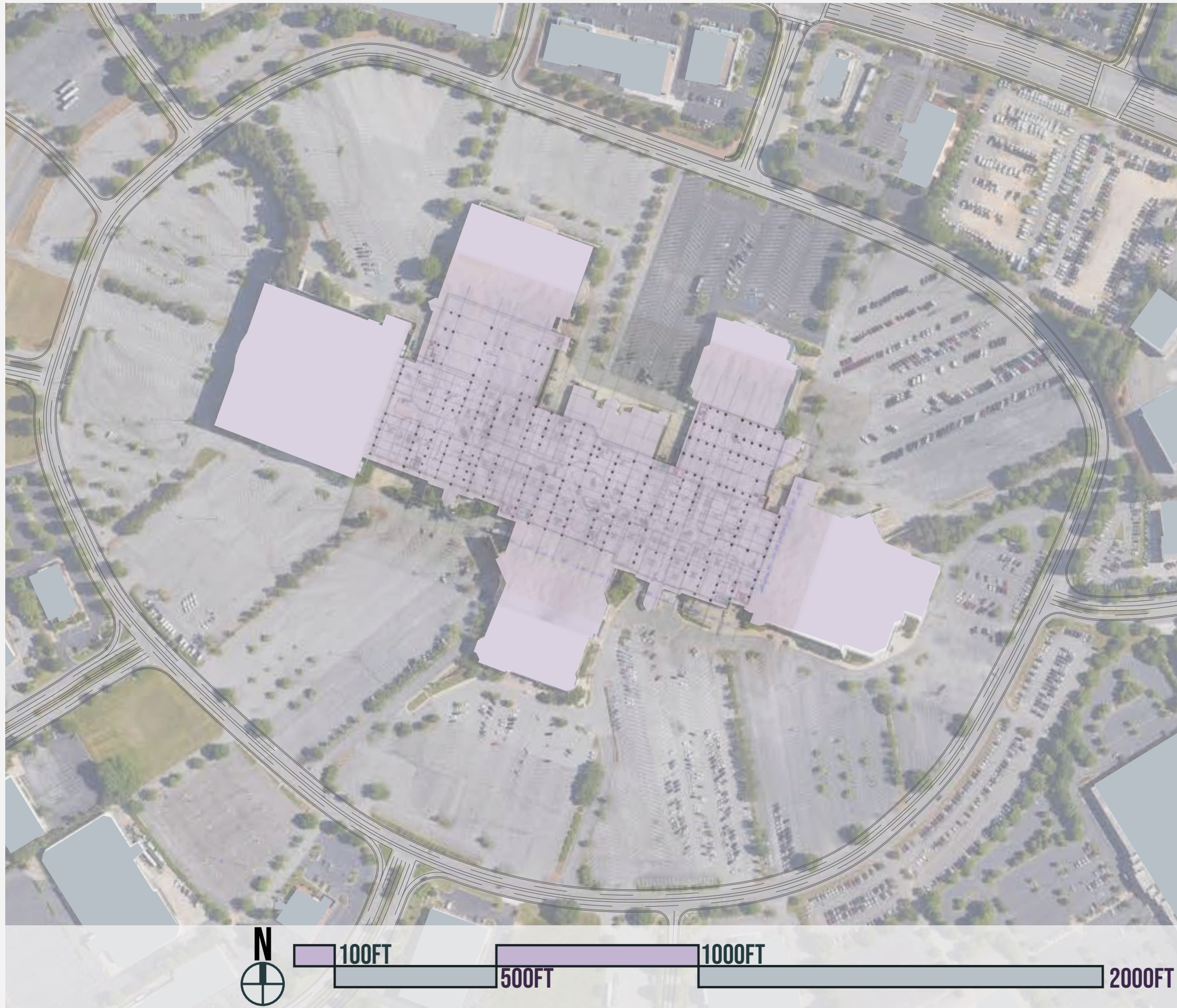
HENNESSY AUTO



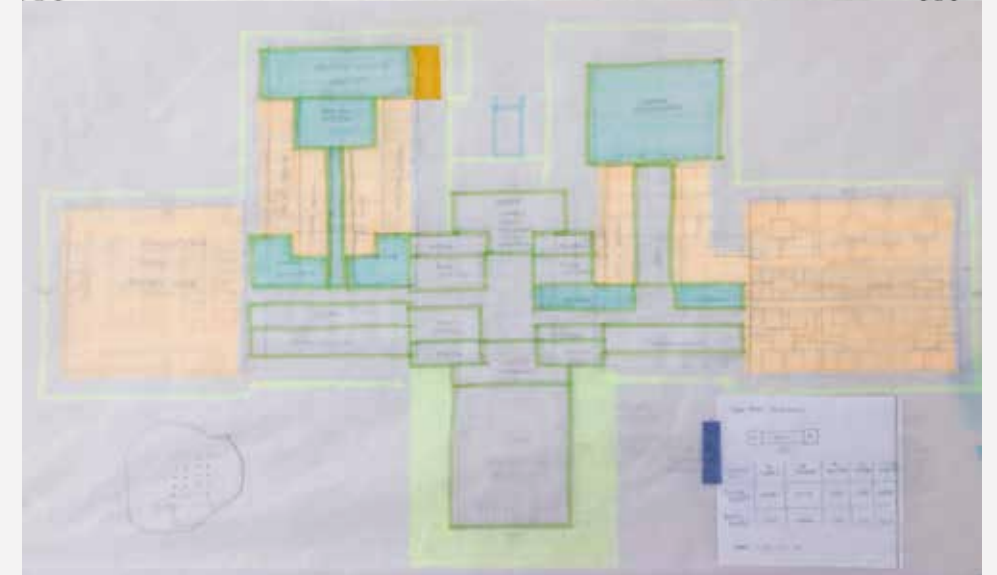
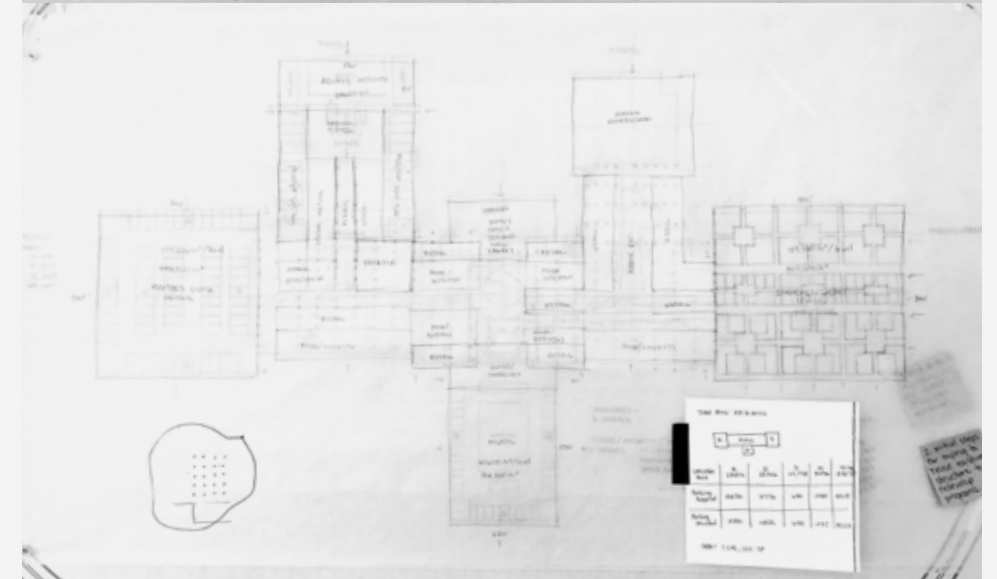
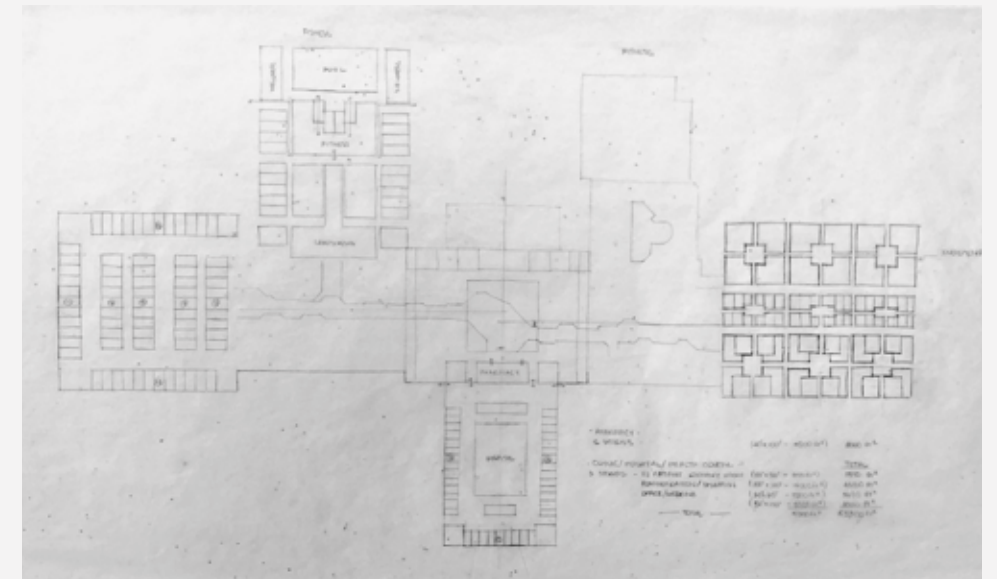
[4.4] STRUCTURAL ANALYSIS OF EXISTING SITE

PROGRAM USAGE FOR EXISTING SITE





ANALYSIS OF EXISTING STRUCTURAL GRID



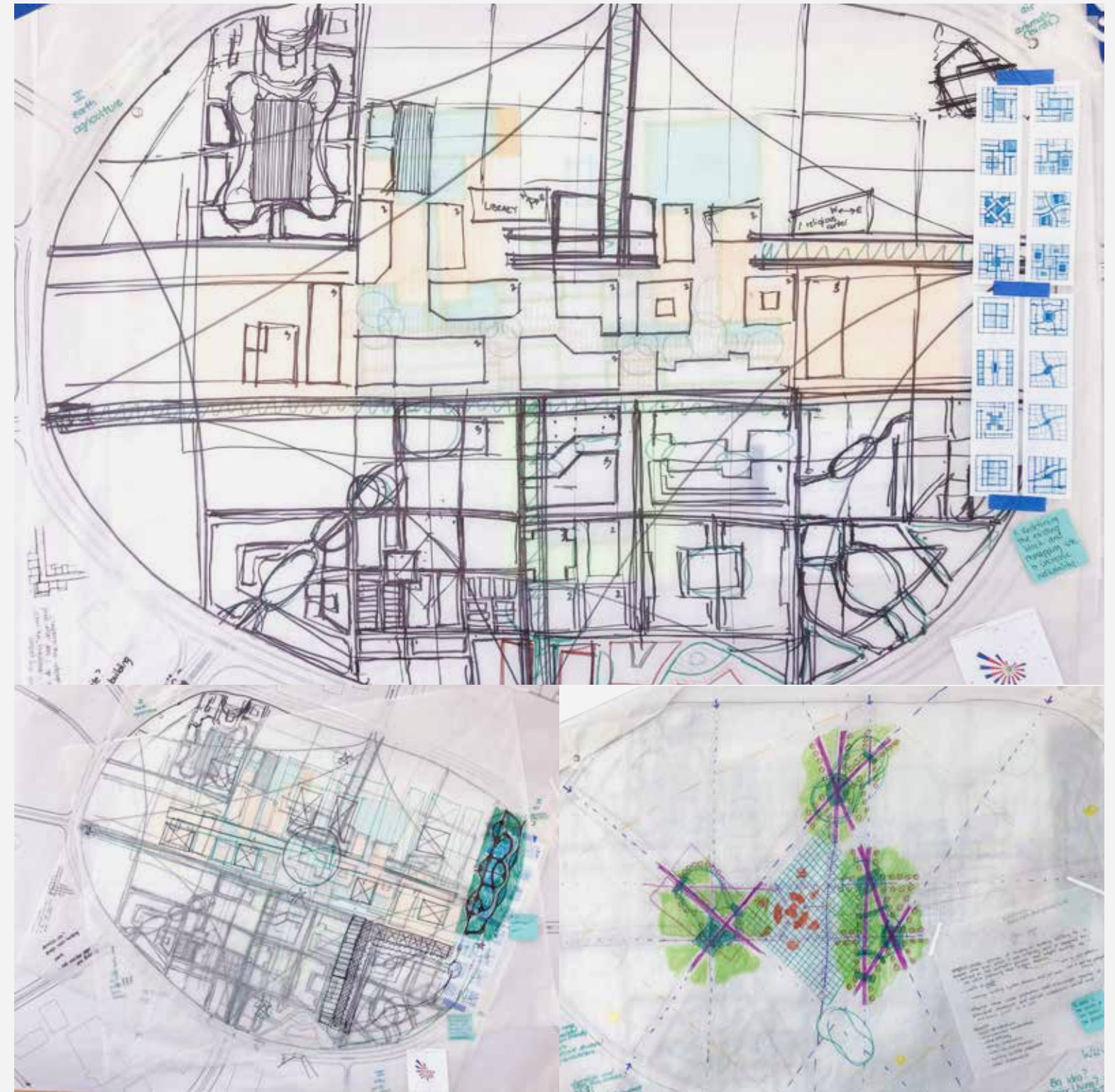
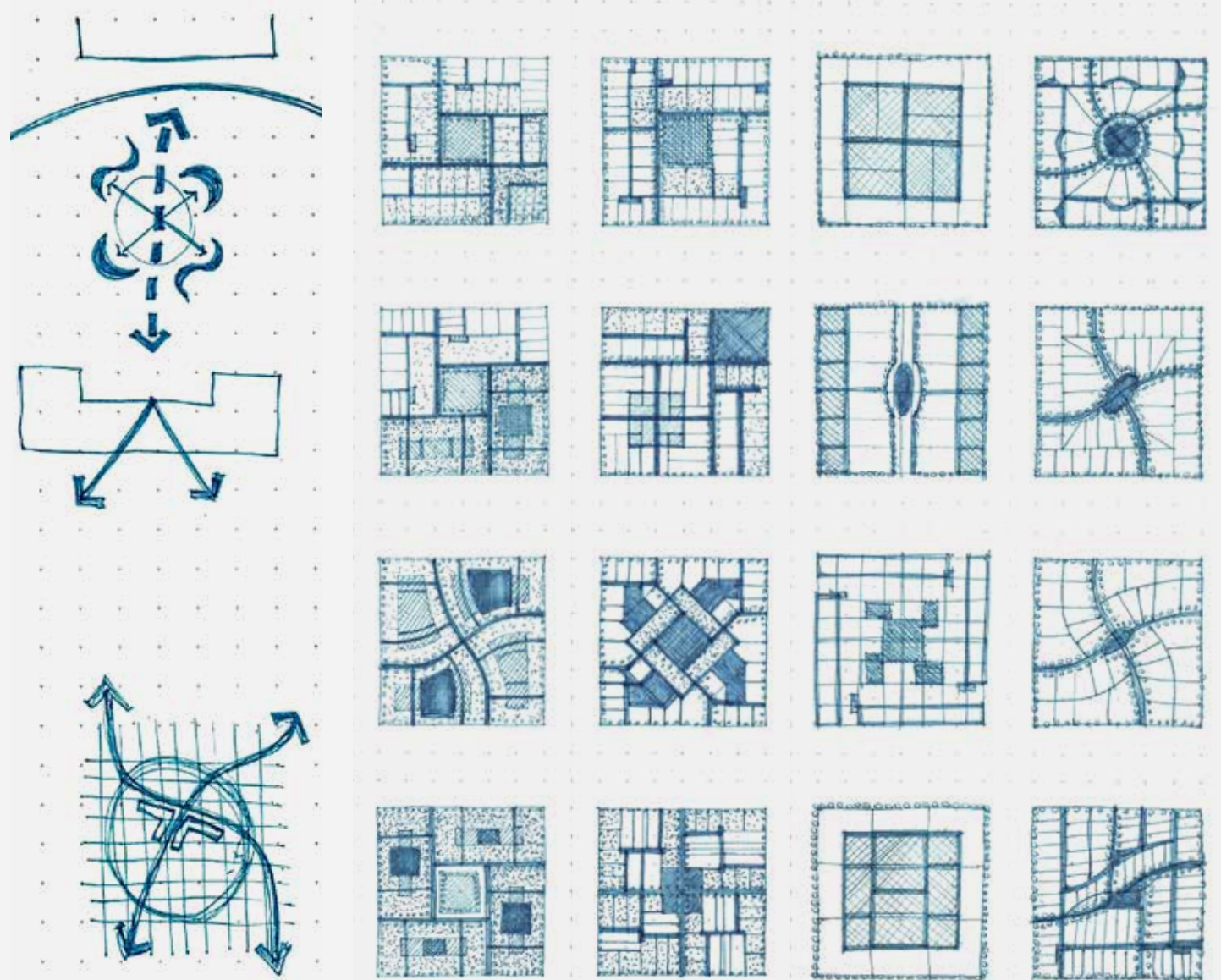
PROGRAM OVERLAY INTO EXISTING STRUCTURE

