

[NURTURE]well-being

The following research was compiled under the love and patience
of an amazing wife and faithful God.

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0.1 Introduction.

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

By:

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



Primary Thesis Advisor



Thesis Committee Chair

December 2011
Fargo, North Dakota

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INTRODUCTION

ABSTRACT:

The project typology is a community center within an urban city master plan. The project is located in Aurora, Colorado and investigates the problem of disconnected neighborhoods. The theoretical premise claims the following: Architecture links isolated urban environments by developing points within a city for smaller communities to connect to one another. When architectural design strategies enhance the mission of the Church, the community's physical, emotional, and spiritual well-being will be nurtured through the medium of architecture.

Key words: **urban, master plan, community, center, centre, well-being, colorado, church, auditorium, track, gymnasium, recreational, nurture, isolation, religious architecture, spiritual, faith**

PROBLEM STATEMENT:

How does Architecture link disconnected communities within an urban environment to one another?

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1.0 Statement of Intent.

STATEMENT OF INTENT

TYPOLOGY:

Urban master plan, to include community center

CLAIM:

Architecture links isolated urban environments by developing points within a city for smaller communities to connect to one another. When architectural design strategies enhance the mission of the Church, the community's physical, emotional, and spiritual well-being will be nurtured through the medium of architecture.

PREMISES:

Architecture is an instrument through which a person's well-being is nurtured by engaging people in the community. It can enhance physical activity, emotional stability, and spiritual awareness.

To stabilize a community's well-being, architecture nurtures community involvement, connections, relationships, and healthy environments.

An individual's well-being is nurtured by architecture when existing design strategies are applied and new, innovative techniques are used. Well-being is directly influenced by exposure to both natural and manmade elements within the architecture itself or perhaps by an inherent connection to it.

THEORETICAL PREMISE:

Architecture nurtures a person's physical, emotional, and spiritual well-being.

PROJECT JUSTIFICATION:

It is our responsibility as designers to look out for the "health, safety, and welfare" of society. "Intimate social ties—once seen as an integral part of daily life and associated with a host of psychological and civic benefits—are shrinking or nonexistent" (Vedantam, 2006). As we design for communities in growing urban neighborhoods, we must find ways to connect individuals to the larger community. Connecting these individuals will launch a network for social interaction within a city and establish an environment for healthy well-being.

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2.0 Proposal.

THE NARRATIVE

A NEED FOR THE SPIRITUAL:

While there are many levels of well-being, I believe that architecture can express our need for spiritual well-being in a unique way. Buildings have become an iconic representation of society's beliefs, trends, and goals. So what does that say about our society? I believe that it reveals the love of wealth, self, and consumerism. While we have become very fine tuned to understanding our physical and emotional needs, we seem to have lost regard for the spiritual. Architecture in itself will never satisfy a person's spiritual needs; however, it has the potential to provide opportunities and spaces for people to have these encounters. When executed correctly, this sort of architecture will inspire and provide users with the resources for spiritual growth.

SPIRITUAL ARCHITECTURE:

What makes architecture spiritual, and what are the qualities desirable in religious buildings? During the Renaissance, church architecture was often ornate and large in scale to represent the majesty and glory of God. Tall steeples would reach toward the sky, as if trying to touch the heavens. The cross is a symbolic representation and reminder of Christ's sacrifice. These crosses seem to mark the historical architecture of the early Church. It was not always like this. In fact, Christians first met in Jewish synagogues or in the homes of believers to avoid persecution. It has become a privilege to mark places of worship with this great symbol of salvation. Over time, the Church has grown comfortable displaying an outward expression of faith,

while inwardly becoming complacent. According to Sovik (1997), religious architecture is classified under three common elements: the devotion to truth, an ethical commitment, and a recognition of that which is called the holy. These elements are recognized when displayed in the form of authenticity, hospitality and beauty. Although it can be recognized that these elements should be present in religious architecture, it is important to note that they could be present in other forms of architecture as well. The quality of selected materials, their placement, and stability within the structure are contributing factors, which demonstrate a commitment to truth. As the Church has moved from a traditional basilica floor plan into a *two-space* configuration, it has begun to facilitate a greater community experience. This is perhaps the most important change in recent Church design to create an atmosphere of hospitality and family. Finally, the visual impact that religious architecture makes on those who experience it will enrich their awareness of the Almighty. In conclusion, authenticity, hospitality, and beauty are expected from religious architecture, but it may also be present in other forms of architecture.

SPIRITUAL COMMUNITY:

As our society invents new methods for achieving *spiritual equilibrium*, anyone from the outside looking in could observe that we have become less happy, more busy, and more spiritually unstable than any generation from the past. Divorce rates have increased, families spend less time together, and health has declined. In order to get back to a healthy sense of community, it is important to first understand what exactly a community should look like. “The family is the basic unit of growth and experience, fulfillment, or failure. It is also the basic unit of illness and health” (Ackerman, 1958). In order to promote well-being in a community, we need to have healthy families. In order to have healthy families, we need to have healthy individuals. A community contains many individuals, much like a song is composed of many notes. When they each play his/her unique sound, the beautiful melody of community comes alive.

USER & CLIENT INFORMATION

OWNER: Aurora First Assembly

CLIENT: Master Plan Committee, Building Committee, School of Evangelism Administration, Pastoral Staff

USERS:

Community Members

Pastoral Staff

Missionary Training Staff

Students

Faculty

The urban master plan will become an amenity to serve over 200,000 residents with physical, emotional, educational, and spiritual needs at a variety of levels. The master plan will also address the facility needs for the School of Evangelism. The facility for the community center will serve approximately 5,000 residents.

Parking will be distributed throughout the urban master plan to ensure that the residents, students, and staff are able to adequately access each facility. Connections to public transit systems and residential neighborhood will also become an important part of the design solution. Some of the physical restraints on the site may include changes in topography and soil conditions.

MAJOR PROJECT ELEMENTS

MASTER PLAN:

01. Administration (SOE)
02. Church Facility
03. Community Center
04. Community Garden
05. Entry / Boulevard
06. Green Space
07. Landscape (Hardscape)
08. Landscape (Softscape)
09. Library (SOE)
10. Outdoor Amphitheater
11. Parking (Above Grade)
12. Parking (Below Grade)
13. Pedestrian / Bicycle Linkages
14. Prayer Pavilion
15. Recreational Areas (Active)
16. Recreational Areas (Passive)
17. School of Evangelism
18. Sports Facility
19. Student Housing (SOE)
20. Vehicle Circulation

COMMUNITY CENTER:

1. Auditorium
2. Administration
3. Cafe / Coffee Shop
4. Childcare
5. Community Courtyard
6. Conference Room
7. Counseling
8. Entrance / Lobby
9. Exercise Studio
10. Fellowship Hall
11. Gymnasium
12. Kitchen
13. Mechanical / Electrical
14. Parking
15. Prayer Lounge
16. Private Toilets
17. Public Toilets
18. Storage / Custodial
19. Receptionist
20. Resource Center

MAJOR PROJECT ELEMENTS

CHURCH FACILITY:

01. Administration
02. Cafe / Coffee Shop
03. Childcare Center
04. Conference Room
05. Education Classrooms
06. Entrance / Lobby
07. Fellowship Hall
08. Gathering Space
09. Kitchen
10. Mechanical / Electrical
11. Meeting Rooms
12. Parking
13. Pastoral Resource Library
14. Prayer Lounge
15. Private Toilets
16. Public Toilets
17. Receptionist
18. Sanctuary
19. Storage / Custodial
20. Youth Fellowship

SITE INFORMATION

REGION: Rocky Mountain Region

CITY: Aurora, Colorado

SITE: Southeast Aurora, approximately 125 acres

NEARBY SITE AMENITIES:

Southlands Mall, Aurora Reservoir, residential, retail, elementary school, middle school, high school, library

TRANSPORTATION LINKS:

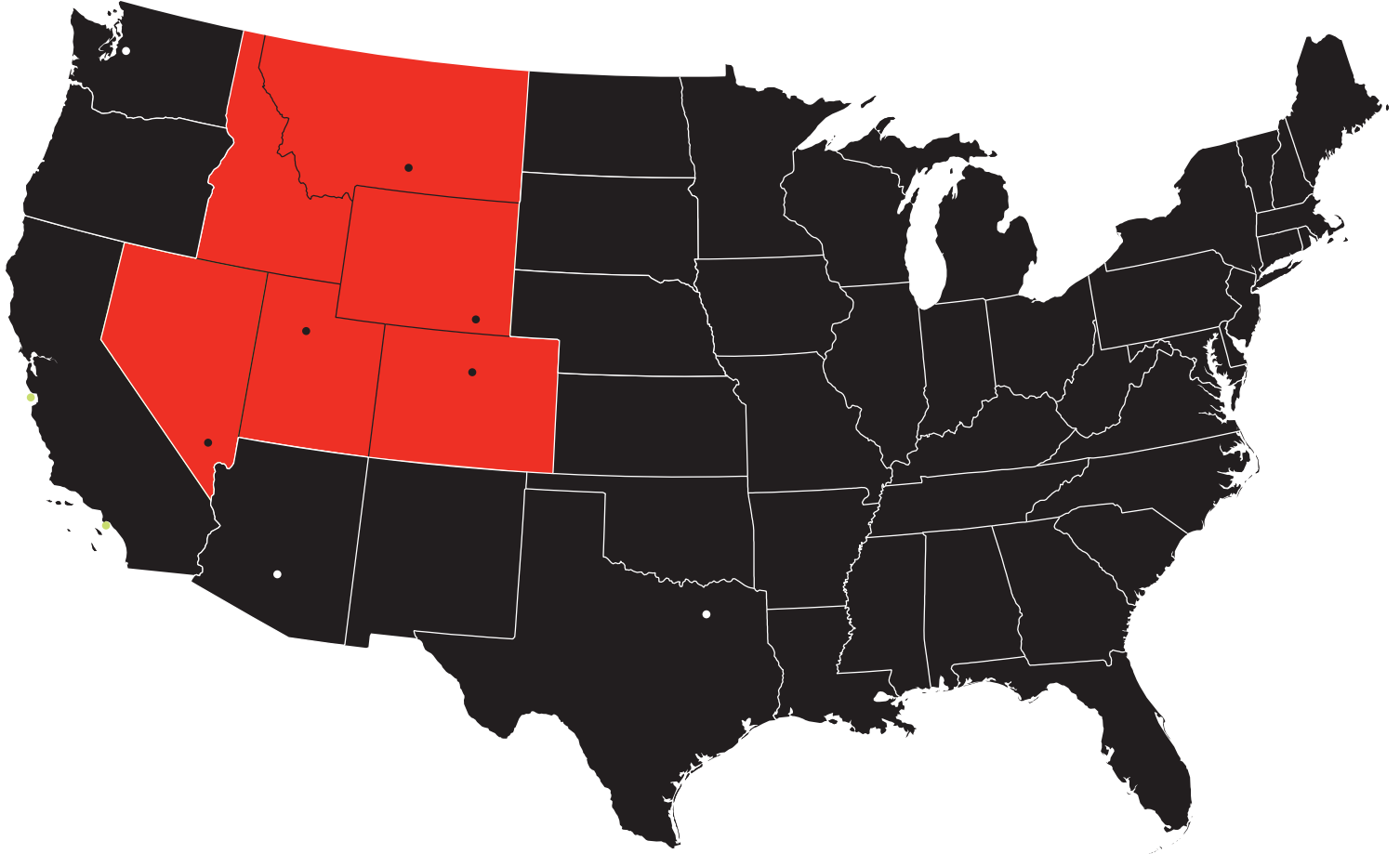
E-470, S Aurora Parkway, E Smoky Hill Road

NARRATIVE:

This particular site became an interest for me because of its size and central location within the developing Aurora community. The site is located close to a major highway with Southlands Mall adjacent on the west side. The surrounding properties have been quickly developed, making this site an ideal location for a community center within a rapidly growing neighborhood. The site is approximately 125 acres, covering open spaces, an existing residential development, and a Lowe's Home Improvement store. The entire eastern border around the site is developed with residential housing.

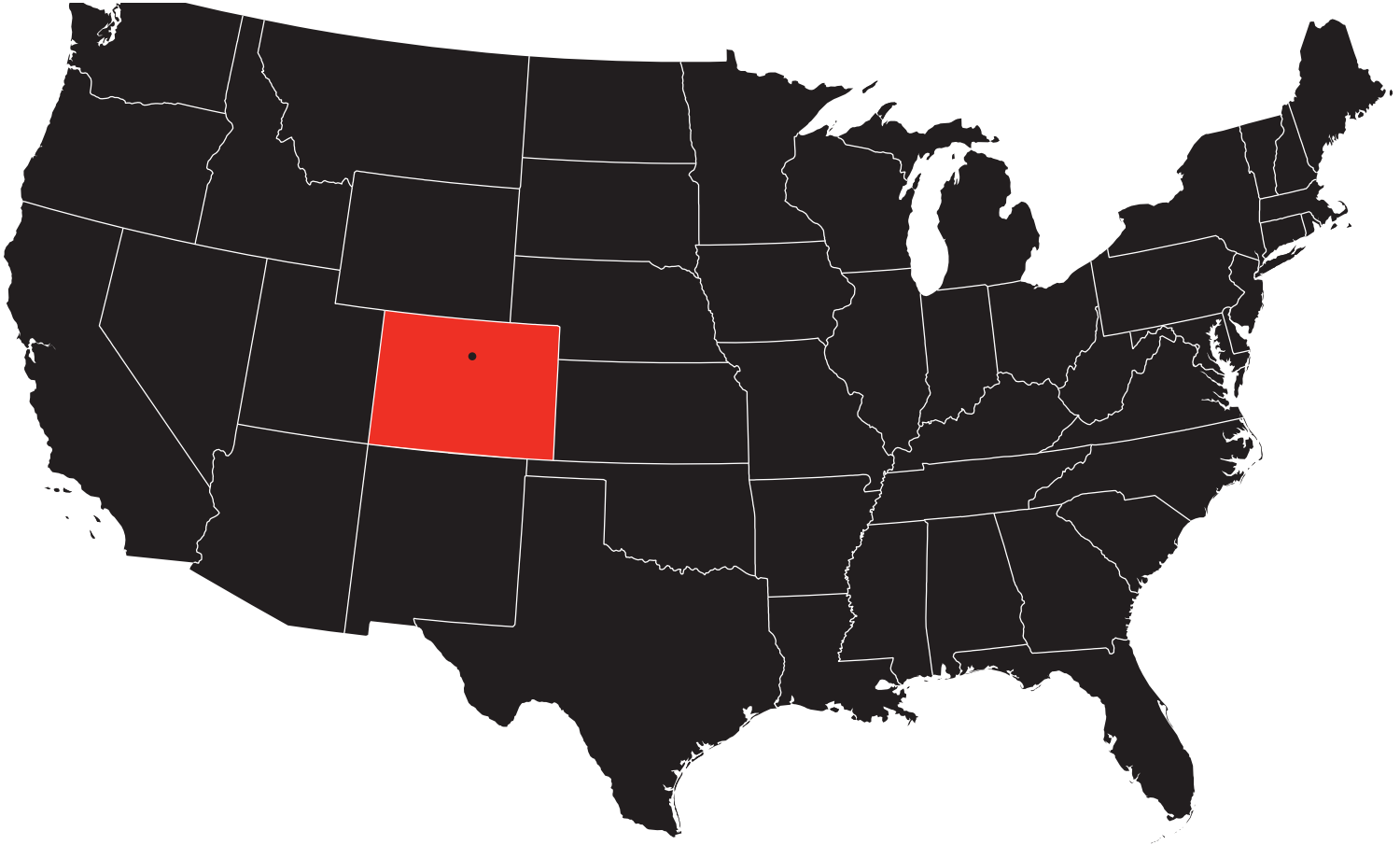
SITE MAPPING INFORMATION

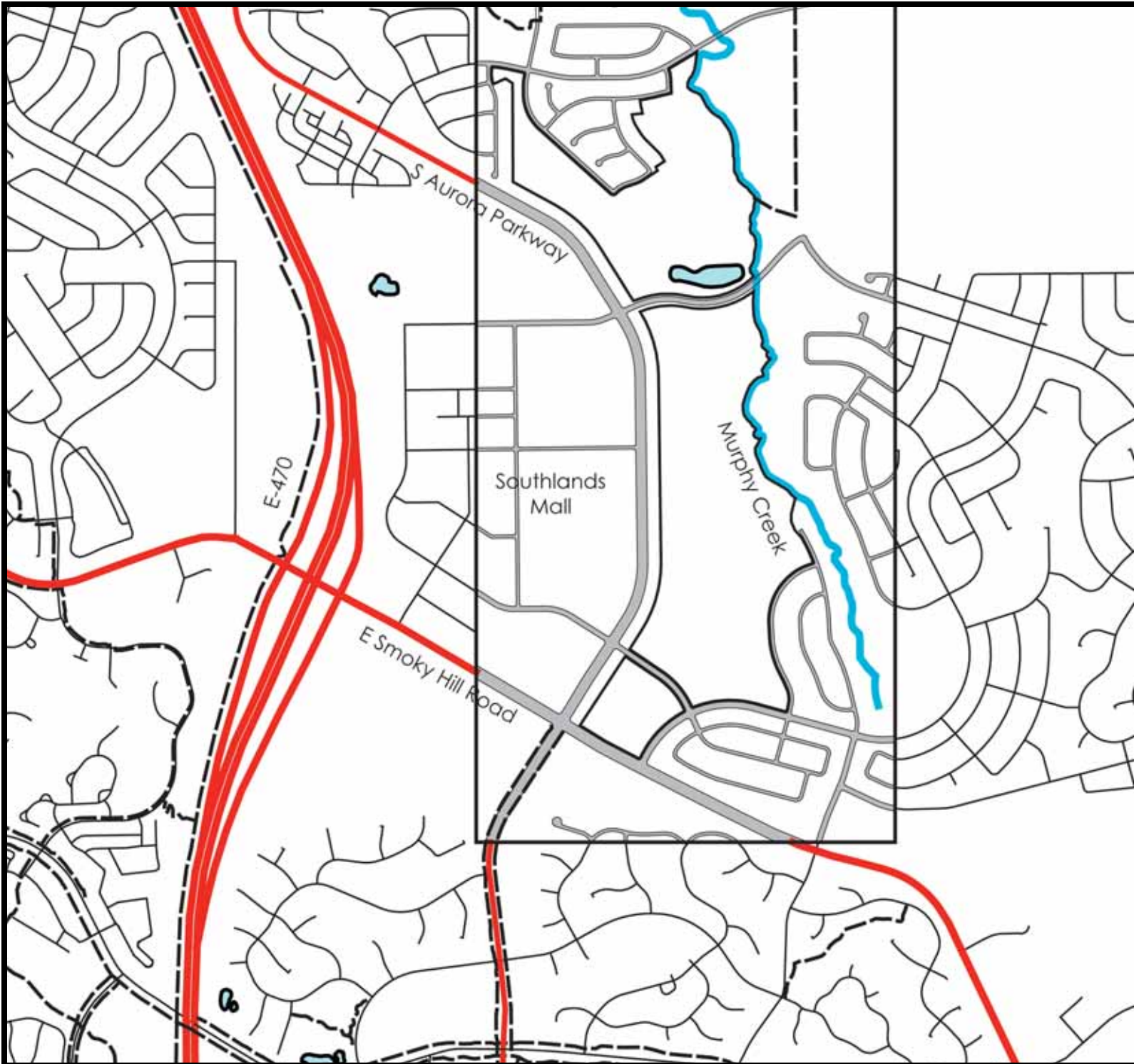
MAP: Macro Scale - Rocky Mountain Region

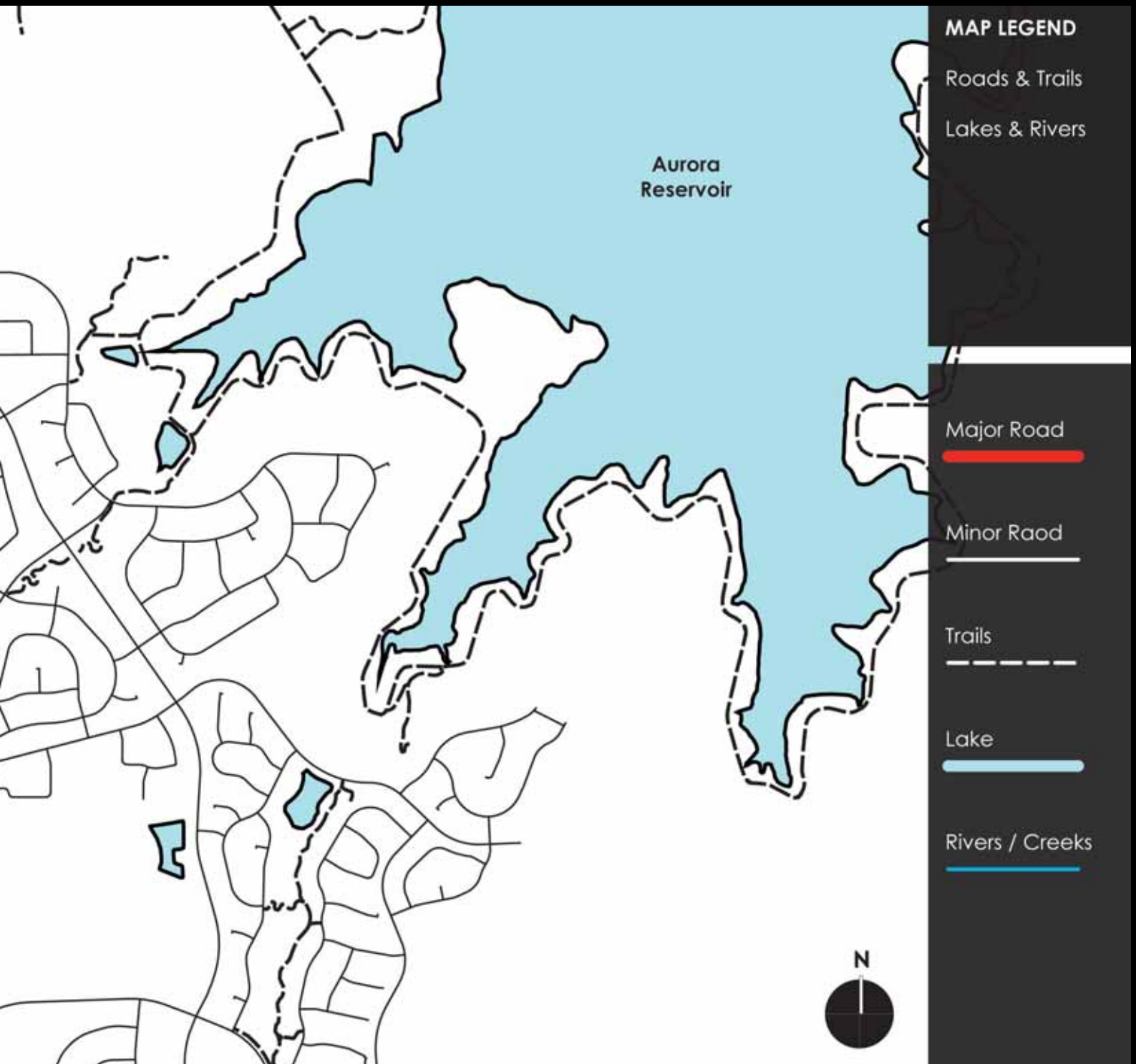


SITE MAPPING INFORMATION

MAP: Macro Scale - Aurora, Colorado







MAP LEGEND

Roads & Trails

Lakes & Rivers

Aurora
Reservoir

Major Road

Minor Road

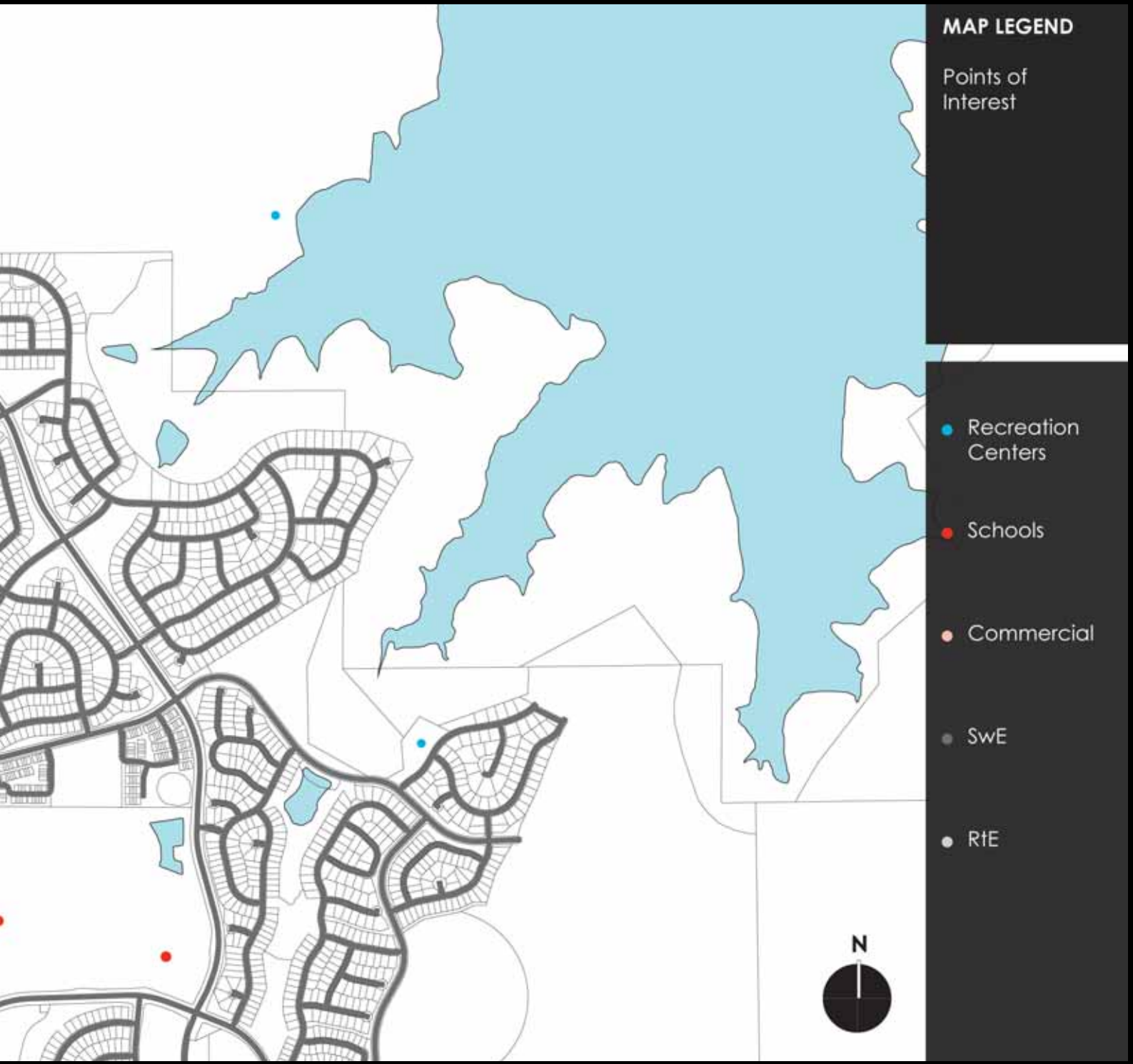
Trails

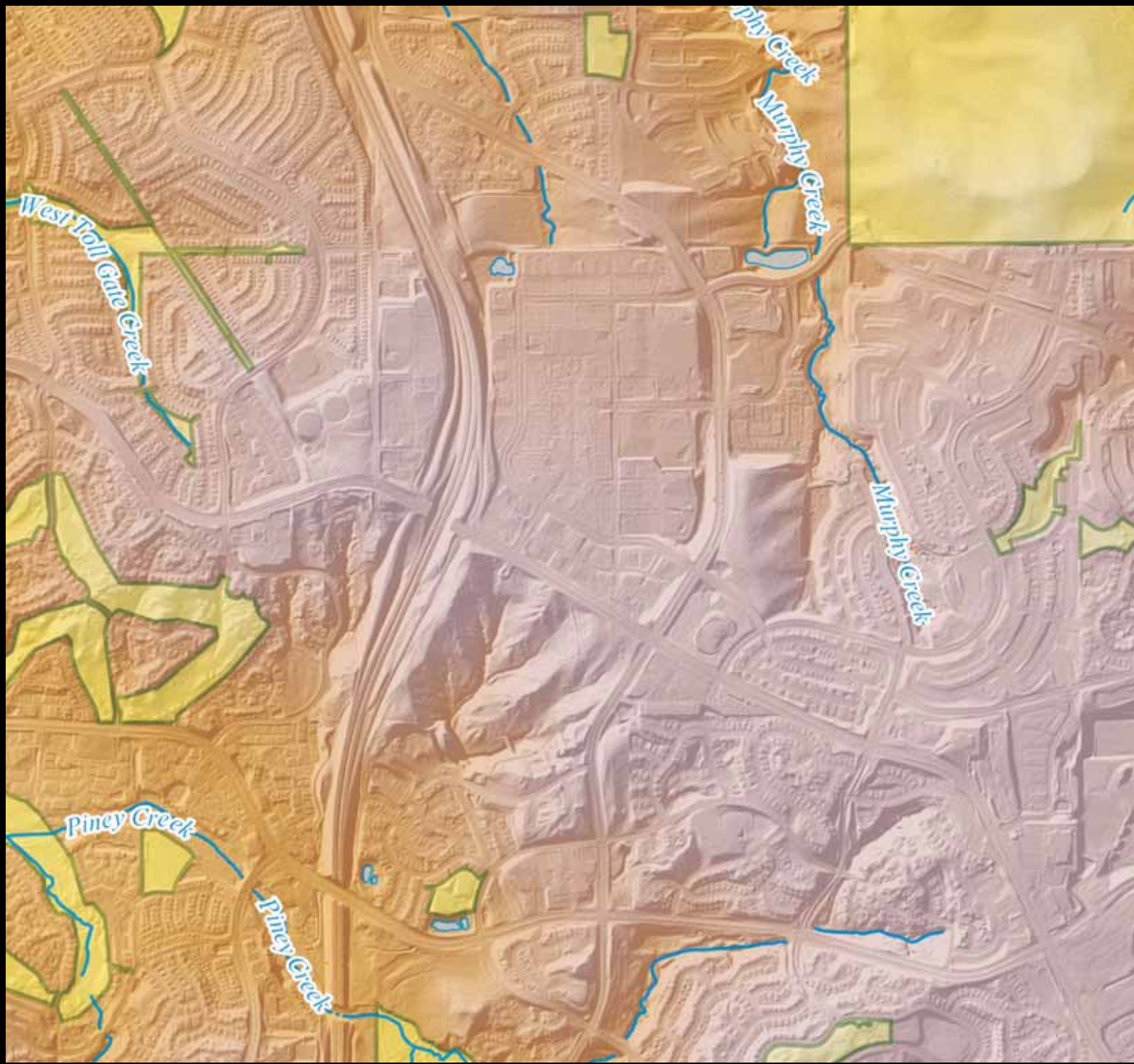
Lake

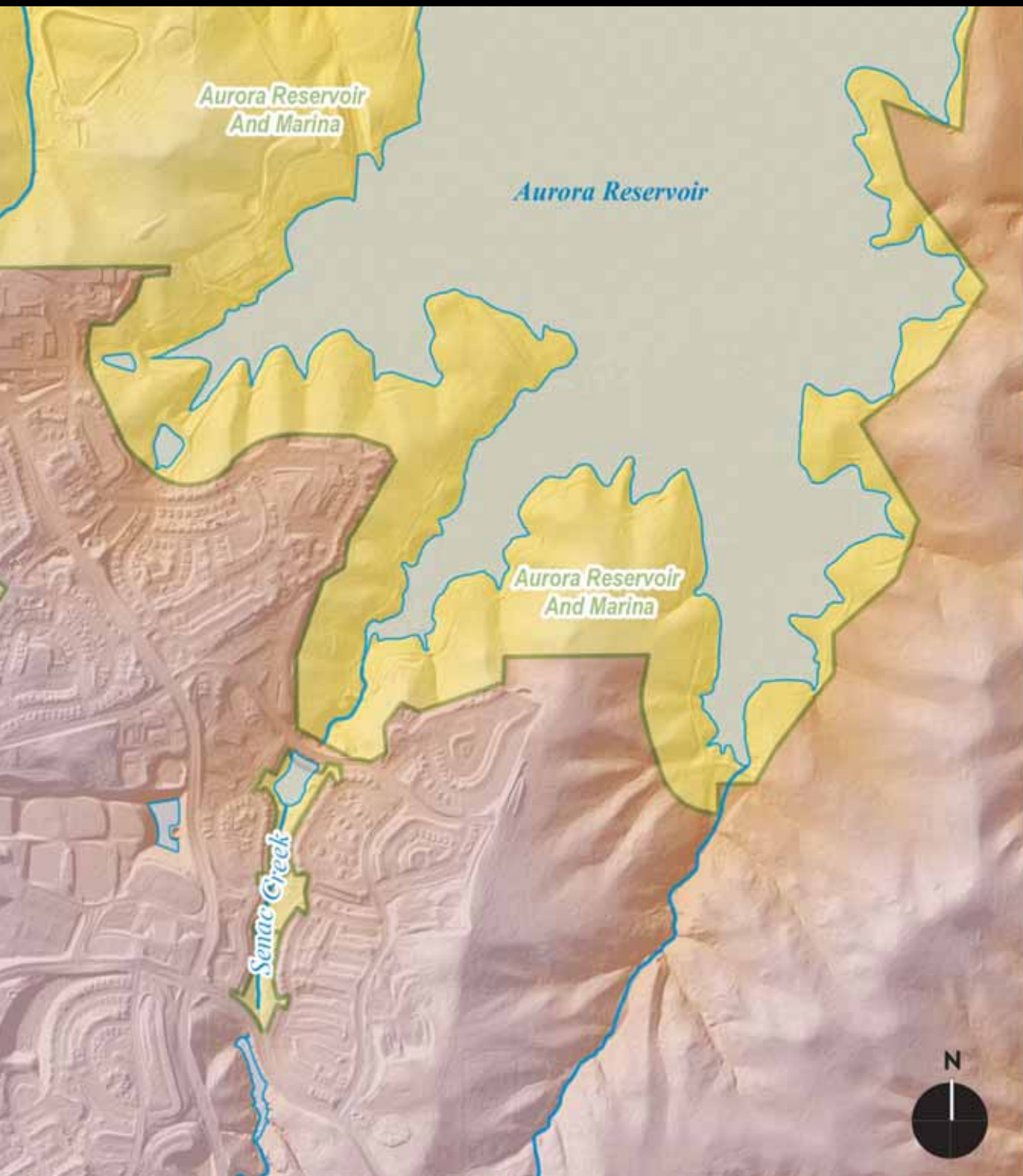
Rivers / Creeks

N









MAP LEGEND

- LIDAR Hillshade
- Park District
- *Produced in ArchGIS





MAP LEGEND

Aerial
Photograph

*Produced in
ArcGIS



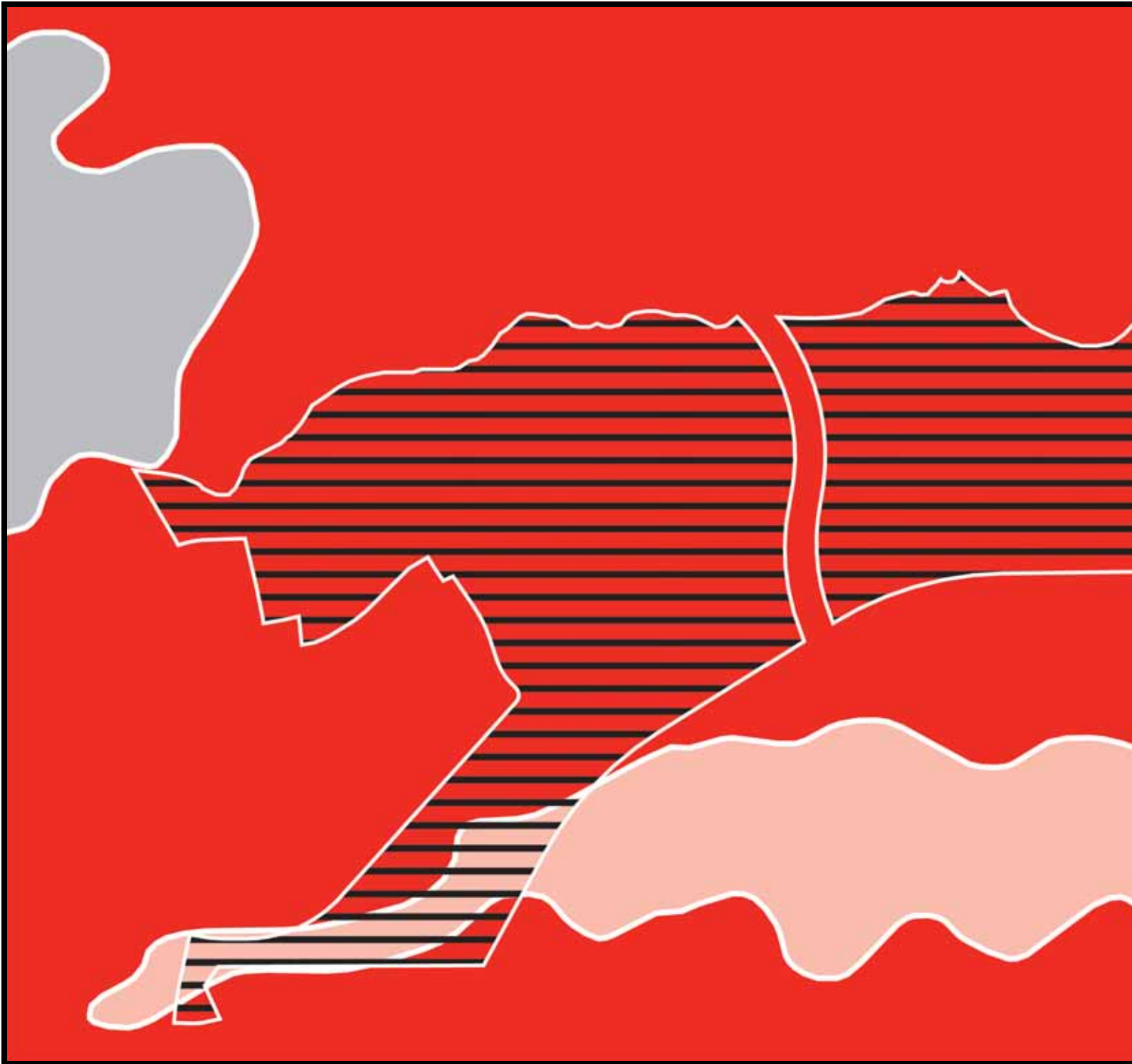


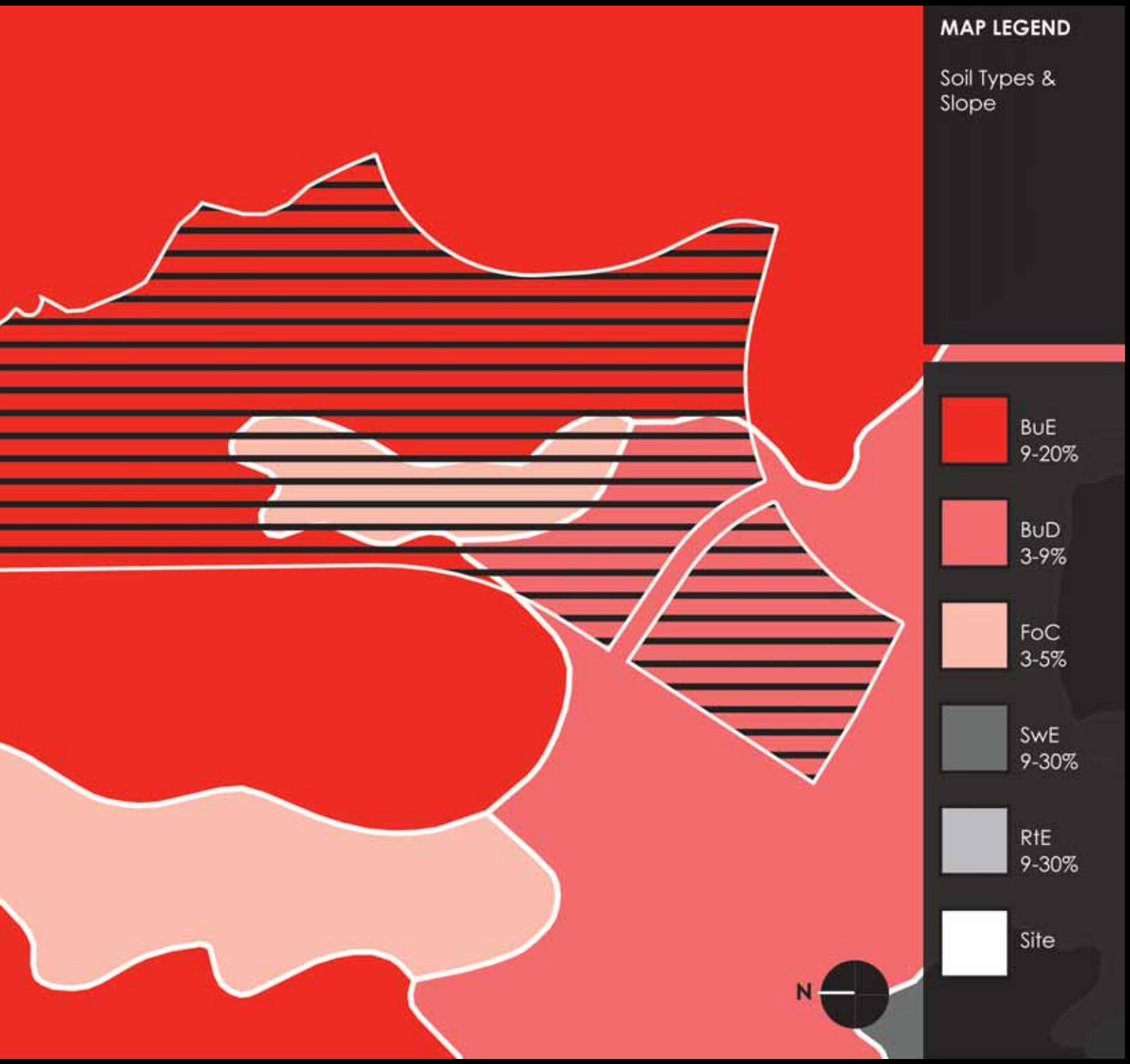


MAP LEGEND

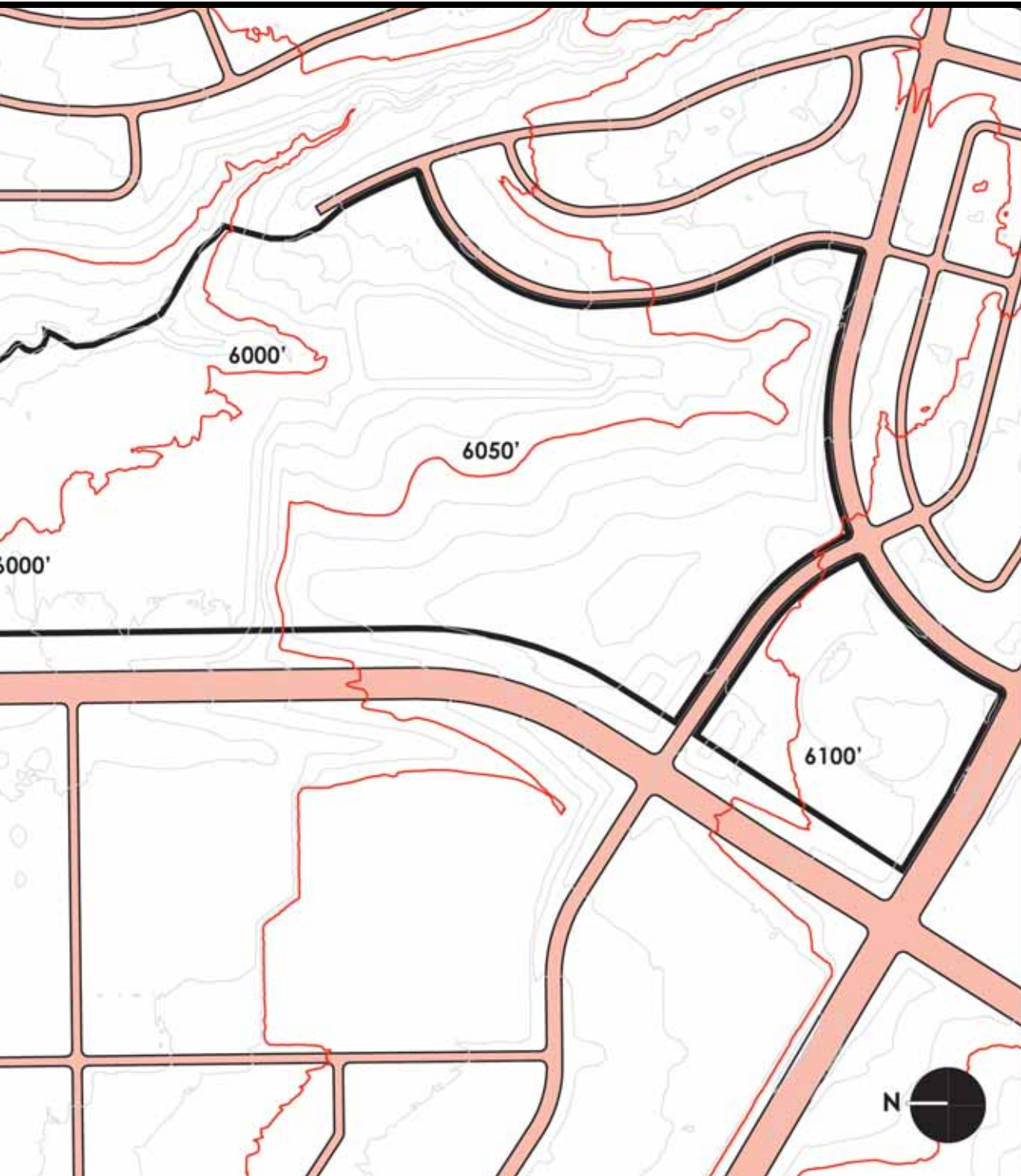
Aerial
Photograph

*Produced in
ArcGIS









MAP LEGEND

Topography

10' Interval
50' Index

Major Contour

Minor Contour

PROJECT EMPHASIS

ARCHITECTURE AND WELL-BEING:

My theoretical premise has led me to investigate the relationship between architecture and a person's well-being. Three aspects that I have chosen to highlight include physical, emotional, and spiritual. The challenge to develop a community master plan that satisfies programmatic needs for a variety of clients will be discovered in the underlying mission of faith, which unites them. This community center will become the bridge which allows those from various faiths to meet in one place. Evangelical outreach will only be made possible when members from the Church community work together to provide community binding functions in respect to physical, emotional, and spiritual well-being. The architecture should enhance this connection and carefully establish the relationship between the community center and church.