CHAPTER [FIVE]
DESIGN

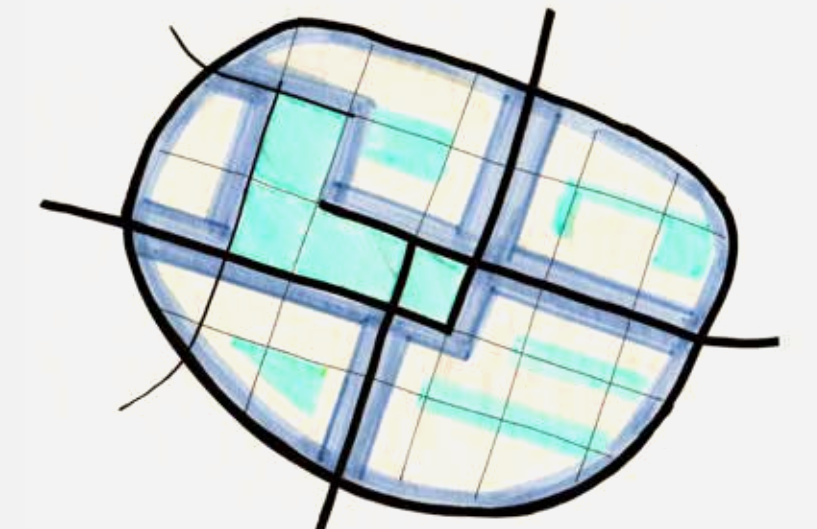
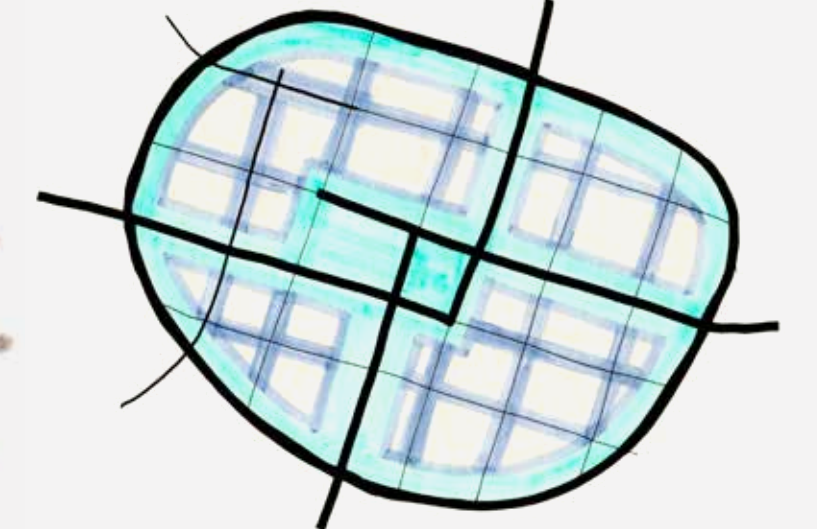
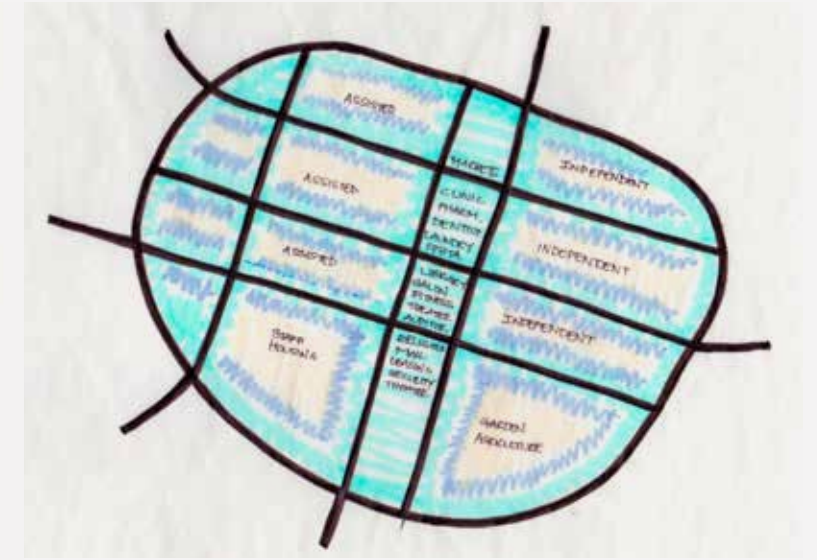
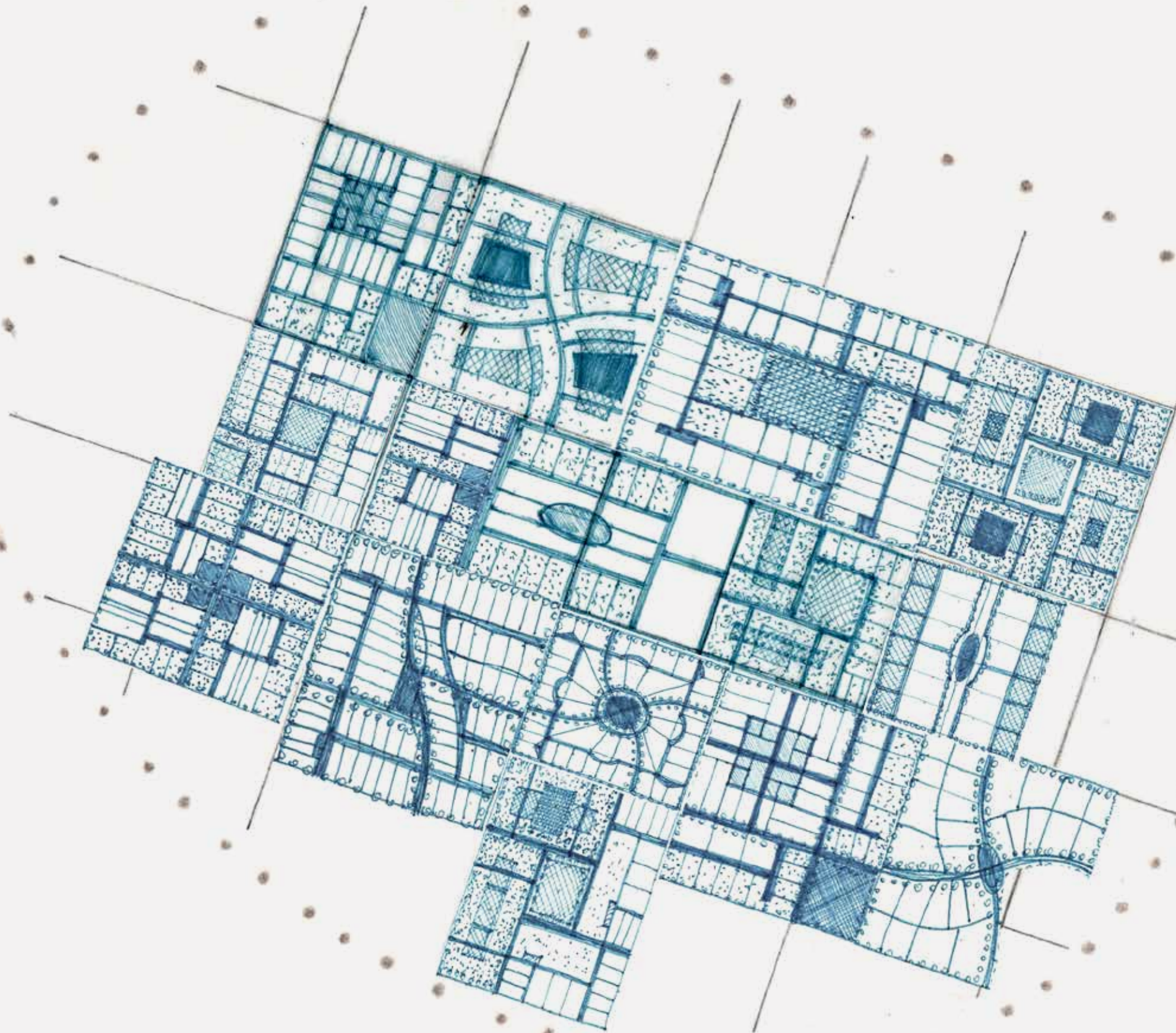
| [5.0]

[5.1] BLOCK DEVELOPMENT LANDSCAPE ORGANIZATION

The design of the blocks came through trying to break down the larger site into smaller walkable blocks by connecting existing main circulation from the existing area into the site. By maintaining the existing block and breaking up the blocks into smaller grid it provides opportunities to create interactive spaces within the site for the occupants.



DESIGN INTERROGATION OF CIRCULATION, NODES, EDGES OF EXISTING SITE



PRIMARY ROADS	SECONDARY ROADS	TERTIARY ROADS
PRIMARY	SOCIAL	SECONDARY
SEMI SOCIAL PRIVATE	TERTIARY	PRIVATE

DIAGRAMMATIC CONCEPTUAL DESIGN FOR PROGRAM ANALYSIS

[5.2] DIAGRAMMATIC PROGRAM ANALYSIS

Figure 5.21 shows the initial analysis began with identifying the major nodes and edges within the site to create the best circulation studies for the design. The site has two major axis from which paths are pulled from.

Figure 5.22 conceptually works with identifying massing of the programs and ways to lay out the different building typologies in relation to each axis of circulation.

Figure 5.23 initial diagrammatically creates meander edges without any parallel elements. The site is then attempted to create different zones of interaction for the occupants.

Figure 5.24 attempts to break the existing fabric and connect edges through parallel axes through the site.

Figure 5.25 uses the existing grid from the site to break down the site into smaller block sizes.

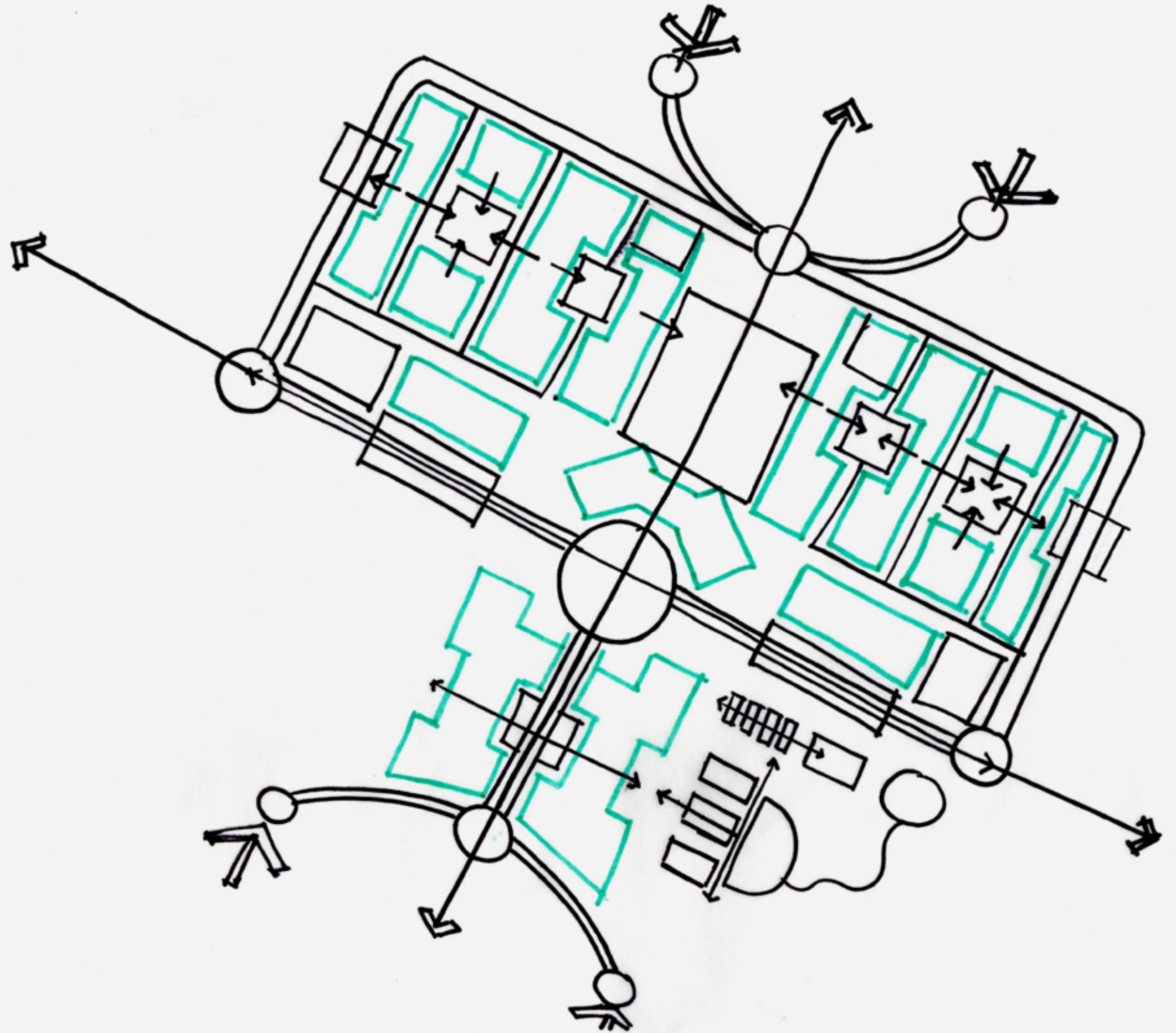


FIGURE 5.21



FIGURE 5.22



FIGURE 5.23



FIGURE 5.24



FIGURE 5.25

[5.3] UNDERSTANDING OF DIAGRAMMATIC PROGRAM ANALYSIS WITHIN REDEFINED CONCEPT

The diagram depicts the process of understanding the diagrammatic program analysis while trying to redefine the initial concepts.

Figure 5.31 takes the initial program analysis and develops programs within the given site. While Figure 5.39 shows how the development of the site progressed into landscaping to create unique experiential qualities within the site for the occupants.