PLAN FOR PROCEEDING

RESEARCH DIRECTION:

The direction my thesis research will be focused on a number of elements that will begin to determine a design direction for my problem statement. The project typology research will highlight urban master planning, with a focus on community centers and assembly spaces. As I research historical context, site analysis, and programmatic requirements, I will move forward to a final design solution, which carefully considers each of these topics.

DESIGN METHODOLOGY:

The design methodology for this project will follow a mixed method model under the Concurrent Transformative Strategy. I will be using interviews, graphics, and digital information to help format my method for proceeding with design decisions. Relating my research to the unifying idea will transform the qualitative/quantitative data into applicable techniques and informative paths for design application.

DOCUMENTATION:

As I move throughout the design process, documentation will be an important step from start to finish. I will need to develop a consistent method for gathering local or digital information to determine its role in my thesis. Failure to do so will result in a lack or loss of data, and could prevent me from presenting viewers with the necessary information to comprehend major project elements.

PREVIOUS STUDIO EXPERIENCE

SECOND YEAR

Fall 2008 - Darryl Booker

Tea House: Fargo, ND

Boat House: Minneapolis, MN

Spring 2009 - Mike Christenson

School of Dance: Fargo, ND

Mixed-use facility: Fargo, ND

THIRD YEAR

Fall 2009 - Cindy Urness

Wellness Center: Fargo, ND

Center of Excellence: Fargo, ND

Spring 2010 - Milton Yergens

Research Center: Stoneville, Mississippi

Business/Residential - Fargo, ND

FOURTH YEAR

Fall 2010 - David Crutchfield

High Rise: San Francisco, CA

Spring 2011 - Don Faulkner & Frank Kratky

Temporary Housing: Stanley, ND

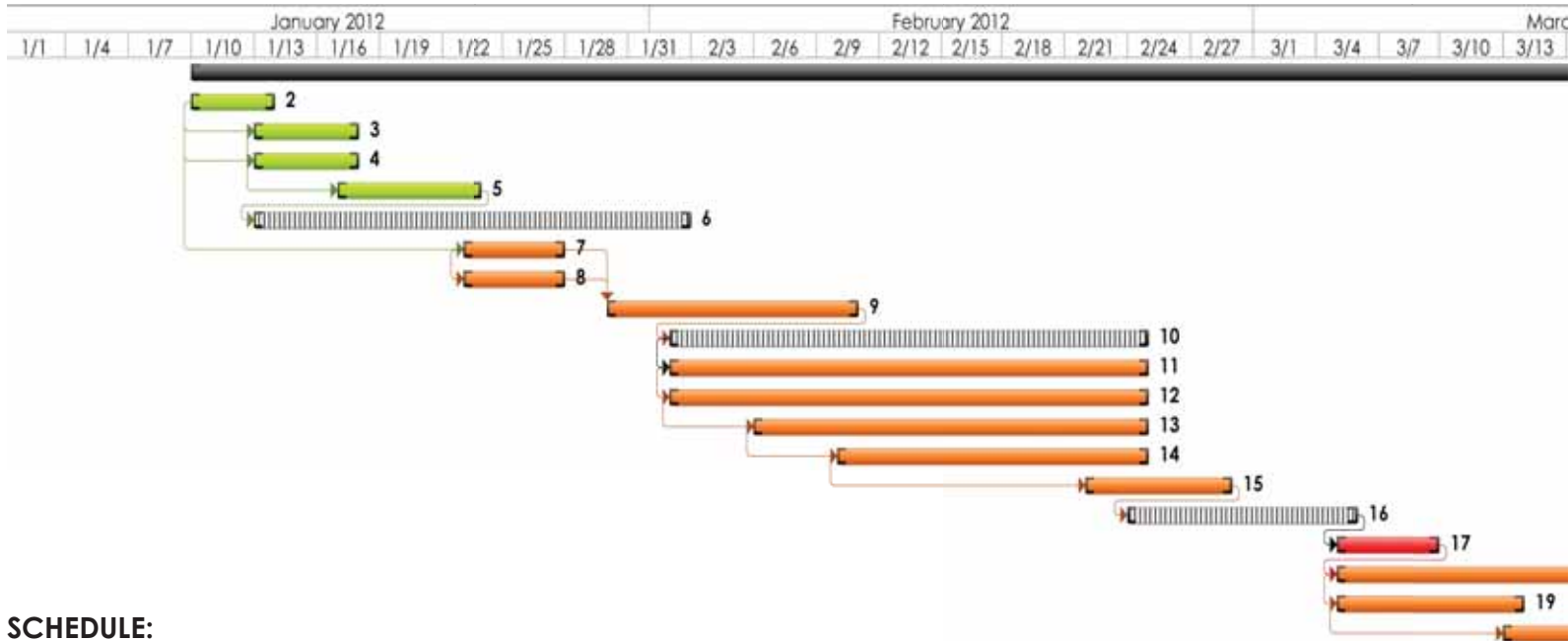
FIFTH YEAR

Fall 2011 - Paul Gleye

Urban City Center: Fargo, ND

City Marketplace: Fargo, ND

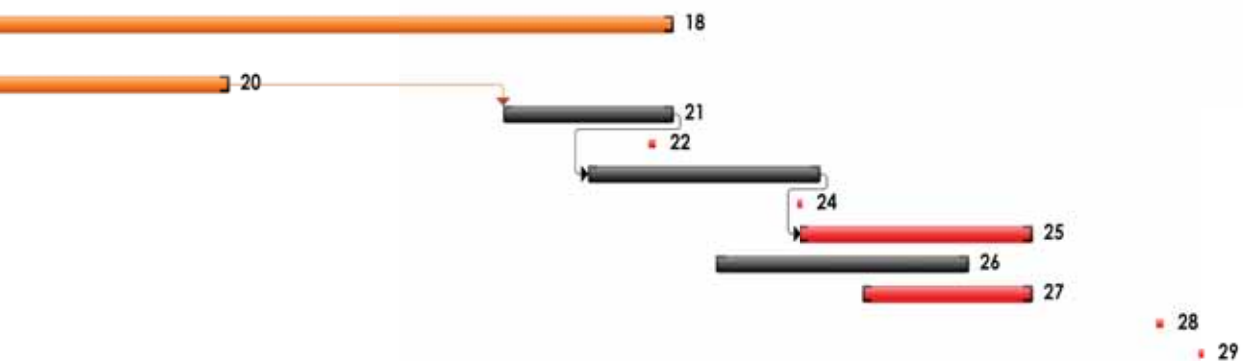
SCHEDULE / WORK PLAN



SCHEDULE:

- | | |
|--------------------------------------|------------------------------|
| 01. Project Documentation | |
| 02. Context Analysis | |
| 03. Conceptual Master plan Analysis | |
| 04. ECS Passive Master Plan Analysis | |
| 05. Spatial Master plan Analysis | |
| 06. Master plan Development | |
| 07. Conceptual Facility Analysis | |
| 08. ECS Passive Facility Analysis | |
| 09. Spatial Facility Analysis | |
| 10. Floor Plan Development | |
| 11. Structural Development | |
| 12. Materials Development | |
| 13. Section Development | |
| | 14. Envelope Development |
| | 15. ECS Active Analysis |
| | 16. Preparation for Review |
| | 17. Midterm Review |
| | 18. Project Revisions |
| | 19. Context Redevelopment |
| | 20. Structural Redevelopment |
| | 21. Presentation Layout |

March 2012						April 2012						May 2012											
3/16	3/19	3/22	3/25	3/28	3/31	4/3	4/6	4/9	4/12	4/15	4/18	4/21	4/24	4/27	4/30	5/3	5/6	5/9	5/12	5/15	5/18	5/21	5/24



- 22. CD Due to Thesis Advisers
- 23. Plotting and Model Building
- 24. All Exhibits installed on the 5th Floor
- 25. Thesis Exhibit
- 26. Preparation for Presentation
- 27. Final Thesis Reviews
- 28. Final Thesis Document Due
- 29. Commencement

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3.0 Program.

UNIFYING IDEA RESEARCH

INTRODUCTION

The research for this thesis will continue to develop elements of the theoretical premise, while focusing on five primary issues: well-being, community, sustainable design, social justice, and social architecture. Research developed in these areas will inform the early stages of design development and build the theoretical framework on which this design thesis rests. Buildings are places of work, play, and social interaction, the places we love or hate. When buildings fail to provide an environment for these three basic needs, our potential to perform well is limited. Buildings should likewise perform well.

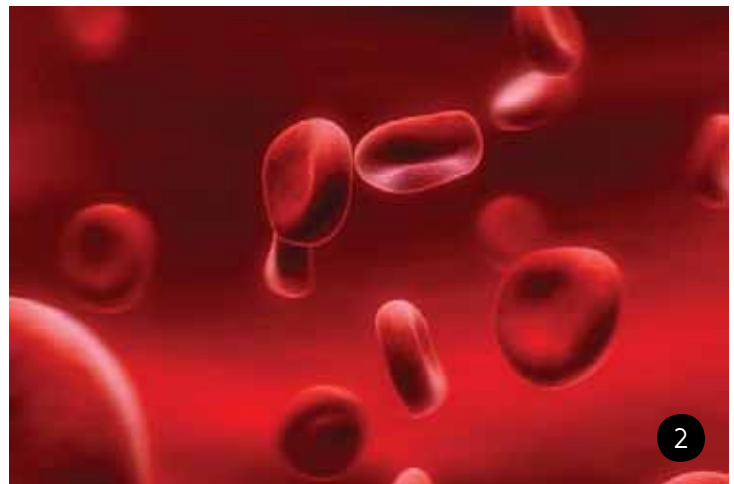
DESIGNING FOR WELL-BEING

According to scientific research, people spend approximately 90 percent of their time indoors (EPA, 2012). This astonishing number makes a significant impact on a person's physical, emotional, and spiritual well-being. Inadequate design solutions produce adverse results on the body, mind, and soul. Where are we currently seeing this outcome in our society, and how can designers reverse its effect? According to Schneekloth (1995) we all live in places, but without our attention our places are endangered. "And when our places are endangered, as revealed in the current ruins of our inner cities, our poisoned rivers, our inhospitable offices and our dilapidated houses, we are at risk". Environmental psychologist, Dr. Judith H. Heerwagen, reasons that architects have the opportunity to create environments which enhance a

person's quality of life by monitoring factors determined by the design of buildings: exposure to nature and daylight, air quality, temperature, noise, ergonomics, and opportunities for social gathering, relaxation, and exercise (Kolleeny, 2003).

Architects are responsible to protect the health, safety, and welfare of society. With an ever increasing awareness concerning issues of air quality, chemically hazardous building products, and the alarming rate at which the world is consuming its resources, it brings attention to the places in which we live. If advances in technology allowed for perfectly energy efficient architecture, part of the puzzle has been solved. Why? Designs affect not only the physical realm, but become a medium through which a community is able to nurture its emotional and spiritual well-being. So how do architects design for something that they can't see? And what is a human's greatest need?

In Norman's (2004) book, *Emotional Design*, he suggests that human emotions "result from three different levels of the brain: the automatic, the prewired layer, called the visceral level; the part that contains the brain processes that control everyday behavior, known as the behavioral level; and the contemplative part of the brain, or the reflective level". There is a correlation between human emotion and architectural design, where visceral design is a state of pre-consciousness where we make



UNIFYING IDEA RESEARCH

impressions based on appearances. Behavioral design relates to our experience of a product and its performance. Reflective design is the highest level of our consciousness and the feelings or emotions ascribed to something (Norman, 2004). Based on these assertions, we can begin to formulate a design strategy that will meet the emotional needs of the community, while carefully considering visceral, behavioral, and reflective design principles. The community's first impression of an architectural solution will be its appearance. Any previous experiences with or in a similar environment will then introduce preconceived notions or thoughts about a place. This, in turn, may affect someone's feelings and their perception of a design.

PLACES OF COMMUNITY

Humans are social creatures. We have a need for community and we were designed to live life together. What sort of environments increase a sense of community? What are the qualities of these spaces? And, how can architecture actively engage the community?

Communities that adapt to sociological changes over time, make needed adjustments in order to respond to the needs of the people who live there (Hall, 2001). A community is built upon layers of information gathered from geographical, political, ethnic, and sociological backgrounds. The spaces we create should reflect this information and mod-

el the desired sense of place for its citizens. Unlike past generations in which communities progressed over the course of several centuries, today's generation is rapidly developing, and significant changes to the community can be noticed in a matter of a single decade (Hall, 2001, 5). When cookie cutter design methods are developed to achieve these changes, we begin to lose the sense of authentic architecture, which once existed in the communities of old.

With recent trends in technology, construction processes move quickly, we have mistaken aggregation for community and curb appeal has replaced sense of place (Hall, 2001, 8). The primary difference between that of an aggregation and one of community is found in unity. The community is a place which binds individuals within a common location to a common interest. They are not simply individuals, but rather a cohesive unit. Many of the suburbs that were developed shortly after the second world war would likely not meet these same definitions for community (Hall, 2001, 9). Instead of valuing a home's sense of place, our society has replaced these values with terms, such as curb appeal. Suburban neighborhoods often lack this sense of character and can become lifeless places with little or no inherent sense of community within them.

So how do we avoid creating places like this and what are some existing strategies that designers



UNIFYING IDEA RESEARCH

are using to create inviting environments and thriving communities? According to Lynch (1960), there are five basic elements which form the image of the cities we live: paths, edges, districts, nodes, and landmarks. While Lynch refers to these elements as relating to the city, Hall (2001, 15) recognizes the universal importance and relevance they serve the designer at the community scale as well. When architects use these elements to create memorable places of habitation, people will be able to establish longlasting relationships and moments in architecture that will become centerpieces for the community. In addition to these elements, Hall recognizes concepts such as axial design, hierarchy, transition elements, dominant features and enclosure which make communities that are livable and dynamic (Hall, 2001, 20). Other spatial components which are subject to the control of the designer are circulation, open space, and structures. As this design thesis develops, these ideas will be very important to consider, especially when developing the master plan.

The medium through which these elements emerge in community design is creativity. And the most important step to creative thinking is just to begin (Hall, 2001, 61). Inspiration can come from a number of outside sources: the natural world, the manufactured world, and abstract thought (Hall, 2001, 64). Some of the strongest architectural solutions develop from these inspirations. The

design of the created world, built environment, and underlying abstract thoughts must be analyzed and extracted into some visual or conceptual idea. These ideas are further developed and manipulated to express architectural solutions for problems in the community. Finding inspiration from

these three sources will help the designer relate his/her design to ideas or elements which are more familiar to the client. In many ways, community design is like problem solving. If we are able to push past the path of least resistance and mediocrity, the result will be valuable and insightful design solutions which nurture the well-being of the community.

“Communities of all kinds need to work together, thinking about the problems they face in holistic ways, and strengthen the fabric that binds them together” (Steffen, 2006). What exactly is that fabric? Perhaps only when we collaborate and analyze each situation will we be able to find what it is that is drawing a specific group together. Community design does not only involve the designer, but the community of individuals as well. As we lay the foundation for community design, we can begin to establish some sustainable standards communities can build upon.

SEEKING SUSTAINABLE STRATEGIES

In the past, humans may have been ignorant about the negative effects in which consumers have made



UNIFYING IDEA RESEARCH

on the environment. Poor material selections and the pursuit of lavish lifestyles, which were harmful to the ecosystem, have greatly contributed. As leaders in the construction industry, designers must actively pursue sustainable design solutions and no longer play the card of ignorance. Architects need to develop new strategies which will encourage communities to develop alternative design methods. If mankind continues to ignore the warning signs, it may be impossible to reverse the effects that our decisions have on future generations. The time is now. To help understand the rate at which we are consuming, studies have been developed which compare average energy consumption at the global scale. In a study done by Global Footprint Network (2010), the average ecological footprint is 5.4 acres per person. The score indicates how many acres we will need to support our current lifestyle. The average American, for example, uses approximately 24 acres, the average Chinese person uses about 4 acres, while the average Pakistani uses 1.5 acres.

In *Worldchanging: A user's guide for the 21st century*, Steffen (2006) states: "To use less of our planet and become responsible consumers, we have to ask ourselves the fundamental question, how much stuff do we need? The relationship between material wealth and well-being would seem to be a proportional one: when one increases, so does the other. But as it turns out, measures of wealth

and health rise together only to a point, and then the pattern shifts". Sustainable design encourages consumers to even out the playing field and reduce energy consumption. Americans must make cautious consumer choices if serious about reducing its environmental impact. Around the world, the impact of global warming and harmful greenhouse gases has been seen. Designers have also responded to these changes in our environment and have already begun to make improvements in the built environment. William McDonough wrote an essay about his concept of cradle-to-cradle which originally appeared in Worldwatch Institute's State of the World 2004: In that article he wrote, "good design—principled design based on the laws of nature—can transform the making and consumption of things into a regenerative force" (McDonough, 2003). Designers can likewise use this concept to become good stewards to the environment by using materials which will continue from "cradle-to-cradle."

The semiarid climate of Colorado usually produces cold, windy winters with warm, dry summers. According to Lechner (2008), there are several climate design priorities which are important to consider for this region. In order of priority strategies include: keep the heat in and the cold temperatures out during the winter, let the winter sun in, protect from the cold winter winds and use thermal mass to reduce day-to-night temperature swings in the sum-



10



11



12

UNIFYING IDEA RESEARCH

mer (Lechner, 2008, 94). There are additional design strategies included in Appendix D for achieving sustainable approaches to climate-related design.

When these passive strategies are implemented during site development, we can rest assured that the final solution will be one which is proactive instead of reactive. Instead of reacting to energy needs after a project is developed, those needs should be designed for first. As the designer, we are able to anticipate these energy requirements and plan accordingly to develop sustainable methods for conservative energy consumption. Our designs must adapt to the environment and the particular challenges each season brings with it. The first sustainable approach mentioned in Appendix D is keeping the heat in and the cold temperatures out during the winter. Many of the strategies which exist to regulate or modify thermal comfort can be understood from zones on a psychrometric chart (Lechner, 2008, 65). These zones help us to understand the human's optimal comfort level in relation to a variety of other less comfortable levels: cold and humid, humid, hot and humid, hot and dry, dry, and cold and dry. This *comfort zone* may vary by culture, time of year, health, fat levels, amount of clothing, and physical activity (Lechner, 2008, 64). By properly insulating the building's envelope, creating balanced surface-area-to volume ratios, and adjusting the building's orientation southward for maximal solar gain, the architect will minimize

heat loss and maximize heat retention during the winter months (Lechner, 2008, 153).

Another sustainable strategy that follows the principle of heat retention is passive solar heating, i.e., letting the winter sun in. Three main passive solar systems include direct gain, trombe wall and sunspaces (Lechner, 2008, 168). Determining which system will be most effective will vary from project to project and there are both advantages and disadvantages to each. According to Balcomb (1992), orientation is 80 percent of passive solar design. In some cases true south orientation is not possible due to existing grids or land patterns, but glazing 20° east or west of true south will still be effective (Lechner, 2008, 168).

Over time, the American culture has been transformed into a society of luxury and convenience. Americans have the ability to get whatever they want and when they want it. These readily available products include but are not limited to electronics, homes, vehicles, or entertainment. Perhaps the most discrete product we regularly enjoy is that of comfort. Some of these patterns can be observed as we look at daily living patterns: the hot shower, the air conditioned car ride, the air conditioned workplace, transportation, and many others. These pursuits of happiness surely are not inherently evil. After all, this freedom is the foundation of the American society. But if our own pursuit of hap-



UNIFYING IDEA RESEARCH

piness affects the life, liberty, and pursuits of others, is this really justice?

SOCIAL JUSTICE

Wheaton (2008) describes three areas of social justice: economic justice, remedial justice, and distributive justice. While the first two focus on just procedures, distributive justice focuses on fair outcomes. That is, a “fair distribution of burdens and benefits among its citizens” (Wheaton, 2008). Does architecture respond to a community in such a way? Or do we primarily focus on economic and remedial justice? “The fundamental basis for pursuing social justice goes back to the fact that every human being is created in God’s image and thus has intrinsic value” (Wheaton, 2008).

Since there are many ideas and views about justice, it will be important to first consider the implications justice has on architecture. Architecture services a broad spectrum of clients with different needs, views and moral values. With this in mind, we may need to adjust our approach to design architecture which responds in a just way to the social needs of a community. Issues such as equality, rights, fairness, and liberty are tested as they come in contact with ethical, social, and political circumstances within a community (Palermo, 2001). As architects, we must maintain an individual’s ability to pursue personal interests without excluding those who are least advantaged.

Palermo (2001) introduces the idea that architecture is constructed ethics. This becomes the physical manifestation of earlier preconceived ideas. When we first start designing we dream and think about *what could be*. As our drawings become a reality, they define what *ought to be* (Palermo, 2001, 184). The judgements that we make as professionals and designers will in turn be evaluated and judged according to the project's intentions or purpose. When we build a new place, we may have certain expectations of what that building should or should not be. Architecture should, of course, increase the quality of life for any client, but finding your client's *hidden agenda* is what will really make a project successful. It is for that purpose that we strive to understand what expectations exist for a given client. When clients have expectations that conflict with our ethical role as an architect, we should use reasoning based on professional understanding to make informed decisions. Communicating these decisions, and the ethical reasoning for the client will help break any tension which has formed over a specific issue, but these are not always easy choices to make.

SOCIAL ARCHITECTURE

“Worship spaces are places of commitment, where individuals commit to a faith and join a community, where couples commit to one another, and where a family and the wider family of the church commit to the upbringing of a child” (Roberts, 2004). It is



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UNIFYING IDEA RESEARCH

important for the designer to develop spaces that will strengthen and encourage these commitments and form a sense of community. These places have a direct impact on social connections. If these connections are not made, or the architecture limits a person's ability to have them, it could have a direct effect on the person's physiological mind set.

CONCLUSION

The research for the unifying idea looked at five primary issues: well-being, community, sustainable design, social justice, and social architecture. As discussed more thoroughly in these sections, these topics are irreplaceable for community design. In particular, the community center becomes the place where these issues meet and it quickly becomes evident as we evaluate the *constructed ethics*. The elements of well-being: physical, intellectual, emotional, social, occupational, environmental, and spiritual all play an active role in the shaping of an individual's body, soul, and mind.



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HISTORICAL CONTEXT

AURORA: A BRIEF HISTORY

Aurora was first named Fletcher in the 1880s, when businessman Donald Fletcher saw the growing need for real estate. The town struggled soon after the Silver Crash in 1893, but later stabilized as a major suburb of the Denver metropolitan area. With a growing population of over 325,000 residents, Aurora complements Denver as one of the largest suburbs in the metropolis. The lack of a central business district is somewhat limiting to the city's growth. It functions primarily as a suburb with the ability to grow in both area and density. Another interesting quality within this city is its elevation change of nearly 1000 feet. This change in elevation creates an interesting terrain and amazing views. With more than 1,800 acres of developed park land and over 6,000 acres of open landscape, Aurora truly is the "Gateway to the Rockies" (Wikipedia, 2012).

SITE BACKGROUND: RECENT HISTORY

According to an interview with Frank Shinnick (2011), Aurora First Assembly bought 55 acres of land near the intersection of South Aurora Parkway and East Smoky Hill Road in 1995. Their intentions were to relocate and build a new facility in order to meet the needs for the growing church and reach more people for Christ. Property towards the south end of the site was sold to a developer, which allowed the church to have utilities dug in by the city for a reduced cost. The South Southlands Parkway, which runs past the church facility site, was also constructed at this time. Meanwhile, the church developed a 29.5 acre master plan with

RNL Design for phase one of the church facility. The first phase would be about 48,000 SF, with about 150,000 SF in future phases. The construction cost was \$11,500,000. Some of the property to the north of the site was to be sold to a medical development group, but their loans were denied after real estate value declined in 2009. This money was required to fund some of the construction costs for the church facility, which left the project unfinished and on hold (Shinnick, 2011).

The church is currently worshipping in Cherokee Trail High School, while they wait for the campus construction project to be finished. Although the church was trying to speed up the relocation process by moving ahead with construction, the required funds were not yet accounted for, resulting in major loss and a very painful two-year hold on the project. Bids for construction will go out in 2012 for construction that summer (Shinnick, 2011).



HISTORICAL CONTEXT

COMMUNITY AROUND THE WORLD

Since the beginning of time, humans have always been in community with one another. Communities are formed by geographic locations, similarities in cultural or ethnic backgrounds, religious affiliations, common purposes, interests, or understanding. Some of the images to the right show some of the earliest beginnings in what become known as the community center.



HISTORICAL TIMELINE

AURORA AND COMMUNITY CENTER HISTORY

1799 - Ebenezer Sheldon builds a cabin in Aurora on East Pioneer Trail.

1802 - The first regular church service was held in the Sheldon cabin.

1901 - In Thringstone, Leicestershire the oldest community center was established.

1909 - Edward J. Ward organized the Wisconsin Bureau of Civic and Social Development.

1911 - The Wisconsin Bureau of Civic and Social Development sponsored a national conference endorsing social / community centers as agencies of reform.

1915 - The name "social" center changed to "community".

1916 - Establishment of the National Community Center Association.

1918 - Army Hospital #21 is constructed to treat WWI soldiers with lung problems. The hospital was renamed Fitzsimons Army Hospital two years later.

1919 - The National Council of Social Service was organized.

1920 - The Federation of Residential Settlements and Educational Settlements Association were organized.

1923 - There were community centers in 240 American cities.

1927 - There were 4000 institutes with 250,000 members.

1928 - Aurora's population reaches 2,000.

1929 - The Pettits Farm Association was formed in Dagenham, London, with over 90,000 inhabitants.

1929 - Aurora's first public library opens.

1930 - New York City has nearly 500 centers with a regular attendance of more than four million.

1939 - Aurora's population reaches 3,494.

1947 - There were community centers in 300 British cities with 60 full-time workers.

1950 - Aurora's population reaches 11,000.

1950 - Aurora's population reaches 50,000.

HISTORICAL TIMELINE

1960 - There were community centers in 929 British cities with with 221 full-time workers.

1972 - Aurora's population reaches 100,000.

1978 - Aurora's population reaches 150,000.

1990 - Aurora's population reaches 224,000. The Aurora Reservoir was completed.

2000 - Construction begins at Fitzsimons for the campus development of medical research and studies.

2004 - Aurora's population reaches 298,303. 72 languages are spoken, and Aurora is recognized as the most culturally integrated city in the nation.

2010 - Aurora's population reaches 325,078. Aurora is the third largest city in Colorado and the 58th largest city in the U.S.

This timeline was compiled using the following sources:

(Wikipedia, 2011)

(Aurora Historical Society, 2011)

(City of Aurora, 2011)

THESIS GOALS

THE ACADEMIC

This thesis will demonstrate clear understanding and comprehensive knowledge of an architectural education. It will serve the university as a reference for community centers and religious buildings. As I work alongside faculty and peers, I hope to learn more about my typology through an interactive learning environment. Learning how to implement these findings into a reasonable and comprehensive design will be very important. I expect my project to highlight appropriate design strategies from previous studio experience, while clearly displaying an attention to detail and skills expected from a graduate student.

I believe that connecting with a variety of staff expertise and closely following project goals and deadlines will lead me to a final design solution with satisfying results. I hope to be intellectually challenged with expectations to learn each week. As I come with this anticipation, I think I will find that the tasks I am completing will be more enjoyable, and that my ideas will become more fluent. I also expect that, as I complete my own thesis, I will seek to understand and challenge my peers.

I hope to further my design proficiency as I come across new challenges or obstacles. I will respond to these opportunities with tact, thinking critically to best analyze each situation with a determination to find appropriate solutions.

THE PROFESSIONAL

As I transition from the educational environment into the professional, I will continue to refine my technical skills and critical thinking. Some of the skills I wish to further develop include: design and graphic abilities, communication, organization, writing, reasoning, task management, work efficiency, digital modeling, detailing, stress management, technical drawing, practical knowledge of codes and construction methods, space planning, computer proficiency, leadership, and material application.

The thesis will be a final opportunity to showcase the learned skills and abilities I have learned while attending North Dakota State University. It is a professional document, the highlight of my portfolio, and an opportunity to express ideas in a professional conduct.

THE PERSONAL

As I look forward to my final semester, I find that my personal goals usually outweigh my academic or professional goals, but I am determined that these captivate my heart and hold every other area of my life together. I will focus my attention to three areas: the Church, my wife, and my God.

To fall away from any of these three components will result in the failure of my thesis. No matter the cost, I will devote myself to serving and loving these three. I wish to further develop these goals by implementing the following: a more persistent prayer life, selfless attitude, servant leadership, fruits of the Spirit (love, joy, peace, patience, kindness, goodness, faithfulness, gentleness and self-control), obedience, and passion.

The verse that I will be living by this semester comes from Psalm 127:1, “Unless the Lord builds the house, its builders labor in vain. Unless the Lord watches over the city, the watchman stand guard in vain” (NIV). If my goals for my thesis do not align with God’s purpose, my efforts or achievements will be futile, but if my labors are for His glory, surely my reward will be in full.

[NURTURE]well-being

4.0 Case Studies.

CASE STUDY INDEX

COMMUNITY CENTER

Case Study One:

The Life Centre

(1 of 3 Primary Case Studies)

Case Study Two:

Surry Hills Library and Community Center

(2 of 3 Primary Case Studies)

Case Study Three:

Gleneagles Community Center

(3 of 3 Primary Case Studies)

Case Study Four:

West Vancouver Community Center

(1 of 14 Secondary Case Studies)

Case Study Five:

Sephardic Community Center

(2 of 14 Secondary Case Studies)

RELIGIOUS ARCHITECTURE

Case Study Six:

The Prayer Pavillion

(3 of 14 Secondary Case Studies)

Case Study Seven:

Tampa Covenant Church

(4 of 14 Secondary Case Studies)

Case Study Eight:

Mortensrud Church

(5 of 14 Secondary Case Studies)

MASTER PLAN

Case Study Nine:

Dead Sea Master Plan
(6 of 14 Secondary Case Studies)

Case Study Ten:

Pier Escape
(7 of 14 Secondary Case Studies)

OTHER

Case Study Eleven:

Westside Bruennen
(8 of 14 Secondary Case Studies)

Case Study Twelve:

Empac
(9 of 14 Secondary Case Studies)

Case Study Thirteen:

NK' MIP Desert Cultural Centre
(10 of 14 Secondary Case Studies)

Case Study Fourteen:

OÖ Science Center Wels I
(11 of 14 Secondary Case Studies)

Case Study Fifteen:

Myongji University Bangmok Library
(12 of 14 Secondary Case Studies)

Case Study Sixteen:

Liverpool University Information Centre
(13 of 14 Secondary Case Studies)

Case Study Seventeen:

Integrated Teaching Building
(14 of 14 Secondary Case Studies)



THE LIFE CENTRE. CASE STUDY ONE

Location: Melbourne, Australia

Architect: Alelier Wagner Architects

Typology: Community Center & Church

Size: 25,000 Square Feet

Client: Syndal Baptist Church

Program: Cafe, Coffee shop, Store, Kitchen, Playground, Office, Activiy Center, Counseling Center, Auditorium, Audivisual, Meeting Rooms, Community Hall

Cost: \$6,500,000



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IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Rhiannon Slatter

www.architecturemedia.com

www.atelierwagner.com.au

www.rhiannonslatter.com.au



The Life Centre makes an excellent case study and has become a focal point for addressing a client's image. While being regarded as a place of community, it still functions very much like a church. The client for this project actually preferred this method of *disguise*, but not because it was trying to hide something. The way this facility is used as a tool for evangelism is quite fascinating. When more and more people are beginning to harden their hearts against the Church because of a *bad experience* or spiritual apathy, the church may need to avoid the image of traditional methods for religious architecture. It is quite possible that someone may be less likely to visit a place because of its *religious appearance*. After all, it's not the appearance of a place that will change lives, but rather the discipleship and fellowship that happens within.

With a facility that will attract the community around it for a number of reasons, it gives believers opportunities to meet community members and connect with them on a number of levels. Because



the program is very diverse, I believe that Syndal Baptist Church sees a greater variety of people who stop in for a service because they have connected with someone in the Life Centre. The spaces that were included in this community center are really no different than other similar case studies, but their purpose is altogether different. Circulation has always seemed to be a place of human interaction and this project was no exception. In fact, the community hall becomes a perfect place for groups or individuals to study or meet with others from the community.

This new community center was constructed among two smaller church halls, one which is joined to the center and is being used as a separate hall. These existing structures were built in the 1970s and 1980s and representative of two distinct church generations. As the community center holds a distinct corner on this piece of property, it begins to envelop the existing church. As the new building has wrapped itself around those existing to create



a pleasing aesthetic, so new church methods and ideas have wrapped around those existing. The result is a project that captivates the attention and heart of the community. The contrast of concrete and glass material for this project creates interesting opportunities for light to enter the space; one of the best perhaps is within the community hall. The auditorium allows natural daylighting from the west, while the other sides are backed up against circulation on all sides. The auditorium may also be divided into several breakout spaces, when not being used as an assembly space for worship or public activities. Two stories of glazing, which makes up the lobby and cafe, are protected by sun control louvres which run the length of the site.

In conclusion, this case study justifies the purpose of the theoretical premise. It reminds us that architecture can serve as a medium through which a person's well-being is serviced. This center not only becomes an asset to the community of Syndal, but it will continue to serve as an asset to Church com

munity. The quality of light has an impact on the way people physically perceive the spaces within, and the people who minister there will have an impact on the way people spiritually perceive the world around them.