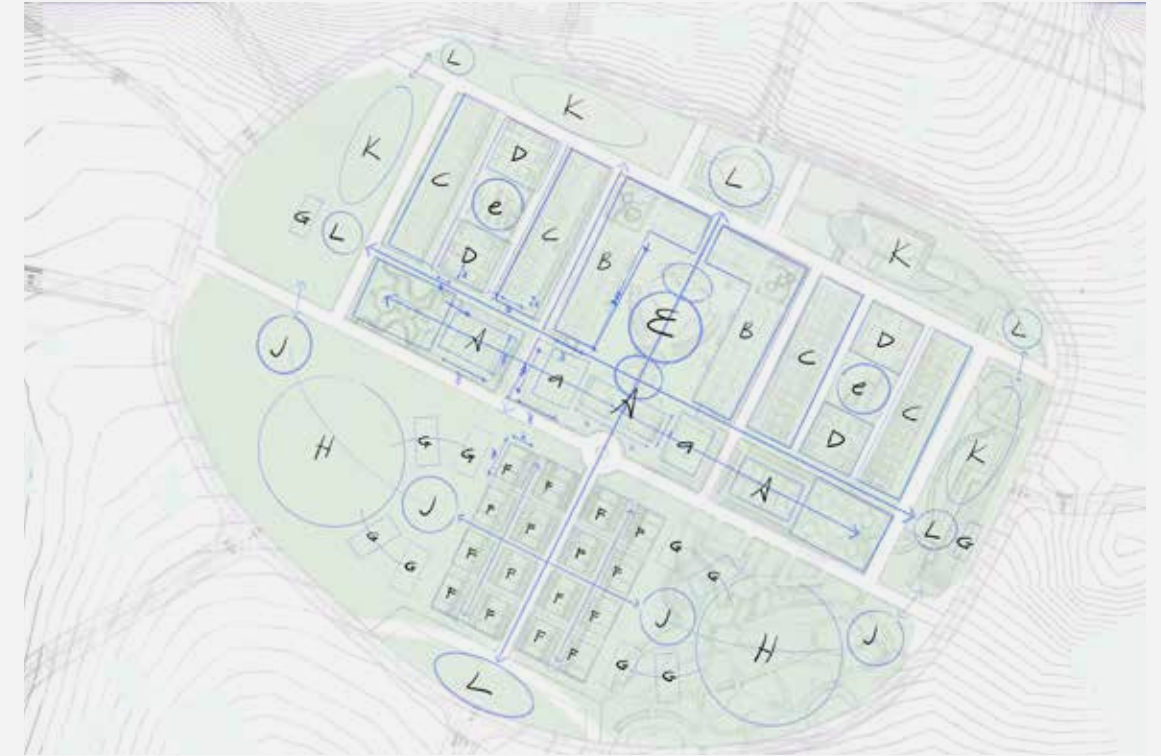


FIGURE 5.31

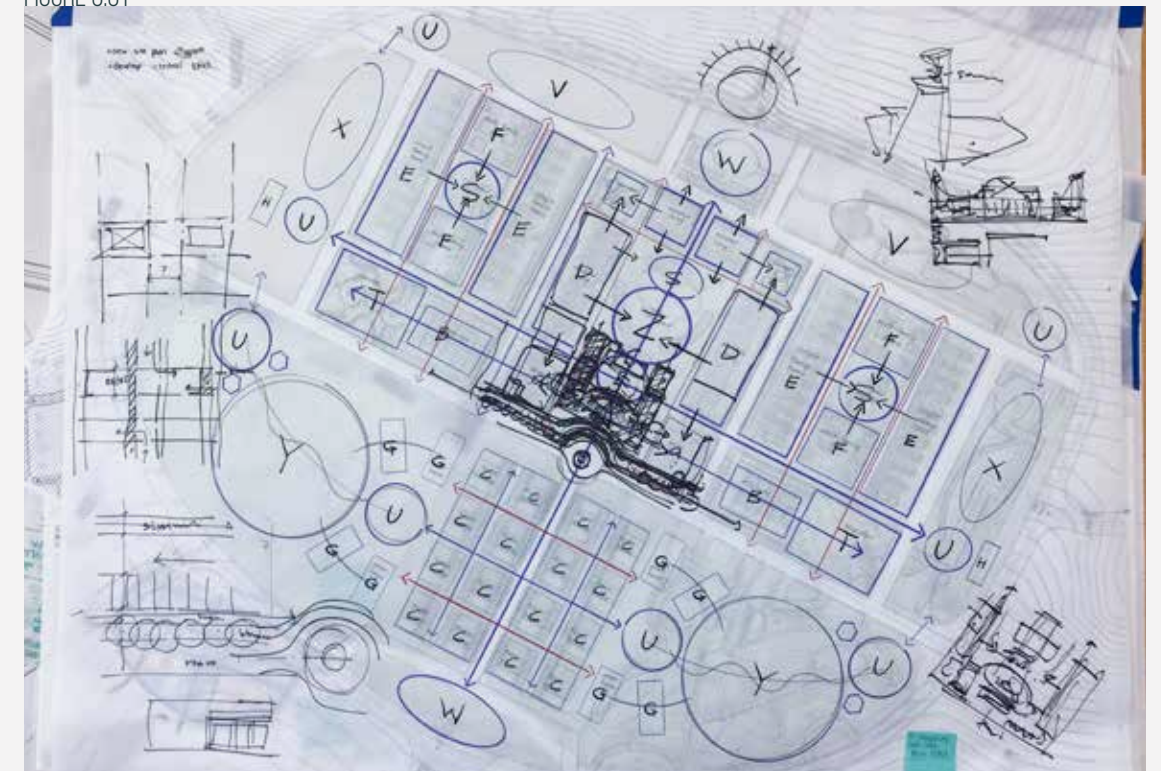


FIGURE 5.32

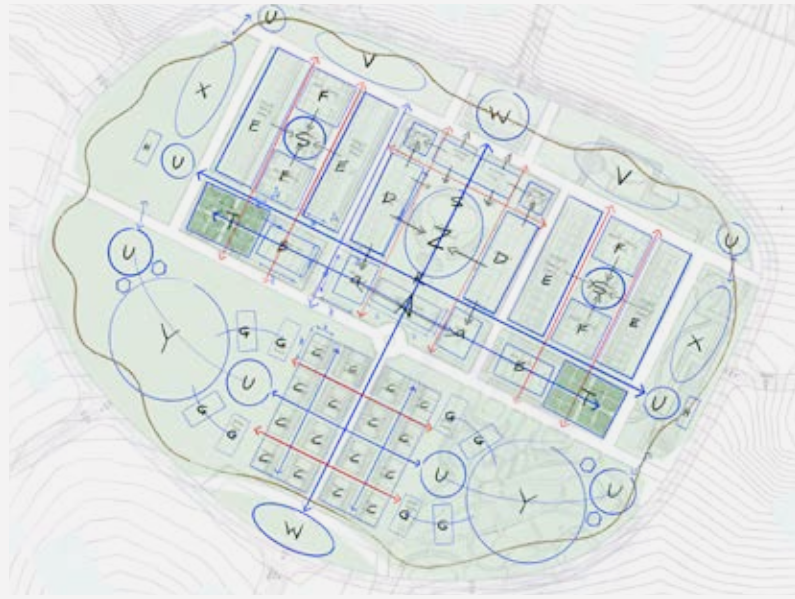


FIGURE 5.33

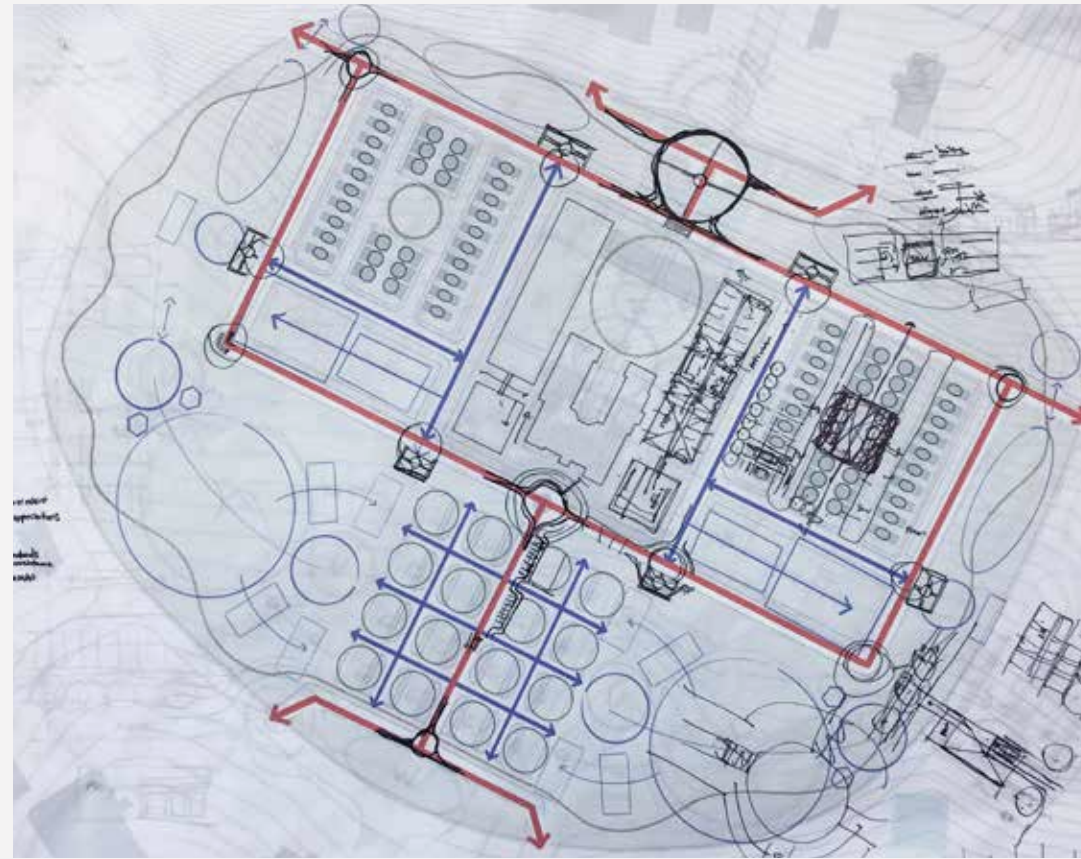


FIGURE 5.36 CIRCULATION ANALYSIS

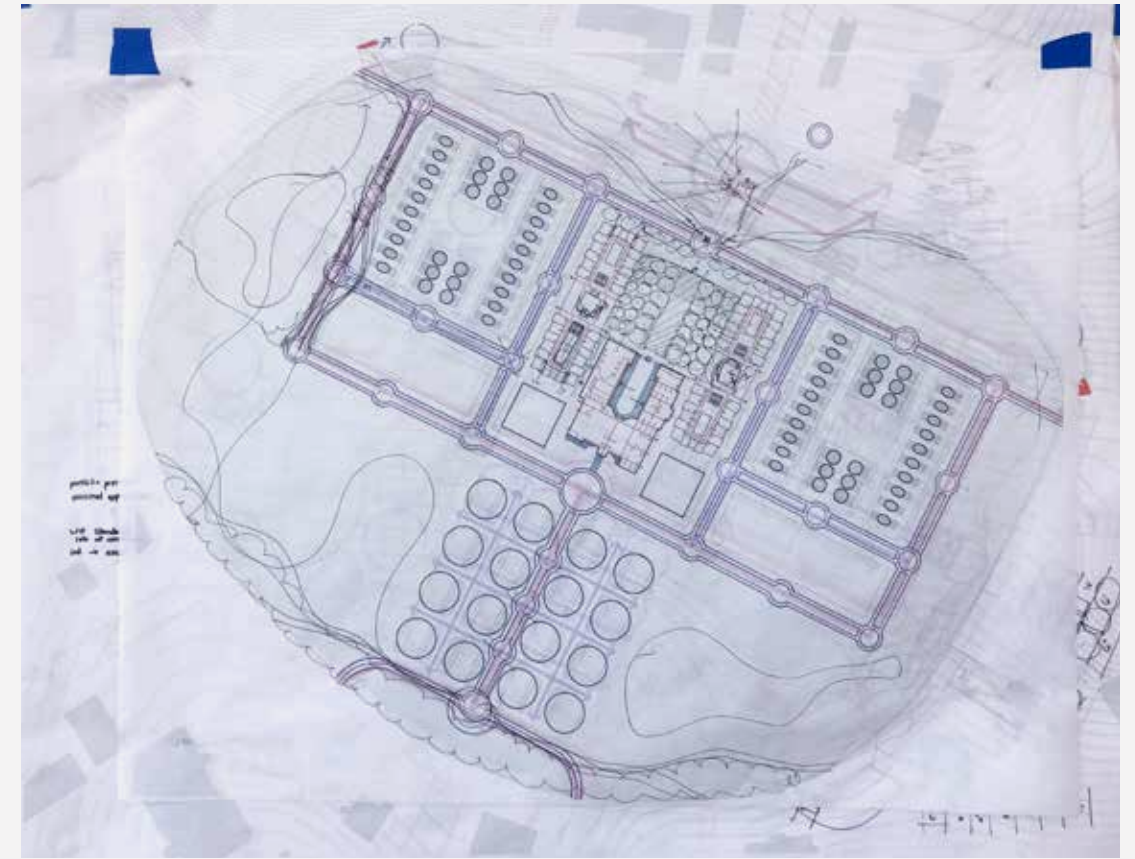


FIGURE 5.38 DIAGRAMMATIC PROGRAM ANALYSIS WITH CIRCULATION

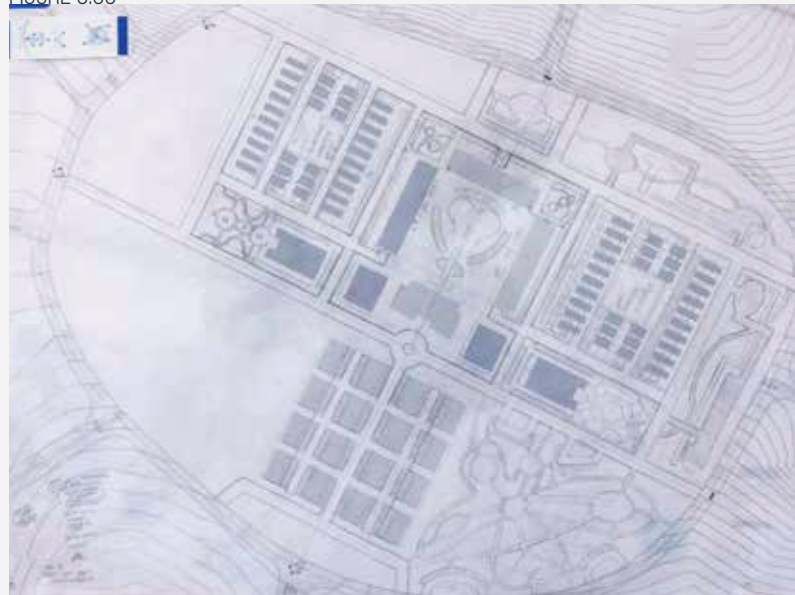


FIGURE 5.34

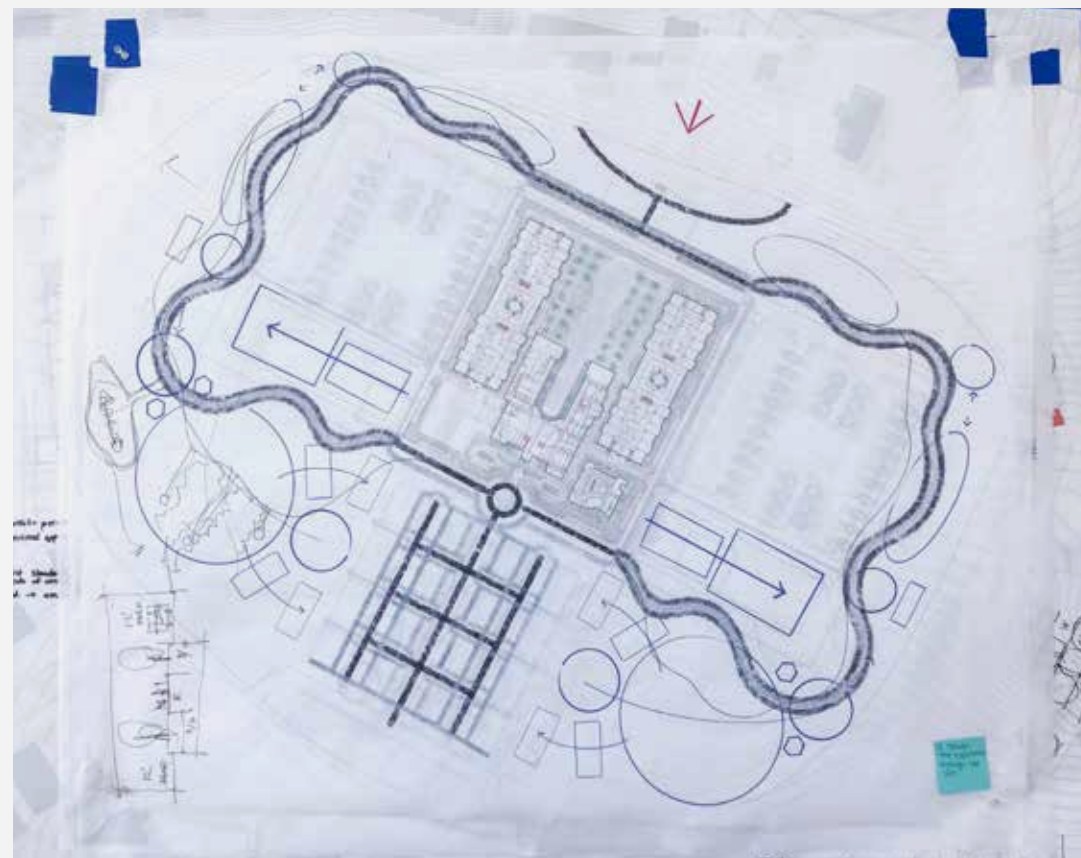


FIGURE 5.37 REDEFINING CIRCULATION ANALYSIS TO TRANSFORM GRID

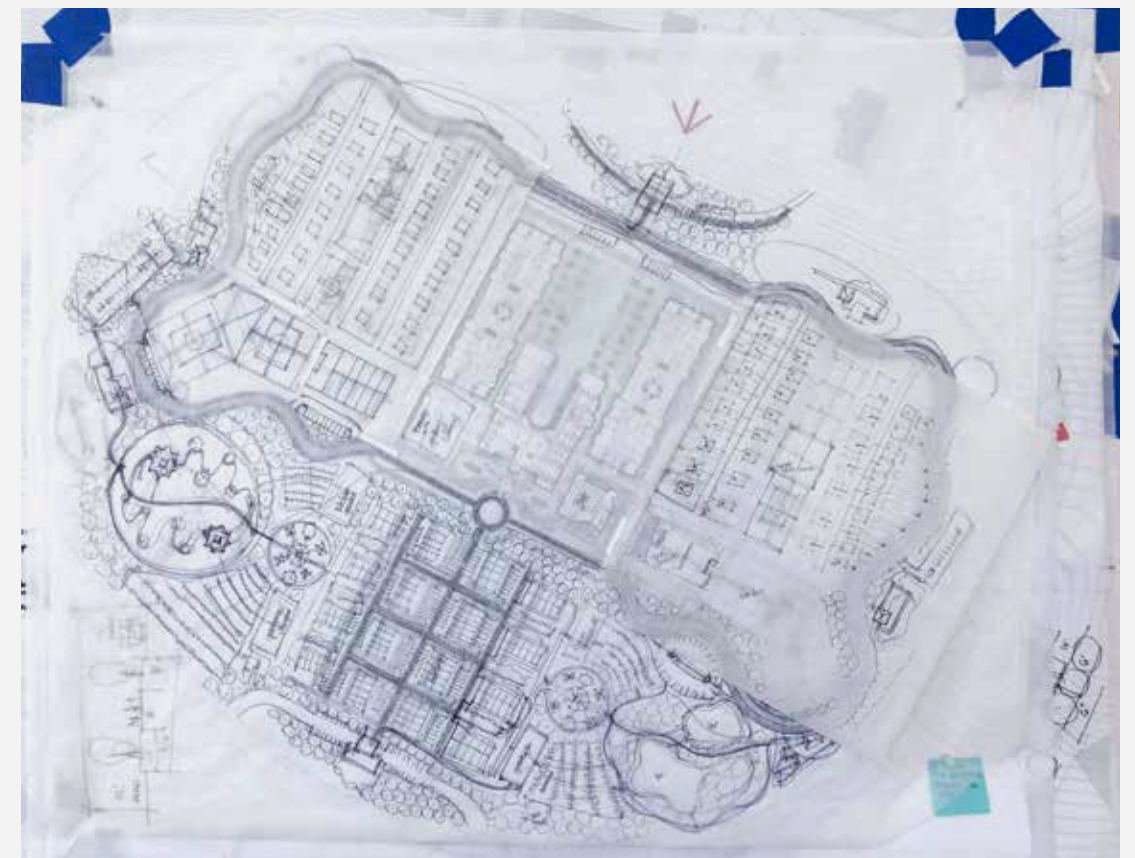


FIGURE 5.39 DESIGN ITERATION OF OVERALL LANDSCAPE OF SITE

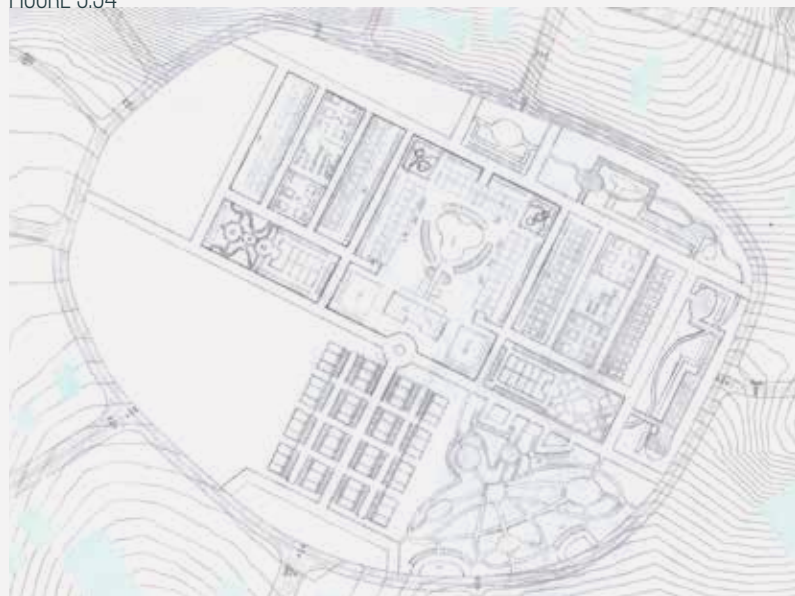
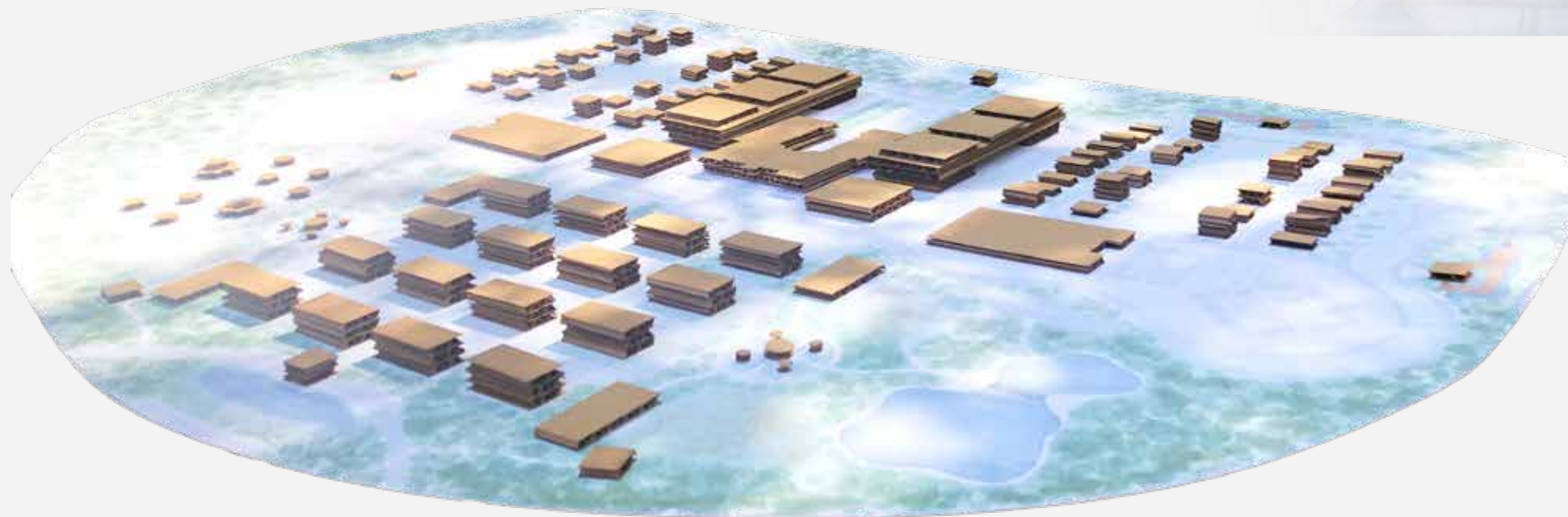


FIGURE 5.35

[5.4] SITE PLAN DEVELOPMENT

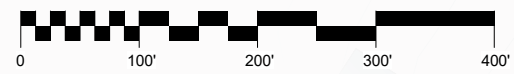
The overall design development with program analysis experimented with conceptual massing of the site and understanding landscaping features for the occupants.