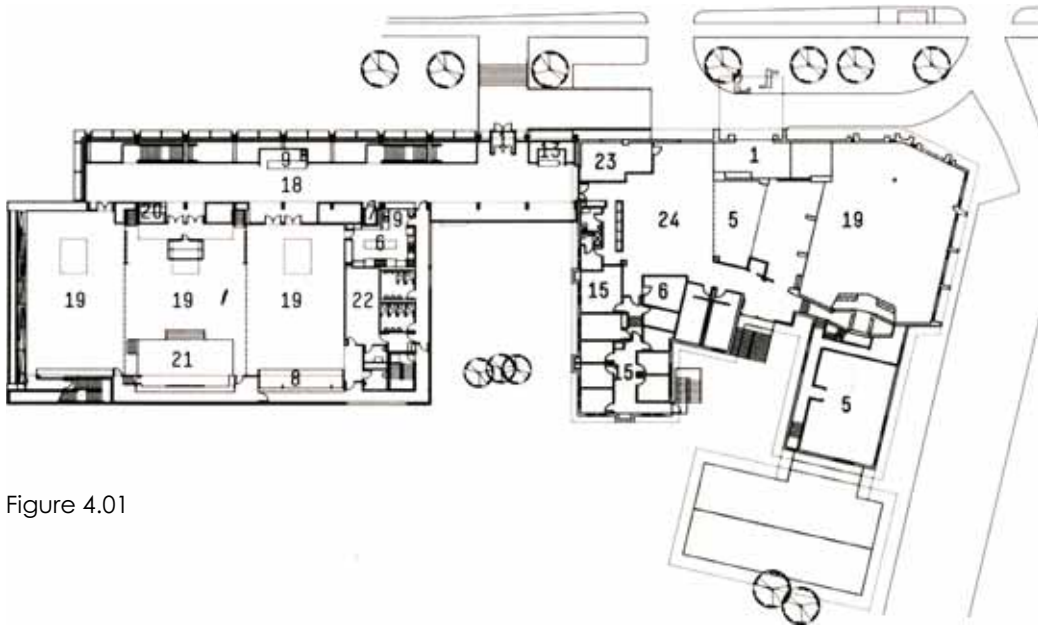


Figure 4.01

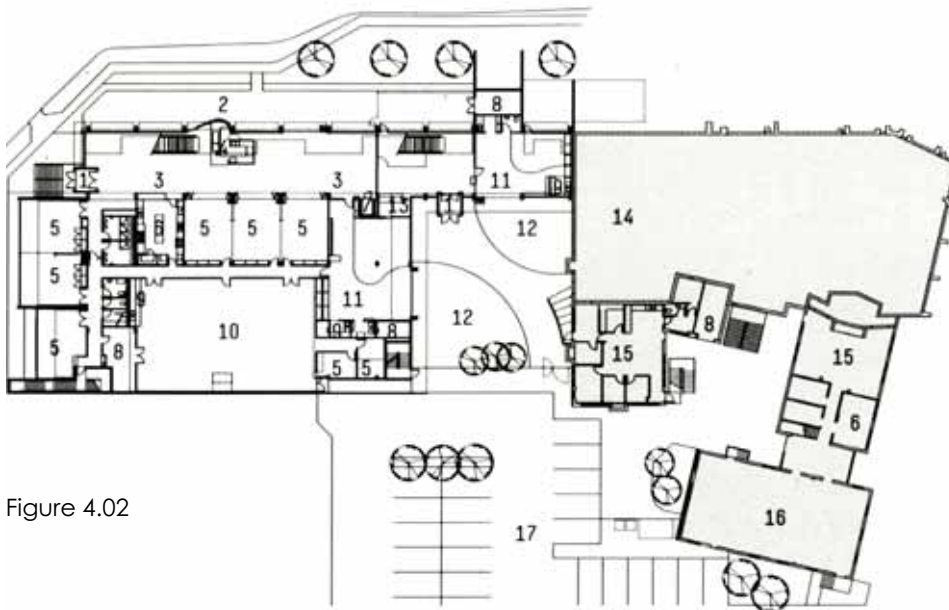


Figure 4.02

FLOOR PLAN

01. Entry
02. North Terrace
03. Cafe
04. Coffee Shop
05. Meeting
06. Kitchen
07. Elevator
08. Store
09. Tea Station
10. Activity Center
11. Toddler and Babies' Play
12. Playground
13. Information desk
14. Subfloor
15. Office
16. Counseling Center
17. Carpark
18. Community Lobby
19. Auditorium
20. Audiovisual
21. Dais
22. Parents' and Children's Room
23. Library
24. Community Hall



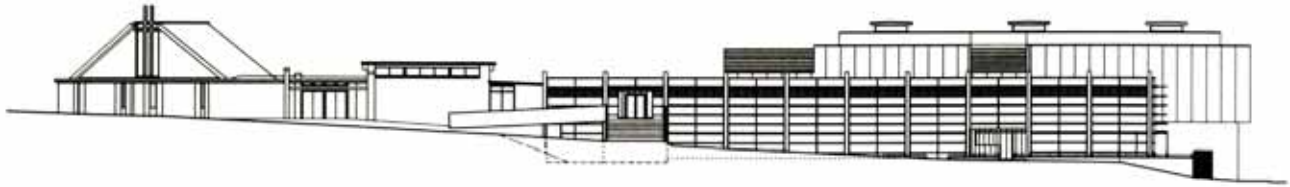


Figure 4.03

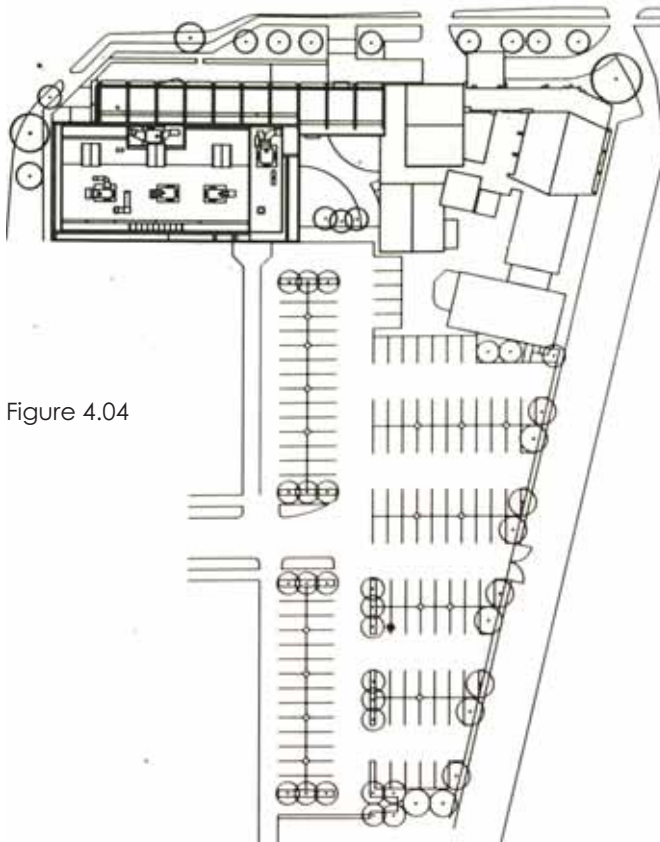


Figure 4.04



Figure 4.5



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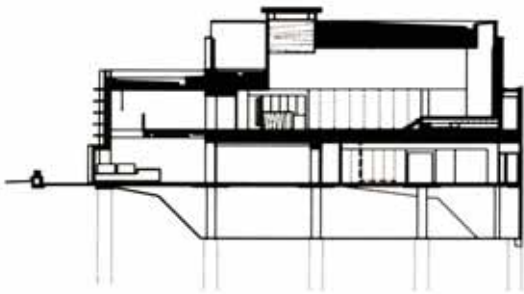


Figure 4.06

Figure 4.01 - First Floor Plan

Figure 4.02 - Ground Floor Plan

Figure 4.03 - Elevation from Street

Figure 4.04 - Site Plan

Figure 4.05 - Elevation from Street

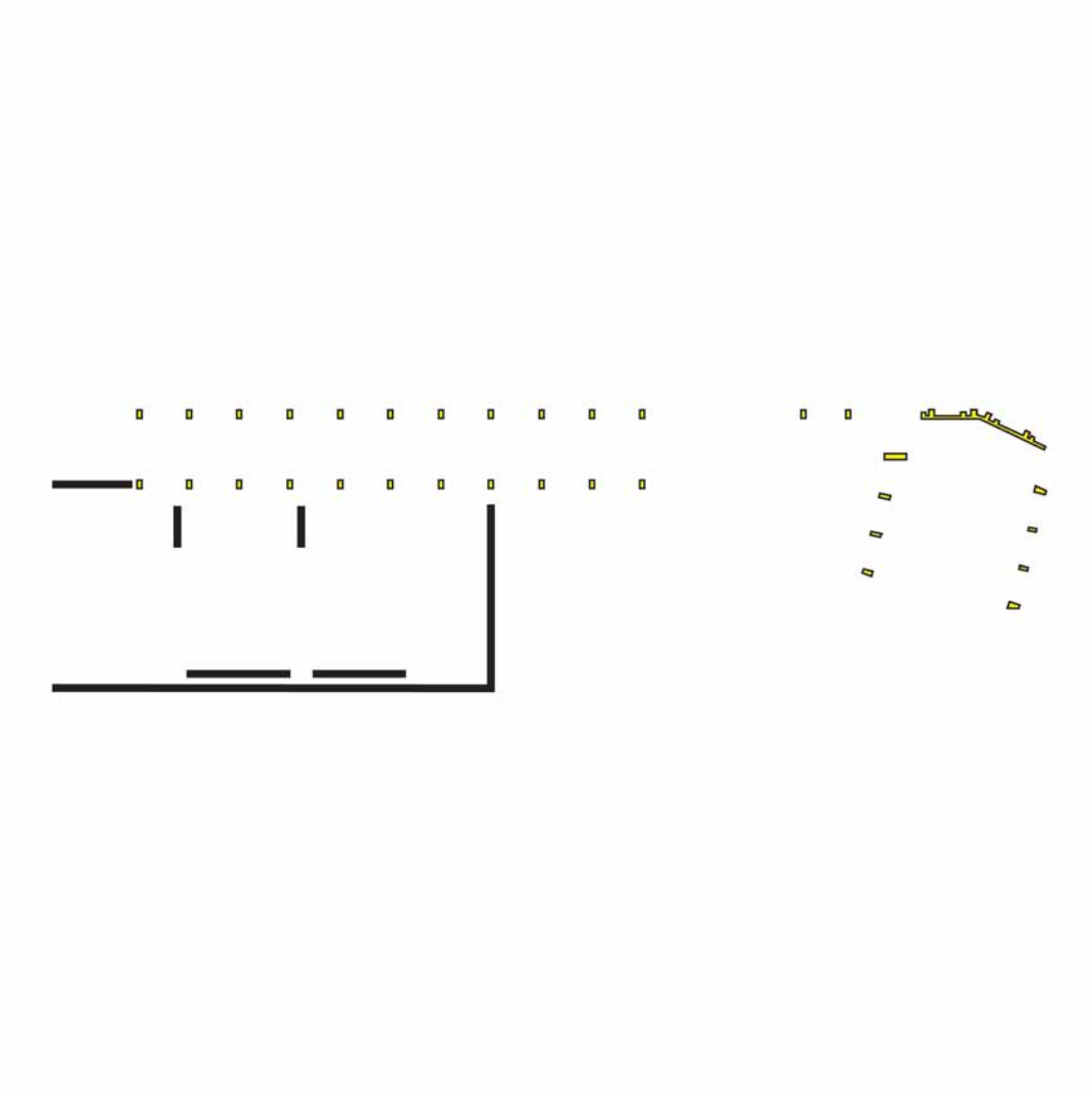
Figure 4.06 - Site Plan



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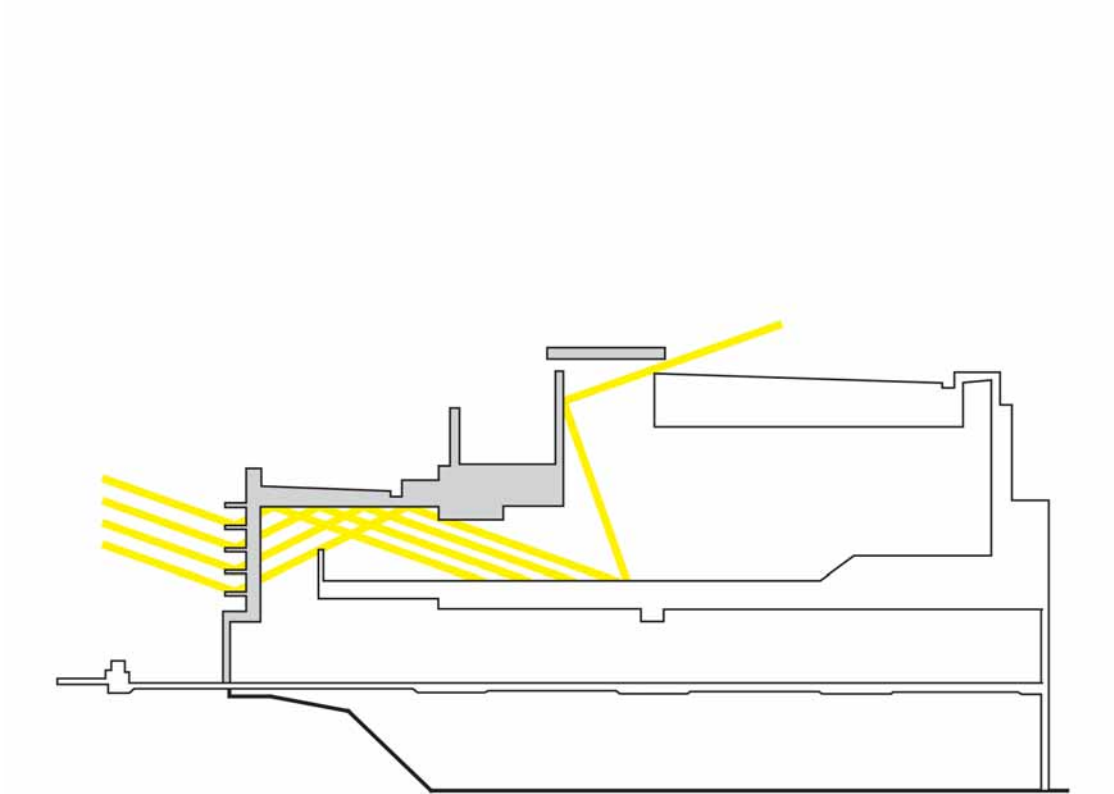
GRAPHIC ANALYSIS

THE LIFE CENTRE: Structure



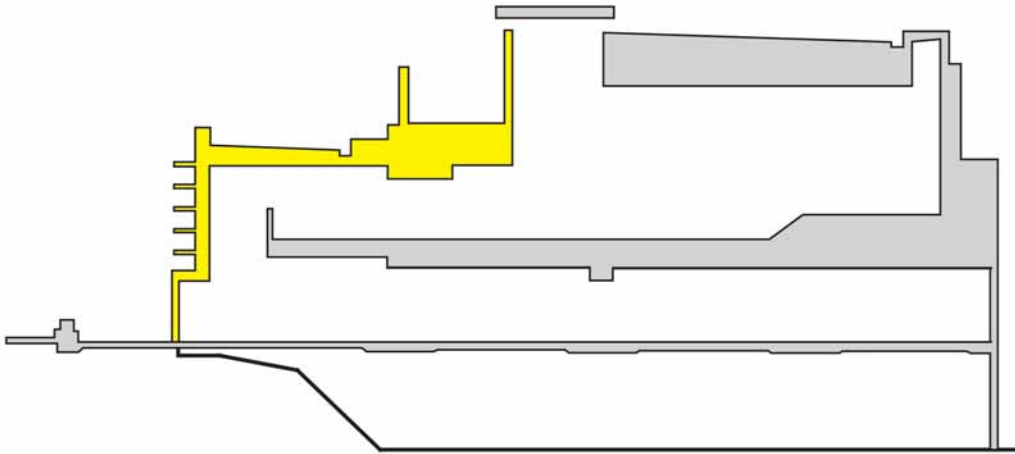
GRAPHIC ANALYSIS

THE LIFE CENTRE: Natural Light



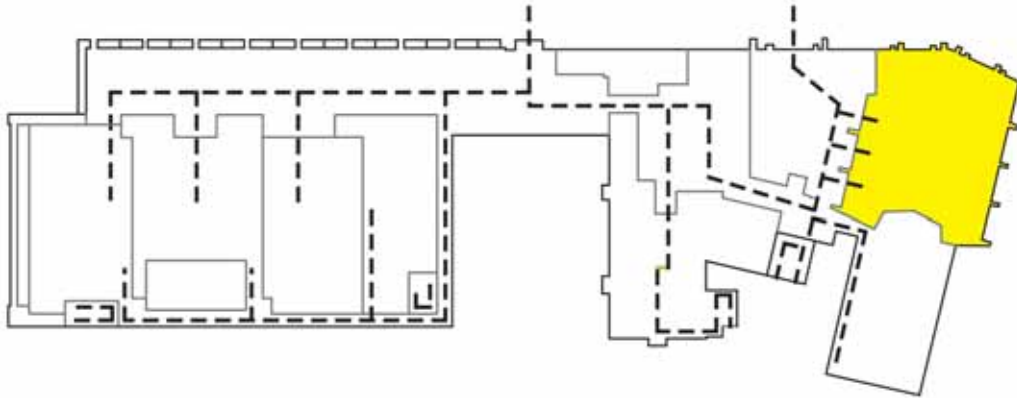
GRAPHIC ANALYSIS

THE LIFE CENTRE: Massing



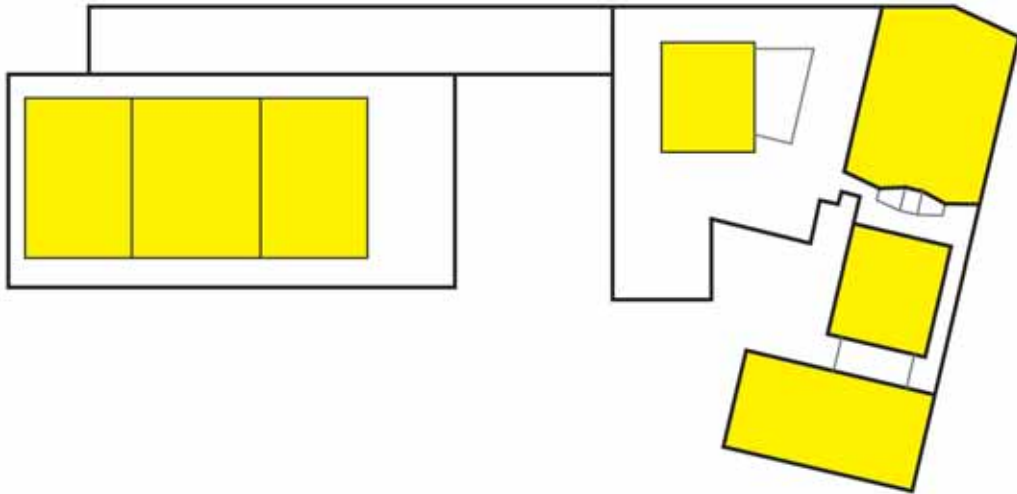
GRAPHIC ANALYSIS

THE LIFE CENTRE: Circulation to Space



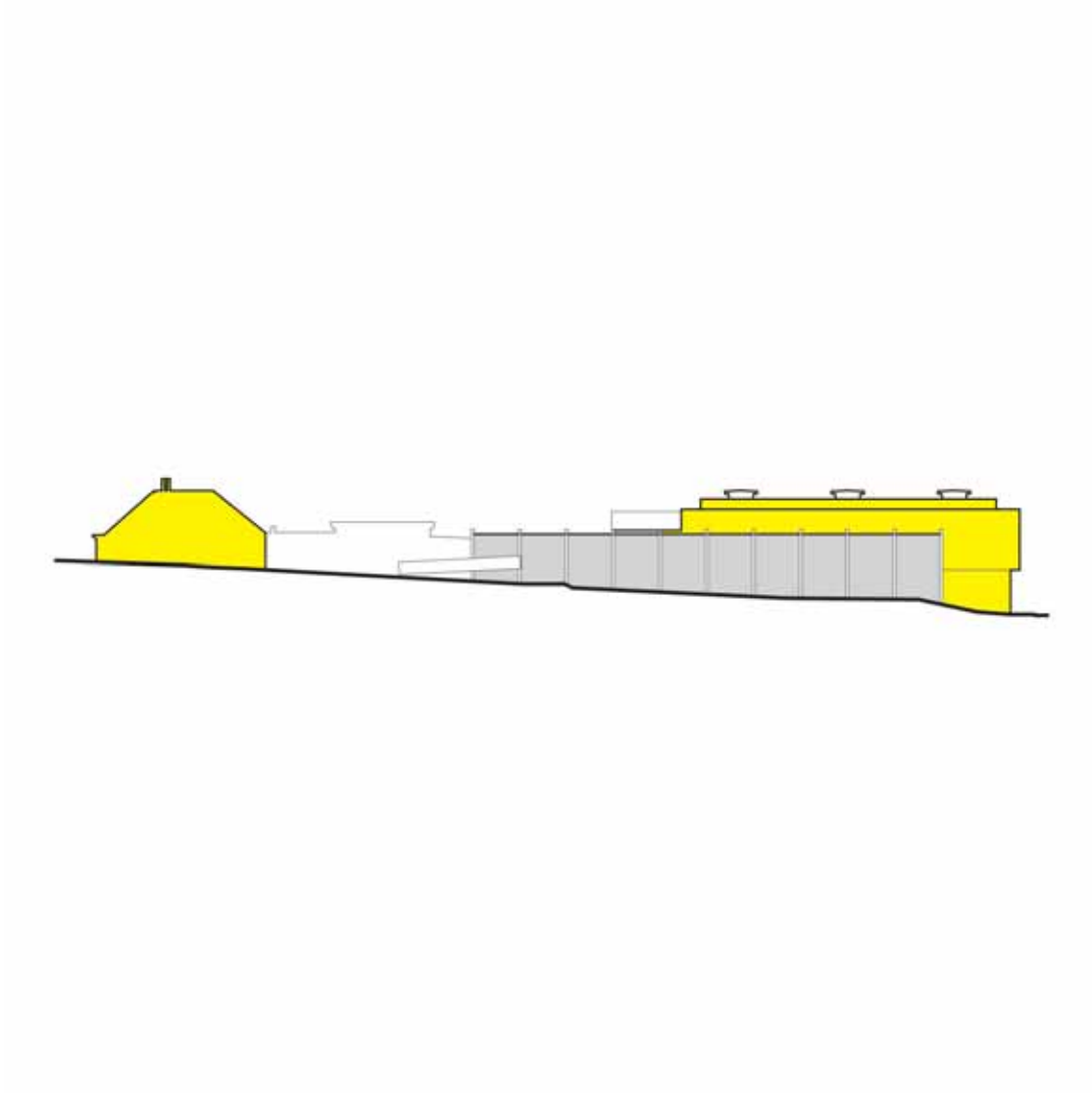
GRAPHIC ANALYSIS

THE LIFE CENTRE: Geometry



GRAPHIC ANALYSIS

THE LIFE CENTRE: Hierarchy





SURRY HILLS LIBRARY AND COMMUNITY CENTER. CASE STUDY TWO

Location: Sydney, Australia

Architect: Francis-Jones Morehen Thorp

Typology: Community Center & Library

Size: 22,800 Square Feet

Client: City of Sydney

Program: Library, Meeting Room, Cafe, Administration, Study Room, Computer Laboratory, Kitchen, Storeroom, Neighborhood Center, Language Laboratory, Children's Play Space

Cost: \$13,500,000



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IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by John Gollings and Andrew Chung

www.archdaily.com

www.fjmt.com.au

www.gollings.com.au

www.iamandrewchan.com



This case certainly stands out among the selected case studies as a model for innovative sustainable design strategies. Working to minimize the carbon footprint was an important design decision, which has a large impact on the materials that were included throughout the project. While this building has made efforts to integrate itself into an urban environment, the city council has termed projects of similar urban scales as *urban villages*. This criticism may be unjustified as a city the size of Sydney can certainly accommodate a building of this scale.

The glass facade is supported by triangulated chimneys, which draw air from the top of the building and through a series of biofiltering and passive conditioning mechanisms. The glass skin will allow for spatial transparency to the site it surrounds. The air runs through a thermal labyrinth near the base of the building where the air is cooled and released inside the facility. The building is also equipped with automatic sunshading devices and passive tech-

nology. The roof is shaded by photovoltaic panels in order to reduce grid necessary grid power. Low-VOC materials, impressive passive and hybrid systems, and geothermal energy will increase energy conservation while creating an awareness of environmental initiatives used in this public facility.

While this building is by far more expensive when compared to the other case studies, it does offer environmental benefits. The lower level supports library functions and a computer laboratory, while the middle level provides spaces for community activities, such as a teaching kitchen and a language laboratory. Each community has different needs, and, depending on the client and functions required in a particular program, the results can differ dramatically. The focus for this community center was not centered around fellowship, and the results show it. But from an architectural standpoint, this project was a success. The design may limit social interaction, due to the fact that users are split into so many different levels. Because of the size



restriction of the site, the program was unable to accommodate such a space. But perhaps, a finely articulated floor plan, though much tighter than the other case studies, could generate opportunities for community members to have closer encounters with one another and chances for better interaction. The proportion and combination of materials used for this project creates a pleasant warm aesthetic. The wood finishes compliment the variety of neutral tones and metal finishes. The project cost was around \$240/square foot. The budget covered primarily sustainability issues, but was criticized for its use of lavish finishes. The critical assesment of the budget raises an interesting issue. Should architecture, especially that which is being used for ministry, be simple or ornate, expensive or cheap, traditional or modern? Should it be a combination of one or all of the above?

In conclusion, there are some great spaces within this community center. The sustainable strategies that were implemented within this project suggest

that the conditions of the inside and outside environment were very important to the client. We see an increase of indoor air quality by 5% and a substantial reduction in the facility's carbon footprint. The building's proportional design elements and its relationship to its urban context are other key factors that made its success.

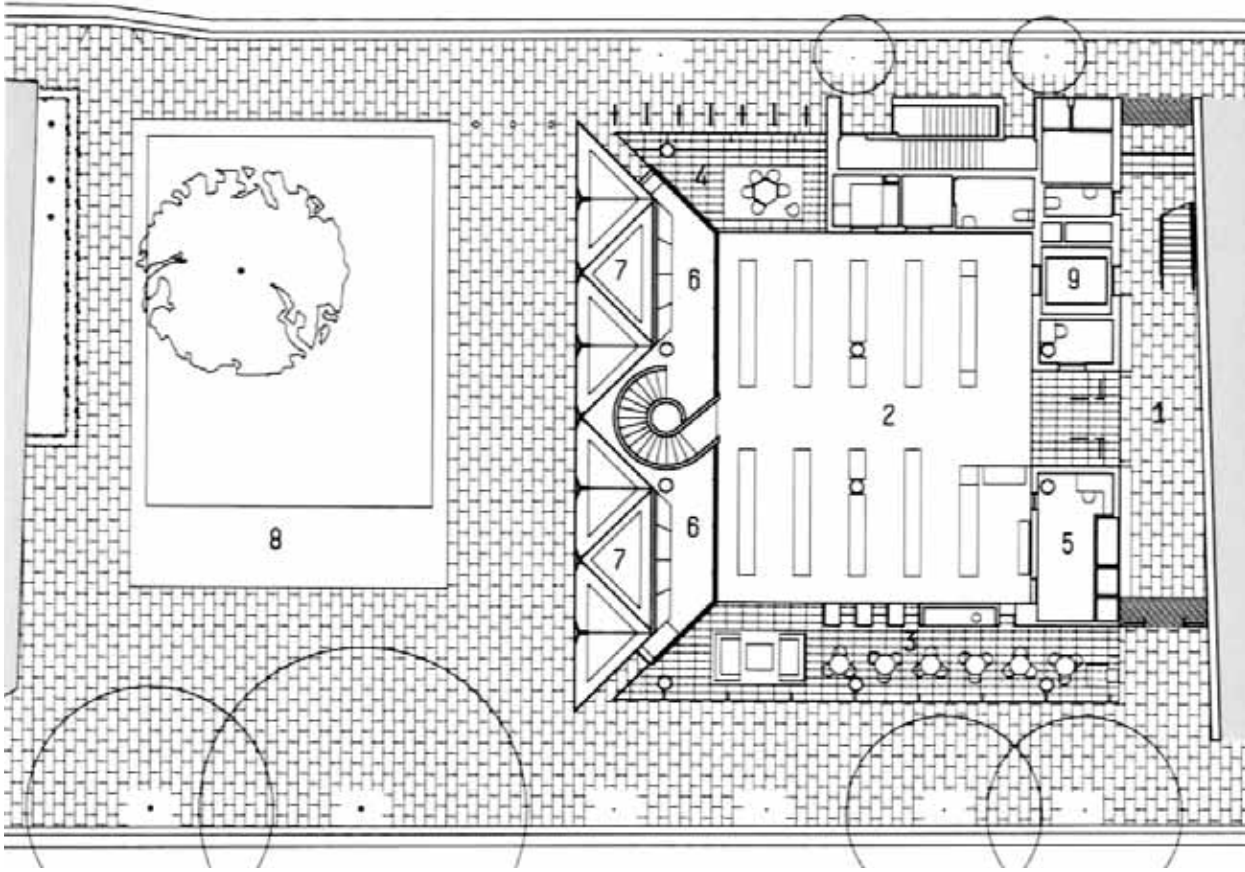


Figure 4.07



Figure 4.08

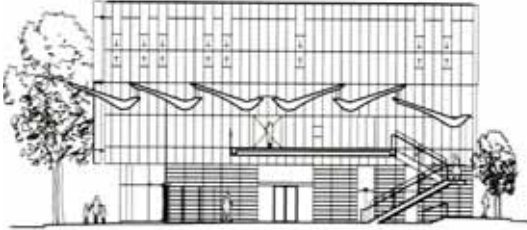


Figure 4.09

FLOOR PLAN

01. Lobby
02. Library Collection
03. Reading Room and Cafe
04. Children's space
05. Administration
06. Void
07. Environmental Atrium
08. Water Storage Tank
09. Elevator
10. Local History Study Room
11. IT and Internet Access
12. Meeting Room
13. Magazine and Newspaper Reading
14. Water Recycling Plant
15. Geothermal Bore Plant
16. Teaching Kitchen
17. Function room
18. Storeroom
19. Balcony
20. Neighborhood Center
21. Language Laboratory
22. Children's Play Space
23. Outdoor Play Space
24. Sleeping Room



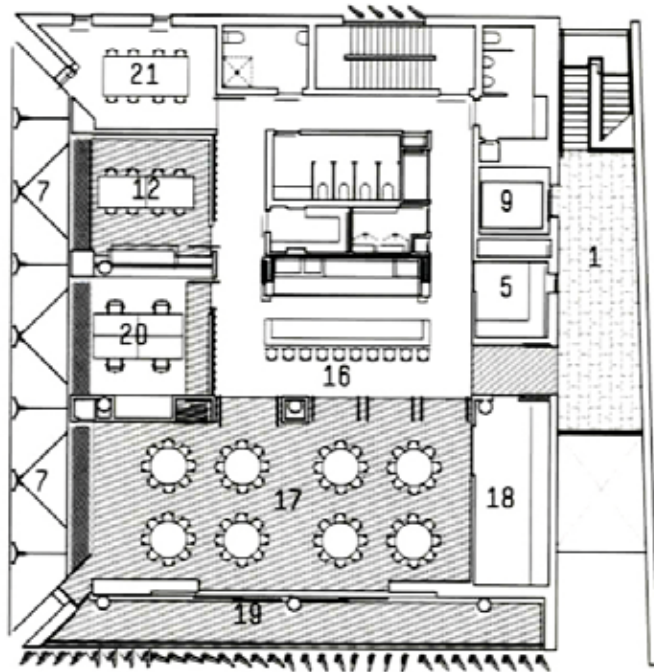


Figure 4.10

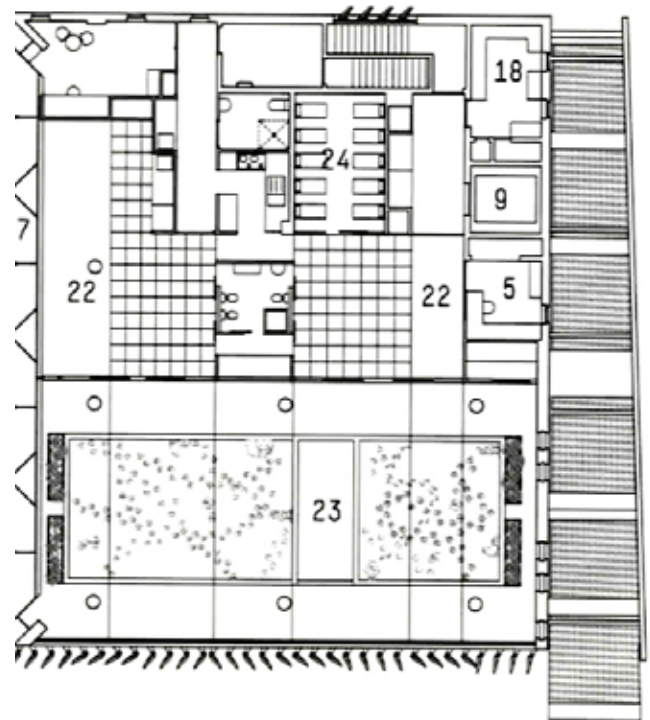


Figure 4.11

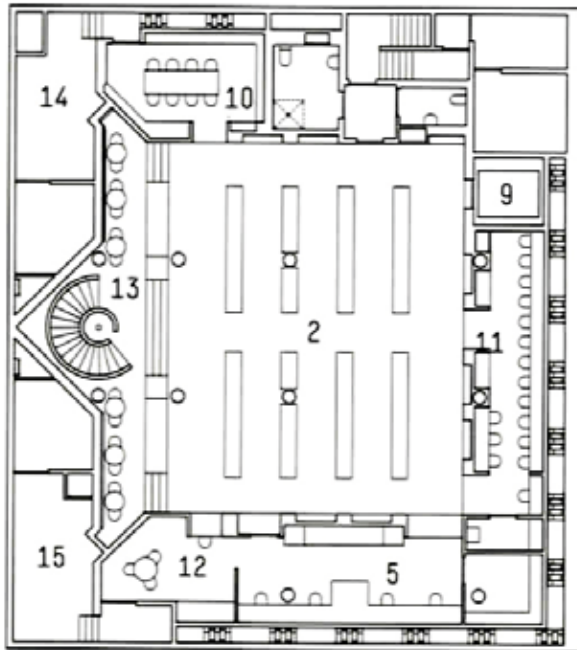


Figure 4.12

Figure 4.08 - First Floor Plan

Figure 4.09 - Ground Floor Plan

Figure 4.10 - Elevation from Street

Figure 4.11 - Site Plan

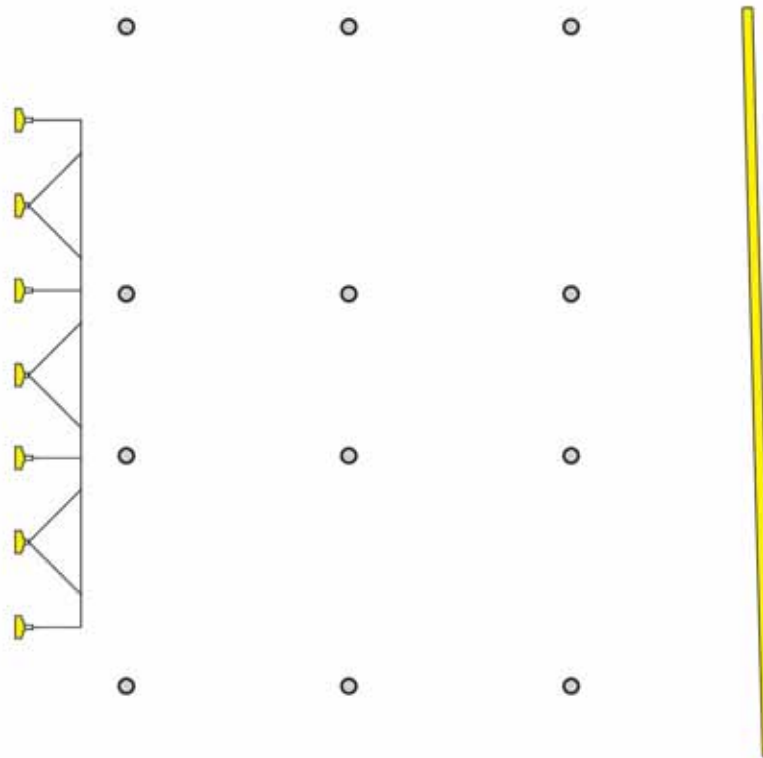
Figure 4.12 - Elevation from Street

Figure 4.13 - Site Plan



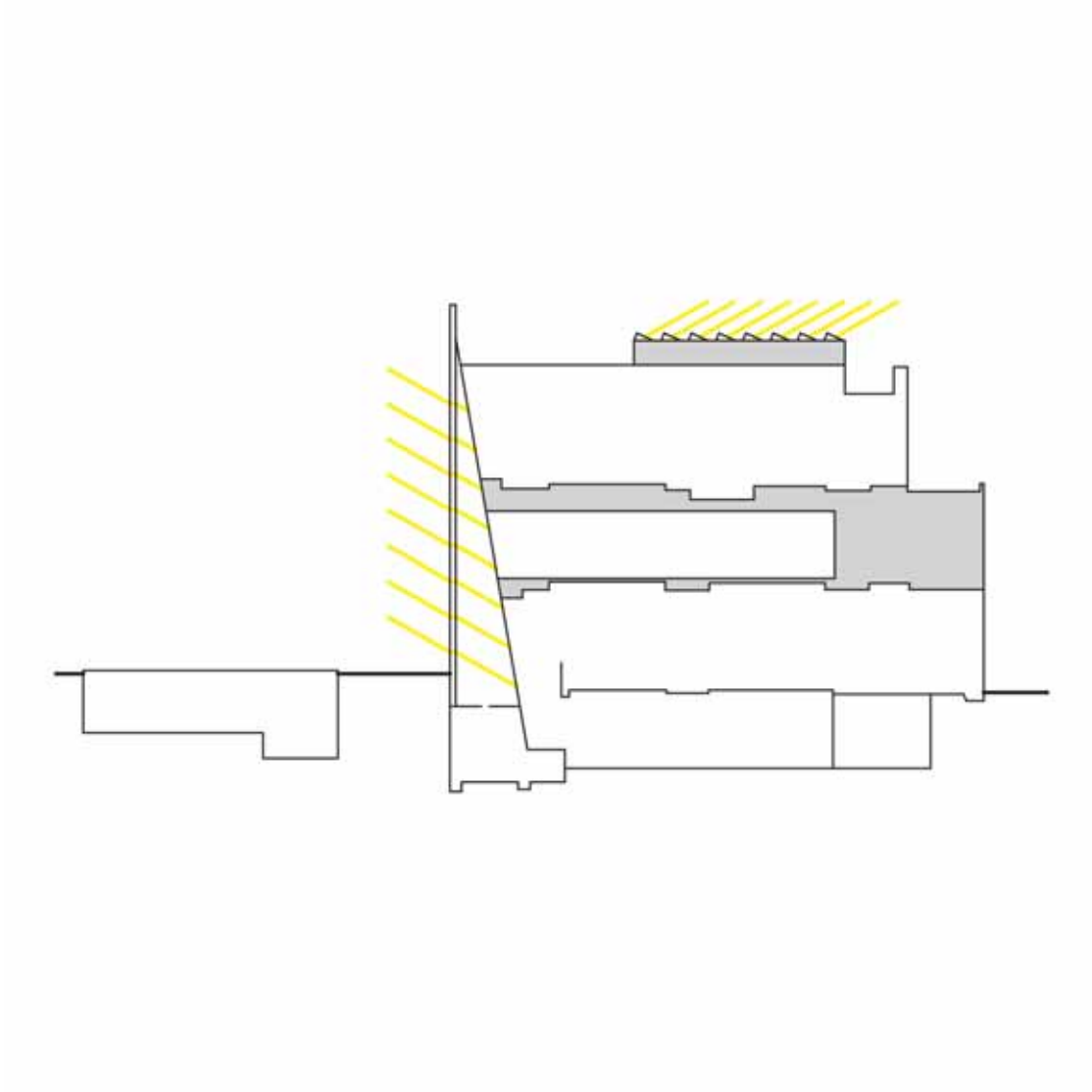
GRAPHIC ANALYSIS

SURRY HILLS LIBRARY AND COMMUNITY CENTER: Structure



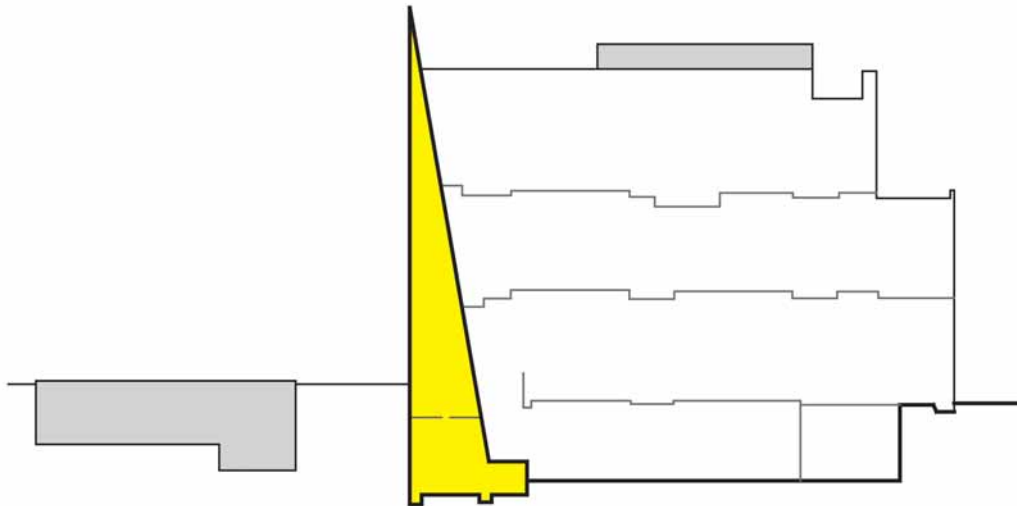
GRAPHIC ANALYSIS

SURRY HILLS LIBRARY AND COMMUNITY CENTER: Natural Light



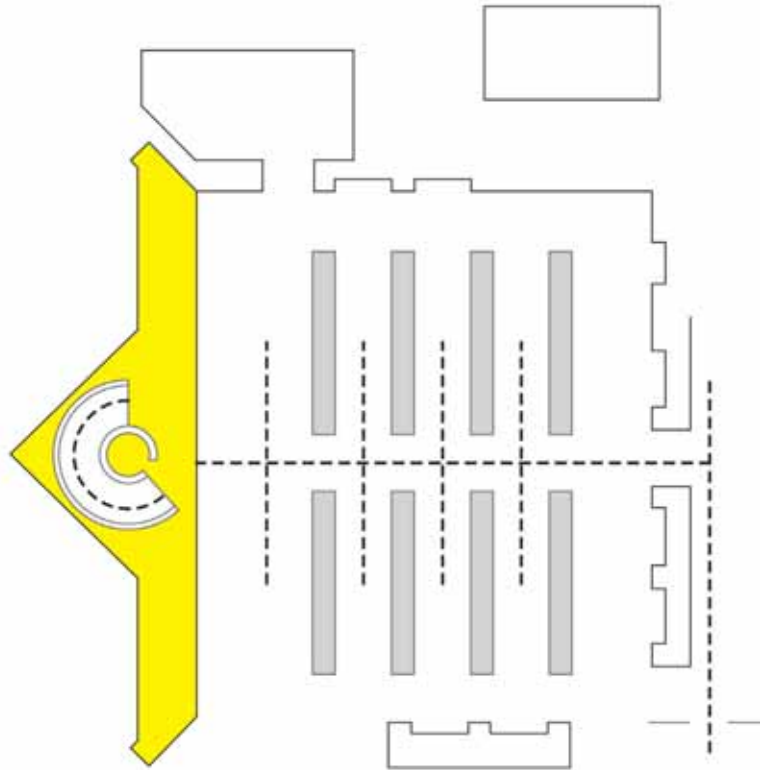
GRAPHIC ANALYSIS

SURRY HILLS LIBRARY AND COMMUNITY CENTER: Massing



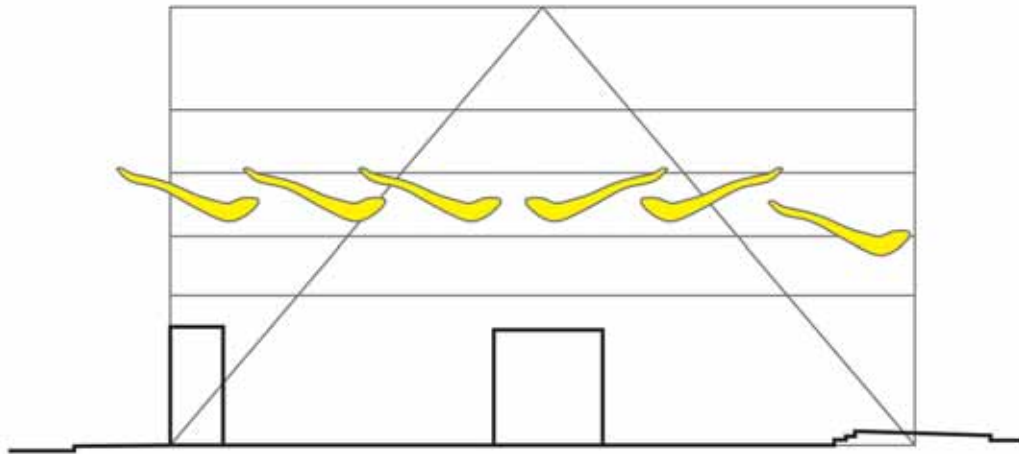
GRAPHIC ANALYSIS

SURRY HILLS LIBRARY AND COMMUNITY CENTER: Circulation to Space



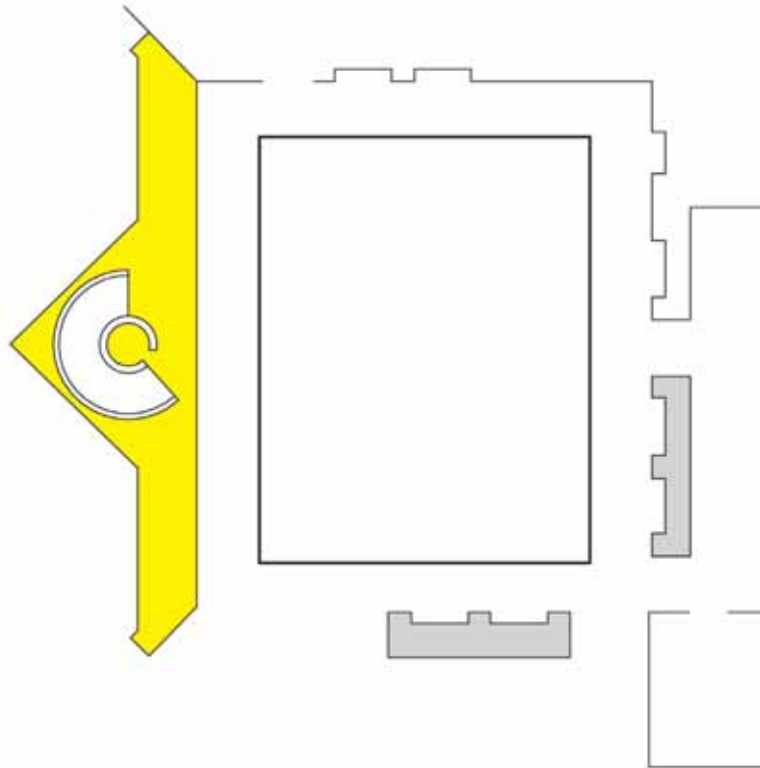
GRAPHIC ANALYSIS

SURRY HILLS LIBRARY AND COMMUNITY CENTER: Geometry



GRAPHIC ANALYSIS

SURRY HILLS LIBRARY AND COMMUNITY CENTER: Hierarchy





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GLENEAGLES COMMUNITY CENTER. CASE STUDY THREE

Location: West Vancouver, Canada

Architect: Patkau Architects

Typology: Community Center & Recreation

Size: 24,000 Square Feet

Client: District of West Vancouver

Program: Workshop, Art Studio, Courtyard, Kitchen, Youth Lounge, Gymnasium, Multipurpose, Fireplace Lounge, Meeting Room, Cafe, Administration, Child Care, Fitness, Training Studio, Counseling, Children's Playground

Cost: \$4,500,000



IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by James Dow

www.archdaily.com

www.architecturenewsplus.com

www.patkau.ca

www.jim-dow-american-studies.org



The Gleneagles Community Center stands out among the three case studies for its subtle gesture and unique geometry. The curved roof creates an interesting structural system, while defining the spaces within it. The community center is divided into three levels. The intermediate level opens onto the street with spaces for administration, childcare, community *living room*, and cafe. The lower level is accessible to an outdoor covered courtyard and has a gymnasium, multi-purpose, and arts room.