The goal of the development was to create pockets of moments that were unique within the order of the overall community. By creating different moments, it allows each individual to find their sense of identity and place within the larger community.





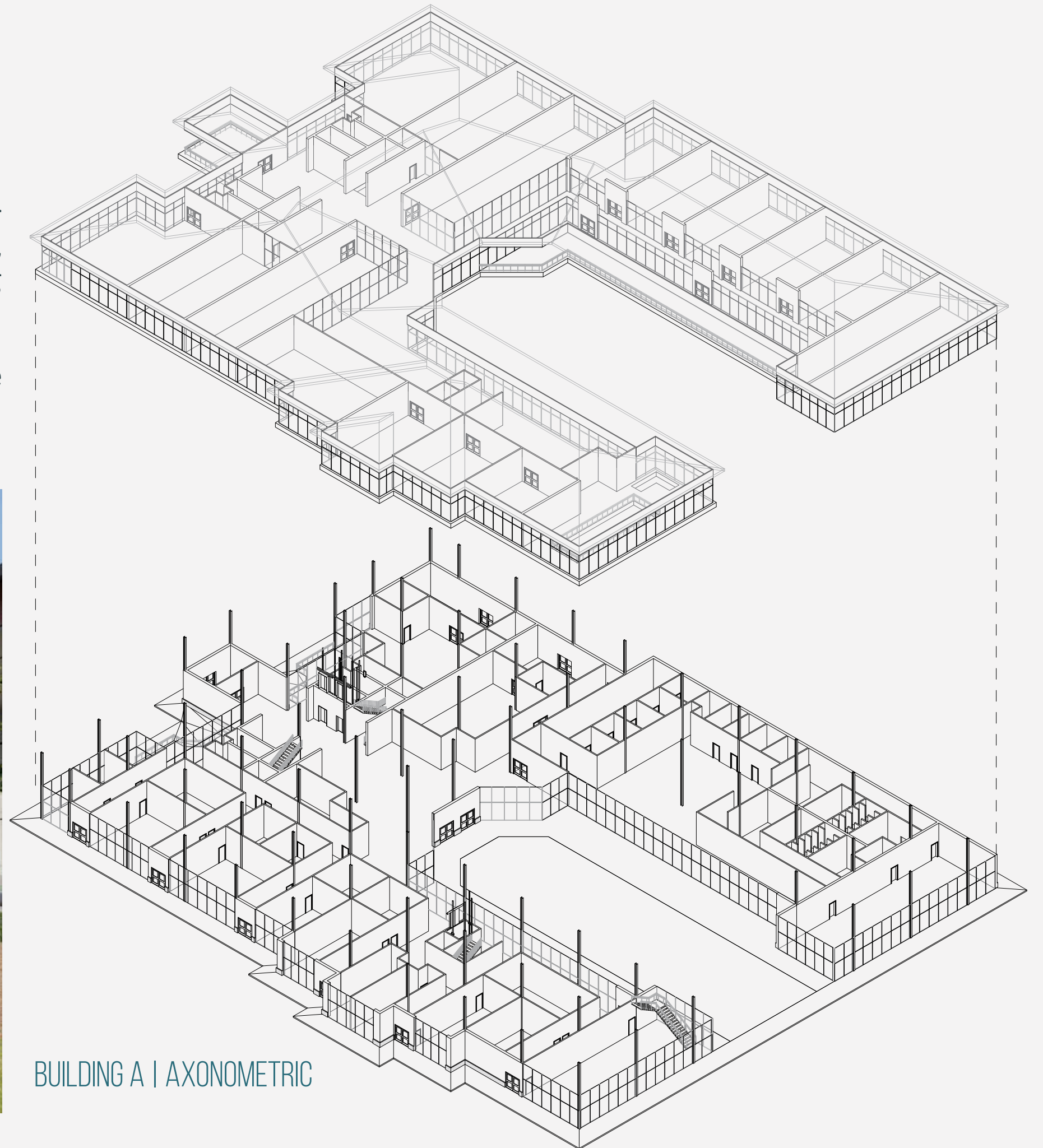
SITE PLAN



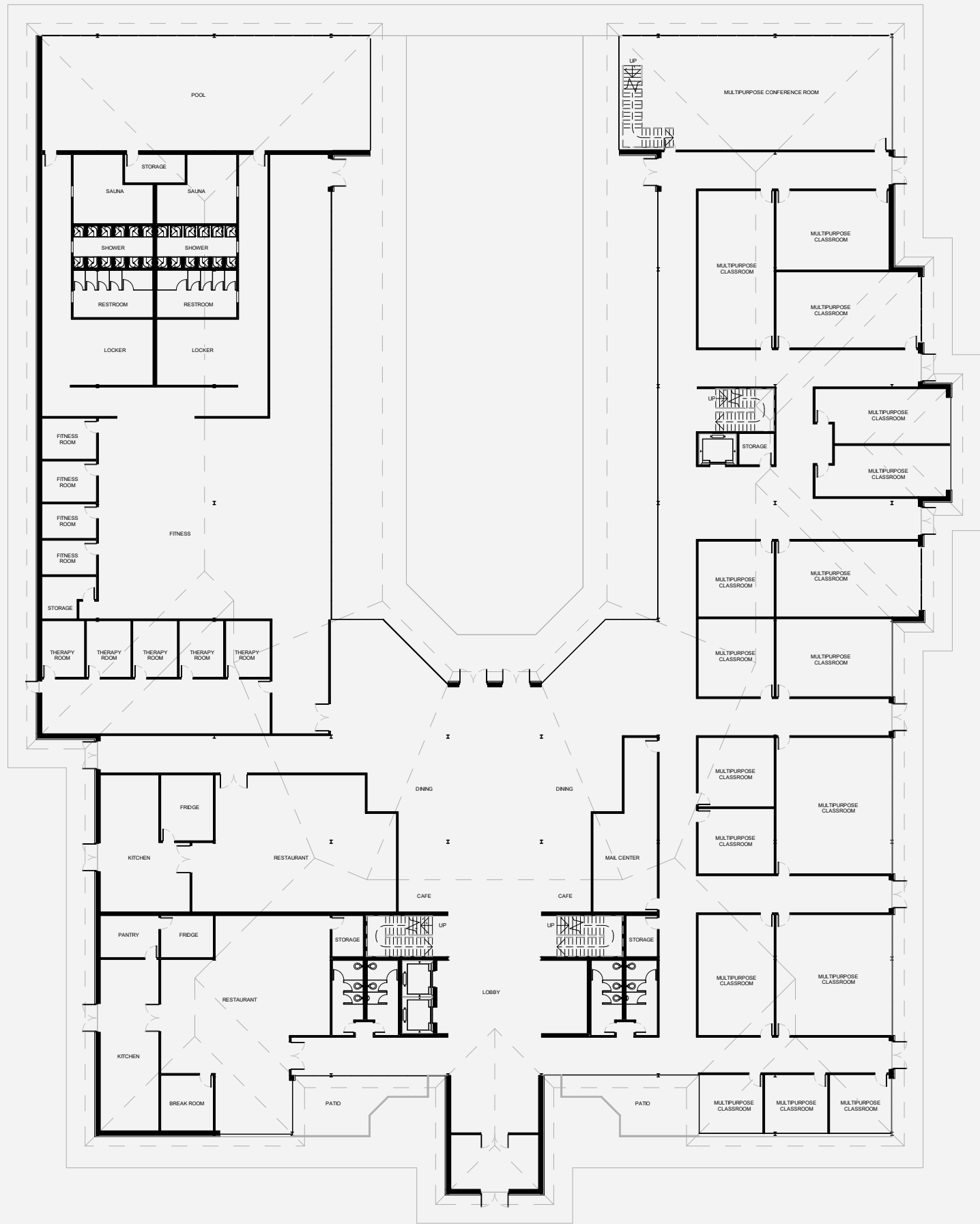
[5.5] BUILDING A | THE CLUBHOUSE

Building A contains the main amenities for the site including an indoor pool with an outdoor courtyard space. There are conference areas, classrooms, learning centers, formal dining spaces, informal dining spaces, mail services, and a fitness center that the elders can use.

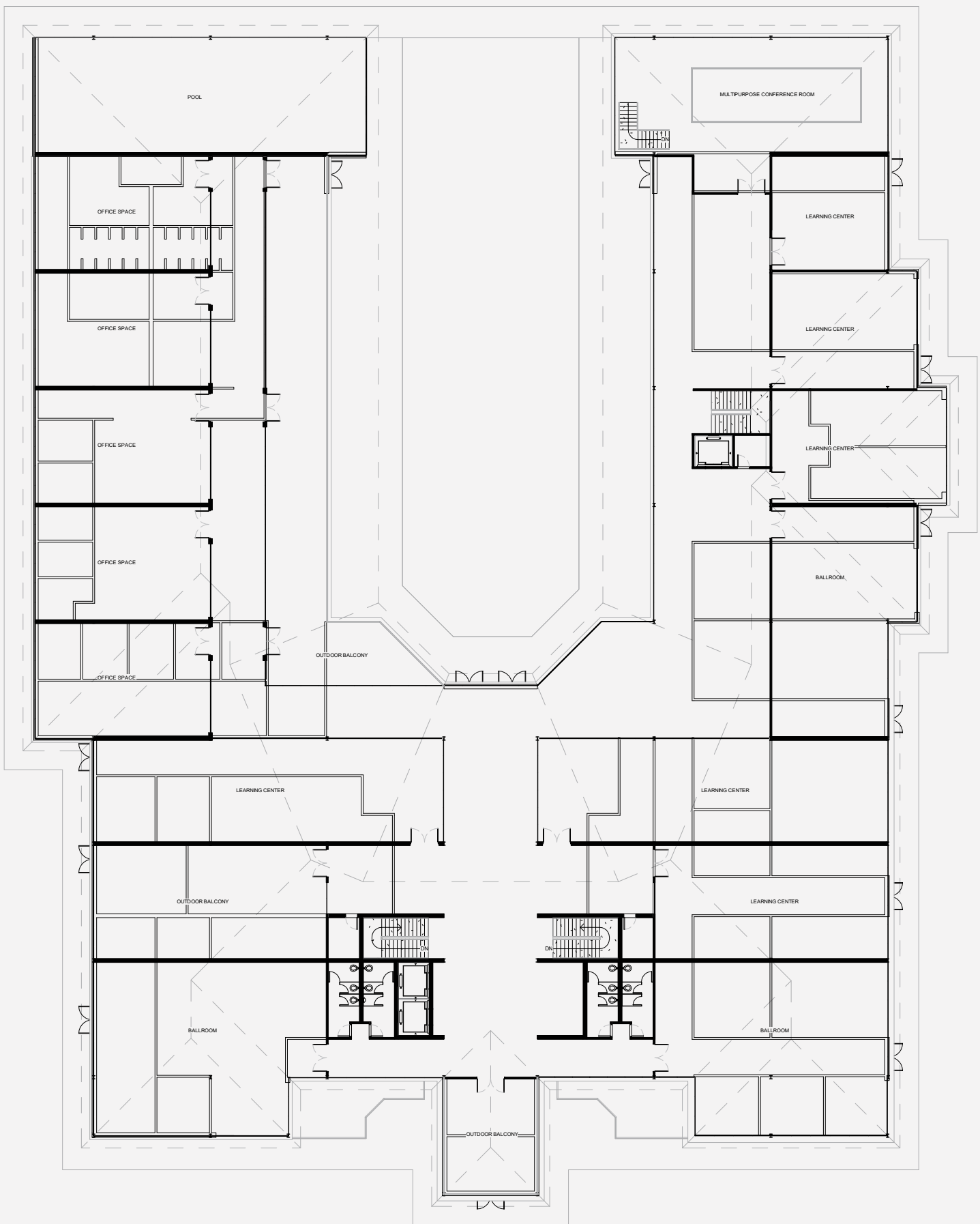
All the spaces are to promote an active social lifestyle to promote the best health for the occupants.