Unlike some of the other case studies, Gleneagles allows for an exceptional ceiling height in the gymnasium, which exposes the heavy timber structural ceiling for the roof and cast-in-place concrete structural system for the remainder of the building. The contrast between these different materials is stunning and creates a pleasant atmosphere with an abundance of glazing and natural light. The circulation corridor that runs along the gymnasium is also glazed, allowing light to reflect and refract from one side of the building to the other. The struc-



tural walls are integrated into the interior climate control system, providing constant temperatures for occupied spaces, while emitting or absorbing energy through concrete surfaces. Other sustainable strategies that were applied to the building design include roof overhangs, radiant heating, ground source heat exchanger, and operable windows. The integration between the mechanical and architectural systems were an important step in the design process to minimize required equipment and space allocation for mechanical. More often than not, we find that sustainable systems often require larger spaces than systems which are less eco-friendly. The new technology implemented in this project is low maintenance and provides user controlled strategies.

The successful sectional design for this building allowed Patkau Architects to incorporate the natural site grading for both landscape and building. This case study strongly relates to the the selected site and has become a model for solving issues with



ration to develop an environment based around family and activity.

dramatic changes in elevation. This multi-level facility allows for users to smoothly transition from street level to the golf course, which connects to the lower level. Another strength in this case study would include its ability to visualize the landscape through framed views and different entry levels. This case study responds to the culture of West Vancouver by providing an environmentally friendly design solution through a socially responsive approach. The city of West Vancouver has developed an Official Community Plan for sustainability efforts which encourage citizens to develop efficient developments. It also engages the public through education and environmental policies already in effect. In conclusion, this project's interesting material selection and use of new sustainable technology set it apart from other community centers in North America. Gleneagles was the first project in North America to use the Swiss Batiso System, decreasing maintenance and environmental impact. The community *living room*, which overlooks the gym`

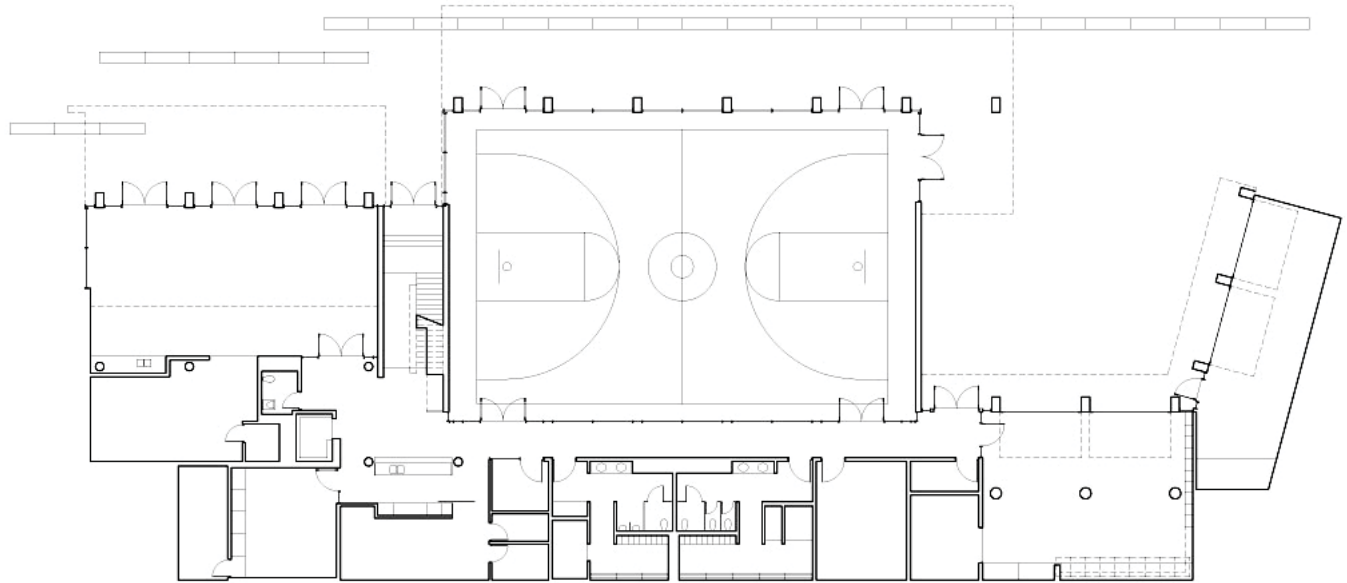


Figure 4.14

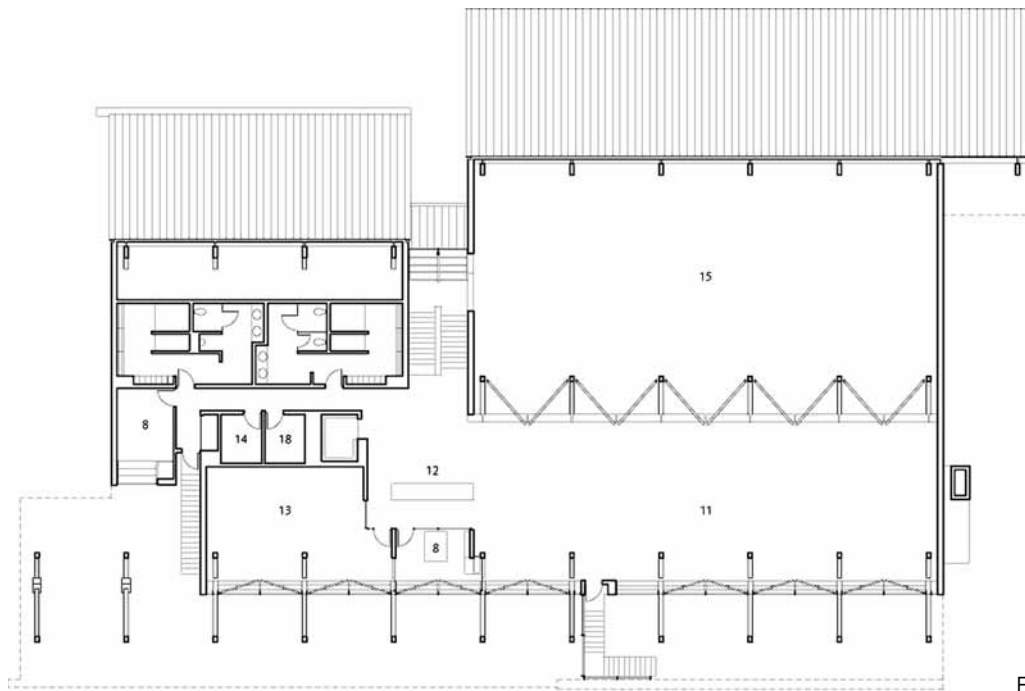


Figure 4.15

FLOOR PLAN

01. Workshop
02. Art Studio
03. Maintenance
04. Mechanical
05. Electrical
06. Office
07. Workshop Courtyard
08. Kitchen
09. Youth Lounge
10. Gymnasium
11. Storage
12. Multipurpose
13. Entry Patio
14. Fireplace Lounge
15. Meeting Room
16. Cafe
17. Reception
18. Administration
19. Child Care
20. Fitness
21. Training Studio
22. Counseling
23. Open to Below
24. Children's Playground



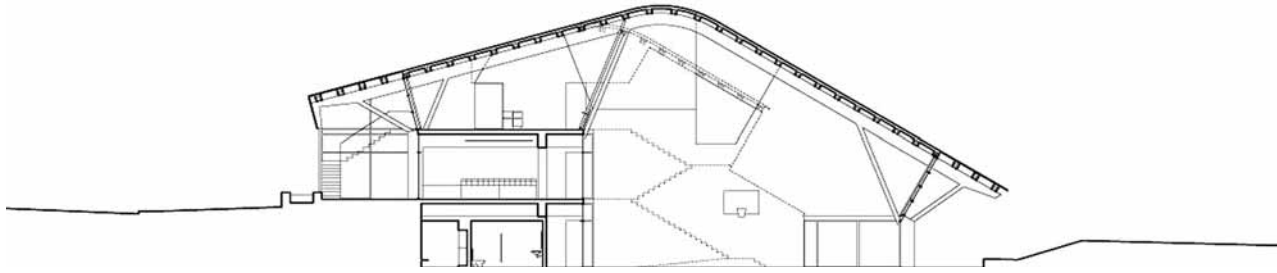


Figure 4.16

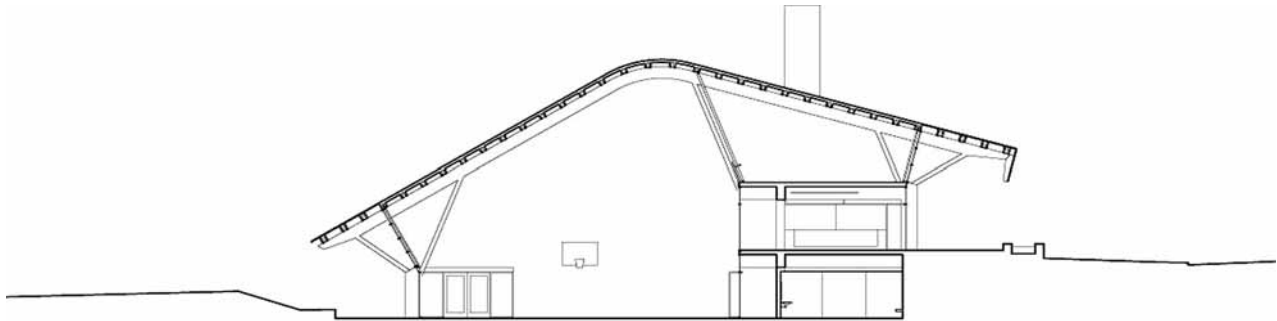


Figure 4.17

Figure 4.14 - First Floor Plan

Figure 4.15 - Ground Floor Plan

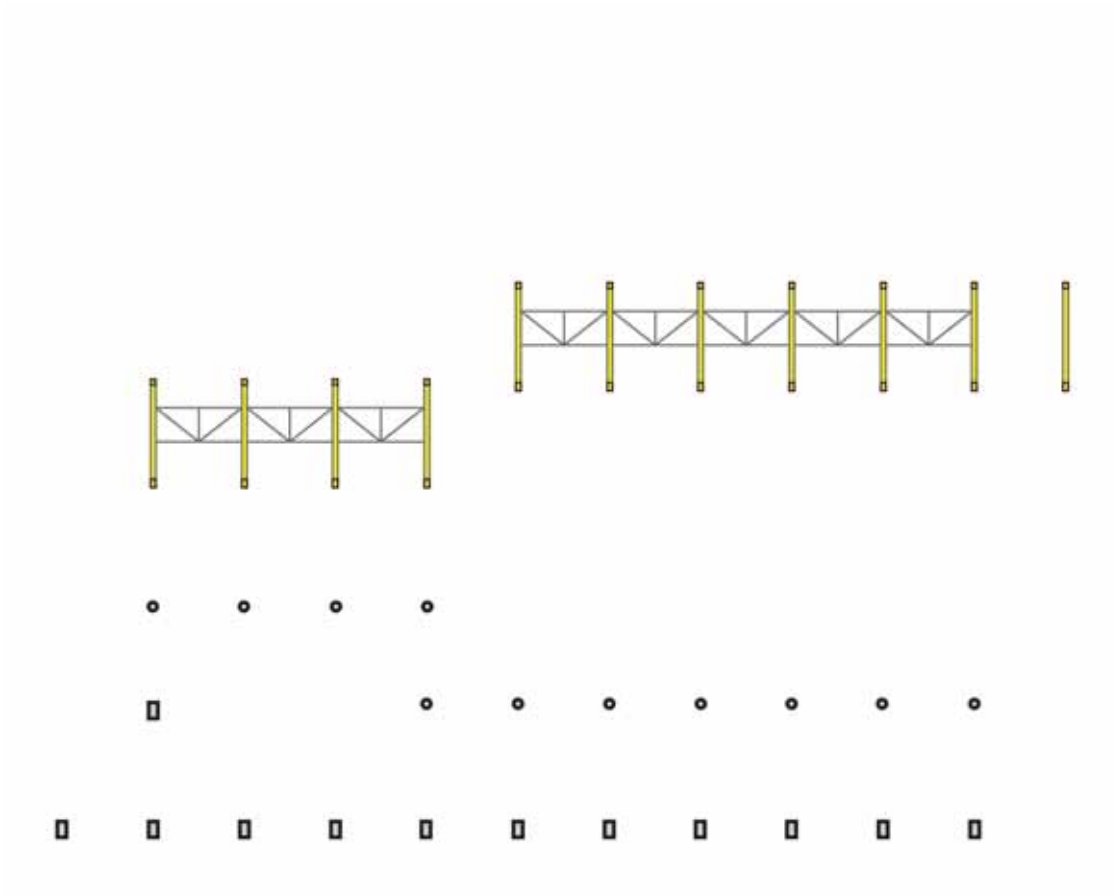
Figure 4.16 - Elevation from Street

Figure 4.17 - Site Plan



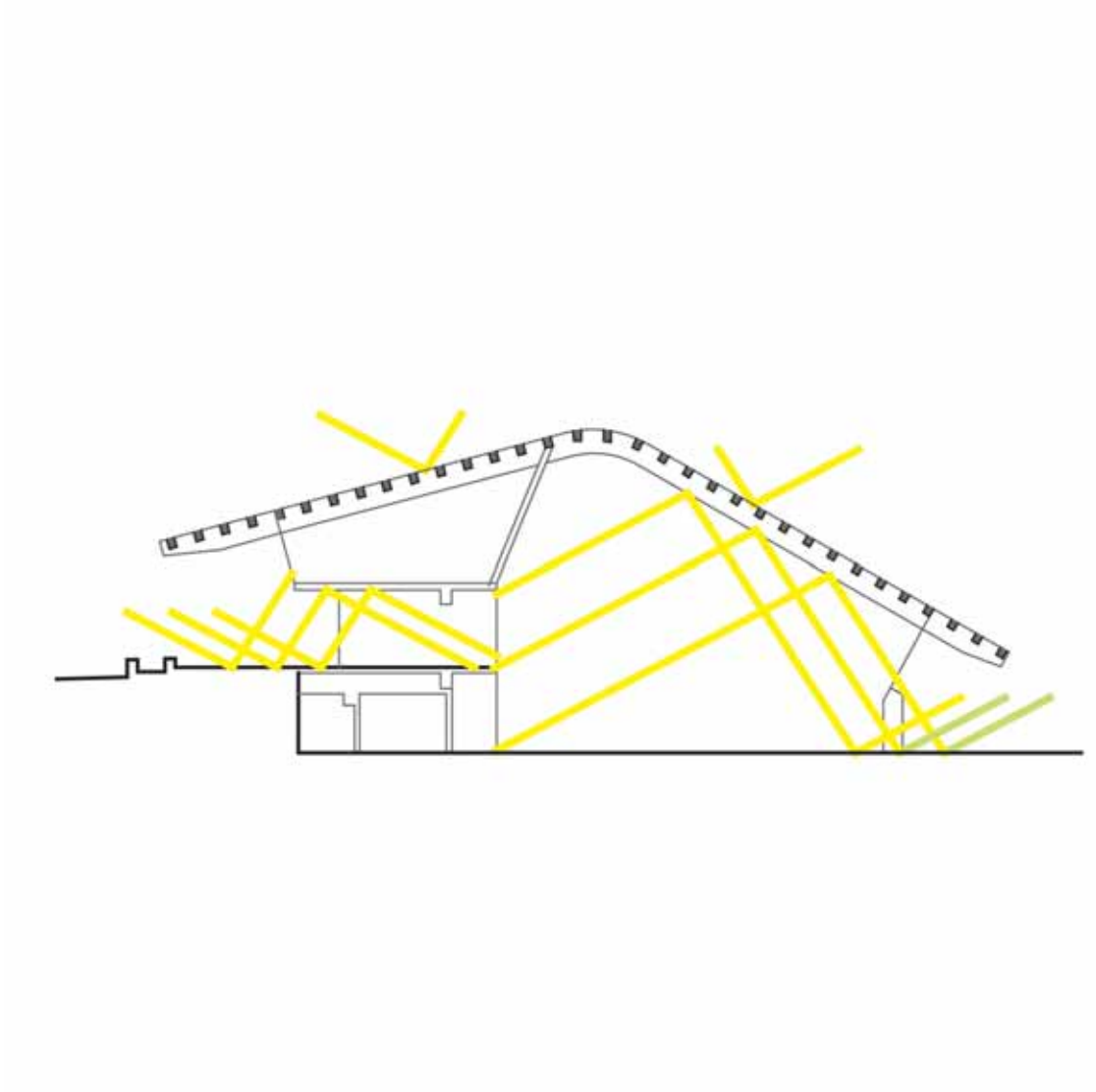
GRAPHIC ANALYSIS

GLENEAGLES COMMUNITY CENTER: Structure



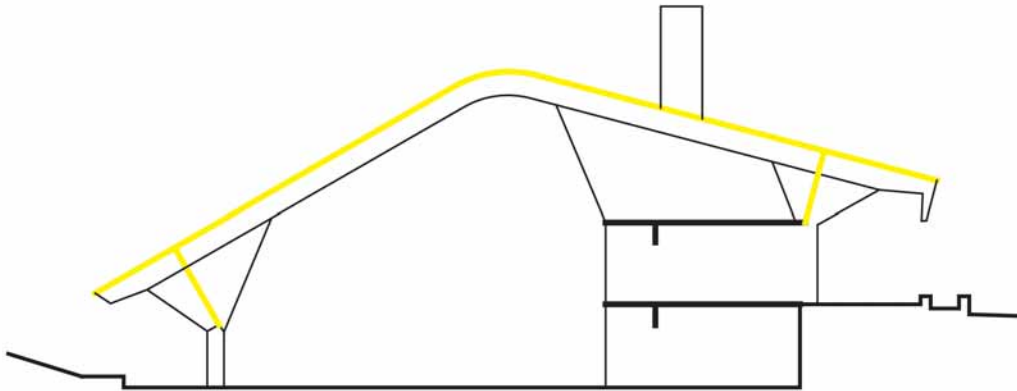
GRAPHIC ANALYSIS

GLENEAGLES COMMUNITY CENTER: Natural Light



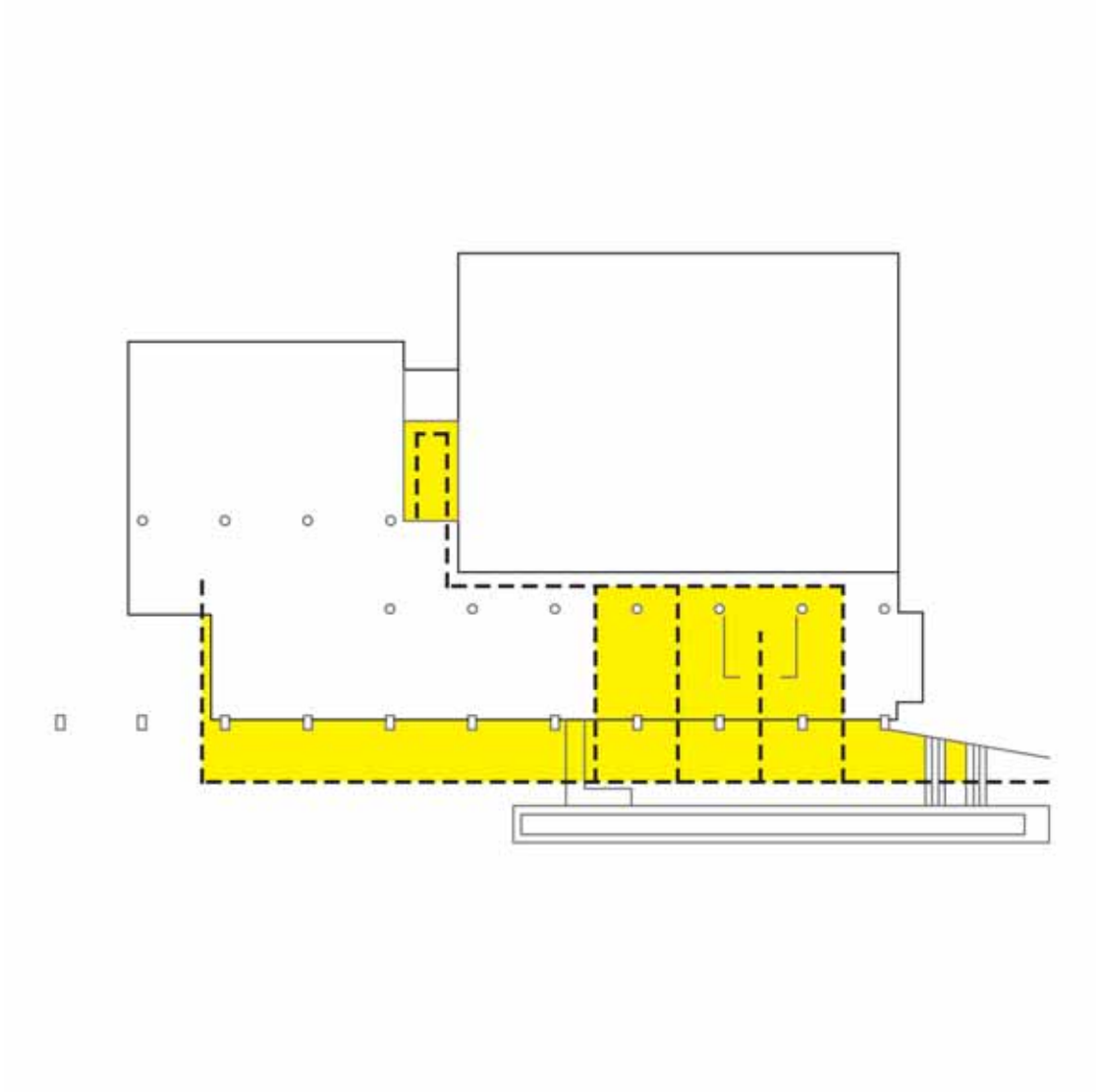
GRAPHIC ANALYSIS

GLENEAGLES COMMUNITY CENTER: Massing



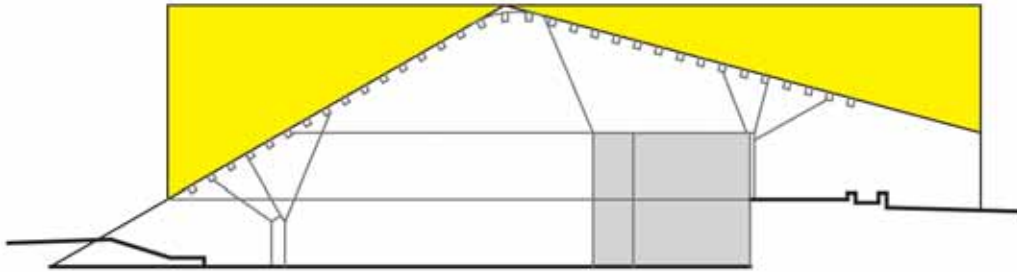
GRAPHIC ANALYSIS

GLENEAGLES COMMUNITY CENTER: Circulation to Space



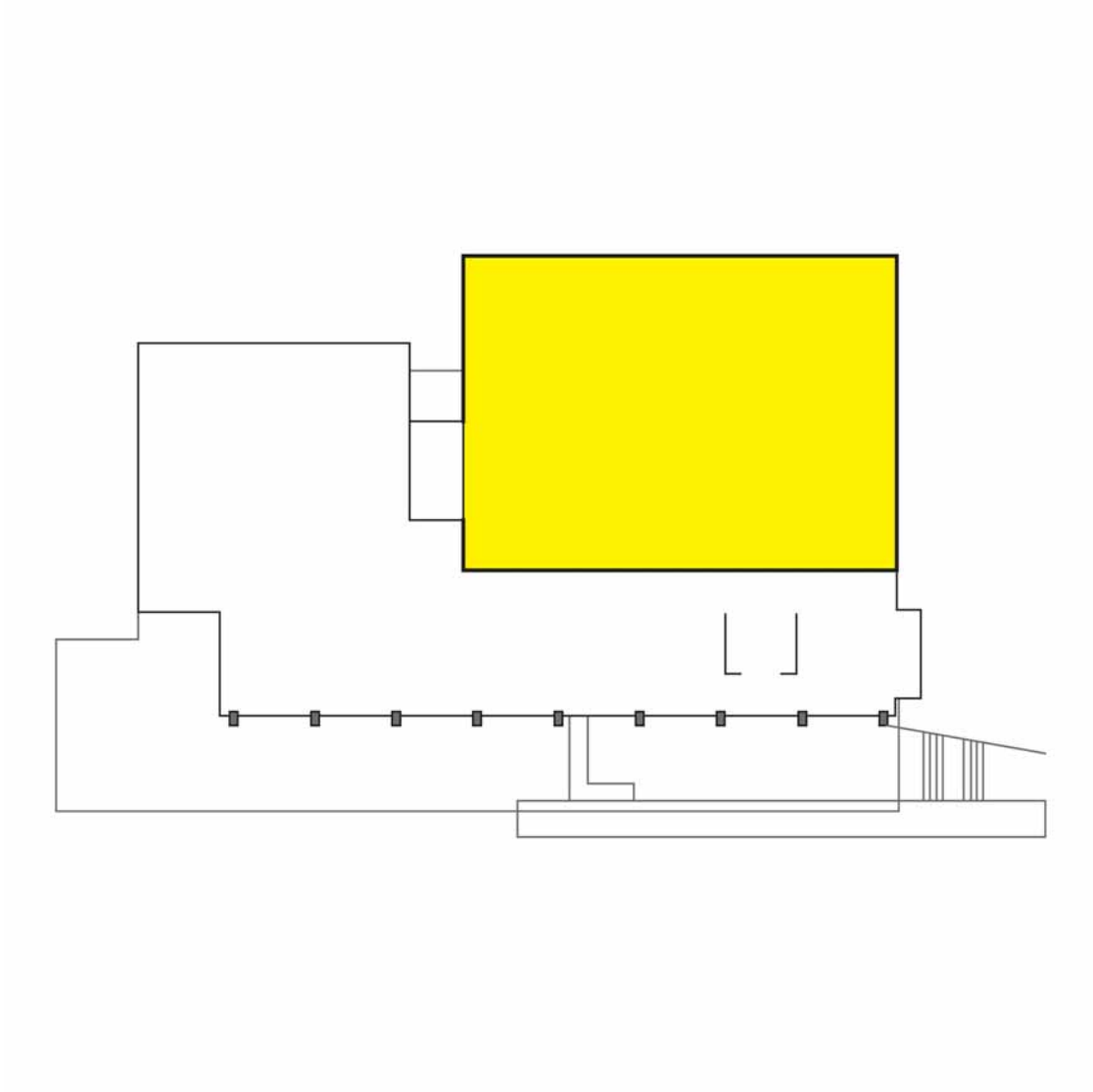
GRAPHIC ANALYSIS

GLENEAGLES COMMUNITY CENTER: Geometry



GRAPHIC ANALYSIS

GLENEAGLES COMMUNITY CENTER: Hierarchy



TYOLOGICAL SUMMARY

The Life Centre, Surry Hills Library and Community Center and Gleneagles Community Center take unique but also similar approaches for community center design. The case studies selected collectively display a number of qualities desirable for this typology and selected site, including: purpose driven design, sustainability, response to site, space configuration, material quality, level of detail, proportion, daylighting strategies, program, and response to community needs. The next level of design will take different aspects from these three case studies into one solution for a community center in Aurora. As these case studies were analyzed, their positive effect on the surrounding community was realized and supported of the theoretical premise. Architecture is able to nurture the community and can improve an individual's physical, emotional and spiritual well-being.

The Life Centre in Melbourne, Australia most closely relates to the mission of Aurora First Assembly and is an excellent model and twist on the notion of a Christian community. Its openness to the community will not limit the variety of community members who will come in direct contact with the Church body, in a subtle yet effective way. The auditorium and community hall, in particular, offer alternative methods for Christians to connect and establish relationships with other members in the community. Like other selected case studies, this project provides spaces for child care services and community education. Reflecting a similar approach in this thesis will be an important step to its success.





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The Surry Hills Library and Community Center located in Sydney, Australia, takes the gold star for its achievements in sustainable technology and reduced environmental impact. The small building imprint requires the facility to have more levels, which in turn decreases the amount of contact community members have with one another. This design solution was in response to certain site restrictions and could perhaps create opportunities for community members to have closer interactions at different levels within this building configuration.



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Finally, the Gleneagles Community Center in West Vancouver, Canada was a noteworthy case study, especially in the area of physical well-being. This facility is more than a gym and more than a community center, it is both. Another positive result and observation is the building's response to its site. The selected site for this thesis will need to overcome similar challenges and this case study will help understand possible solutions to those barriers. These barriers can also become opportunities, much like the solution at Gleneagles illustrates.



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WEST VANCOUVER COMMUNITY CENTRE. CASE STUDY FOUR

Location: West Vancouver, Canada

Architect: Hughes Condon Marler Architects

Typology: Community & Aquatic Centre

Size: 86,000 Square Feet

Client: District of West Vancouver

Program: Gymsiums, Fitness Rooms, Wellness Clinics, Aquatic Spaces



IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Hubert Kang and Nic Lehoux

www.archdaily.com

www.hcma.ca

www.hubertphoto.com

www.niclehoux.com







SEPHARDIC COMMUNITY CENTER. CASE STUDY FIVE

Location: Brooklyn, New York

Architect: : BSKS Architects

Typology: Community Center

Size: 100,000 Square Feet, 50,000 Square Foot Addition

Client: Sephardic Synagogue

Program: Gym, Pool, Spa, Student Preschool Center, Meetings Spaces, Performance Space, Administrative Offices, Celebratory Space, Heritage Hall Entry Lobby



IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Jonathan Wallen and Jeffrey Totaro

www.archdaily.com

www.bksk.com

www.jonathanwallen.com

www.jeffreytotaro.com



Figure 4.18

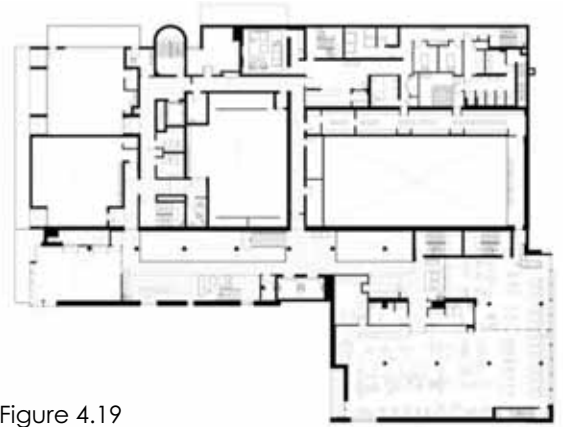


Figure 4.19



Figure 4.20



Figure 4.21



69



Figure 4.22



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Figure 4.18 - Cellar Floor Plan

Figure 4.19 - Second Floor Plan

Figure 4.20 - Ground Floor Plan

Figure 4.21 - Third Floor Plan

Figure 4.22 - Fourth Floor Plan



71



72

THE PRAYER PAVILION OF LIGHT. CASE STUDY SIX

Location: Phoenix, Arizona

Architect: Debartolo Architects LTD.

Typology: Prayer Chapel, Master Plan (Final Phase)

Size: 4,500 Square Feet

Client: Phoenix First Assembly

Program: Chapel, Plaza



IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Bill Timmerman

www.archdaily.com

www.debartoloarchitects.com

www.billtimmerman.com





74



75



76



77



78

TAMPA COVENANT CHURCH. CASE STUDY SEVEN

Location: Tampa, Florida

Architect: Alfonso Architects

Typology: Church

Size: 25,000 Square Feet

Client: City of Sydney

Program: Worship Sanctuary, Administrative Offices, Classrooms, Exterior Courtyard

Cost: \$2,600,000

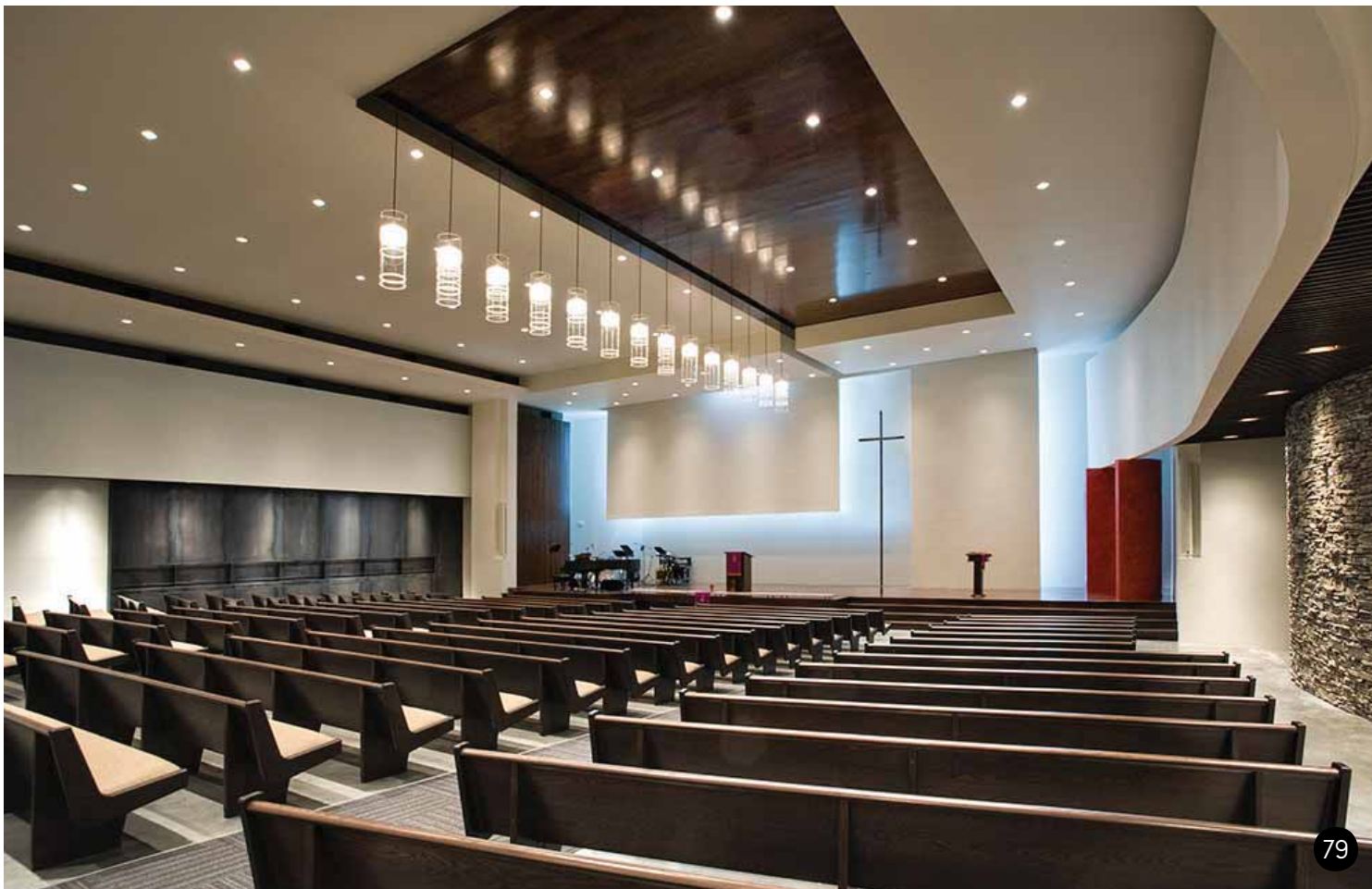


IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Al Hurley

www.archdaily.com

www.alfonsoarchitects.com

www.imagesbyalhurley.com





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84



85

MORTENSRUD CHURCH. CASE STUDY EIGHT

Location: Mortensrud, Oslo

Architect: Jensen & Skodvin Arkitektkontor

Typology: Church

Size: 23,600 Square Feet

Client: Kirkelig Fellesråd i Oslo, Terje Oterholt

Program: Sanctuary, Parish Hall, Gardens, Entrance Court, Kitchen, Fellowship Space

Cost: \$8,420,000



IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Jan Olav Jensen and Per Berntsen

www.archdaily.com

www.jsa.no

www.perberntsen.com



87



88





89



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91



DEAD SEA MASTER PLAN. CASE STUDY NINE

Location: Jordan

Architect: Sasaki Associates

Typology: Community Master Plan

Size: 9,900 acres

Client: Jordan Development Zones Company

Program: Mixed-use Boulevard, Ecological Preserve, Hotels, Commercial, Cultural and Public Spaces



IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Images by Sasaki Associates

www.archdaily.com

www.sasaki.com

www.dzc.jo







98

PIER ESCAPE. CASE STUDY TEN

Location: Chicago, Illinois

Architects: Aedas Architects, Davis Brody Bond, Martha Schwarz Partners

Typology: Competition, Master Plan

Size: 9,900 Acres

Client: Navy Pier Centennial Vision

Program: Gateway Plaza, Bus Plaza, Wetland Garden

Cost: \$85,000,000



99

IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Images by Aedas Architects

www.archdaily.com

www.aedas.com

www.davisbrody.com

www.marthaschwartz.com

www.navytelevision.com







104

WESTSIDE BRUENNEN. CASE STUDY ELEVEN

Location: Bern, Switzerland

Architect: Daniel Libeskind

Typology: Urban Scale Shopping Center

Size: 1,500,000 Square Feet

Client: Neue Brunnen AG

Program: 55 shops, 10 restaurants, Hotel, Multiplex Cinema, Wellness Center and Housing



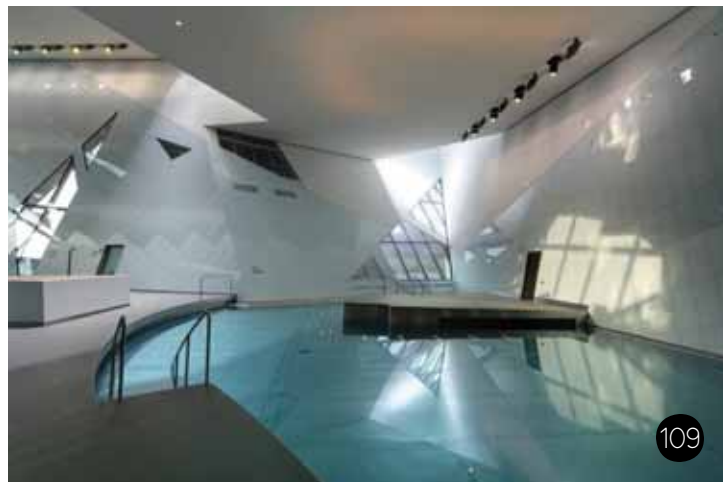
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IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Daniel Libeskind

www.archdaily.com
daniel-libeskind.com
www.perberntsen.com







112

EMPAC. CASE STUDY TWELVE

Location: Troy, New York

Architect: Grimshaw

Typology: Performing Arts Center

Size: 221,200 Square Feet

Client: Neue Brunnen AG

Program: Concert Hall, Theater, Black Box Studio, White Box Studio, Dance Studio, Atrium Space



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IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Paul Rivera

www.archdaily.com
grimshaw-architects.com
www.archphoto.com







NK'MIP DESERT CULTURAL CENTRE. CASE STUDY THIRTEEN

Location: Osoyoos, British Columbia

Architect: Hotson Bakker Boniface Haden architects

Typology: Cultural Center

Size: 1,600 Acres

Client: Osoyoos Indian Band

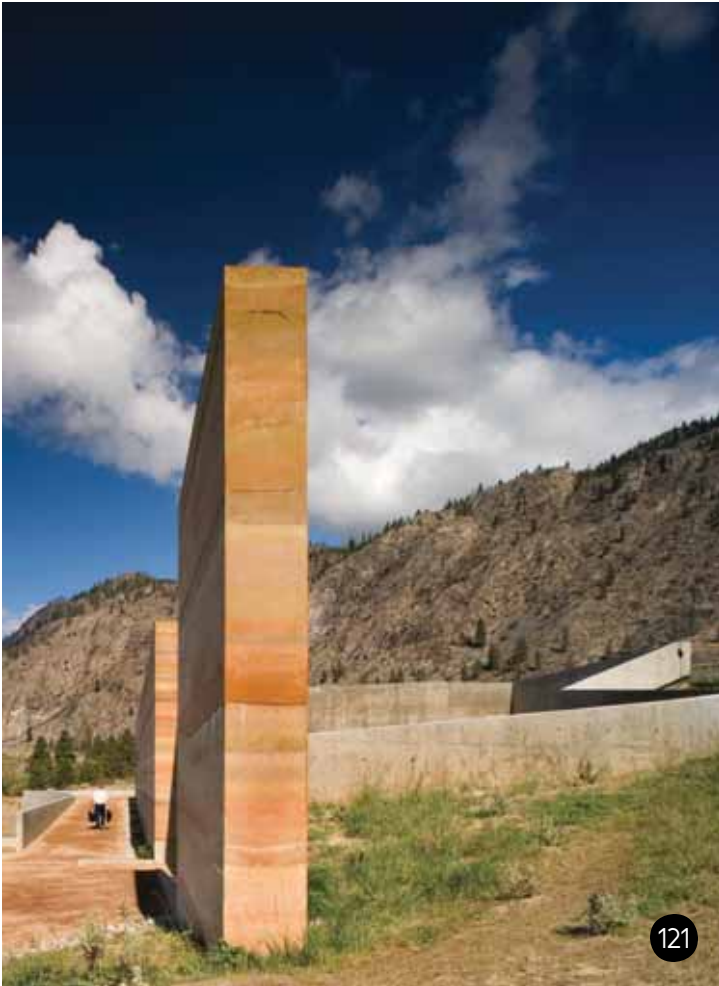
Program: Interpretive Centre, Theatre, Exhibition Space, Outdoor Performance Area, Amphitheatre, Research Area, Demonstration Space



IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Nic Lehoux

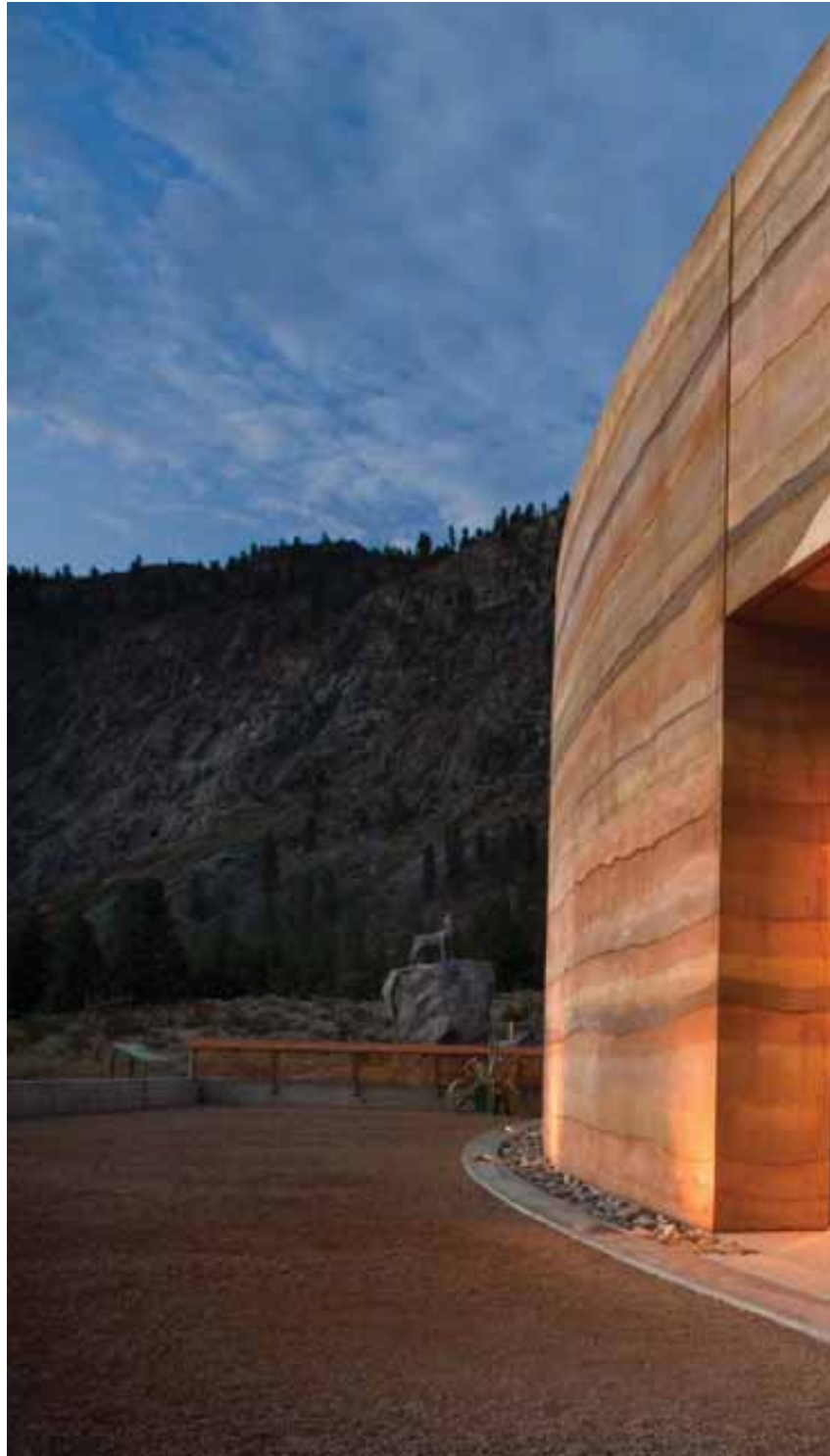
www.archdaily.com
www.designdialog.ca
www.niclehoux.com



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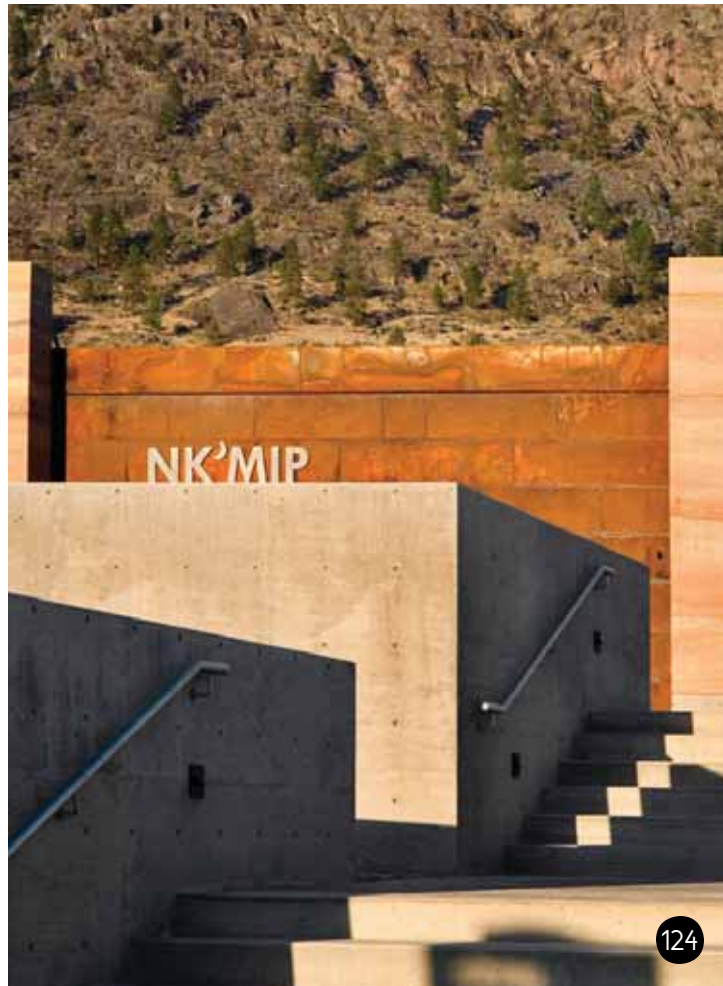


122





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126

OÖ SCIENCE CENTER WELS I. CASE STUDY FOURTEEN

Location: Wels, Austria

Architect: Archinauten Dworschak, Mühlbacher ZT GmbH

Typology: Museum

Size: 53,800 Square Feet

Client: City of Wels

Program: Entrance Hall, Exhibition Spaces, Restaurant, Shop, Foyer, Public Garden,



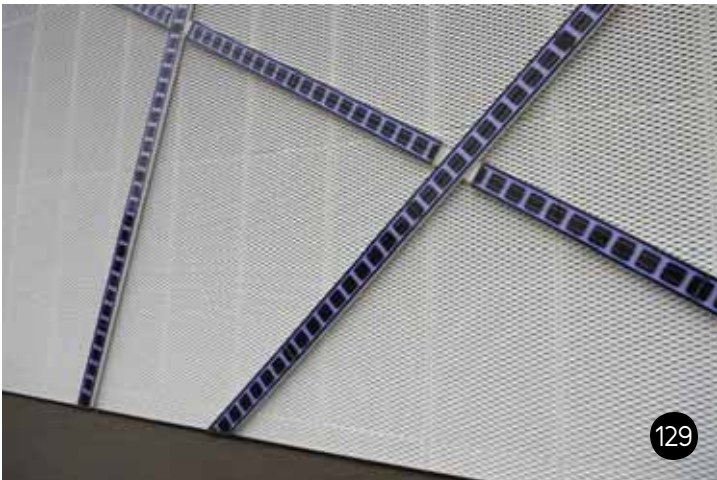
IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Dietmar Tolerian

www.archdaily.com
www.archinauten.com/
www.archpicture.at



128



129





130



131



132



133

MYONGJI UNIVERSITY BANGMOK LIBRARY. CASE STUDY FIFTEEN

Location: Seoul, Korea

Architect: Gansam Architects & Associates

Typology: Library

Size: 35,000 Square Feet

Client: Myongji University

Program: Lobby, Reading Area, Seminar Area, Memorial Exhibition, Study Rooms, Administration, Student Center, Auditorium, Educational Classrooms, Multi-Media Spaces



134

IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Photography by Gansam Architects & Associates

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www.gansam.com





137



138



139



LIVERPOOL UNIVERSITY INFORMATION CENTRE. CASE STUDY SIXTEEN

Location: Suzhou, PRC

Architect: Aedas Architects

Typology: Educational

Client: Xi'an Jiaotong-Liverpool University

Program: Administration Centre, Learning and Resources Centre, Training Centre, Student Activities Centre



141

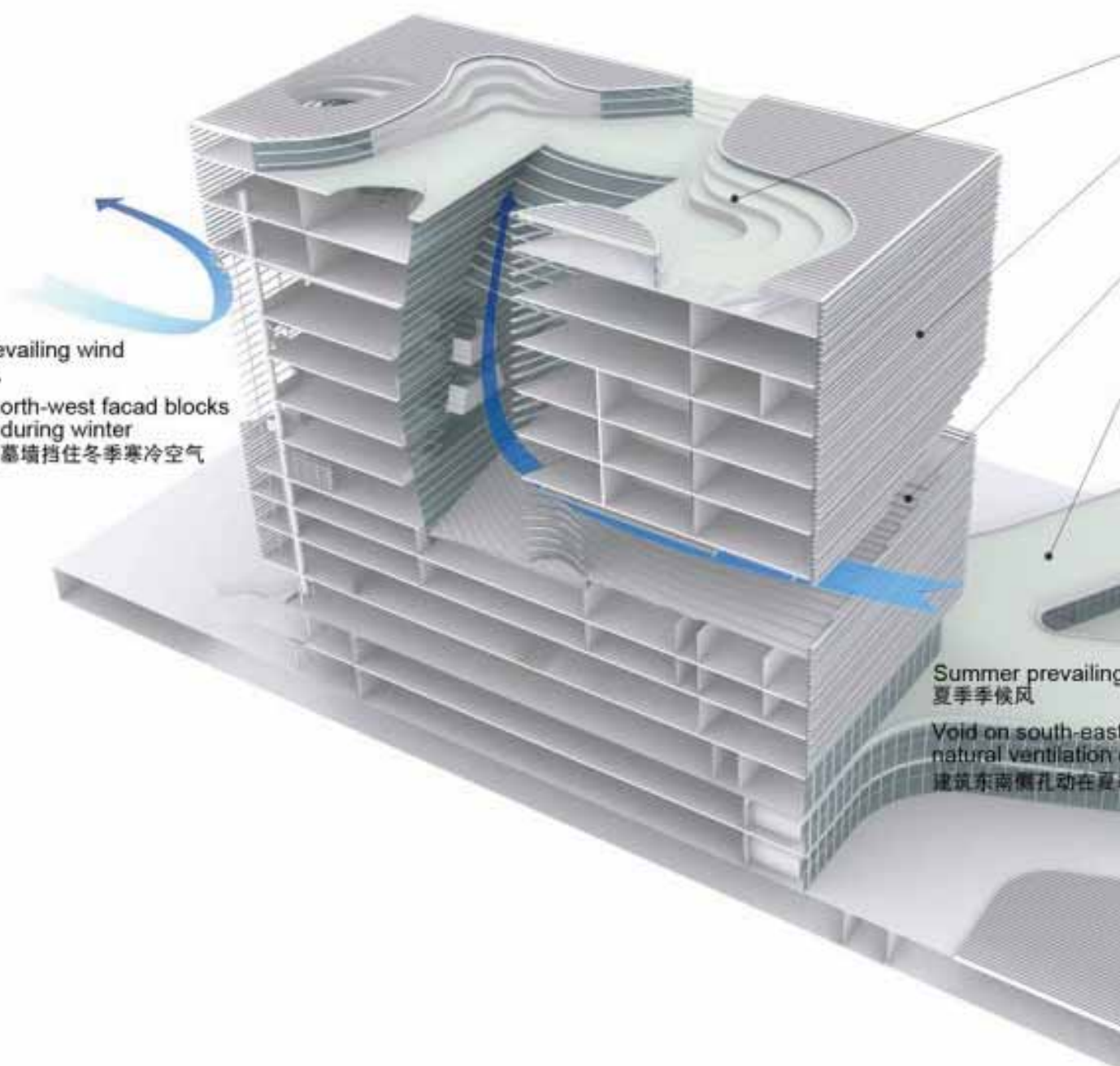
IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Images by Aedas Architects and Silkroad Digital Technology

www.archdaily.com

www.aedas.com

en.silkroadcg.com



Winter prevailing wind
冬季季候风

Solid on north-west facad blocks
cold wind during winter
建筑西北侧幕墙挡住冬季寒冷空气

Summer prevailing
夏季季候风

Void on south-east
natural ventilation d
建筑东南侧孔动在夏季

- Roof garden
屋顶花园
- Horizontal Louvers provide diffused light and reduce solar heat gain
水平百叶提供漫反射自然光照明并减少太阳热辐射
- Roof terrace
屋顶平台
- Green roof
绿化屋顶
- Courtyard
庭院



142



143



144



INTEGRATED TEACHING BUILDING. CASE STUDY SEVENTEEN

Location: Hong Kong, China

Architect: Urbanus

Typology: Educational

Size: 432,700 Square Feet

Client: Chinese University of Hong Kong

Program: Outdoor Areas, Academic Centers, Gathering Spaces,



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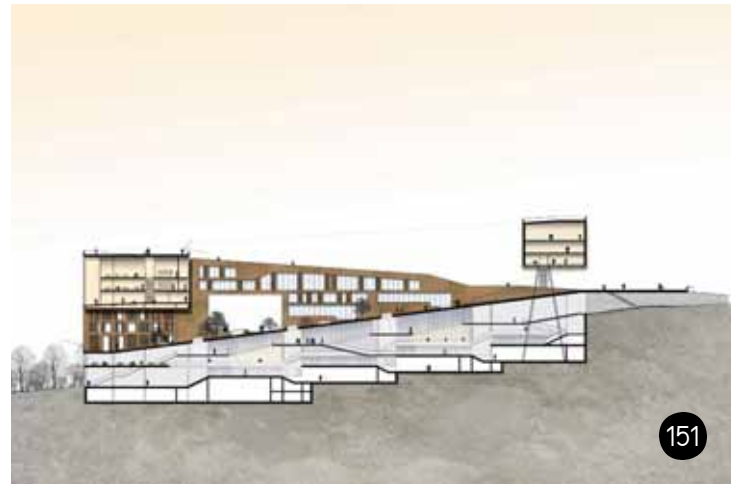
IMAGE CREDITS. REFER TO 7.1 FOR ADDITIONAL INFORMATION

Images by Urbanus

www.archdaily.com

www.urbanus.com.cn





TYOLOGICAL SUMMARY

West Vancouver Community Centre (57 & 58)

The design for the West Vancouver Community Centre linked a number of other disconnected facilities to a central “front door” to the community of West Vancouver. The project consists of a three-story atrium that connects different recreation levels along a circulation spine. The formal gathering spaces orient views to the Great Lawn and mountains beyond. The circulations spine features operable skylights which drive sunlight and fresh air into the building. These levels are broken into casual moments for “pause and opportunities for social interaction”.



Sephardic Community Center (65 & 66)

The Sephardic Community Center plays an interactive role in the community to preserve the history and culture of the Sephardic Community. The building's program offers historical, educational, athletic, and social services for the community in a quiet community environment. The center hosts a variety of events and activities made known to the community in the Heritage Hall entry Lobby. The cultural aspect of this community is the unifying factor supporting this building's “bold vision of a mutually supportive community.”





The Prayer Pavillion (72 & 73)

The Prayer Pavilion of Light is part of the Assembly of God's 58-acre campus in Phoenix, Arizona. The landscape features a 600-foot-long processional walk to the chapel. Upon arrival, users are greeted by a welcoming plaza space, landscaped with desert trees and unique courtyard design. This chapel has been envisioned as a 'lantern on a hill.' Steel Framing supports the translucent panels above and frames the transparent glass below. The architecture is minimal with finely articulated details and a soft palette of earth tones which compliment the surrounding landscape.



TYOLOGICAL SUMMARY

Tampa Covenant Church (78 & 79)

Tampa Covenant Church was developed using the Fibonacci sequence to establish scale derived from theological requirements. Other architectural elements from the project were based on numerical biblical importance. (i.e. 3 olive trees, 7 candle boxes, 12 office windows, 14 pendant lights, etc.). Another symbolic representation, which may or may not have been intended, was the church's white exterior, because the Church is the bride of Christ, to be represented with absolute purity and holiness. This sanctuary space connects two existing church buildings by creating an exterior courtyard where these spaces meet.

Mortensrud Church (85 & 86)

The Mortensrud Church was carefully placed on its existing landscape, with special attention given to how it meets the ground. Only a thin layer of soil was excavated, allowing the church to preserve the natural habitat where it is located. Trees and rock formations are captured within the design of the building within atrium spaces and the concrete floor of the church. The structure is composed of a steel framework, stonewall, and glass facade, allowing light to stagger in through uneven joints in the stonework. Since traditional mortar joints were not used, steel plates were used to stiffen the stonewall construction in both horizontal and vertical planes.



78



85



92



79

Dead Sea Master Plan (92 & 93)

The master plan for the Jordan Development Zones Company is a planned community development along 40 kilometers of land north and east on coast of the historic Dead Sea. The proposed plan accommodates a site-specific approach, which balances design efforts to increase tourism and preserve existing cultural significance within the region. The master plan has set high standards for sustainable development to foster an increase in social infrastructure, while conserving nearby existing communities. The efforts that have been made to preserve the natural ecological environment with considerations for an improved road network, public transportation, fresh water supply, waste water treatment, and utilities within the proposed series of districts makes this an exceptional model for community design.



86



93

TYOLOGICAL SUMMARY

Pier Escape (98 & 99)

The Pier Escape proposal “envisions Navy Pier as a world-class urban landscape that protects Lake Michigan, promotes economic growth and creates an escape for the people of Chicago”. The proposal offers an exciting list of activities to enrich the value of this destination to both residents and tourists alike. Spaces for play, culture, and relaxation make this venue an iconic landscape in the context of an urban recreational environment. An entry plaza will draw crowds into the interactive spaces while making subtle connections from the Chicago skyline to the shoreline of Lake Michigan.

Westside Bruennen (104 & 105)

Westside Bruennen has become the new center for leisure and shopping, while by recreating our traditional conception of these spaces. This project features a complex mixture of retail, residential, and recreational facilities that reinvent urban and social patterns typically developed in projects of similar scale. “The development creates an exciting gateway into the city of Bern as it dramatically positions itself over the major highway and is integrated into the city with its own highway exit and train stop”.





Empac (112 & 113)

The Experimental Media and Performing Arts Center implements “an ensemble of instrumental spaces defined by technology”. This case study creates an innovative example for performance spaces, featuring a 1,200-seat concert hall encased within a multi-layered shell within the building envelope. This solution provides a stunning atrium space leading up to the concert hall, which has been given special acoustical consideration to prevent interference between distinct activities within the center.



TYOLOGICAL SUMMARY

NK' MIP Desert Cultural Centre (119 & 120)

The NK'Mip Desert Cultural Centre is located adjacent to the Great Basin Desert in Canada and explores the relationship of aboriginal history in the context of this reservation land. The buildings acts as an extension of the site as the desert landscape seemingly flows over the building's green roof, which is held in place by a rammed earth wall. Because of the fragile nature of the site and project, careful consideration was placed on sustainable design. The building's orientation, large rammed earth wall, habitable green roof, water use management, mechanical features, and use of local materials are among the list of methods integrated within this project.

OÖ Science Center Wels I (126 & 127)

The OÖ Science-Center has become an iconic urban hub for Wels, presenting itself as an engaging case study in the field of science. The form itself is very artistic and it is an experiment of sloped landscapes, walls, and flowing line work. The site is located adjacent to the city hall with open public spaces flowing into the entrance for the museum and axis to the city center. The configuration of the building allows for a flexible arrangement of the thematic interior spaces. Line patterns over the metal curtain facade are made with steel bands, representing the project's focus on renewable energy, while the LED strips behind them give this place a notable presence at night.





Myongji University Bangmok Library (133 & 134)

The Myongji University Bangmok Library matches its surrounding context in a residential and educational environment, welcoming the student body with the pull from its gently curved massing. The curvilinear outer skin is composed with U-Glass while the square form is expressed with wood. The glass will filter light gently into the library, creating a pleasant atmosphere without harming the books themselves. The interactive garden lobby is the hub, which merges the different zones within the library to a common place abundant with natural lighting and interesting interior architecture. The spatial diversity and staggered floor layouts create memorable views and spaces at each level.



TYOLOGICAL SUMMARY

Liverpool University Information Centre (140 & 141)

The Administration & Information Centre is located in the Suzhou Industrial Park, surrounded by a quickly developing economy. The center is part of a master plan for Liverpool University incorporating an administrative center, learning and resource center, and student activities center. These centers are located within a square structure following the concept of Taihu stone, an ornamental stone used for decorating Chinese gardens. Much like the nature of this stone, this project will incorporate these spaces in natural connections using voids to create dynamic gathering places inside the building.





Integrated Teaching Building (145 & 146)

The Integrated Teaching Building proposal titled “Windows on Community” creates visual and physical connections between two parts of the campus, tying them together in the construction of this building. By implementing the concept of a Möbius strip, the design mixes interior and exterior circulation. This loop creates a lively community space that is diverse and filled with activity. Different paths to reach destinations are broken up leading to lobbies, outdoor settings, and different academic centers.



[NURTURE]well-being

5.0 Site Analysis.

SITE NARRATIVE

THE MOUNTAIN STATE

Colorado is known for mountainous terrain, high plains, foothills, and desert lands. The variation in elevation and natural formations create a variety of climate changes. Natural formations and a semi-arid climate zones provide mild winters and average temperature summer conditions for the Denver-metropolitan area. Its location between the Rocky Mountains to the west and High Plains to the east can create rapid changing weather patterns. It has often been said among residents that if you don't like the weather, just wait fifteen minutes. As you enter the metropolis from the High Plains, you drop over 1000 feet as you enter the foothills of the Rocky Mountains. Some of the cities that make up the Denver metropolis include: Aurora, Englewood, Lakewood, Parker, Arvada, Westminster, Highlands Ranch, Littleton, Centennial, Greenwood, Castle Rock, and Broomfield, among others. As this metropolis continues to steadily grow, new developments are added to the list. Existing cities are also caught up in the expansion, becoming suburbs themselves.

Aurora has a variety of open spaces where a master plan of this scale could be developed. While there are many community, recreational, and cultural centers within the Denver metro area, Aurora was in greatest need of a community center of this scale. The ratio of community centers to residential housing was much lower in this new development in comparison to some of the surrounding suburbs. It will be important for the city of Aurora to consid-





er a development like this to improve the sense of community and prevent isolation within this suburb. The location for this community center intersects major streets and is nearby an interstate, the E-470. This tollway is a fast alternative to congested highways and side streets which stretch along the eastern side of Aurora. The Regional Transportation District runs a bus route that stops at Southlands across the street from the site. According to the website, "Southlands is an outdoor lifestyle center with a four-block Main street and community plaza surrounded by additional retailers and restaurants." As one leaves Southlands and merges onto E-470, you will notice amazing views looking west toward the foothills and surrounding city.



Issues that complicated other sites include: size limitations, location, community center ratio, street access, noise control, traffic, and visual limitations. Issues that will need to be resolved in the selected site include changes in elevation, soil conditions, irregular grid patterns, and pedestrian connections. The site presents itself along a pedestrian linkage in a residential neighborhood. Finding a proper balance or buffer distance between these two zones will be a necessary part of the solution. Perhaps one of the strongest components in this site are the existing vistas. The natural landscape should be incorporated into the design for the final master plan and provide its users with a sense of peace and tranquillity.



QUALITATIVE ANALYSIS

SITE IMPRESSIONS: VISUAL AND SENSORY

As observations are made about the site, it will help determine creative design solutions and opportunities which lie within the site itself. While there is some recognition of a north / south orientation, the roadways curve back and forth. This inconsistent grid pattern may result from natural formations in the landscape. Some of the residential developments are likely planned like this to create interesting views and footprint patterns. Looking around the site reveals a variety of textures and patterns, most of which come from natural formations like plants, hills and streams.

This site is mostly open, with very little shade and shadow characteristics. However, the site slopes slightly towards the north and more abruptly towards the west making these two locations less preferable than those with leveled surfaces.

Some of the built features towards the south include: Wallgreens, Chick-fil-A, International Bank, and beyond this commercial development, residential. At the east side of the site, Southlands and one other small commercial development stretch along the entire S Aurora Parkway road, which runs alongside the site. The north is almost completely bare, while the east is covered densely with new residential housing. The site receives adequate lighting on all sides which can be quite powerful, even during the winter. The vegetation consists of native plants, such as switch grass, indian grass, little bluestem, and sideoats gamma. These plants can play an important role in erosion control when being introduced to areas once destroyed.

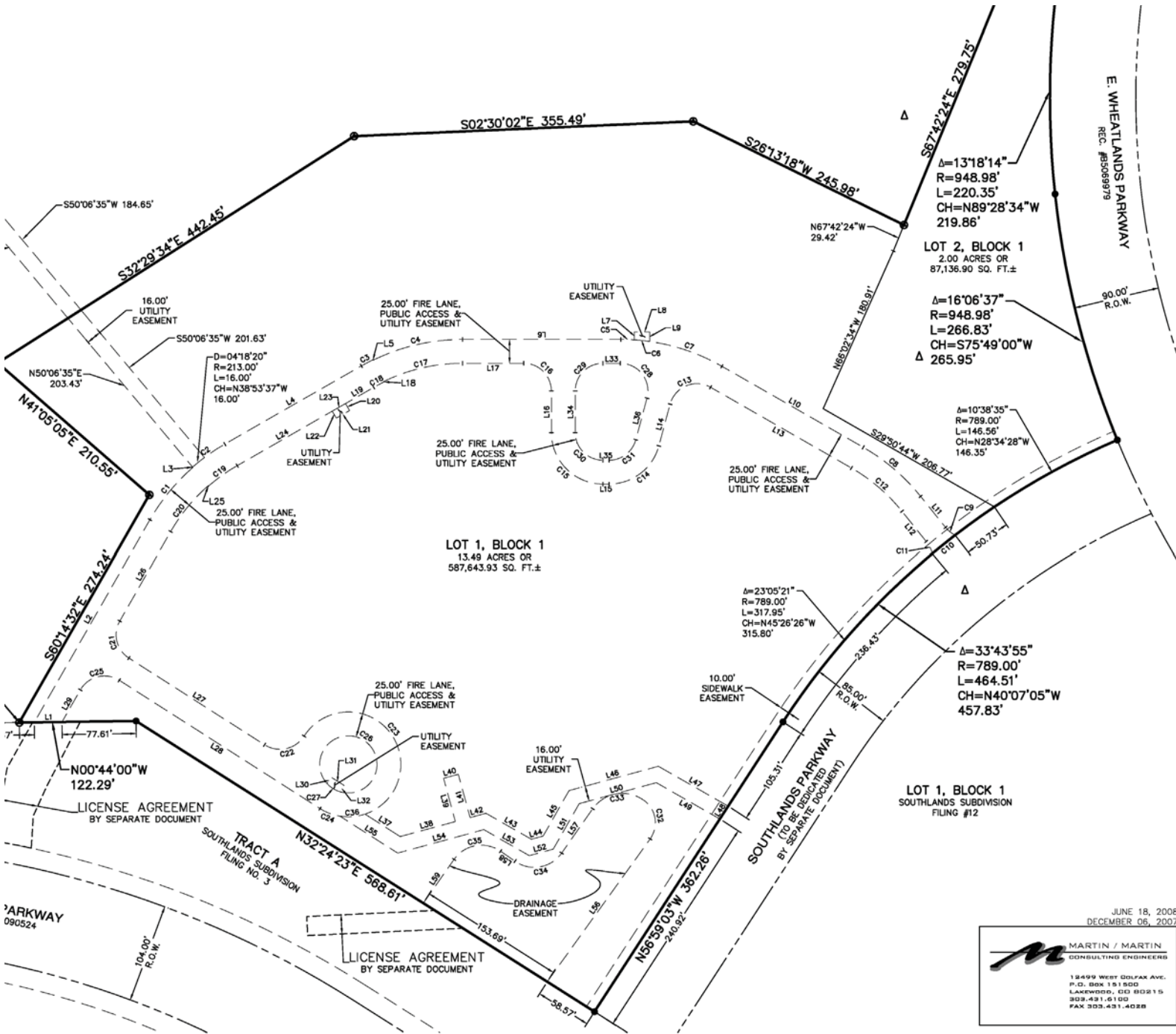
The church currently being constructed is the only sign of human activity and will be considered to



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be null for the sake of this project. The site also has roads and power lines running through it. Large metal power lines run through the north and west sides of the the site. Towards the east side, where the landscape begins to drop off, there is a small creek that runs north and south parallel to a pedestrian walkway. There is very little distress on the site, because of the lack of human presence. Some of the surrounding developments show signs of wear, which are likely the result of heavy machinery and continued construction. Preserving this natural landscape will need to be an initiative from the start, carefully planning project phases in an orderly and consistent manner.

PLAT MAP



JUNE 18, 2008
DECEMBER 06, 2007

MARTIN / MARTIN
CONSULTING ENGINEERS

12499 WEST DOLFAK AVE.
P.O. BOX 191500
LAKEWOOD, CO 80215
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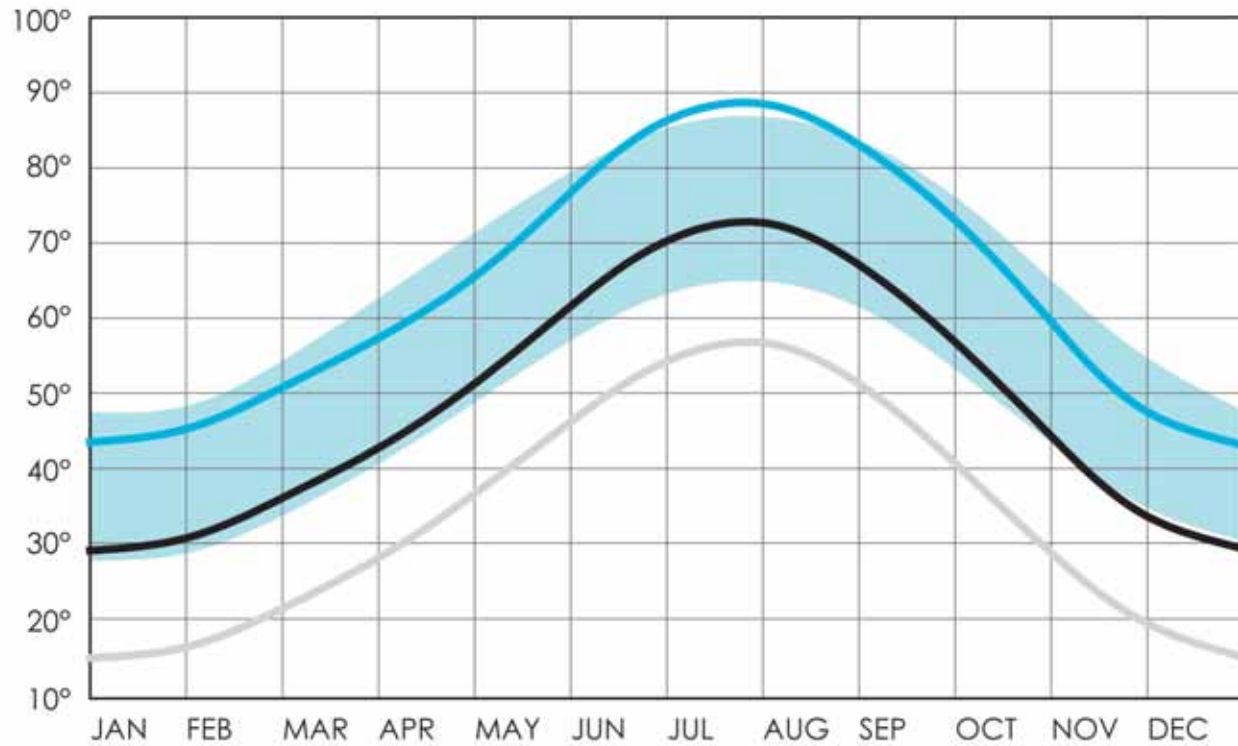