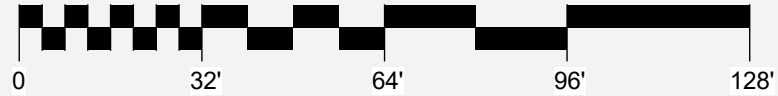
BUILDING A | AXONOMETRIC



BUILDING A | LEVEL 1 | PLAN



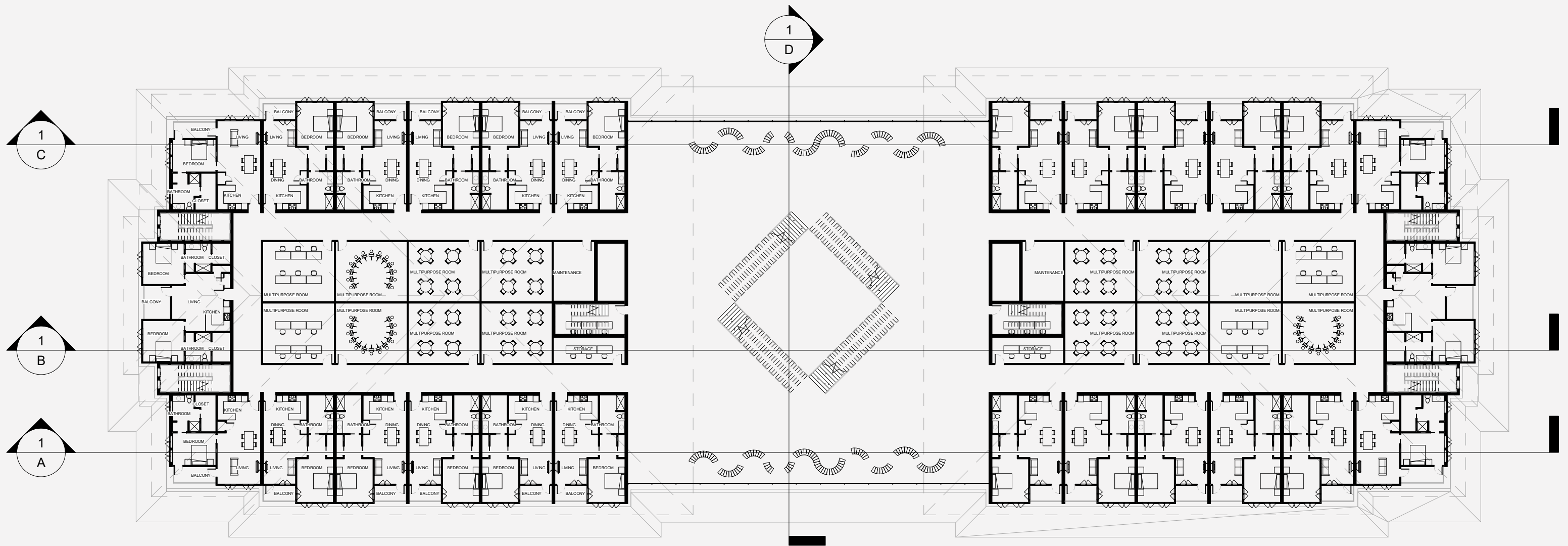
BUILDING A | LEVEL 2 | PLAN



[5.6] BUILDING B | THE TOWER

The Tower is designed with the independent living and assisted living in mind. The lower levels are designed for the assisted living and the upper levels are designed for the independent living. The courtyard space on the 5th floor has an outdoor pool. Within the center of the building, there are activity spaces for the occupants such as learning centers and art classrooms and game rooms.

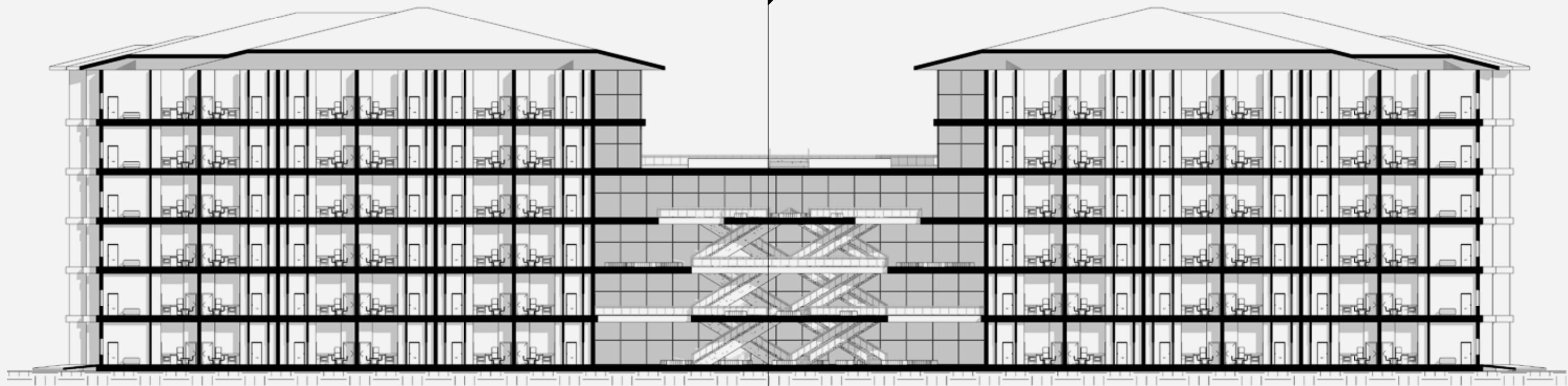




BUILDING B | LEVEL 1 | PLAN

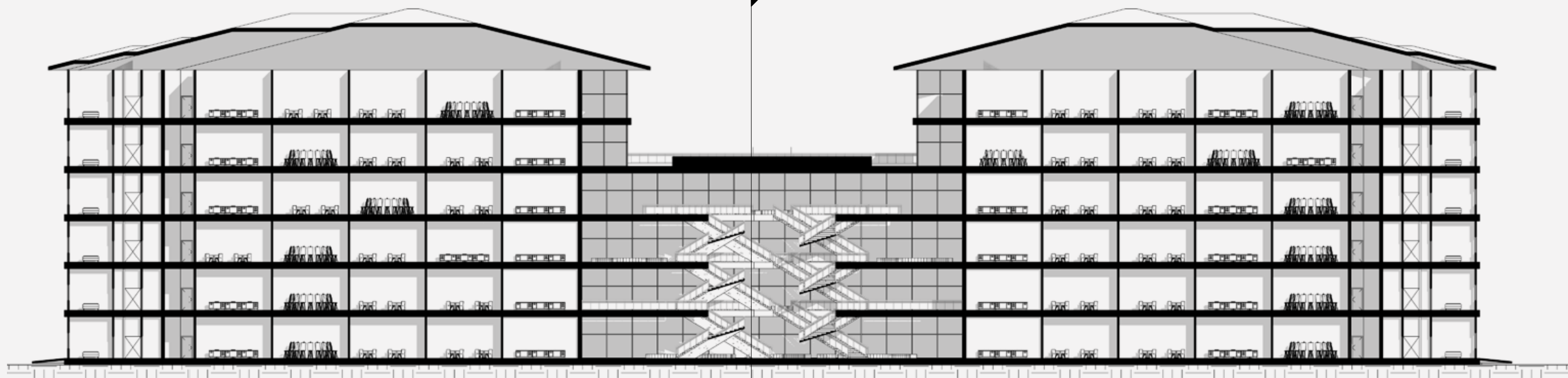


1
D



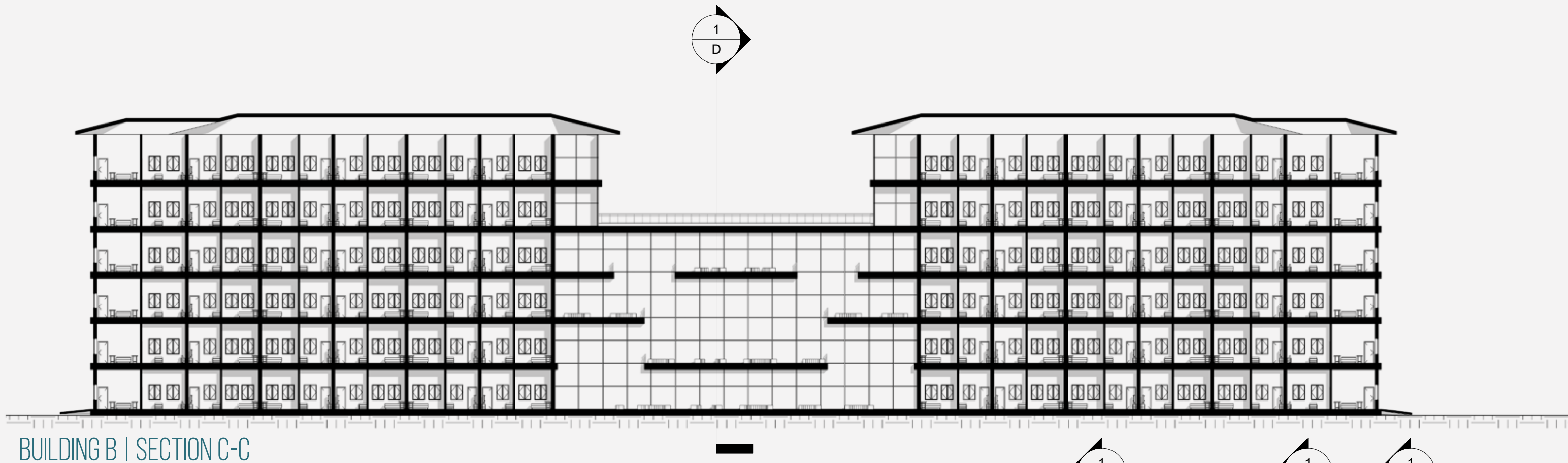
BUILDING B | SECTION A-A

1
D

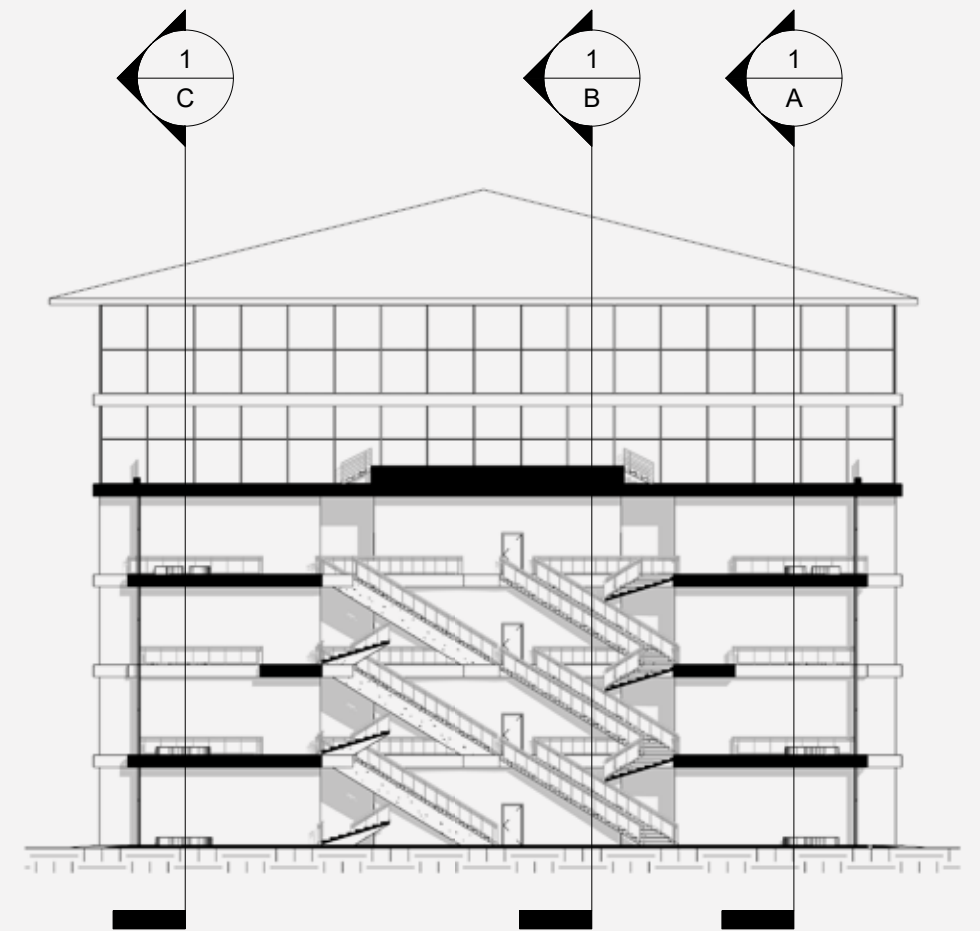
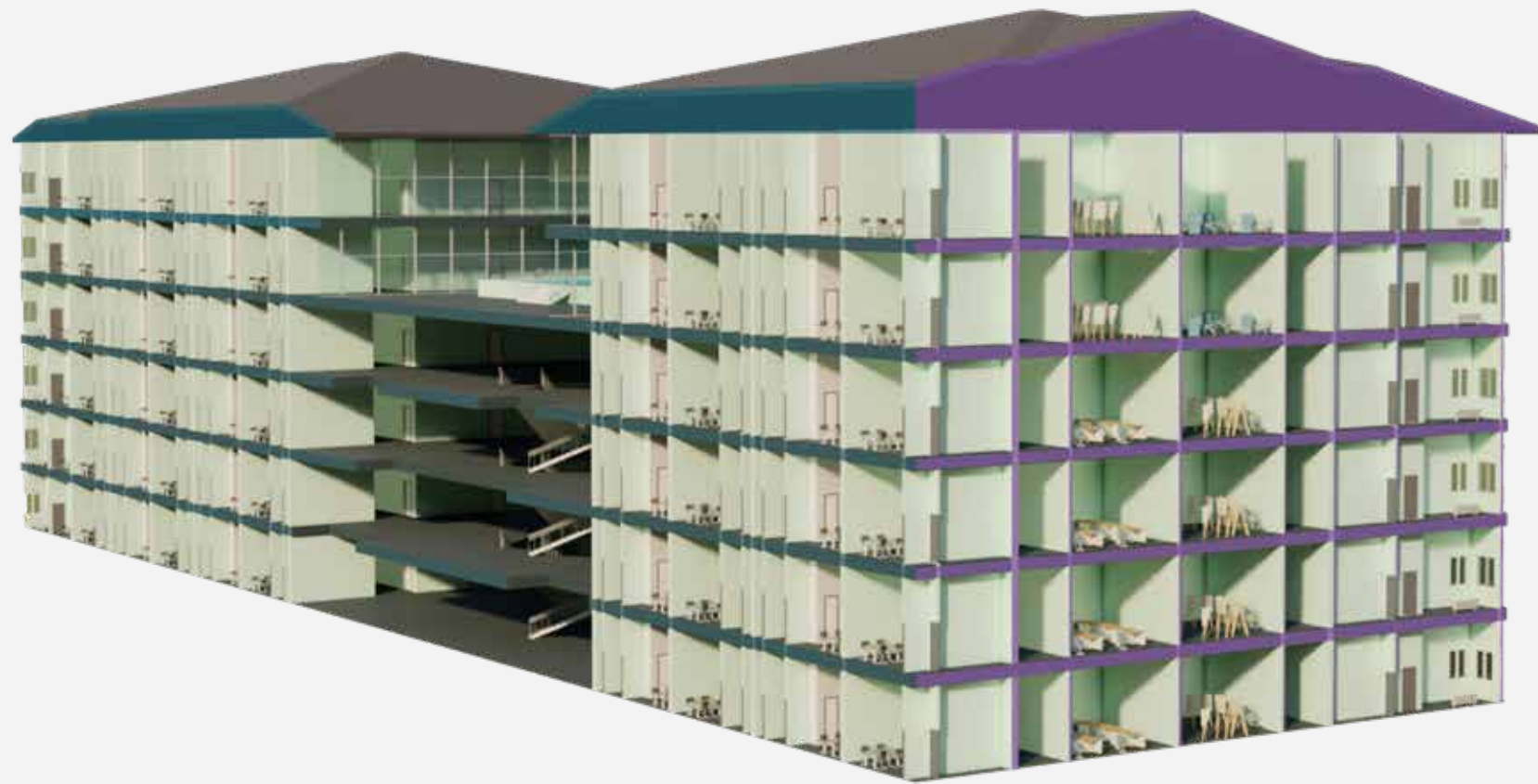


BUILDING B | SECTION B-B





BUILDING B | SECTION C-C



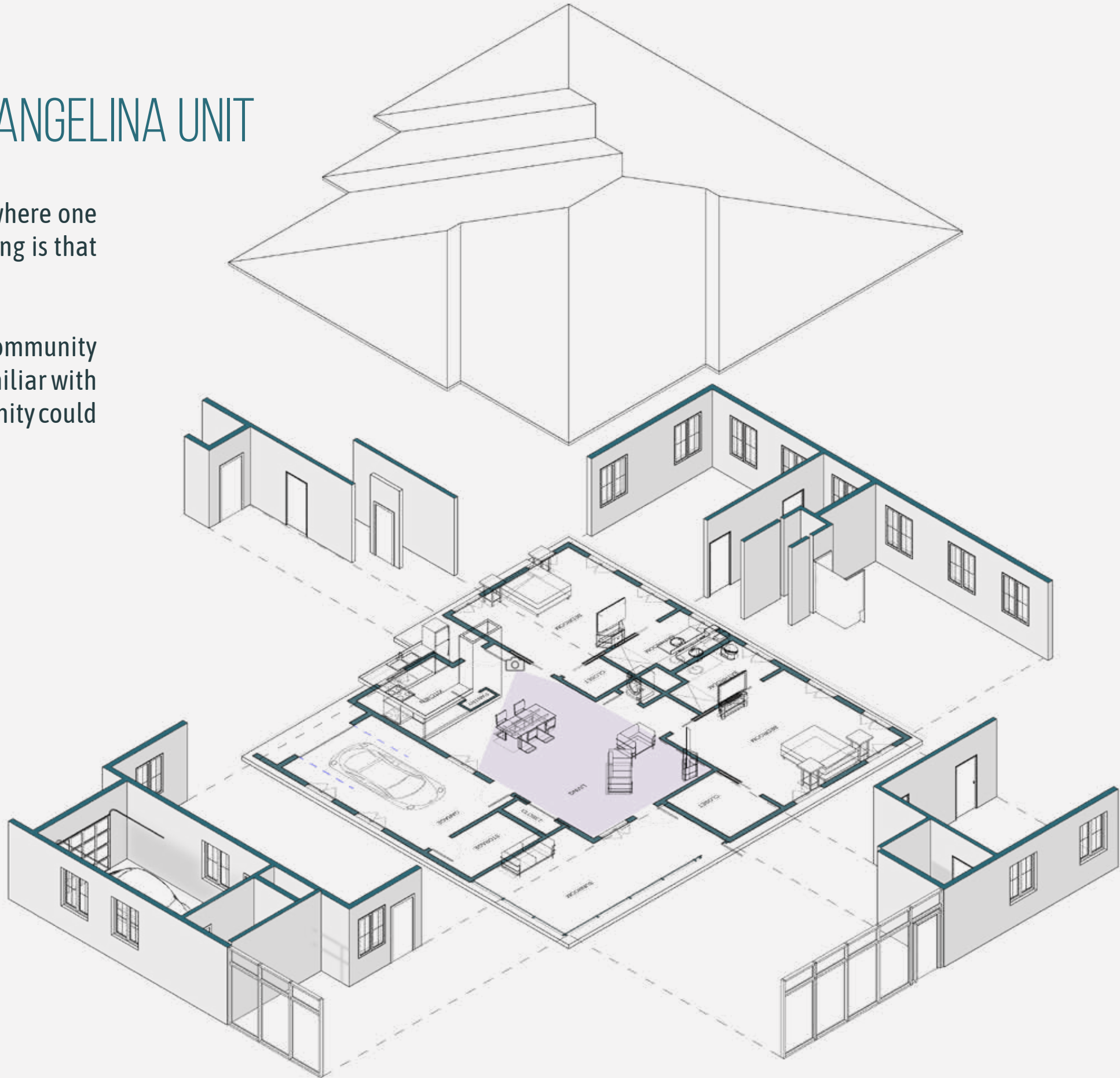
BUILDING B | SECTION D-D



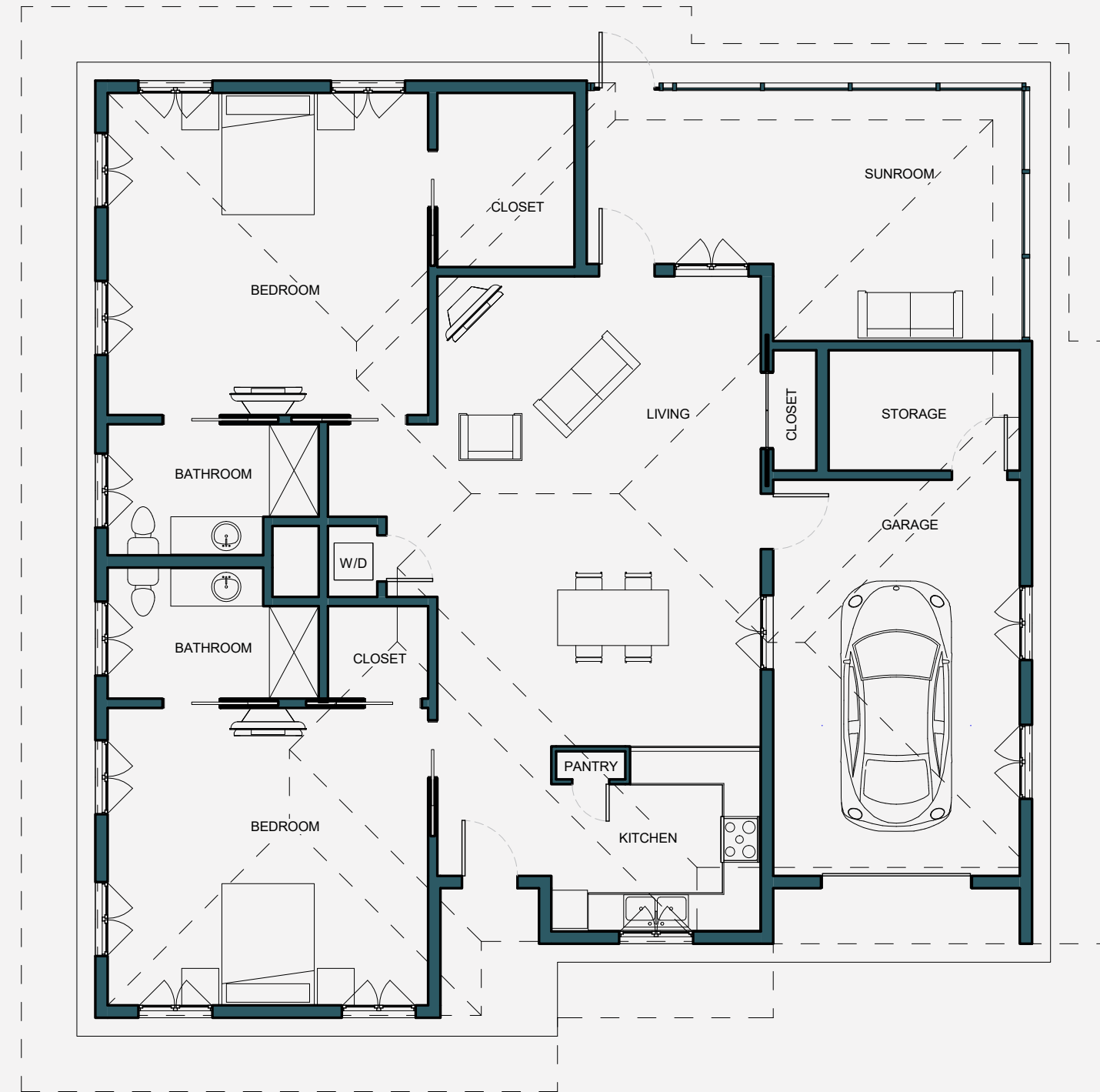
[5.7] BUILDING C | TWO BEDROOM | ANGELINA UNIT

The Angelina is designed with two large bedroom spaces where one room could become an office. The key feature of this building is that there is an indoor patio space as well as a one car garage.

This unit is designed so that your loved one could move into a community where the living situation is still similar to what they are familiar with while having access to all the amenities that a larger community could offer.



BUILDING C | AXONOMETRIC



BUILDING C | LEVEL 1 | PLAN



BUILDING C | EXTERIOR RENDERING

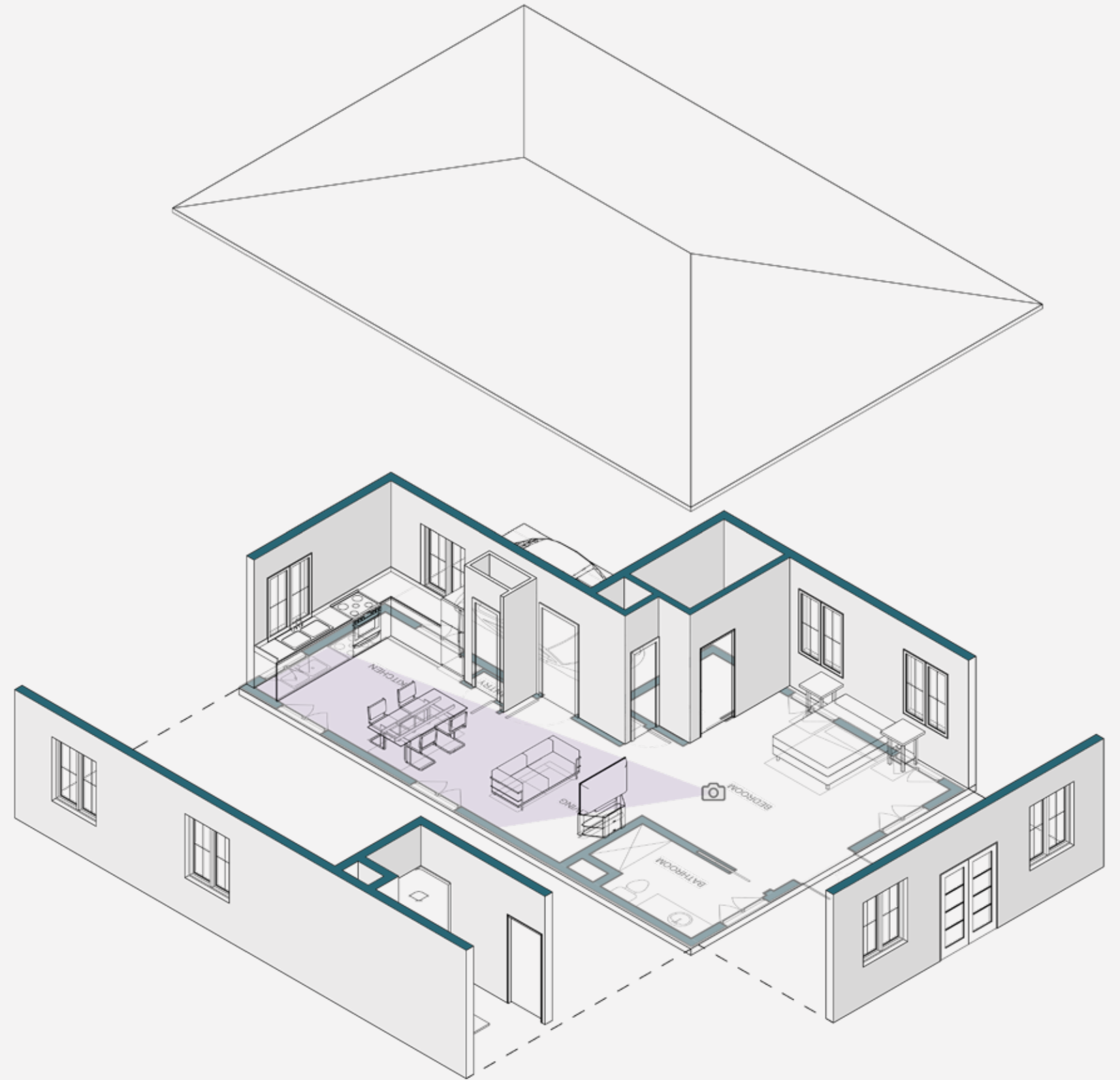


BUILDING C | INTERIOR RENDERING

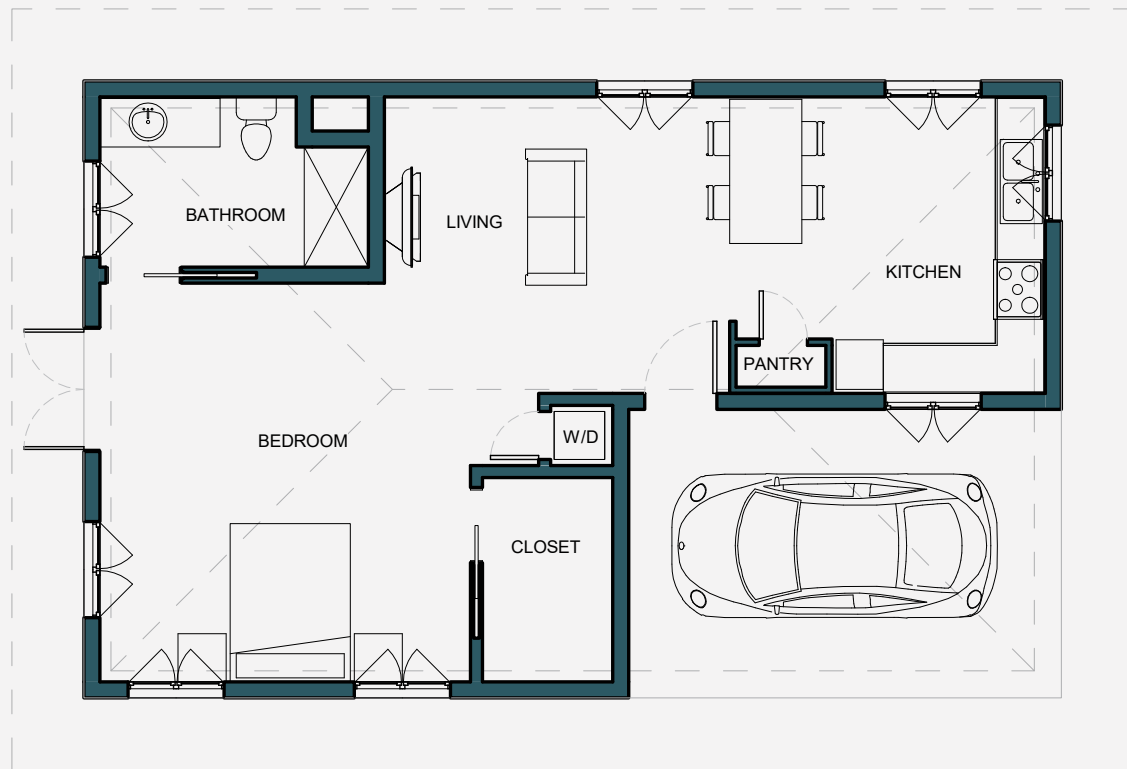
[5.8] BUILDING D | KARYN STUDIO

Karyn Studio residents enjoy carefree living with various services such as housekeeping and all the amenities that the community has to offer.