QUANTITATIVE ANALYSIS

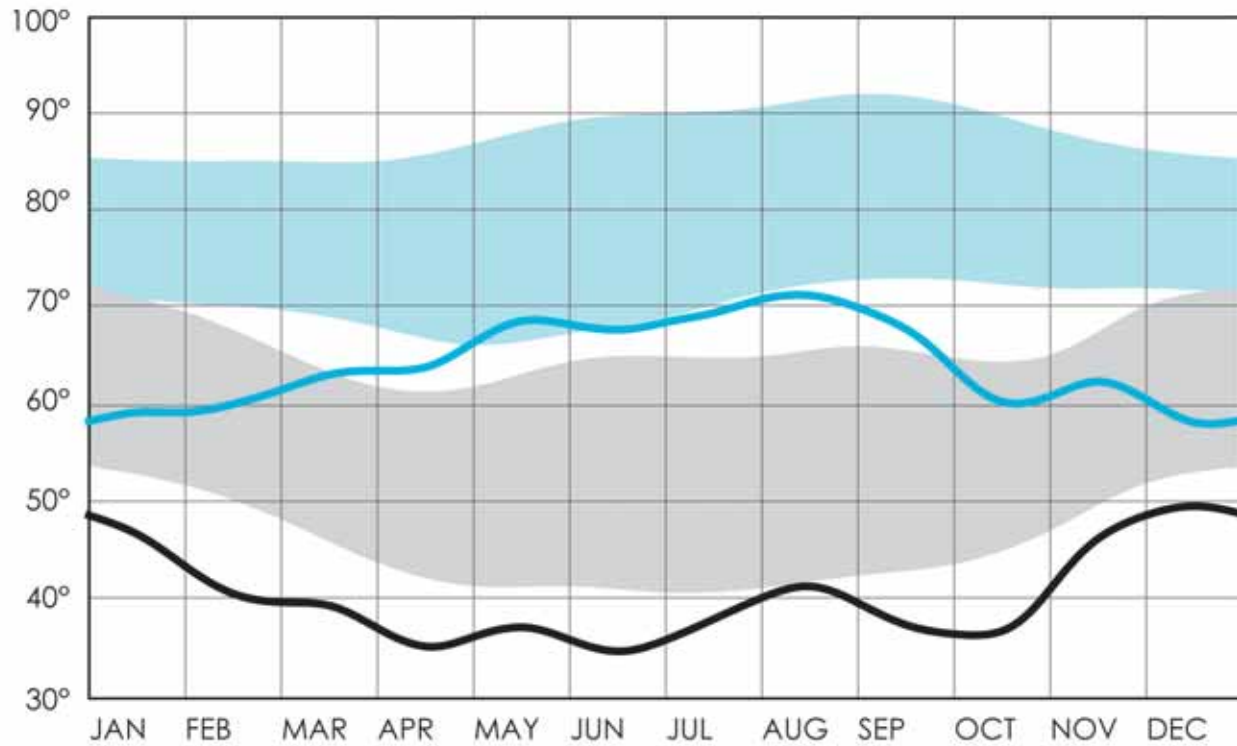
CLIMATE: Temperature



Daily High 
Average 
Daily Low 
US Average 

QUANTITATIVE ANALYSIS

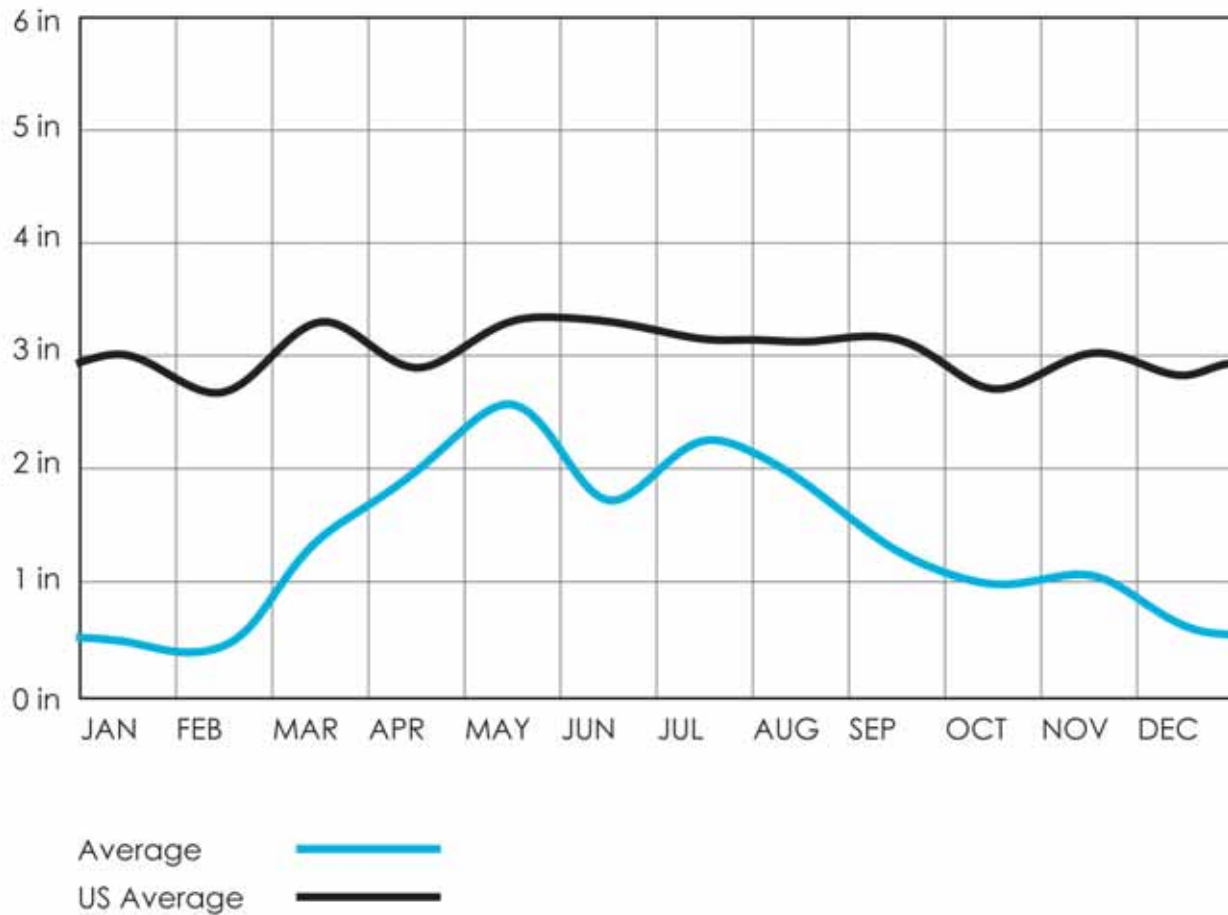
CLIMATE: Humidity



Morning 
Afternoon 
US Afternoon 
US Morning 

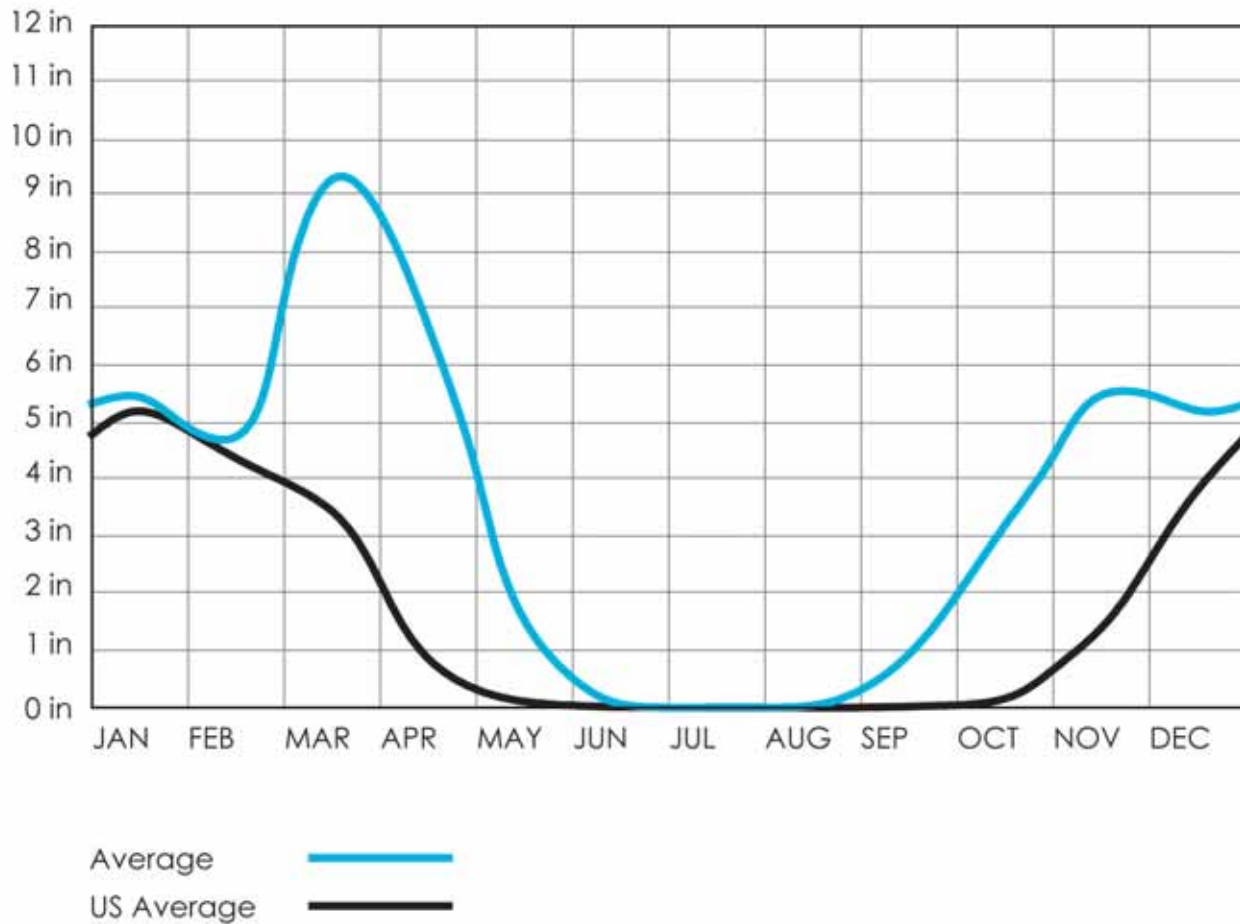
QUANTITATIVE ANALYSIS

CLIMATE: Precipitation



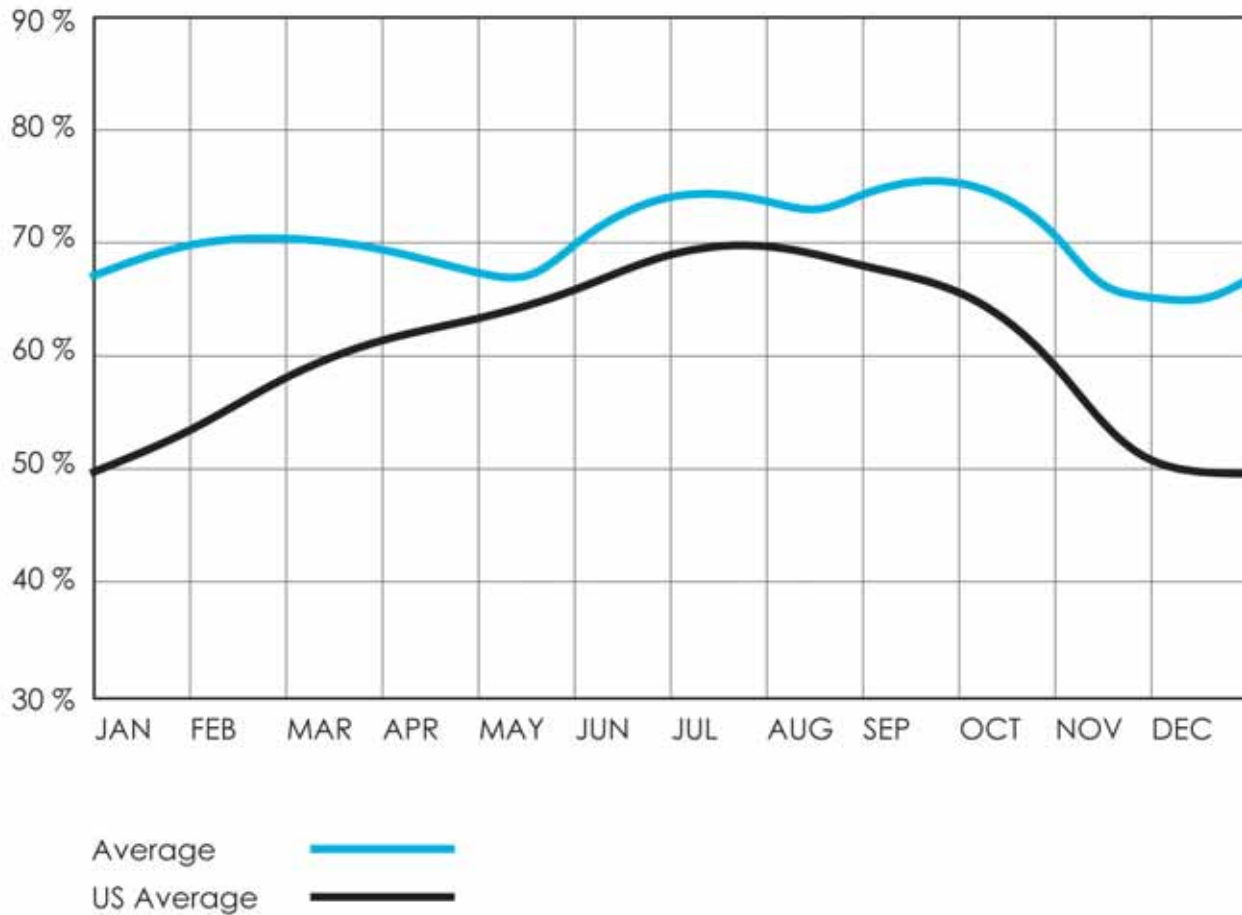
QUANTITATIVE ANALYSIS

CLIMATE: Snowfall



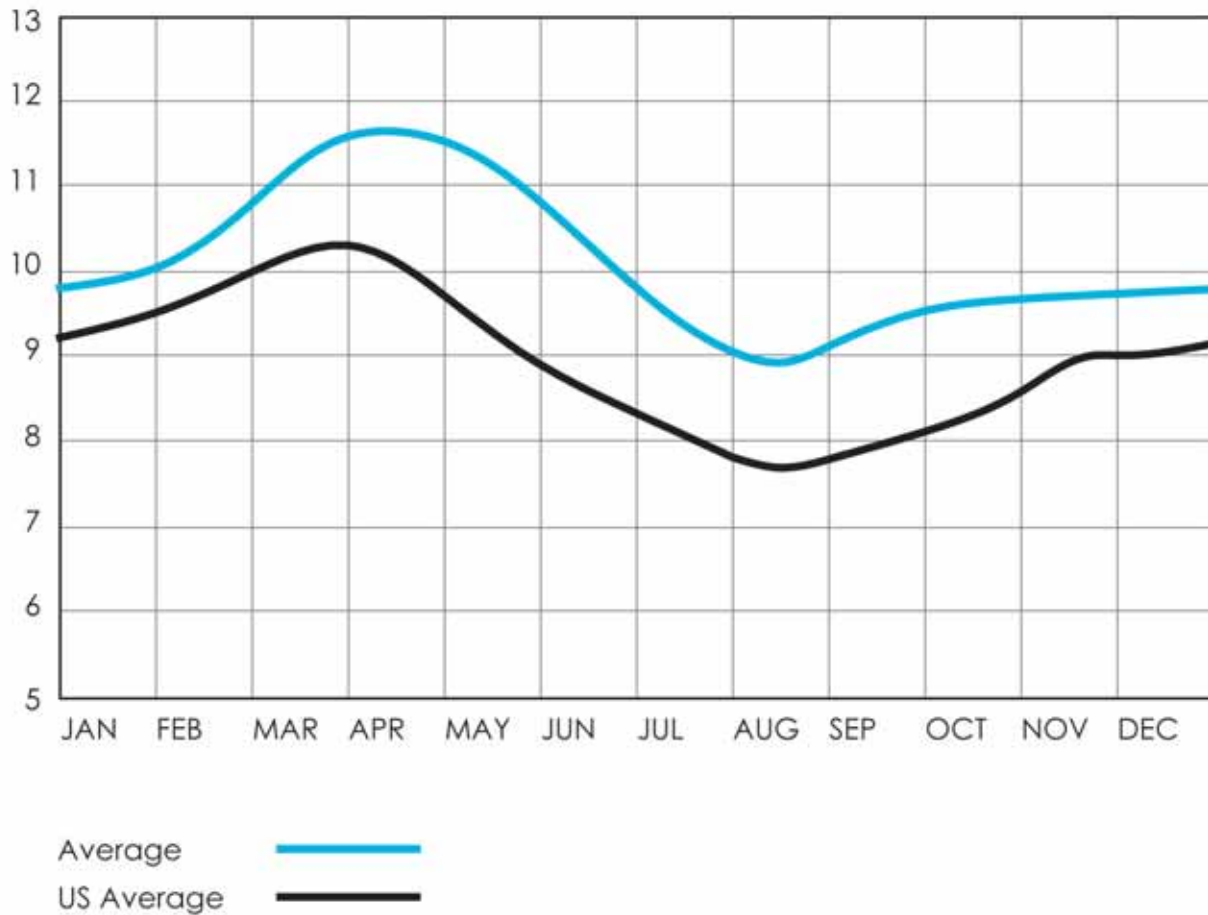
QUANTITATIVE ANALYSIS

CLIMATE: Sunshine



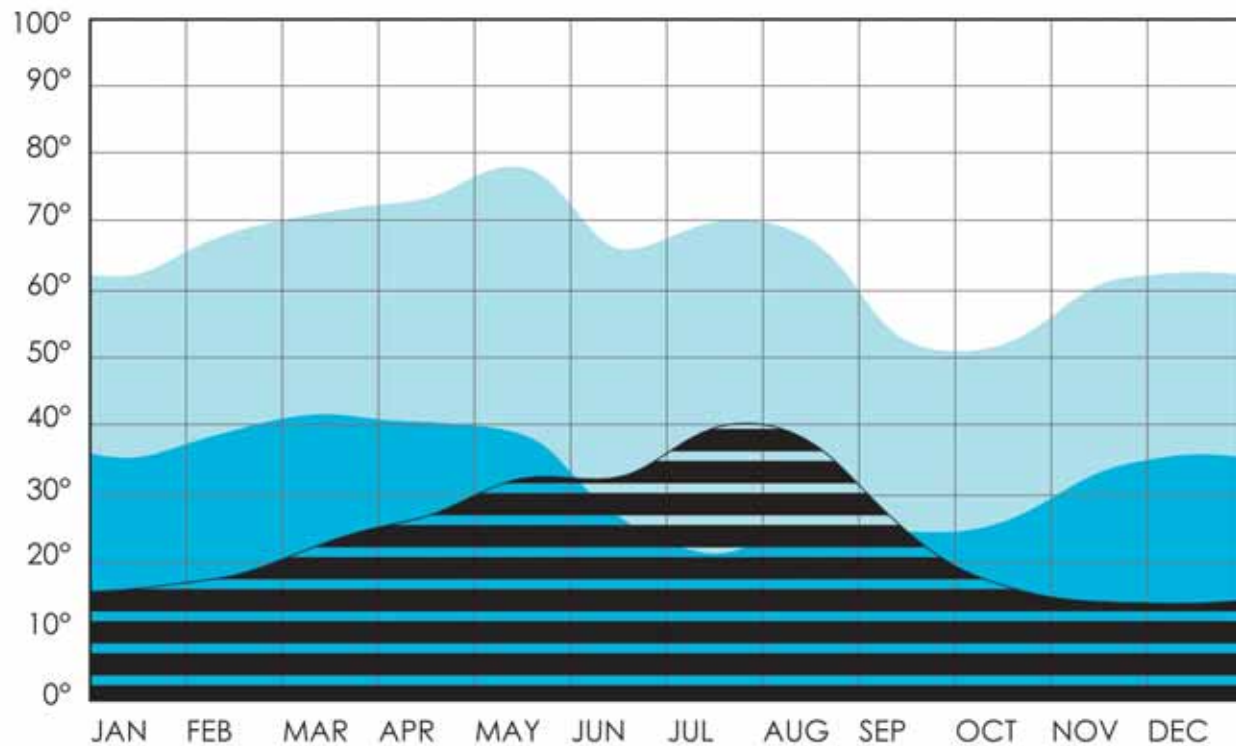
QUANTITATIVE ANALYSIS

CLIMATE: Wind speed



QUANTITATIVE ANALYSIS

CLIMATE: Cloudiness

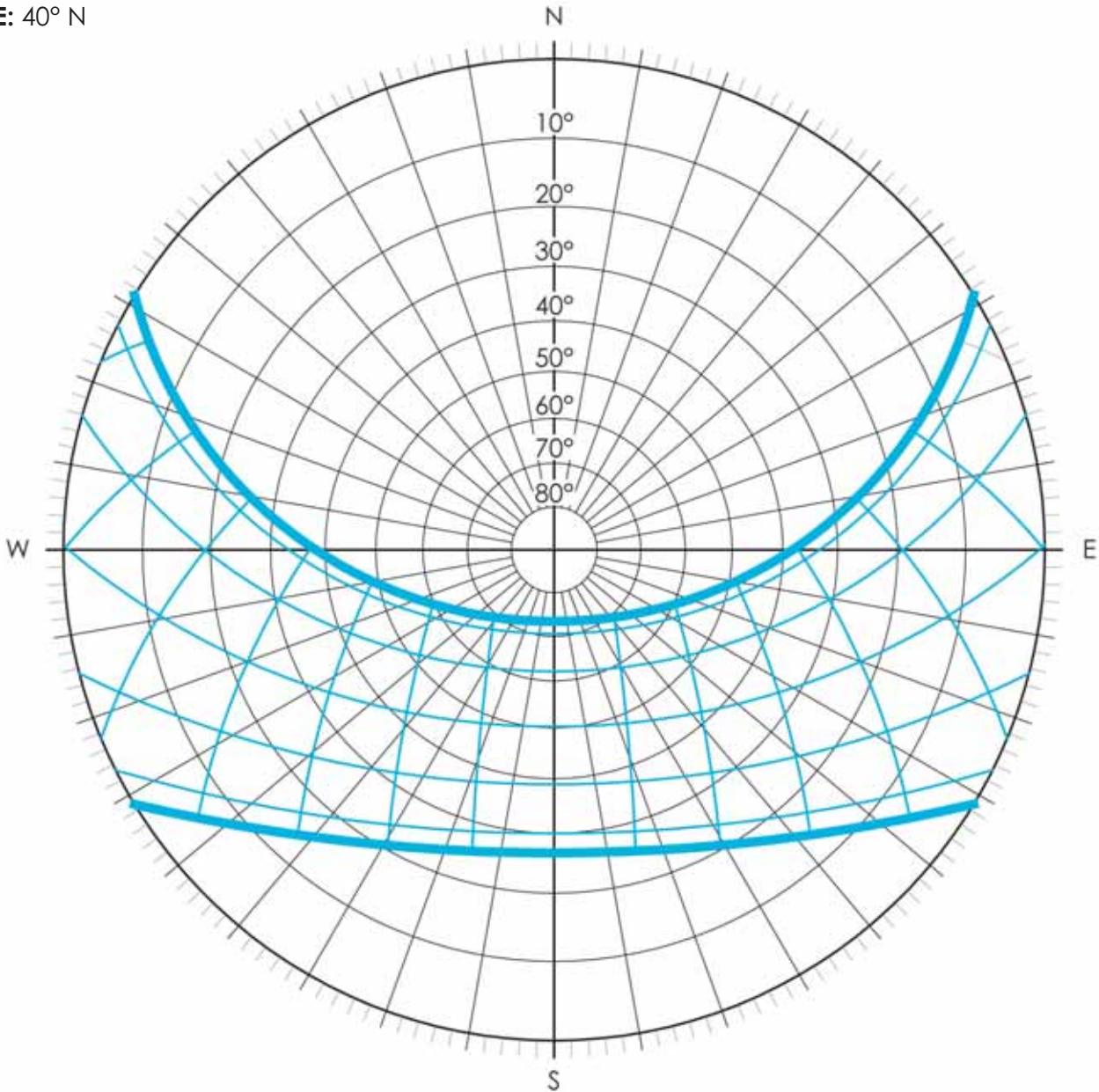


Clear
Partly Cloudy
Cloudy
Precipitation

QUANTITATIVE ANALYSIS

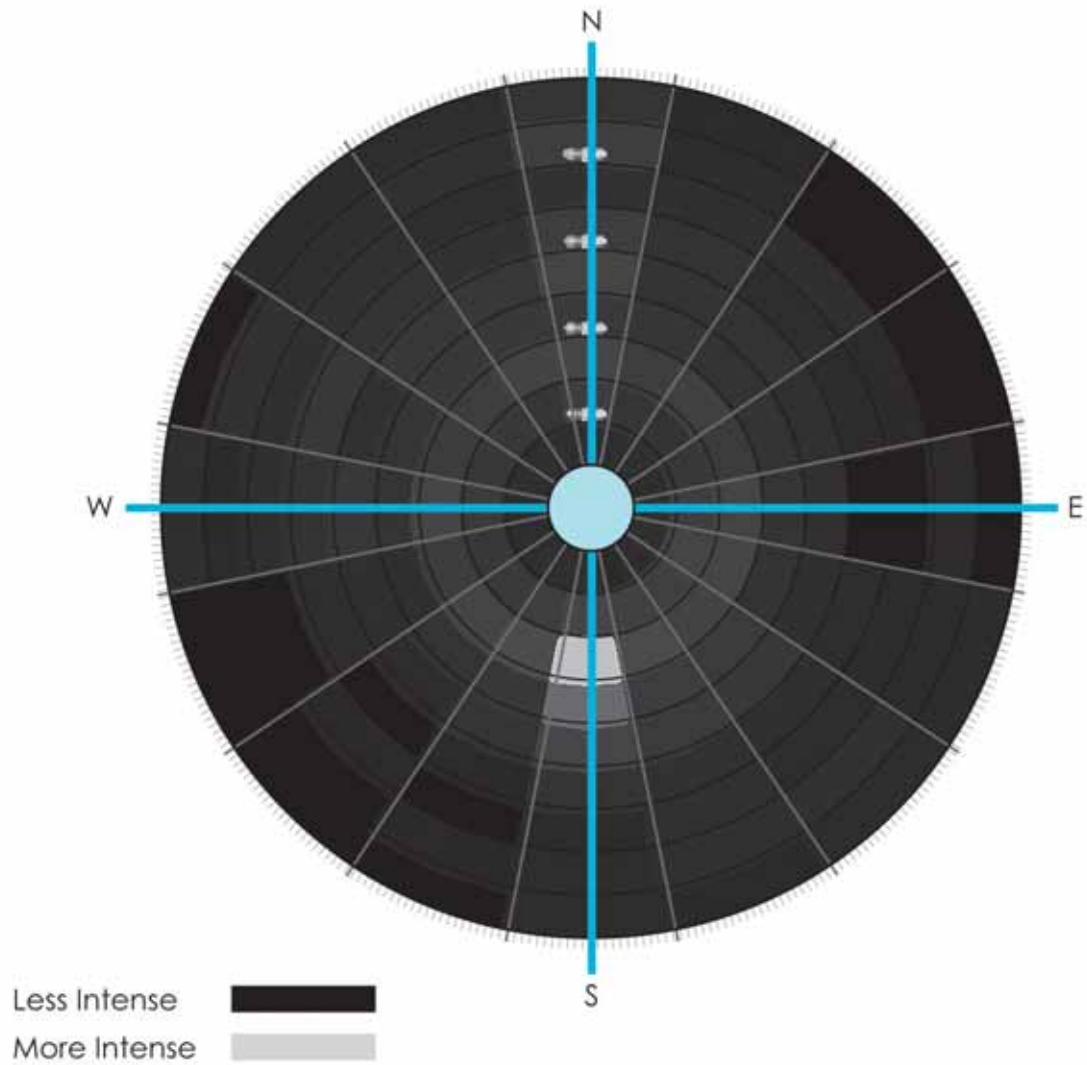
CLIMATE: Sunpath Diagram

LATITUDE: 40° N



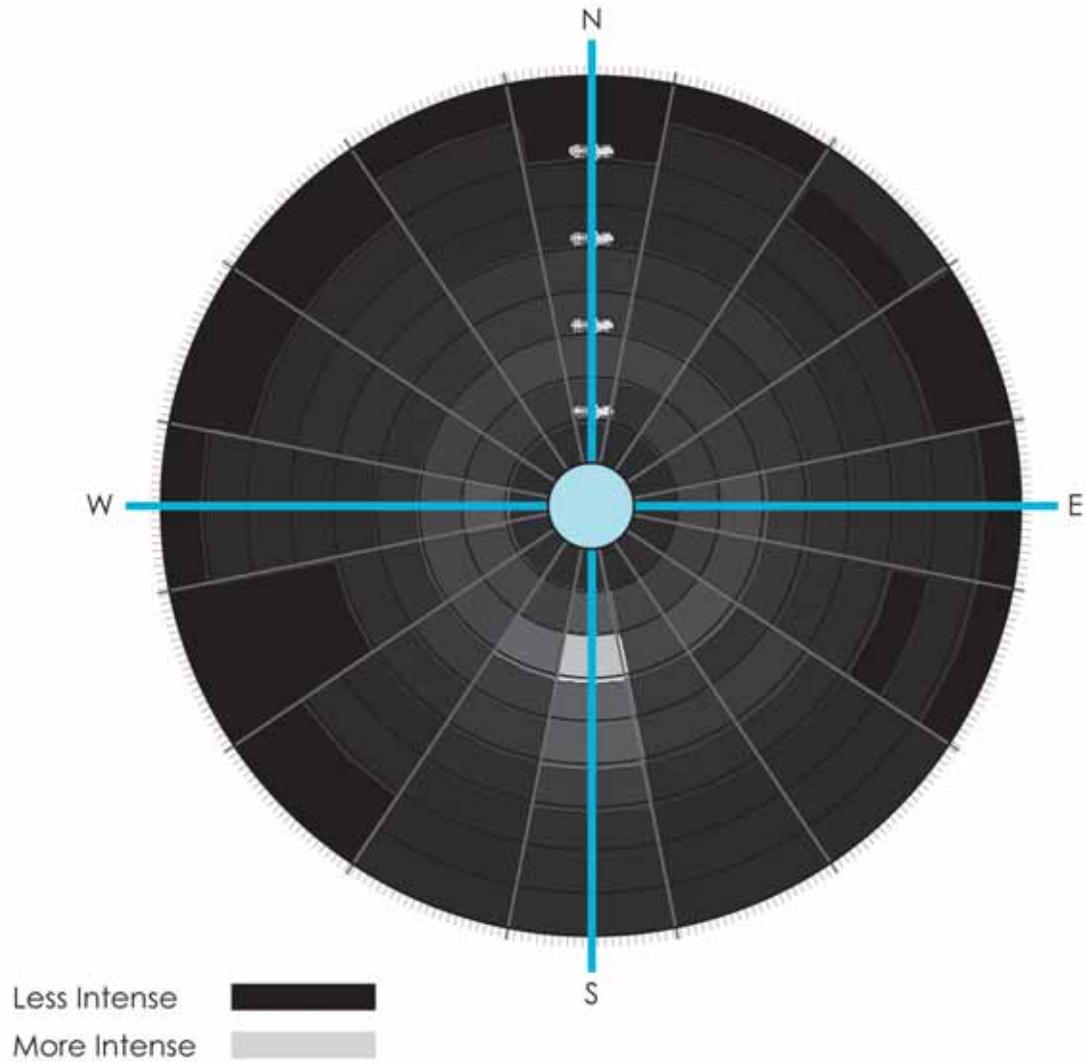
QUANTITATIVE ANALYSIS

CLIMATE: Spring Prevailing Winds



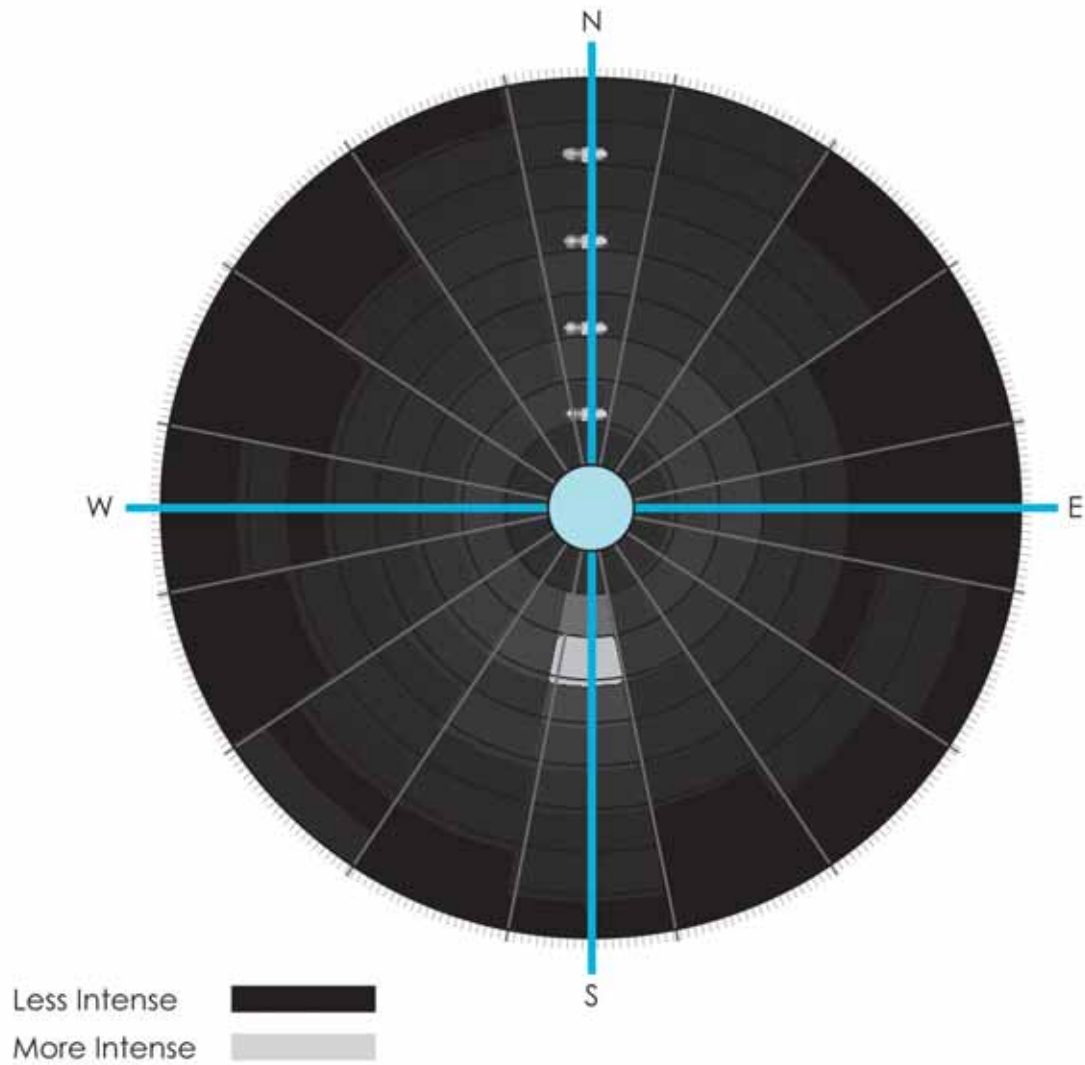
QUANTITATIVE ANALYSIS

CLIMATE: Summer Prevailing Winds



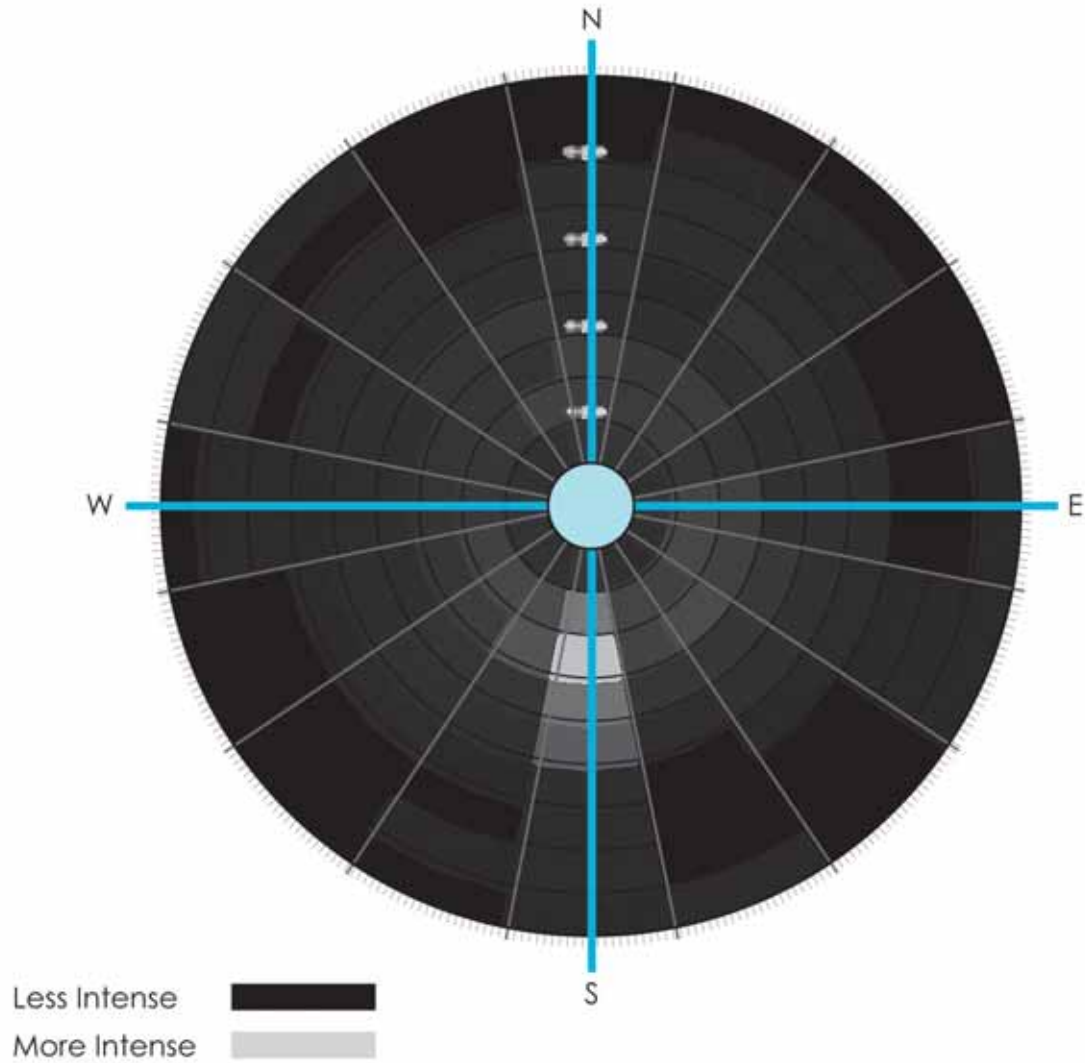
QUANTITATIVE ANALYSIS

CLIMATE: Autumn Prevailing Winds



QUANTITATIVE ANALYSIS

CLIMATE: Winter Prevailing Winds



[NURTURE]well-being

6.0 Programmatic Requirements.

PROGRAM REQUIREMENTS

INTERACTION MATRIX: Master Plan



Administration (SOE)

Church Facility

Community Center

Community Garden

Entry / Boulevard

Green Space

Landscape (Hardscape)

Landscape (Softscape)

Library (SOE)

Outdoor Amphitheater

Parking (Above Grade)

Parking (Below Grade)

Pedestrian / Bicycle Linkages

Prayer Pavilion

Recreational Areas (Active)

Recreational Areas (Passive)

School of Evangelism

Sports Facility

Student Housing (SOE)

Vehicle Circulation

Administration (SOE)
 Church Facility
 Community Center
 Community Garden
 Entry / Boulevard
 Green Space
 Landscape (Hardscape)
 Landscape (Softscape)
 Library (SOE)
 Outdoor Amphitheater
 Parking (Above Grade)
 Parking (Below Grade)
 Pedestrian / Bicycle Linkages
 Prayer Pavilion
 Recreational Areas (Active)
 Recreational Areas (Passive)
 School of Evangelism
 Sports Facility
 Student Housing (SOE)
 Vehicle Circulation

	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Desirable	Desirable	Desirable	Not Needed	Essential	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Essential	
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Desirable	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Desirable	Essential		Not Needed	Desirable	Not Needed	Essential	Desirable	Desirable	Desirable	Desirable	Desirable	Not Needed	Not Needed	Essential
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Essential	Essential	Desirable	Not Needed	Not Needed	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Essential
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Essential	Essential	Essential	Desirable	Essential	Not Needed	Not Needed	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Essential

PROGRAM DESCRIPTIONS

Church Facility

Like some of the other buildings on this campus, the facility for the church, may use less traditional methods for religious architecture, developing a modern architectural character throughout the master plan. This facility will require adequate parking for 1,500 members and will need to maintain a strong connection to the community center.

Community Center

This facility will become a metaphorical hand reaching out to the Aurora community. It will provide residents with a place to connect with others and to connect with God. The resource and counseling center will assist those in need throughout the community, providing them with hope and encouragement. The assembly and recreational facilities will be designed to nurture lasting relationships.

Community Garden

A community garden would create opportunities for outdoor fellowship and could be maintained by those in the community to serve those in need. In a fast paced world, this would give residents a chance to slow down and consider the needs of others before themselves.

Outdoor Amphitheater

An outdoor amphitheater would be a place for large assemblies to gather for retreats, concerts, and worship services. Developing a strong connection to some sort of active recreational area would be desirable.

Prayer Pavillion

The prayer pavillion is social gathering place for the assembling of God's people. It serves as a connection link between the School of Evangelism and the Community Center. This facility may desire to be located some distance away from other facilities in order to provide a meditative journey as one approaches the building.

School of Evangelism

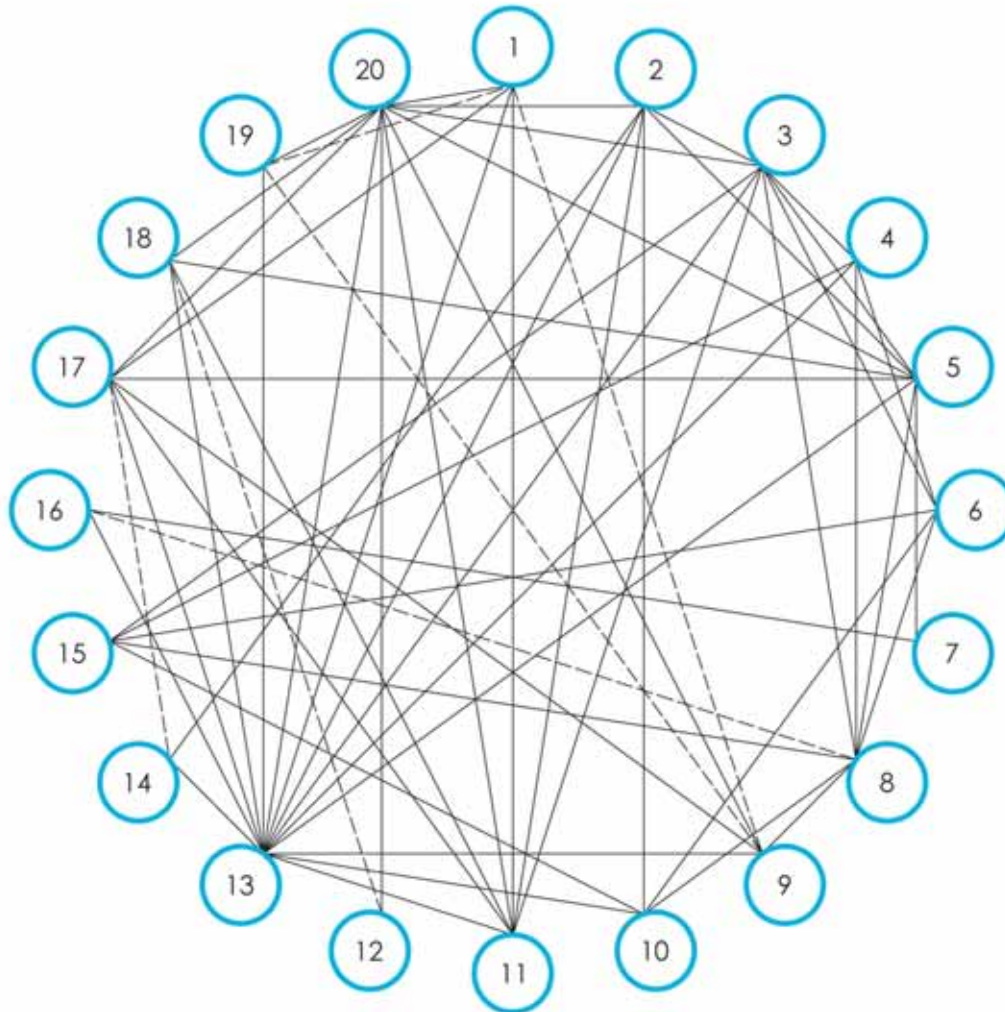
The school of Evangelism is a post-secondary educational facility, which equips students with the tools to reach a world in need. It will also be associated with the SOE Administration, SOE Library, and SOE Student Housing.