Living in a studio home allows the occupants to have the luxury of minimal living without having to live near the immediate proximity of others. Each home has their own private garden that they have access to with assistance if they choose.



BUILDING D | AXONOMETRIC



BUILDING D | LEVEL 1 | PLAN



BUILDING D | INTERIOR RENDERING



BUILDING D | EXTERIOR RENDERING

“As an architect you design for the present, with an awareness of the past, for a future which is essentially unknown. The green agenda is probably the most important agenda and issue of the day [...] all the projects which have, in some way, been inspired by that agenda are about a celebratory lifestyle, in a way celebrating the places and spaces which determine the quality of life.”

- Norman Foster

Everyone has a story to tell that can change the perception of how you view something in life. There is no defined set answer where design has to be a certain way. We all have something we are passionate about, but the most important thing is to remember why you're doing something.

People age every day and it is an inevitable process of life. The little things we can do as designers is try to create a quality of life that takes the consideration of the needs and wellbeing of other, and help to surpass the need for shelter and medical care. Creating opportunities that celebrates a specific space in a specific time can determine the quality of life for an individual.

A place that fosters the opportunities can create everlasting design interventions, while art, music, and interaction can mentally stimulate the mind to improve a healthy psychological life.





CHAPTER [SIX]
APPENDIX

| [6.0]

[6.1] FIGURES | IMAGES

All images are courtesy of the author unless otherwise indicated.

1-61 | Gensler's Aging Community

<https://www.gensler.com/research-insight/gensler-research-institute/design-for-active-aging>

3-11 | Eastgate Town Center - Dunham-Jones, Ellen, and June Williamson. Retrofitting Suburbia. Hoboken, NJ: Wiley, 2008.

3-12 | Winter Park Village - Dunham-Jones, Ellen, and June Williamson. Retrofitting Suburbia. Hoboken, NJ: Wiley, 2008.

3-13 | Belmar - Dunham-Jones, Ellen, and June Williamson. Retrofitting Suburbia. Hoboken, NJ: Wiley, 2008.

3-21 | "Homefarm." Spark Architects. Accessed September 5, 2019. http://sparkarchitects.com/portfolio_page/homefarm/.

3-22 | "Homefarm." Spark Architects. Accessed September 5, 2019. http://sparkarchitects.com/portfolio_page/homefarm/.

3-23 | "Homefarm." Spark Architects. Accessed September 5, 2019. http://sparkarchitects.com/portfolio_page/homefarm/.

3-24 | "Homefarm." Spark Architects. Accessed September 5, 2019. http://sparkarchitects.com/portfolio_page/homefarm/.

3-25 | "Homefarm." Spark Architects. Accessed September 5, 2019. http://sparkarchitects.com/portfolio_page/homefarm/.

3-26 | "Homefarm." Spark Architects. Accessed September 5, 2019. http://sparkarchitects.com/portfolio_page/homefarm/.

5-21 | author diagram

5-22 | author diagram

5-23 | author diagram

5-24 | author diagram

5-25 | author diagram

5-31 | author diagram

5-32 | author diagram

5-33 | author diagram

5-34 | author diagram

5-35 | author diagram

5-36 | author diagram

5-37 | author diagram

5-38 | author diagram

5-39 | author diagram

[6.2] GLOSSARY OF TERMS

greyfield - [a] occupied but economically obsolescent non-industrial premise with the considerable site and need for the intervention of public or private entities. [b] outdated and blighted architecture, considerable site, surrounding buildings, lacking reinvestment capital, need for intervention by public or private entities, and environmentally uncontaminated.

mindset - a mental attitude or inclination

temporal - [a] of or relating to time as opposed to eternity. [b] of or relating to time as distinguished from space

[6.3] BIBLIOGRAPHY

1. Adams, Annmarie, and Sally Chivers. "Architecture and Aging: The Depiction of Home in Sarah Polley's *Away From Her*." *Age Culture Humanities*, March 23, 2015. <https://ageculturehumanities.org/WP/architecture-and-aging-the-depiction-of-home-in-sarah-polleys-away-from-her/>.
2. Andersson, Jonas E. "Architecture and Ageing. On the Interaction between Frail Older People and the Built Environment." *Architecture and Ageing. On the Interaction between Frail Older People and the Built Environment*, 2011.
3. architectmagazine.com, n.d. https://www.architectmagazine.com/practice/getting-better-with-age-design-for-senior-and-assisted-living-facilities_o.
4. Astbury, Jon. "Morris Company Clads Hampstead Retirement Home in Modulated Brick." *Dezeen*. Dezeen, August 30, 2019. <https://www.dezeen.com/2019/09/02/belle-vue-morris-company-retirement-home-hampstead-london-uk/>.
5. Beals, Rachel Koning. "This Is How Boomers Are Reinventing Retirement Living." *MarketWatch*, August 4, 2019. <https://www.marketwatch.com/story/boomers-are-reinventing-retirement-housing-imagine-galleries-walkability-and-multi-age-communities-2019-05-22>.
6. Bontenbal, Timo. "Cruise Ship Cabin as Home for Elderly – the Possibilities in Cruise Ship Living." *Metropolia*, n.d. https://muotoilu.metropolia.fi/en/opinnaytetyot_post/cruise-ship-cabin-home-elderly-possibilities-cruise-ship-living/.
7. Burley, Jon, Gina Deyoung, Shawn Partin, and Jason Rokos. "Reinventing Detroit: Reclaiming Grayfields—New Metrics in Evaluating Urban Environments." *Challenges* 2, no. 4 (2011): 45–54. <https://doi.org/10.3390/challe2040045>.
8. Castro, Maria. *Senior Living: Creating Bonding Experiences*, 2011.
9. Cogley, Bridget. "ACDF Builds Panorama Retirement Home for 'Sophisticated Seniors' on Outskirts of Montreal." *Dezeen*. Dezeen, August 29, 2019. <https://www.dezeen.com/2019/08/26/panorama-acdf-architecture-retirement-home-quebec-canada/>.
10. "Design for Active Aging: Gensler Research Institute: Research & Insight." Gensler, September 1, 2015. <https://www.gensler.com/research-insight/gensler-research-institute/design-for-active-aging>.
11. "Design for an Ageing Population." RIBA, n.d. <https://www.architecture.com/knowledge-and-resources/resources-landing-page/design-for-an-ageing-population>.
12. Dunham-Jones, Ellen, and June Williamson. *Retrofitting Suburbia*. Hoboken, NJ: Wiley, 2008.
13. "Dwelling in the Golden Years: Experiments in Senior Living." *Archinect*, n.d. <https://archinect.com/features/article/150040714/dwelling-in-the-golden-years-experiments-in-senior-living>.
14. Elabed, Azam, Albert Wertheimer, and Sabri Ibrahim. "Opening A New Independent Pharmacy 101." *INNOVATIONS in Pharmacy* 7, no. 1 (October 2016). <https://doi.org/10.24926/iip.v7i1.417>.
15. "Elderly Housing." *sofiaesquivel*, n.d. <https://www.sofiaesquivel.com/elderly-people>.
16. Engelbert, Timothy. *An Integrated Elderly Community*, 2012.
17. Feddersen, Eckhard, Lüdtke Insa, and Christel Kapitzki. *A Design Manual Living for the Elderly*. Basel: Birkhäuser, 2009.
18. Fitzgerald, Kelly. *Delmar Woods Retirement Community for the Active Adult*, 1996.
19. Frearson, Amy. "Spark's Model for Asian Retirement Community." *Dezeen*. Dezeen, March 5, 2018. <https://www.dezeen.com/2015/11/17/home-farm-spark-model-asian-retirement-housing-communities-city-farms/>.
20. "Guide to Designing Old Age Homes." *Architecture Student Chronicles*, December 21, 2013. <http://www.architecture-student.com/design-guide/guide-to-designing-old-age-homes/>.
21. "Health Care - 1:80 CU Interior Architecture Thesis 2016." *Put your projects on the Web.*, n.d. <https://cargocollective.com/stu80-IA/Health-Care-1>.

22. "Homefarm." Spark Architects. Accessed September 5, 2019. http://sparkarchitects.com/portfolio_page/homefarm/.
23. "How Architects Design For An Aging Population." Freshome.com, January 29, 2015. <https://freshome.com/2014/09/24/how-architects-design-for-an-aging-population/>.
24. Jr., Douglas J. Gallow, and Aia. "Senior Center Design Best Practices - NISC Blog." NCOA, n.d. <https://www.ncoa.org/blog/design-and-renovation-of-senior-centers/>.
25. Kibert, Charles J. *Sustainable Construction: Green Building Design and Delivery*. Hoboken, NJ: Wiley, 2016.
26. Layman, Tom. "Housing That Reflects the World." *Harvard Gazette*. Harvard Gazette, April 16, 2019. <https://news.harvard.edu/gazette/story/2015/09/housing-that-reflects-the-world/>.
27. McKnight, Jenna. "David Baker Creates Apartment Building for Low-Income Seniors in San Francisco." *Dezeen*. Dezeen, October 24, 2018. <https://www.dezeen.com/2018/10/24/david-baker-creates-colourful-apartment-building-for-low-income-seniors-in-san-francisco/#/>.
28. P, Amber. "Casa Grande Senior Apartments / Archumana." *ArchDaily*. ArchDaily, December 26, 2009. <https://www.archdaily.com/44508/casa-grande-senior-apartments-archumana>.
29. "Planning a New Medical Office Space." *Medscape*, April 13, 2007. <https://www.medscape.com/viewarticle/554115>.
30. "Planning the Public Library." American Planning Association, n.d. <https://www.planning.org/pas/reports/report241.htm>.
31. "Redevelopment and Reuse Council (RRC)." ULI Americas, n.d. <https://americas.uli.org/redevelopment-reuse-council-rrc/>.
32. Rosenfield, Karissa. "SPARK Proposes Vertical Farming Hybrid to House Singapore's Aging Population." *ArchDaily*. ArchDaily, December 1, 2014. <https://www.archdaily.com/573783/spark-proposes-vertical-farming-hybrid-to-house-singapore-s-aging-population-2>.
33. Saieh, Nico. "Houses for Eldery People in Alcácer Do Sal / Aires Mateus." *ArchDaily*. ArchDaily, February 6, 2013. <https://www.archdaily.com/328516/alcacer-do-sal-residences-aires-mateus>.
34. "Sentul Aged Care Community Centre." Kirk. Accessed September 5, 2019. <https://kirk.studio/projects/sentul-aged-care-community-centre>.
35. Seo, Jun-Won, and Joo-Lim Lee. "Characteristics and Retrofit Constraints of Grayfield in Korean Cities." *Sustainability* 11, no. 8 (2019): 2381. <https://doi.org/10.3390/su11082381>.
36. "Six Keys to Building the Efficient Office You Want." *Ophthalmology Management*, October 1, 2013. <https://www.opthalmologymanagement.com/issues/2013/october-2013/six-keys-to-building-the-efficient-office-you-want>.
37. "Spanish Elderly Care Center Wrapped in a Pixelated Green Facade." *Inhabitat Green Design Innovation Architecture Green Building*, n.d. <https://inhabitat.com/spanish-elderly-care-center-wrapped-in-a-pixelated-green-facade/cso-arquitectura-elederly-care-center-7/>.
38. Talen, Emily. *Retrofitting Sprawl: Addressing Seventy Years of Failed Urban Form*, 2015.
39. US Census Bureau. "Age and Sex Composition in the United States: 2018." *Age and Sex Composition in the United States: 2018*, July 11, 2019. <https://www.census.gov/data/tables/2018/demo/age-and-sex/2018-age-sex-composition.html>.
40. Usher, Matthew. "To Design for the Elderly, Don't Look to the Past." *ArchDaily*. ArchDaily, October 30, 2018. <https://www.archdaily.com/904759/to-design-for-the-elderly-dont-look-to-the-past>.
41. Valenzuela, Karen. "Establishment for Dependent Elderly / PARALLELE." *ArchDaily*. ArchDaily, August 8, 2014. <https://www.archdaily.com/533102/establishment-for-dependent-elderly-parallele>.
42. Valenzuela, Karen. "Senior Center of Guangxi / Atelier Alter." *ArchDaily*. ArchDaily, October 6, 2014. <https://www.archdaily.com/553442/senior-center-of-guangxi-atelier-alter>.
43. Wbdg. "Auditorium ." *WBDG*, April 12, 2017. <https://www.wbdg.org/space-types/auditorium>.