Sports Facility

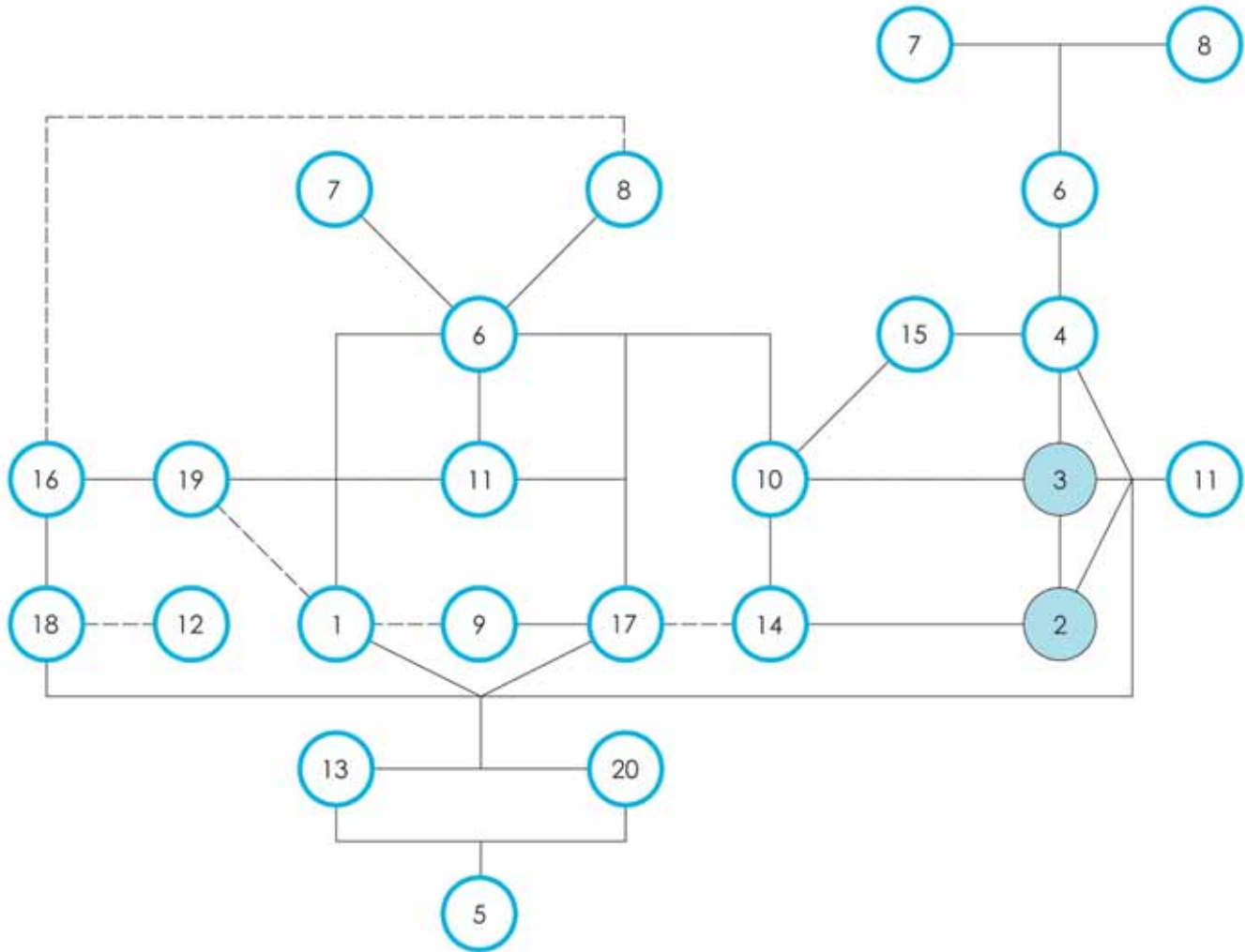
The sports facility will equip this master plan with a large venue suitable for sporting events, concerts, conferences, and special services.

INTERACTION NET: Master Plan

1. Administration (SOE), 2. Church Facility, 3. Community Center, 4. Community Garden, 5. Entry / Boulevard, 6. Green Space, 7. Landscape (Hardscape), 8. Landscape (Softscape), 9. Library (SOE), 10. Outdoor Amphitheater, 11. Parking (Above Grade), 12. Parking (Below Grade), 13. Pedestrian / Bicycle Linkages, 14. Prayer Pavilion, 15. Recreational Areas (Active), 16. Recreational Areas (Passive), 17. School of Evangelism, 18. Sports Facility, 19. Student Housing (SOE), 20. Vehicle Circulation



Essential —————
Desirable - - - - -



Essential —————
 Desirable - - - - -

PROGRAMMATIC REQUIREMENTS: Master Plan

SCHOOL OF EVANGELISM

Administration:	75,000 SF
School of Evangelism:	400,000 SF
Library:	50,000 SF
Sports Facility:	100,000 SF
Student Housing:	300,000 SF

Total: **925,000 SF**

AURORA FIRST ASSEMBLY

Church Facility:	75,000 SF
Community Center:	65,000 SF
Community Garden:	2,500 SF
Outdoor Amphitheater:	15,000 SF
Prayer Pavilion:	5,000 SF

Total: **162,500 SF**

LANDSCAPE / ROADWAY / PEDESTRIAN

Entry / Boulevard:	150,000 SF
Green Space:	500,000 SF
Landscape (Hardscape):	100,000 SF
Landscape (Softscape):	500,000 SF
Pedestrian / Bicycle Linkages:	300,000 SF
Recreational Areas (Active):	50,000 SF
Recreational Areas (Passive):	870,000 SF
Vehicle Circulation:	1,100,000 SF

Total: **3,570,000 SF**

PARKING: Above Grade

Administration:	37,500 SF
Church Facility:	50,000 SF
Community Center:	75,000 SF
Library:	25,000 SF
School of Evangelism:	400,000 SF
Sports Facility:	300,000 SF

Total Area: **887,500 SF**

TOTAL AREA: **5,545,000 SF**

PARKING: Below Grade

Sports Facility:	20,000 SF
------------------	-----------

Total Area: **20,000 SF**

LOT AREA: **125 ACRES or 5,545,000 SF**

PROGRAM REQUIREMENTS

INTERACTION MATRIX: Community Center



	Auditorium	Administration	Cafe / Coffee Shop	Childcare Center	Community Courtyard	Conference Room	Counseling	Entrance / Lobby	Exercise Studio	Fellowship Hall	Gymnasium	Kitchen	Mechanical / Electrical	Parking	Prayer Lounge	Private Toilets	Public Toilets	Receptionist	Resource Center	Storage / Custodial	
Auditorium		Desirable	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Essential	Not Needed	Desirable	Not Needed	Not Needed	Desirable	Essential	Not Needed	Not Needed	Essential	Desirable	Desirable	Desirable	Not Needed
Administration	Desirable		Not Needed	Desirable	Desirable	Essential	Desirable	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Essential	Not Needed	Desirable	Essential	Desirable	Desirable
Cafe / Coffee Shop	Not Needed	Not Needed		Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Essential	Not Needed	Not Needed	Desirable	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Desirable
Childcare Center	Not Needed	Desirable	Not Needed		Desirable	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Desirable	Not Needed	Not Needed	Desirable	Not Needed	Not Needed
Community Courtyard	Essential	Desirable	Essential	Desirable		Not Needed	Not Needed	Desirable	Not Needed	Essential	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Desirable	Desirable	Desirable	Essential
Conference Room	Not Needed	Essential	Not Needed	Not Needed	Not Needed		Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Counseling	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed		Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable
Entrance / Lobby	Essential	Essential	Not Needed	Desirable	Desirable	Desirable	Not Needed		Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed
Exercise Studio	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed		Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed
Fellowship Hall	Desirable	Not Needed	Essential	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed		Not Needed	Essential	Desirable	Not Needed	Desirable	Not Needed	Essential	Essential	Not Needed	Not Needed	Not Needed
Gymnasium	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Desirable	Essential	Not Needed		Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Essential	Essential	Not Needed	Not Needed	Not Needed
Kitchen	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed		Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Not Needed	Not Needed
Mechanical / Electrical	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed		Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed
Parking	Essential	Essential	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Desirable	Not Needed	Not Needed	Not Needed		Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable
Prayer Lounge	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed		Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable
Private Toilets	Not Needed	Essential	Desirable	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed		Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Public Toilets	Essential	Not Needed	Desirable	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed		Desirable	Not Needed	Not Needed	Not Needed
Receptionist	Desirable	Desirable	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Essential	Essential	Desirable	Desirable	Not Needed	Not Needed	Not Needed	Desirable		Not Needed	Not Needed	Not Needed
Resource Center	Desirable	Essential	Not Needed	Desirable	Desirable	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed		Not Needed	Desirable
Storage / Custodial	Not Needed	Desirable	Desirable	Not Needed	Essential	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	

PROGRAM DESCRIPTIONS

Auditorium

The auditorium will be a multi-purpose space. It will function primarily as an assembly space for worship with moveable partitions that will form smaller rooms for meeting spaces and prayer. This space may require a stage of some sort that will be flexible to change as the venue itself does. Natural indirect lighting should a priority for this space.

Childcare Center

The childcare center will be an area where children three months to five years of age can be in a secure environment. It will include activities for fine and large motor skills, as well as cognitive development. The childcare center will be a safe location for children to be social, learn, and have fun. A drop off location for parents is desirable.

Community Courtyard

The community courtyard will be a central location that connects the main spaces. Within this space there should be a café with open seating. This space will have natural lighting and provide an environment for people to gather for conversation or lunch. It will also serve as a circulation spine for the building.

Fellowship Hall

The fellowship hall will be a community-gathering place. The space will be multi-purpose and within close proximity to the Auditorium. It could be used for meetings, receptions, and community potlucks or events. This space will need to have some sort of

distinctive architectural character in order to create an atmosphere appropriate for social events or wedding receptions.

Gymnasium

The gymnasium will be a recreational space for basketball and other associated indoor activities. This space should have a tall ceiling, while revealing the architectural character of the structure. This space will require storage spaces for equipment. Located somewhere nearby should be family, and men's and women's locker rooms. This space will be the focal point for the recreational portion of the community center.

Prayer Lounge

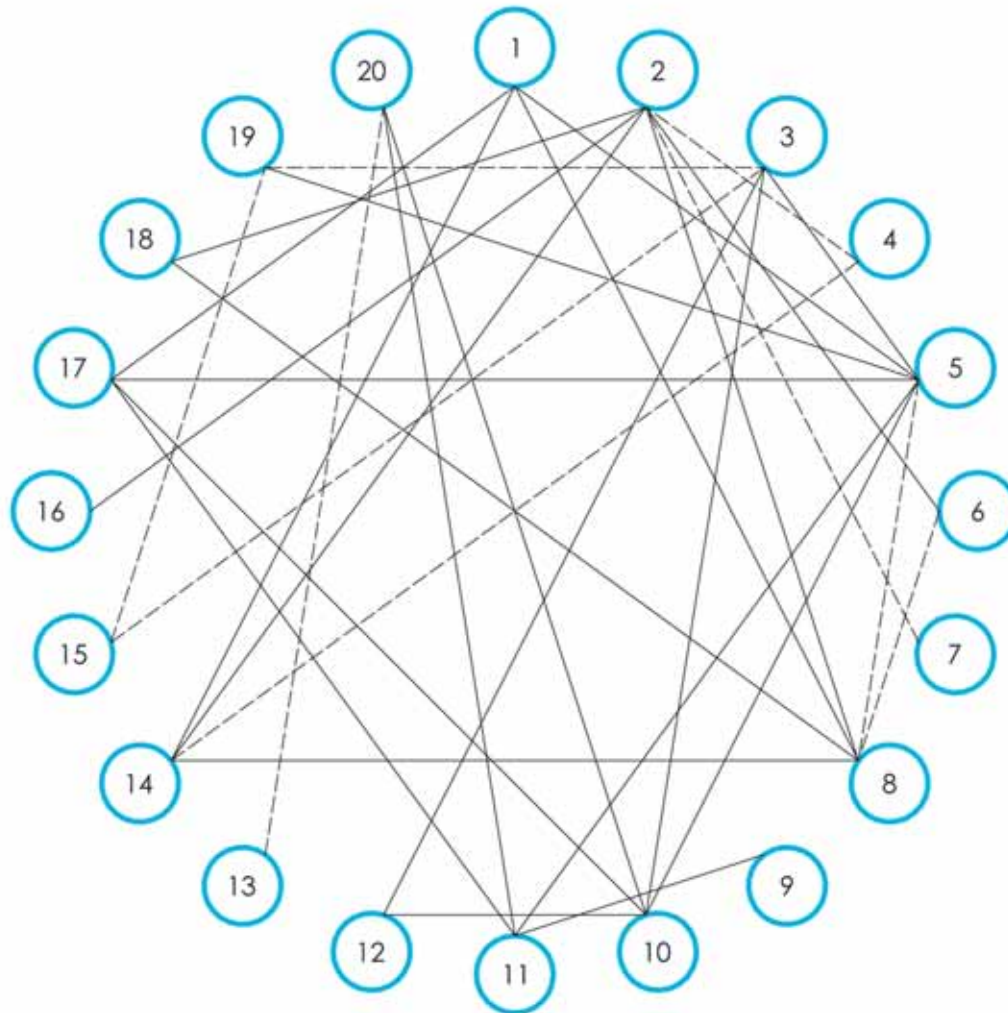
The prayer lounge will be in a more private yet easily accessible location. The function of this space will be to allow individuals or small groups to seek the Lord in prayer. It should have comfortable seating and lighting to provide an environment that is inviting and suitable for prayer.

Resource Center

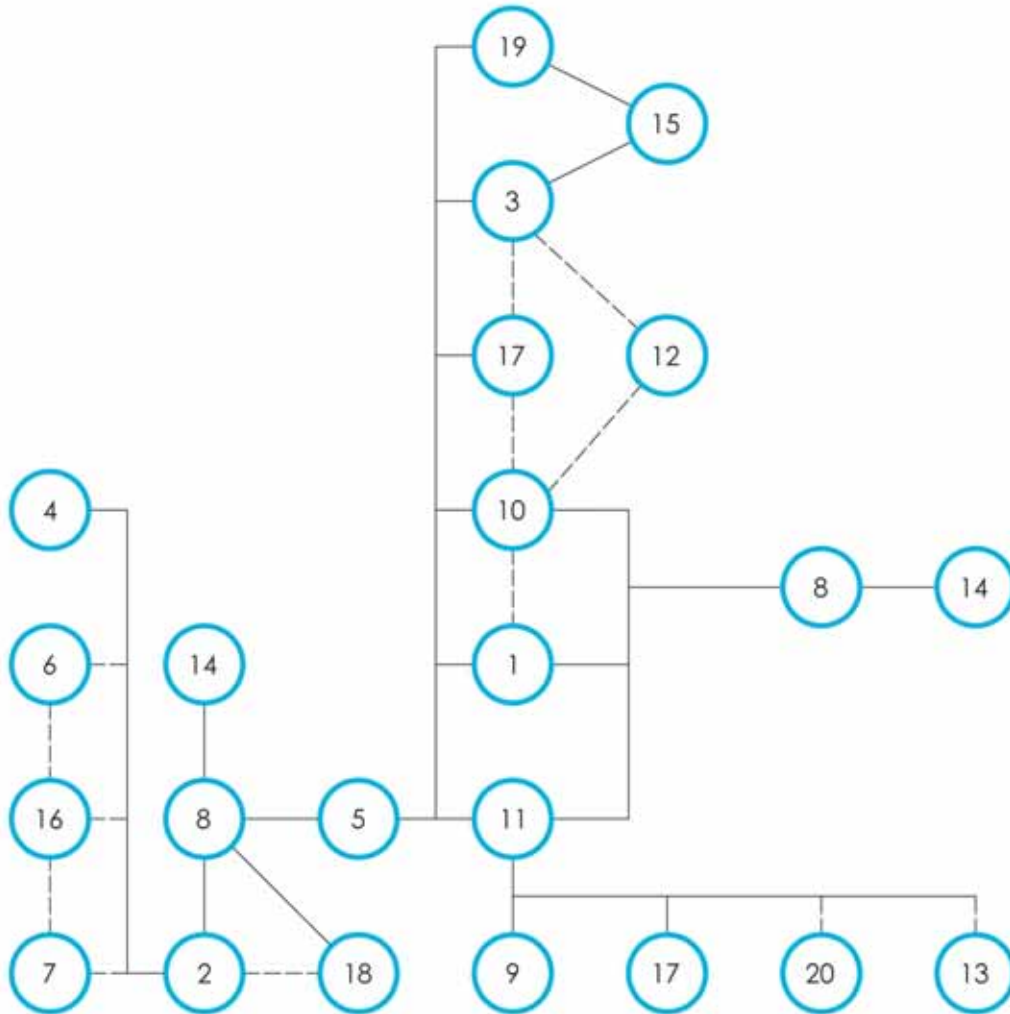
The resource center will be in an open area that is central to the building. It will have information and resources available to guests and first time users of the community center. It will be welcoming and inviting space with a central location within the Community Courtyard.

INTERACTION NET: Community Center

1. Auditorium, 2. Administration, 3. Cafe / Coffee Shop, 4. Childcare Center, 5. Community Courtyard, 6. Conference Room, 7. Counseling, 8. Entrance / Lobby, 9. Exercise Studio, 10. Fellowship Hall, 11. Gymnasium, 12. Kitchen, 13. Mechanical / Electrical, 14. Parking, 15. Prayer Lounge, 16. Private Toilets, 17. Public Toilets, 18. Receptionist, 19. Resource Center, 20. Storage / Custodial



Essential —————
Desirable - - - - -



Essential ———
 Desirable - - - - -

PROGRAMMATIC REQUIREMENTS: Community Center

ADMINISTRATION

Offices:	1,250 SF	Public Toilets:	1,500 SF
Conference Room:	500 SF	Resource Center:	2,250 SF
Private Toilets:	1,000 SF		
Staff Lounge:	350 SF	Total:	24,000 SF
Counseling:	1,000 SF		

Total: 4,100 SF

PUBLIC: Recreational

Fitness Studio A:	1,500 SF
Fitness Studio B:	1,500 SF
Gymnasium:	7,500 SF
Men's Lockers:	2,500 SF
Women's Lockers:	2,500 SF
Family Lockers:	1,500 SF
Racquetball Courts:	2,000 SF
Weight Training:	2,500 SF

Total: 21,500 SF

PUBLIC: Gathering

Auditorium:	5,500 SF
Cafe / Coffee Shop:	750 SF
Childcare Center:	2,500 SF
Community Courtyard:	4,000 SF
Fellowship Hall:	3,500 SF
Kitchen:	1,500 SF
Prayer Lounge:	500 SF
Community Education:	2,000 SF

AUXILLARY

Mechanical / Electrical:	1,500 SF
Storage / Custodial:	1,000 SF
Lobby / Reception:	1,000 SF

Total: 3,500 SF

Total Area: 53,100 SF

Circulation / Entrance (20 %): 10,600 SF

TOTAL AREA: 63,700 SF

PROGRAM REQUIREMENTS

INTERACTION MATRIX: Church Facility

- Essential
- Desirable
- Not Needed

- Administration
- Cafe / Coffee Shop
- Childcare Center
- Conference Room
- Education Classrooms
- Entrance / Lobby
- Fellowship Hall
- Gathering Space
- Kitchen
- Mechanical / Electrical
- Meeting Rooms
- Parking
- Pastoral Resource Library
- Prayer Lounge
- Private Toilets
- Public Toilets
- Receptionist
- Sanctuary
- Storage / Custodial
- Youth Fellowship

- Administration
- Cafe / Coffee Shop
- Childcare Center
- Conference Room
- Education Classrooms
- Entrance / Lobby
- Fellowship Hall
- Gathering Space
- Kitchen
- Mechanical / Electrical
- Meeting Rooms
- Parking
- Pastoral Resource Library
- Prayer Lounge
- Private Toilets
- Public Toilets
- Receptionist
- Sanctuary
- Storage / Custodial
- Youth Fellowship

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PROGRAM DESCRIPTIONS

Administration

The administration wing for the church facility should be a welcoming place for pastors and members of the community to connect and meet together. This wing should be located in an area where the staff and community are not distracted by others, and feel safe to develop relationships and talk about private issues. These pastoral offices should be placed in close proximity to other administrative spaces with access to private restrooms and other staff amenities.

Cafe / Coffee Shop

The cafe and coffee shop will provide services for both the community center and church facility. It should be in a location close to the fellowship hall in case it will be used during social gatherings or larger events. The layout should be very open with tables for visitors to sit and grab lunch or coffee with one another.

Education Classrooms

The education wing for the church facility will be used for both church and community education. There will be dedicated rooms for church education and additional multipurpose spaces for community educational spaces.

Gathering Space

The gathering space for the sanctuary will become a place of transition, social interaction, and invitation. This space should be visually engaging with natural lighting and furnishings for people to inter-

act and have relaxed conversations. The architecture should be stimulating and create an excitement for the worship experience.

Meeting Rooms

The meeting rooms should be in close proximity to the education wing and will be used for bible study, social, support, or community groups. These spaces should have close connection to both the community center and church facility. Meeting rooms may also be used for educational purposes.

Sanctuary

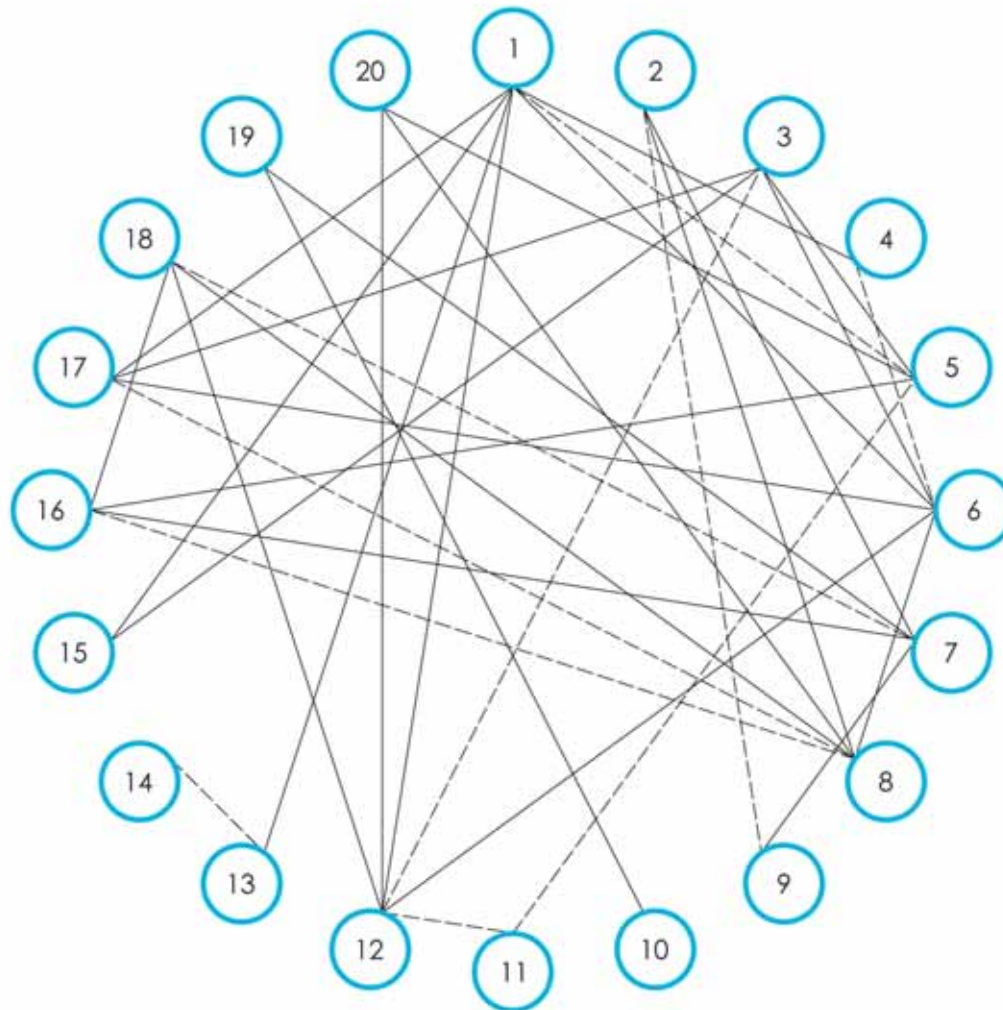
The sanctuary will become a focal point for both the community and church facility. Significant emphasis will be placed on both the interior and exterior portion of the design. The worship space will include area for a large platform and altar space. There should be seating for approximately 2000. Floor seating should dominate the majority of the area with some overflow seating in the balcony.

Youth Fellowship

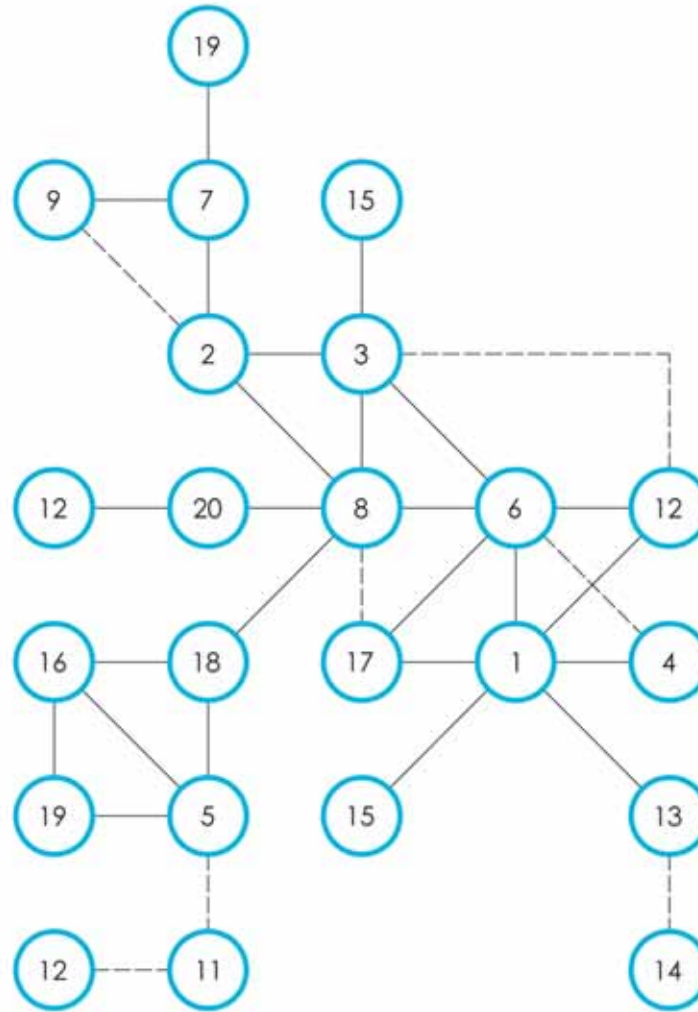
The youth fellowship space should accommodate approximately 300 students with spaces for a small band, lounge area, and games. This room should be closely connected to the education wing and the architecture should be upbeat with modern influences to create a stimulating environment for both teens and young adults.

INTERACTION NET: Church Facility

1. Administration, 2. Cafe / Coffee Shop, 3. Childcare Center, 4. Conference Room, 5. Education Classrooms, 6. Entrance / Lobby, 7. Fellowship Hall, 8. Gathering Space, 9. Kitchen, 10. Mechanical / Electrical, 11. Meeting Rooms, 12. Parking, 13. Pastoral Resource Library, 14. Prayer Lounge, 15. Private Toilets, 16. Public Toilets, 17. Receptionist, 18. Sanctuary, 19. Storage / Custodial, 20. Youth Fellowship



Essential —————
Desirable - - - - -



Essential —————
Desirable - - - - -

PROGRAMMATIC REQUIREMENTS: Church Facility

INTERACTION MATRIX: Church Facility

Offices:	3,000 SF
Conference Room:	1,000 SF
Private Toilets:	1,000 SF
Pastoral Resource Library:	750 SF
Receptionist:	500 SF

Total: 6,250 SF

AUXILLARY

Mechanical / Electrical:	4,500 SF
Storage / Custodial:	2,000 SF
Lobby / Reception:	2,500 SF

Total: 9,000 SF

Total Area: 71,000 SF

PUBLIC: Educational

Classroom Setting A:	5,000 SF
Classroom Setting B:	3,000 SF
Community Education:	2,000 SF
Meeting Rooms:	2,000 SF
Public Restroom:	1,000 SF

Total: 12,000 SF

Circulation / Entrance (20 %): 14,200 SF

TOTAL AREA: 85,200 SF

PUBLIC: Gathering

Cafe / Coffee Shop:	750 SF
Childcare Center:	2,500 SF
Fellowship Hall:	3,500 SF
Gathering Space:	2,500 SF
Kitchen:	1,500 SF
Prayer Lounge:	2,500 SF
Public Restroom:	1,500 SF
Sanctuary:	25,000 SF
Youth Fellowship:	4,000 SF

Total: 43,750 SF

PROGRAMMATIC REQUIREMENTS

INTERACTION MATRIX: Combined Facility



Auditorium
Administration
Cafe / Coffee Shop
Childcare Center
Community Courtyard
Conference Room
Counseling
Entrance / Lobby
Exercise Studio
Fellowship Hall
Gymnasium
Kitchen
Mechanical / Electrical
Parking
Prayer Lounge
Private Toilets
Public Toilets
Receptionist
Resource Center
Storage / Custodial

	Administration	Cafe / Coffee Shop	Childcare Center	Conference Room	Education Classrooms	Entrance / Lobby	Fellowship Hall	Gathering Space	Kitchen	Mechanical / Electrical	Meeting Rooms	Parking	Pastoral Resource Library	Prayer Lounge	Private Toilets	Public Toilets	Receptionist	Sanctuary	Storage / Custodial	Youth Fellowship
Auditorium	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Essential	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Overlapping Program	Not Needed	Overlapping Program
Administration	Essential	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Cafe / Coffee Shop	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed
Childcare Center	Not Needed	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed
Community Courtyard	Not Needed	Essential	Not Needed	Not Needed	Essential	Essential	Overlapping Program	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Essential	Essential	Not Needed	Not Needed
Conference Room	Essential	Not Needed	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Counseling	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Entrance / Lobby	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed
Exercise Studio	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Fellowship Hall	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Overlapping Program	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed
Gymnasium	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Kitchen	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Mechanical / Electrical	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed
Parking	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Prayer Lounge	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed
Private Toilets	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Public Toilets	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed	Not Needed
Receptionist	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Overlapping Program	Not Needed	Not Needed	Not Needed
Resource Center	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed
Storage / Custodial	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Overlapping Program	Not Needed

SHARING SPACES

Administration

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Sanctuary

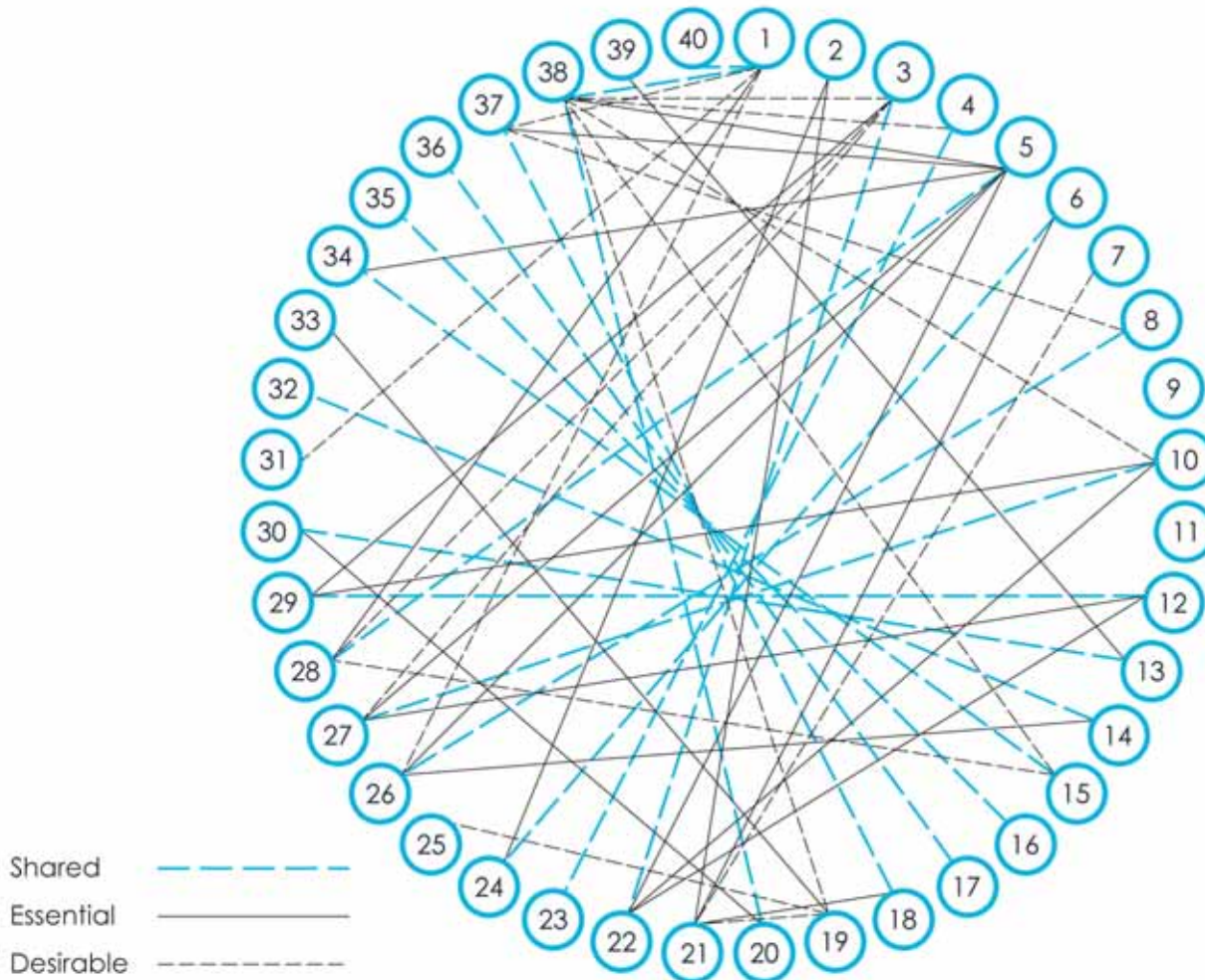
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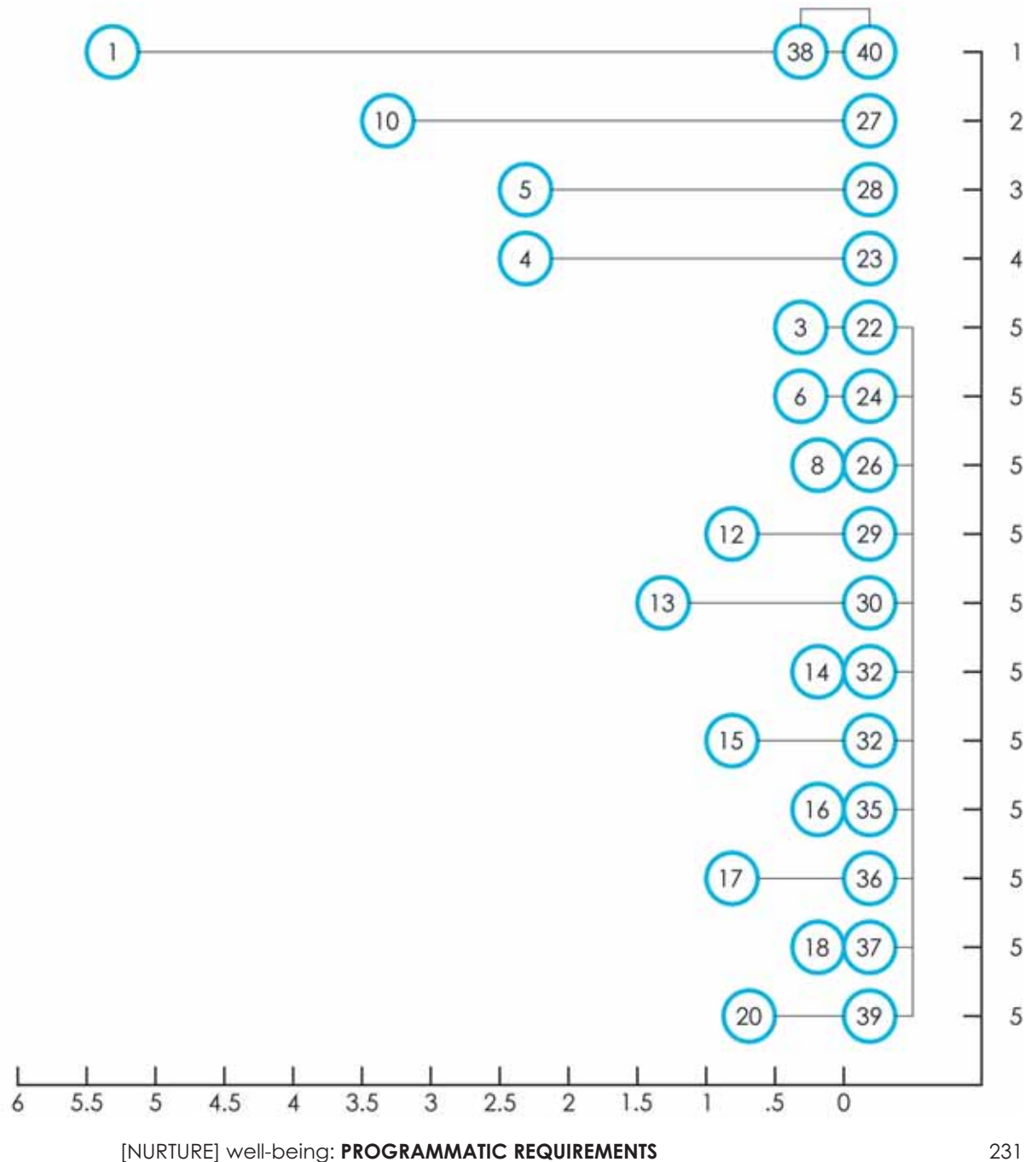
INTERACTION NET: Combined Facility

1. Auditorium, 2. Administration, 3. Cafe / Coffee Shop, 4. Childcare Center, 5. Community Courtyard, 6. Conference Room, 7. Counseling, 8. Entrance / Lobby, 9. Exercise Studio, 10. Fellowship Hall, 11. Gymnasium, 12. Kitchen, 13. Mechanical / Electrical, 14. Parking, 15. Prayer Lounge, 16. Private Toilets, 17. Public Toilets, 18. Storage / Custodial, 19. Receptionist, 20. Resource Center, 21. Administration, 22. Cafe / Coffee Shop, 23. Childcare Center, 24. Conference Room, 25. Education Classrooms, 26. Entrance / Lobby, 27. Fellowship Hall, 28. Gathering Space, 29. Kitchen, 30. Mechanical / Electrical, 31. Meeting Rooms, 32. Parking, 33. Pastoral Resource Library, 34. Prayer Lounge, 35. Private Toilets, 36. Public Toilets, 37. Receptionist, 38. Sanctuary, 39. Storage / Custodial, 40. Youth Fellowship



INTERACTION NET: Combined Facility

The chart below represents relationships between the community center and church facility. The y-axis ranks spatial hierarchy while the x-axis displays the proposed reduction in square footage (in 1,000's) in spaces of interest.

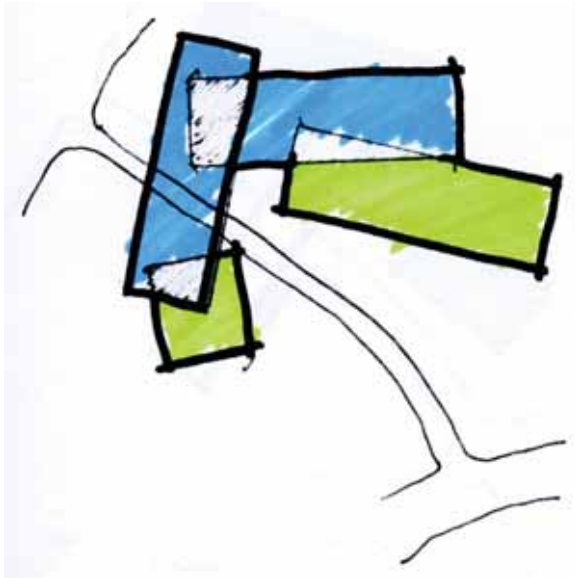


[NURTURE]well-being

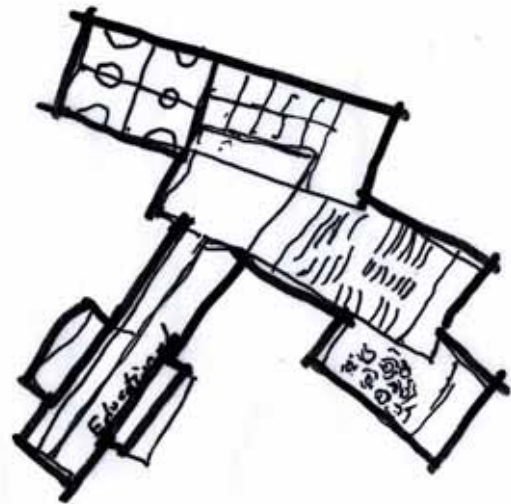
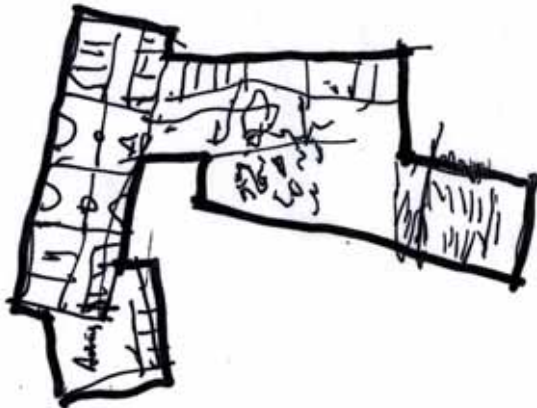
7.0 Design Solution.

PROCESS: SITE LAYOUT OPTIONS

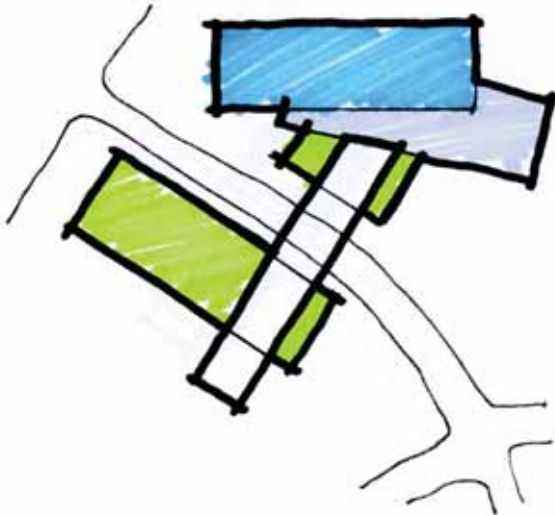
OPTION A



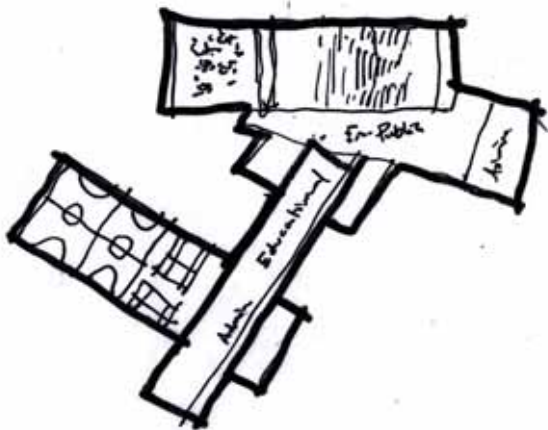
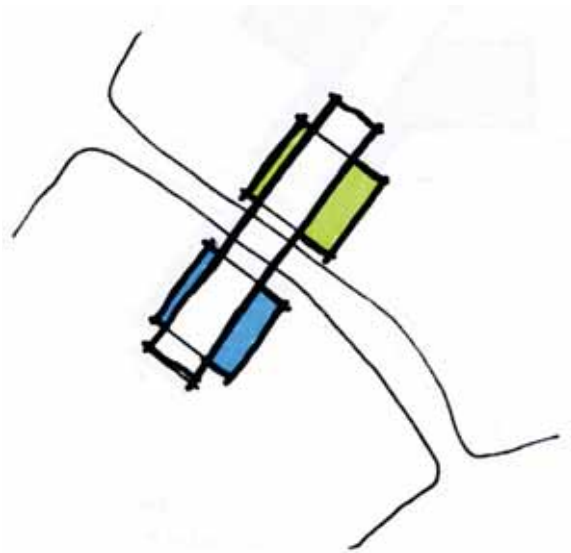
OPTION B



OPTION C

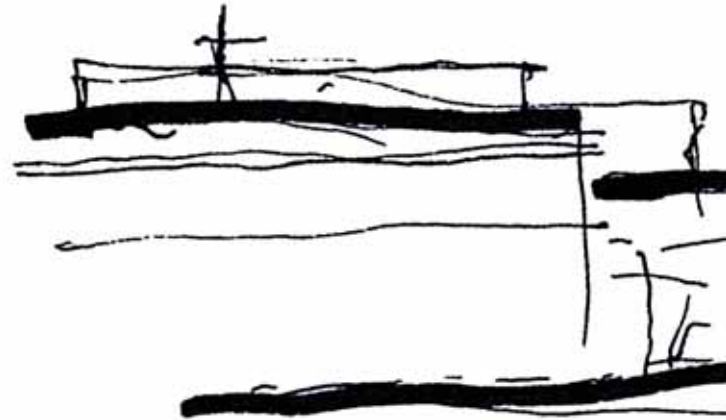
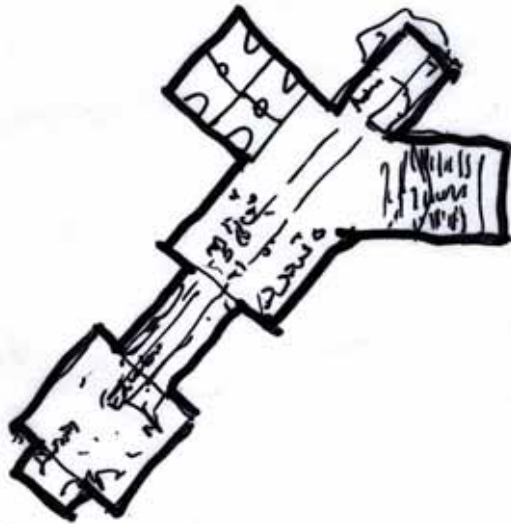
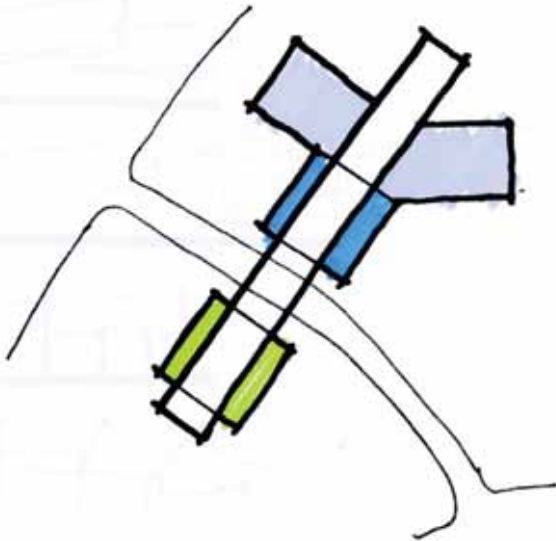


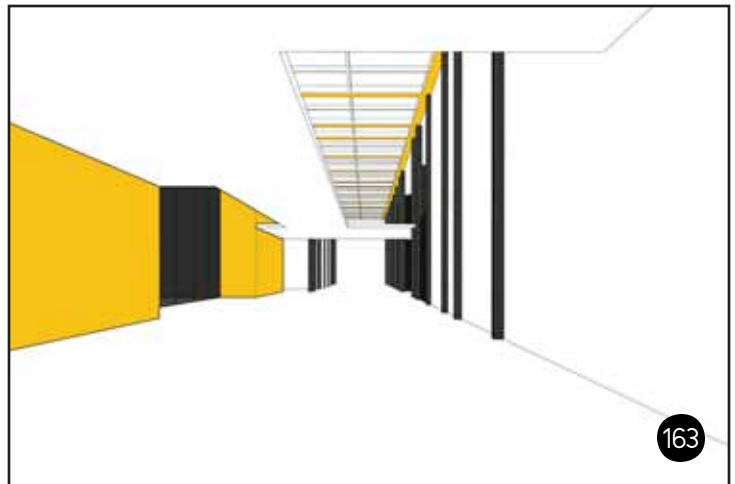
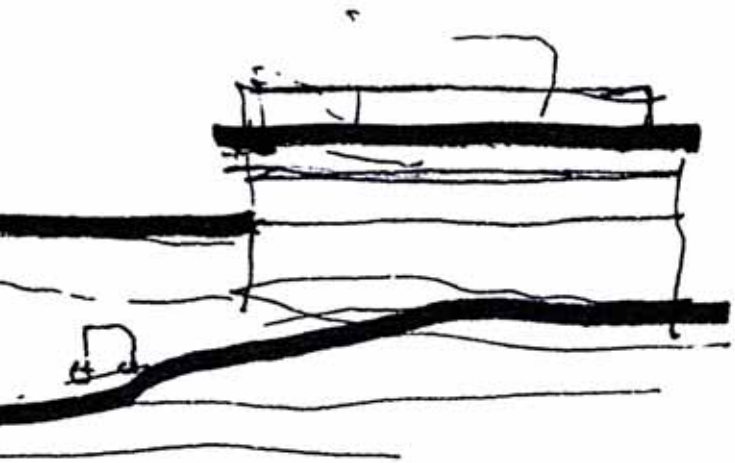
OPTION D



PROCESS: SITE LAYOUT OPTIONS

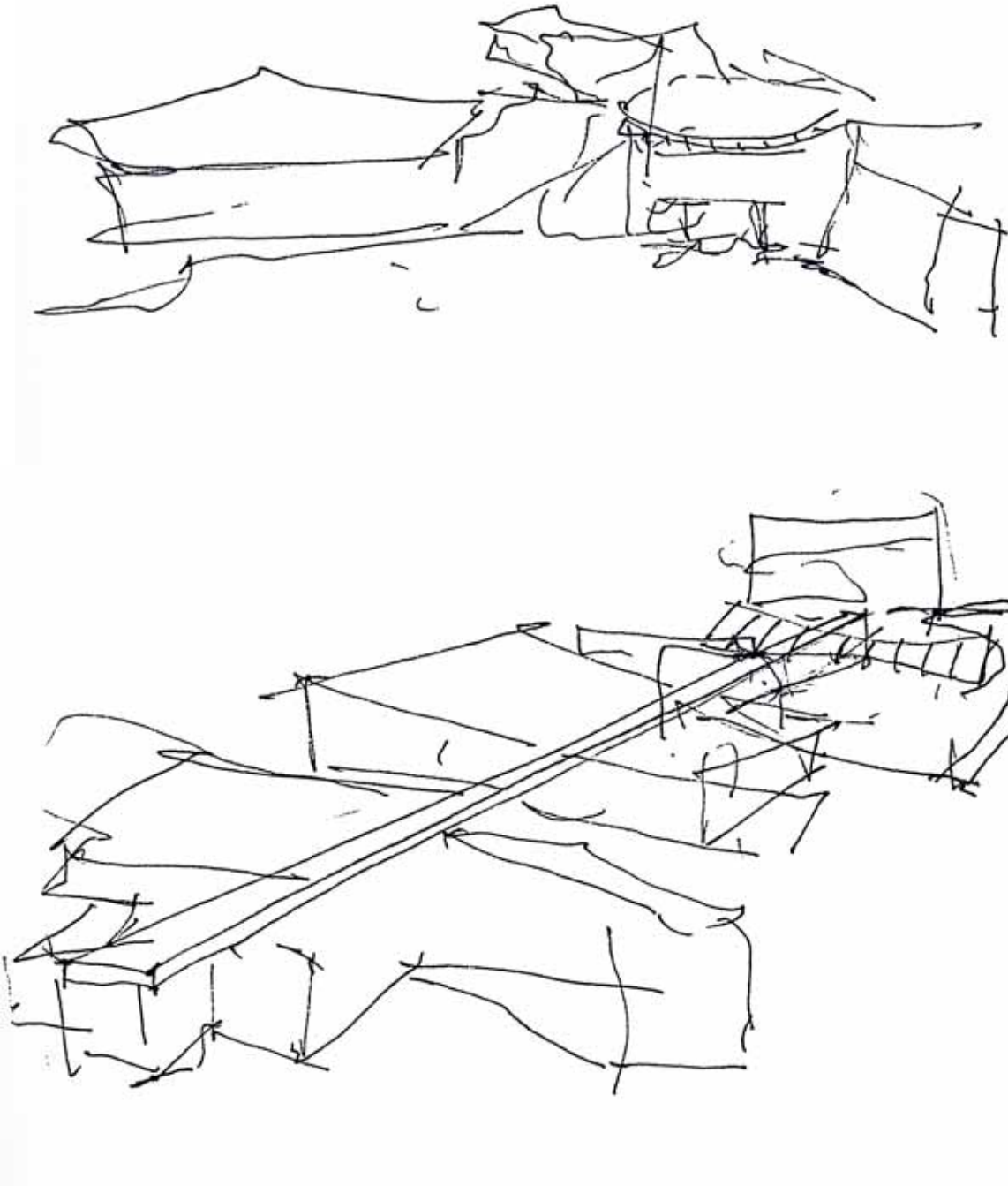
OPTION E

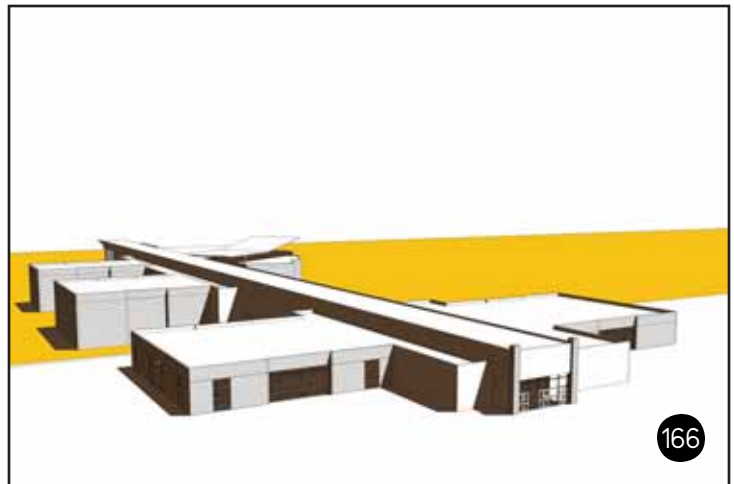
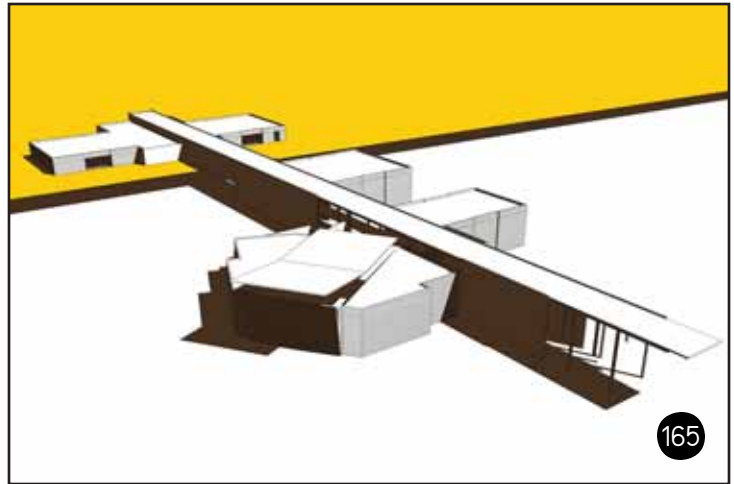




PROCESS: SKETCHES

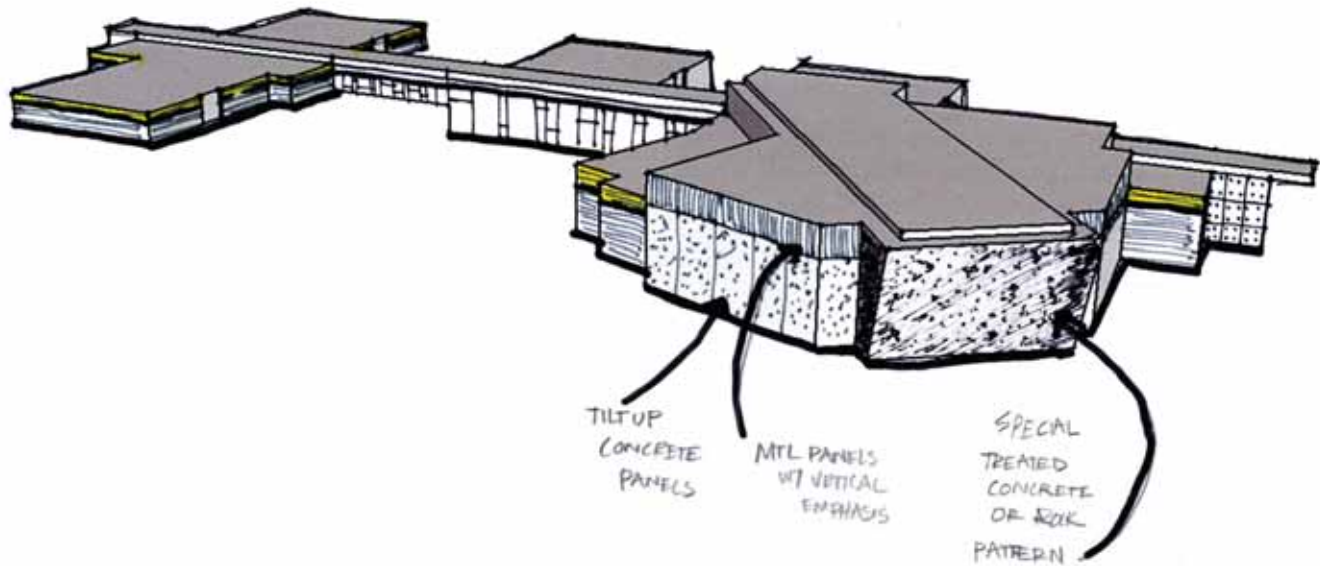
CIRCULATION SPINE

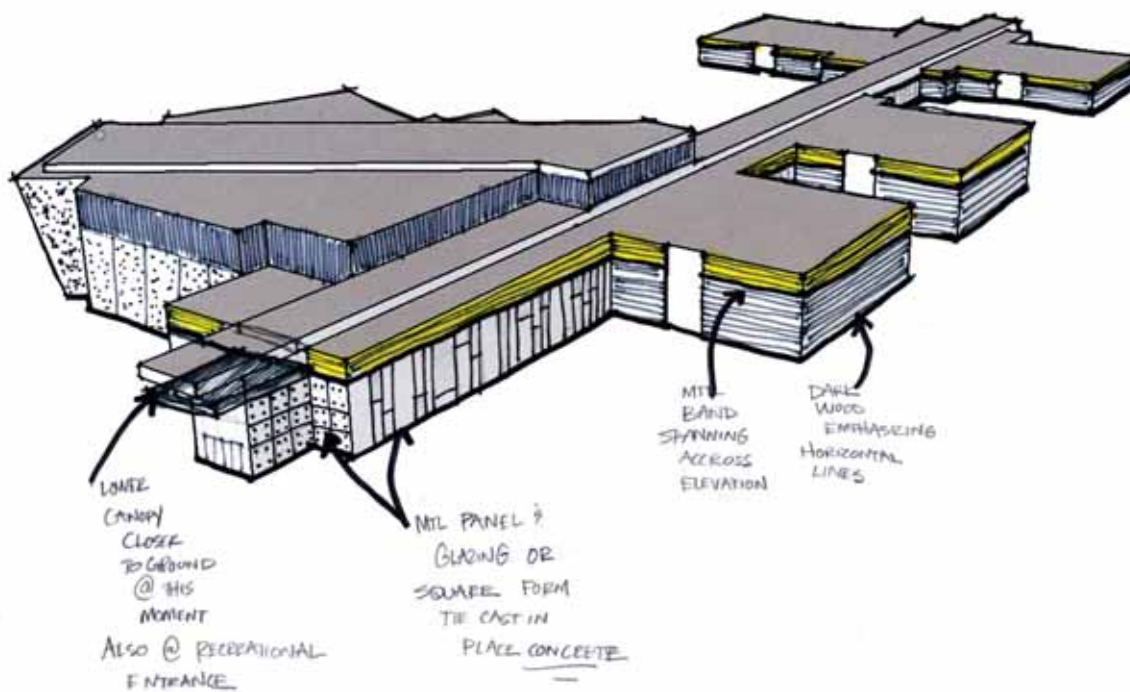




PROCESS: MATERIAL SELECTION

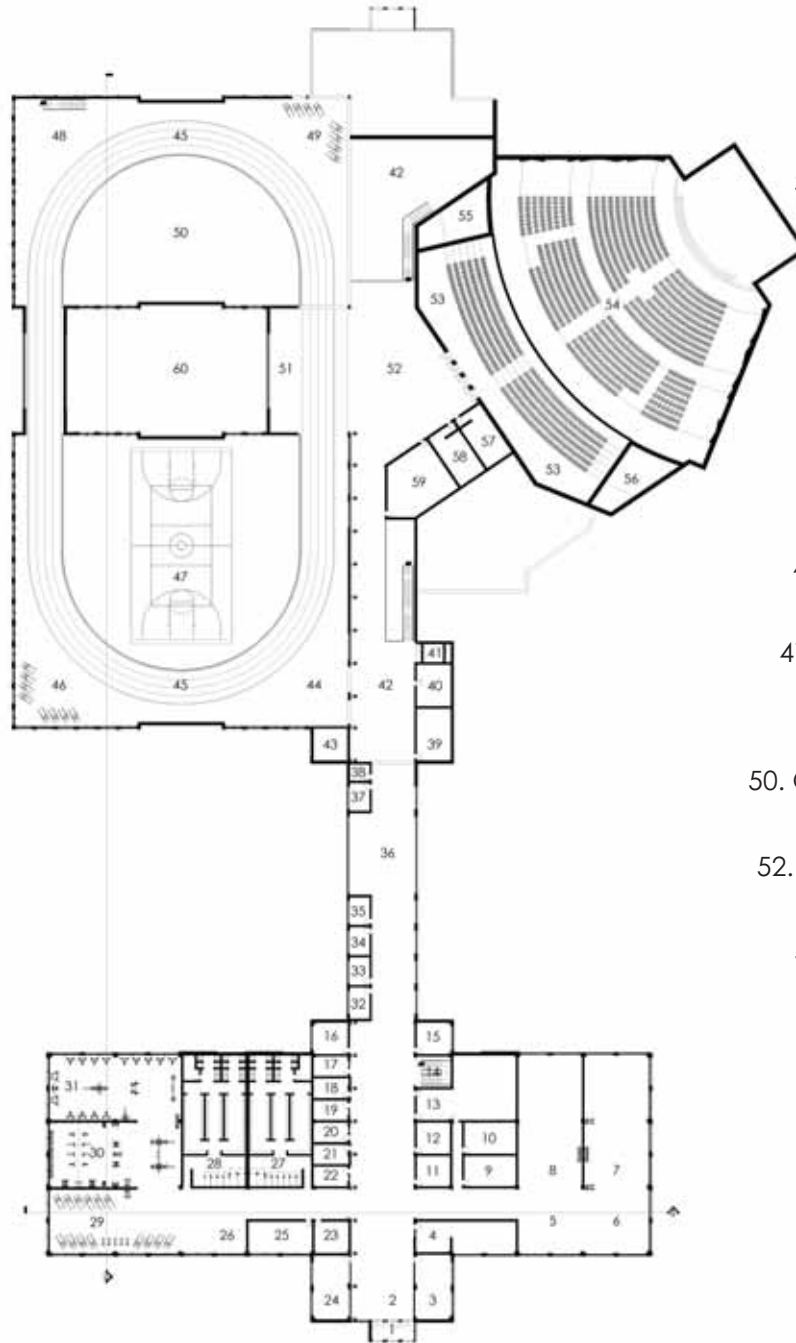
METAL PANEL
SITECAST CONCRETE
WOOD VENEER





UPPER FLOOR PLAN

- 01. Vestibule
- 02. Circulation Spine
- 03. Resource Center
- 04. Administration
- 05. Fitness Studio A
- 06. Fitness Studio B
- 07. Fitness Studio C
- 08. Fitness Studio D
- 09. Community Education
- 10. Community Education
- 11. Community Education
- 12. Community Education
- 13. Computer Lab
- 14. Stairs to Lower Level
- 15. Mechanical
- 16. Electrical
- 17. Office
- 18. Office
- 19. Office
- 20. Counseling
- 21. Counseling
- 22. Counseling
- 23. Custodial
- 24. Conference Room
- 25. Personal Training
- 26. Stretching
- 27. Women's Locker Room
- 28. Men's Locker Room
- 29. Cardio Area
- 30. Weight Training
- 31. Fitness Training
- 32. Meeting Room

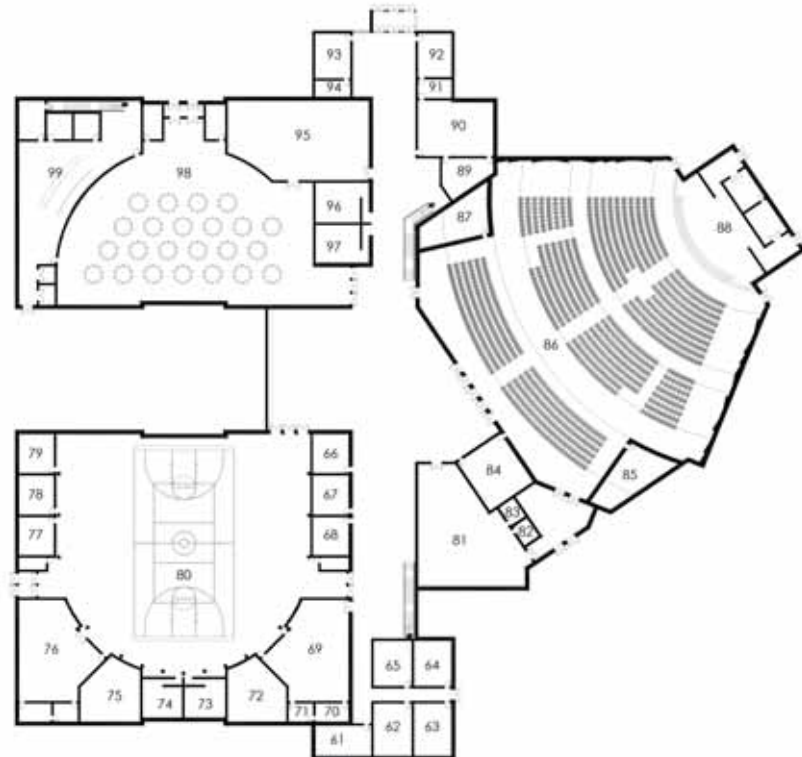


- 33. Meeting Room
- 34. Meeting Room
- 35. Meeting Room
- 36. Community Lounge
- 37. Meeting Room
- 38. Office
- 39. Mechanical
- 40. Classroom
- 41. Elevator
- 42. Circulation Spine
- 43. Electrical
- 44. Warm-up Area
- 45. 200m Running Track
- 46. Cardio Area
- 47. Open to Gymnasium
- 48. Stairs to Exit
- 49. Cardio Area
- 50. Open to Fellowship Hall
- 51. Lounge
- 52. Upper Level Gathering
- 53. Balcony
- 54. Open to auditorium
- 55. Storage
- 56. Electrical
- 57. Women's Restroom
- 58. Men's Restroom
- 59. Equipment Storage
- 60. Open to Courtyard

LOWER FLOOR PLAN

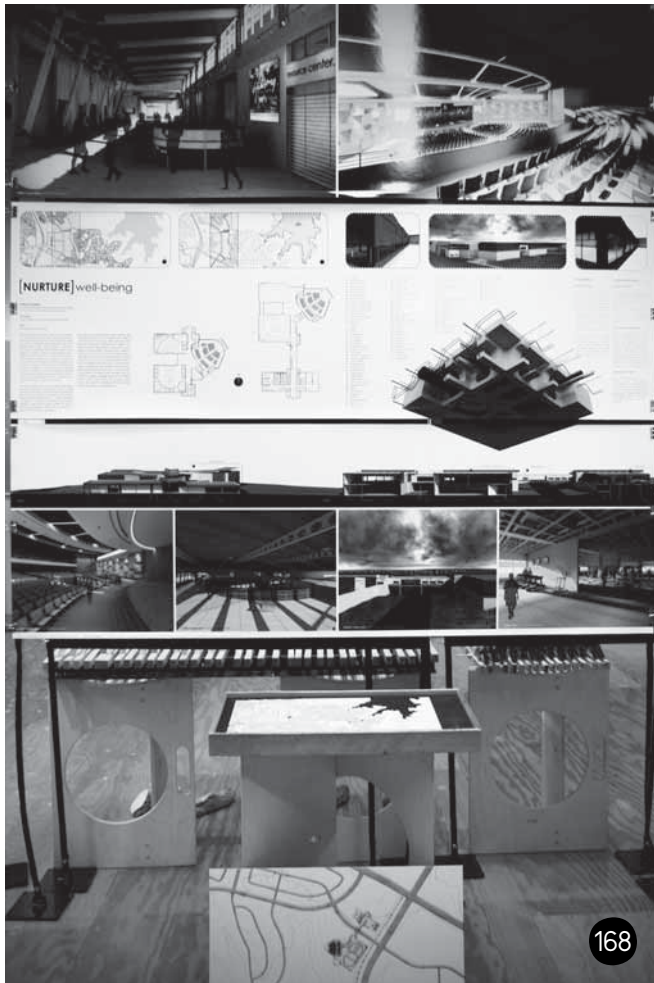
- 61. Mechanical
- 62. Classroom
- 63. Classroom
- 64. Classroom
- 65. Classroom
- 66. Classroom
- 67. Classroom
- 68. Classroom
- 69. Classroom Setting A
- 70. Storage
- 71. Private Toilet
- 72. Mechanical
- 73. Women's Locker Room
- 74. Men's Locker Room
- 75. Storage
- 76. Youth Fellowship
- 77. Office
- 78. Office
- 79. Office
- 80. Multi-purpose Gymnasium
- 81. Childcare Center
- 82. Private Toilet
- 83. Storage
- 84. Prayer Lounge
- 85. Mechanical
- 86. Auditorium
- 87. Electrical
- 88. Stage
- 89. Resource Library
- 90. Administration
- 91. Copy Room
- 92. Conference Room
- 93. Meeting Room

- 94. Storage
- 95. Pastoral Offices
- 96. Women's Restroom
- 97. Men's Restroom
- 98. Fellowship Hall
- 99. Kitchen



FINAL DESIGN LAYOUT

DISPLAY & MODEL (Below)
BOARDS (Right)



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171



[NURTURE] well-being

Project Overview

Location

Client

Program

Design Goals

Key Features

Architectural Details

Interior & Exterior

Materiality & Craftsmanship

Accessibility & Sustainability

Conclusion

Appendix

References

Notes

Site Plan

Section

3D Model





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LOBBY AT MAIN ENTRY. AURORA COMMUNITY CENTER

Structure: Glulam beams, sitecast waffle slab

Ceiling: Wood decking

Flooring: Sealed concrete

Feature: Southern facing clearstory window system & butterfly roof rain collection system



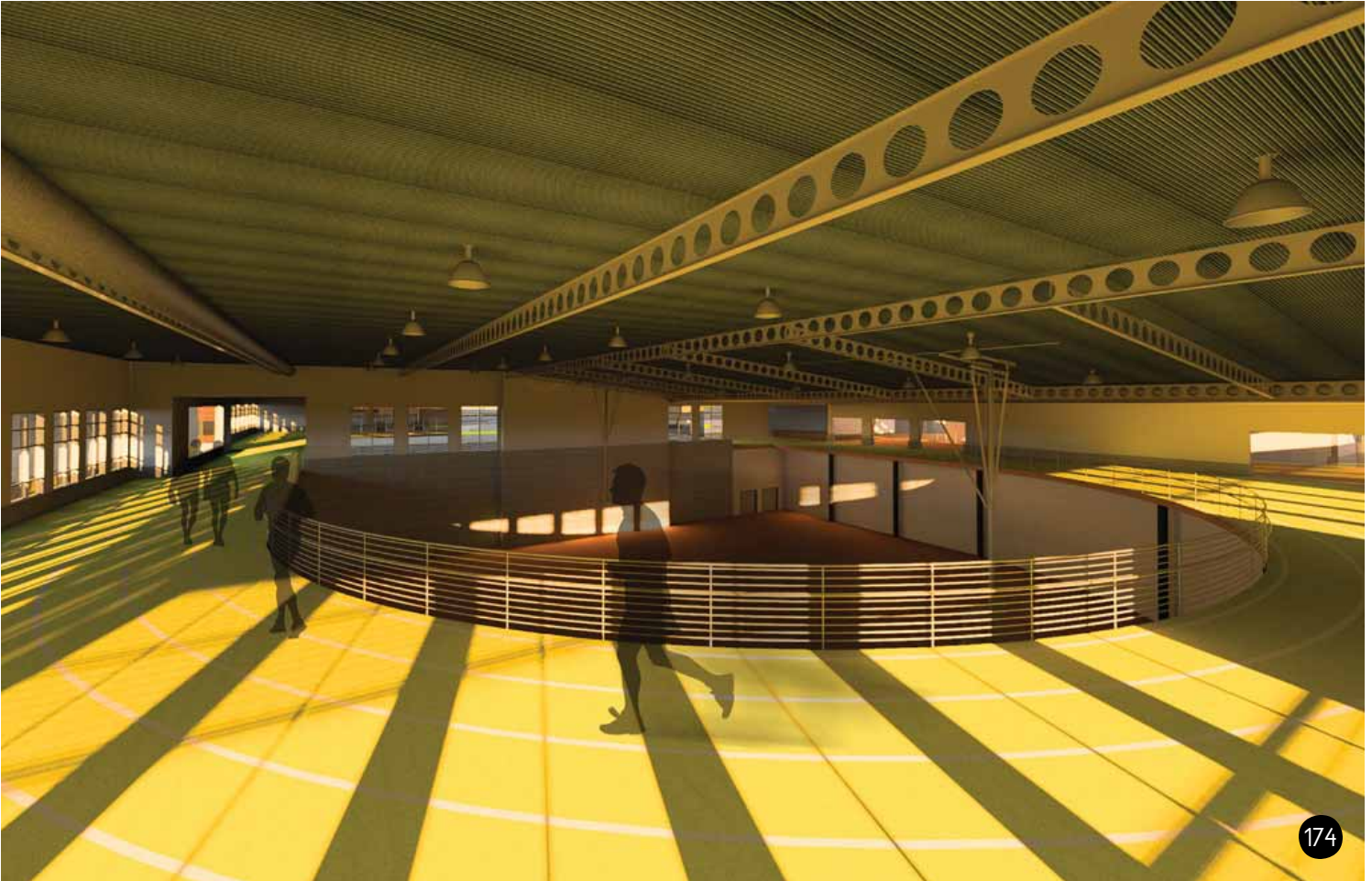
AUDITORIUM. AURORA FIRST ASSEMBLY OF GOD

Structure: Steel joists & composite metal deck

Ceiling: Accoustical wood veneer panels

Flooring: Carpet / sealed concrete

Feature: Diffused lighting & offset accoustical wall panels



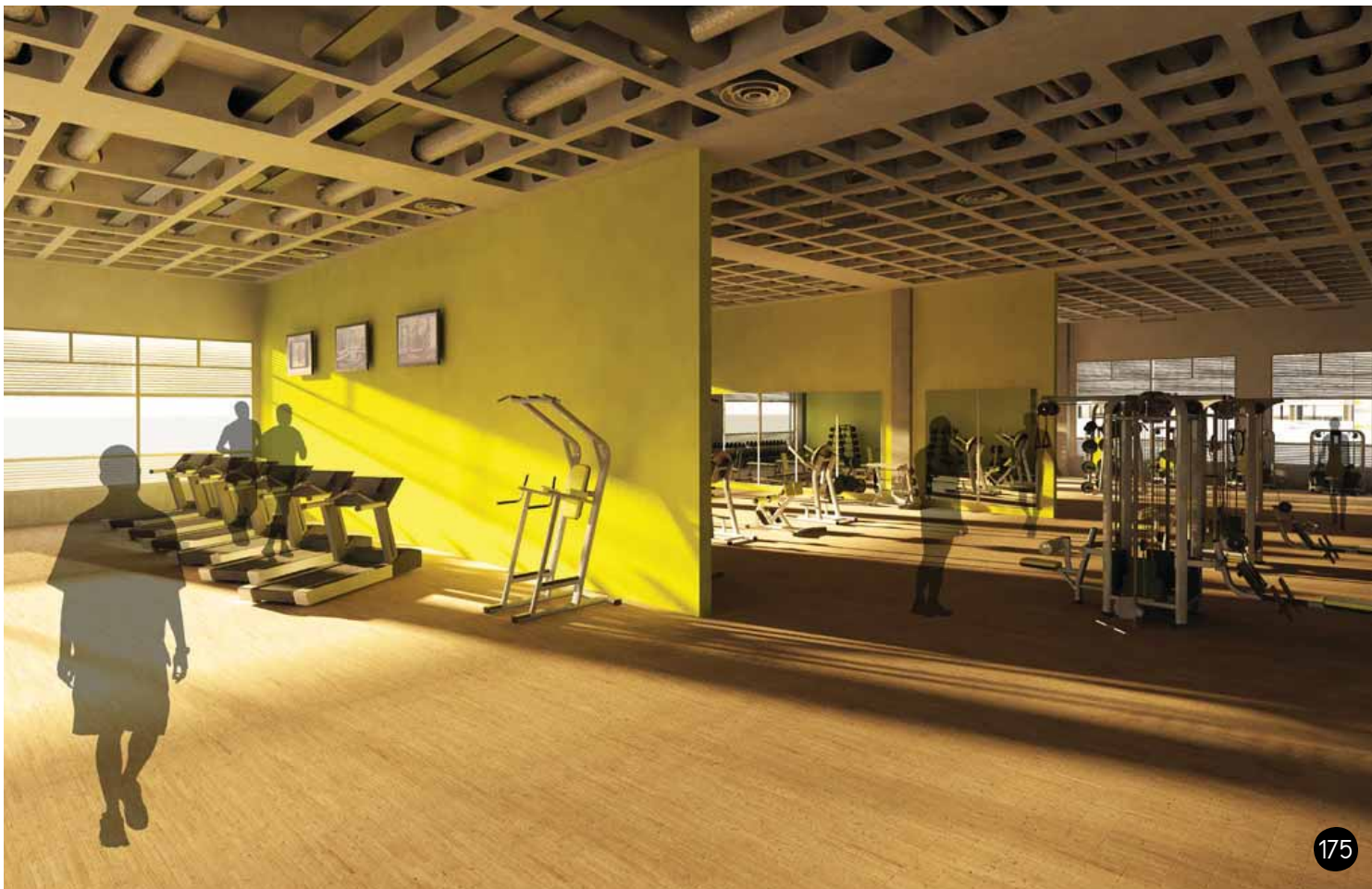
200 METER RUNNING TRACK. AURORA COMMUNITY CENTER

Structure: Cellular beams, steel columns

Ceiling: Exposed composite metal deck

Flooring: Synthetic flooring & hardwood flooring

Feature: Long span structural system & Mezzanine track overlooking gymnasium



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FITNESS AREA. AURORA COMMUNITY CENTER

Structure: Sitecast HoleDECK concrete system

Ceiling: Exposed mechanical / electrical all-in-one system

Flooring: Hardwood flooring

Feature: Structure & exterior wood rain screen system



176

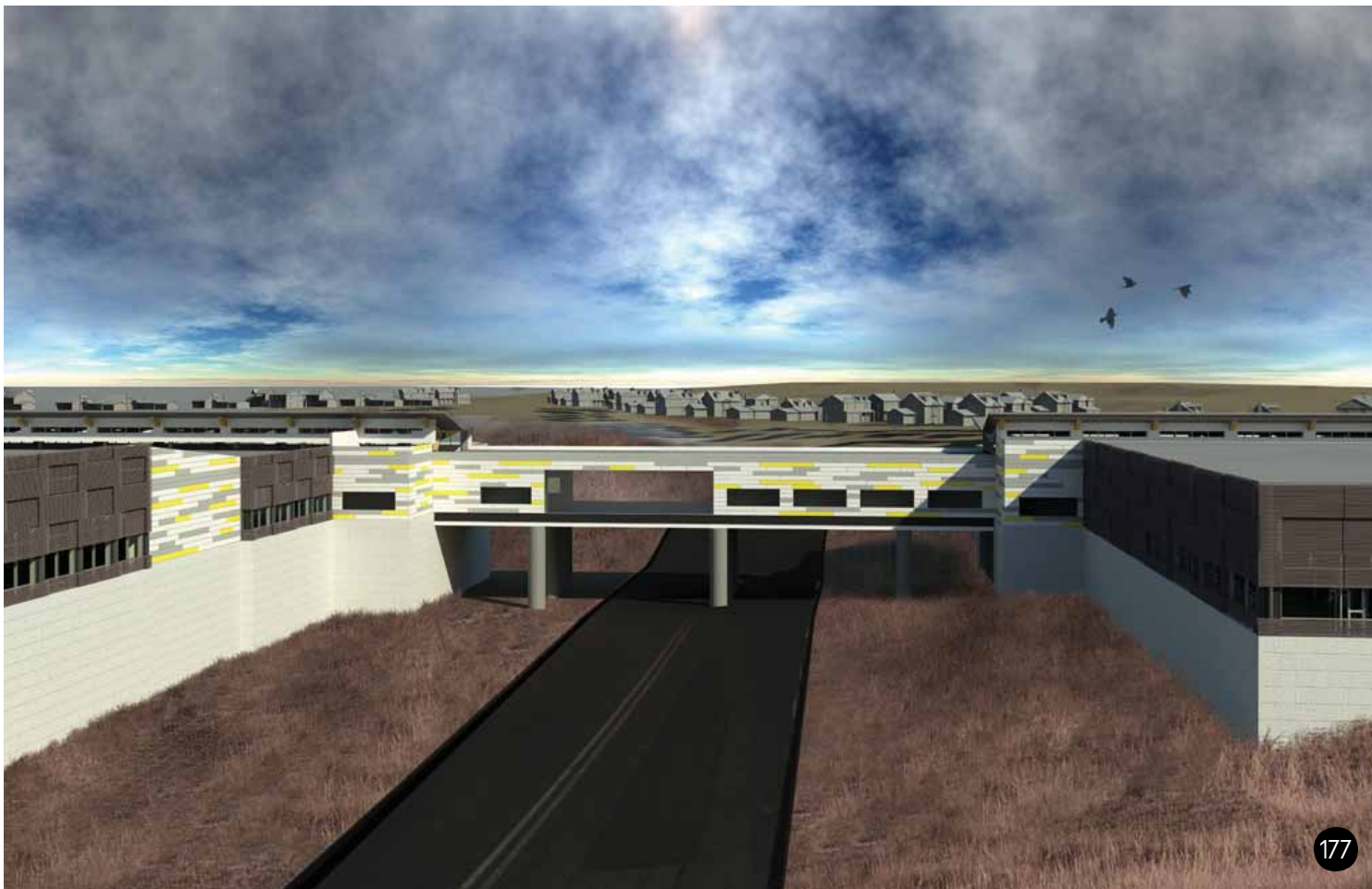
STAGE AT AUDITORIUM. AURORA FIRST ASSEMBLY OF GOD

Structure: Steel joists & composite metal deck

Ceiling: Accoustical wood veneer panels & GWB soffit

Flooring: Carpet / sealed concrete / hardwood flooring

Feature: Multi purpose space to be utilized for church services and a variety of community events



BRIDGE CONNECTION. GATEWAY FROM SOUTHLANDS SHOPPING DISTRICT

Structure: Concrete pillars & steel construction

Facade: Wood rainscreen, metal panel & sitecase concrete

Landscape: Local & natural vegetation

Feature: Community space overlooking the road & woven facade design



178

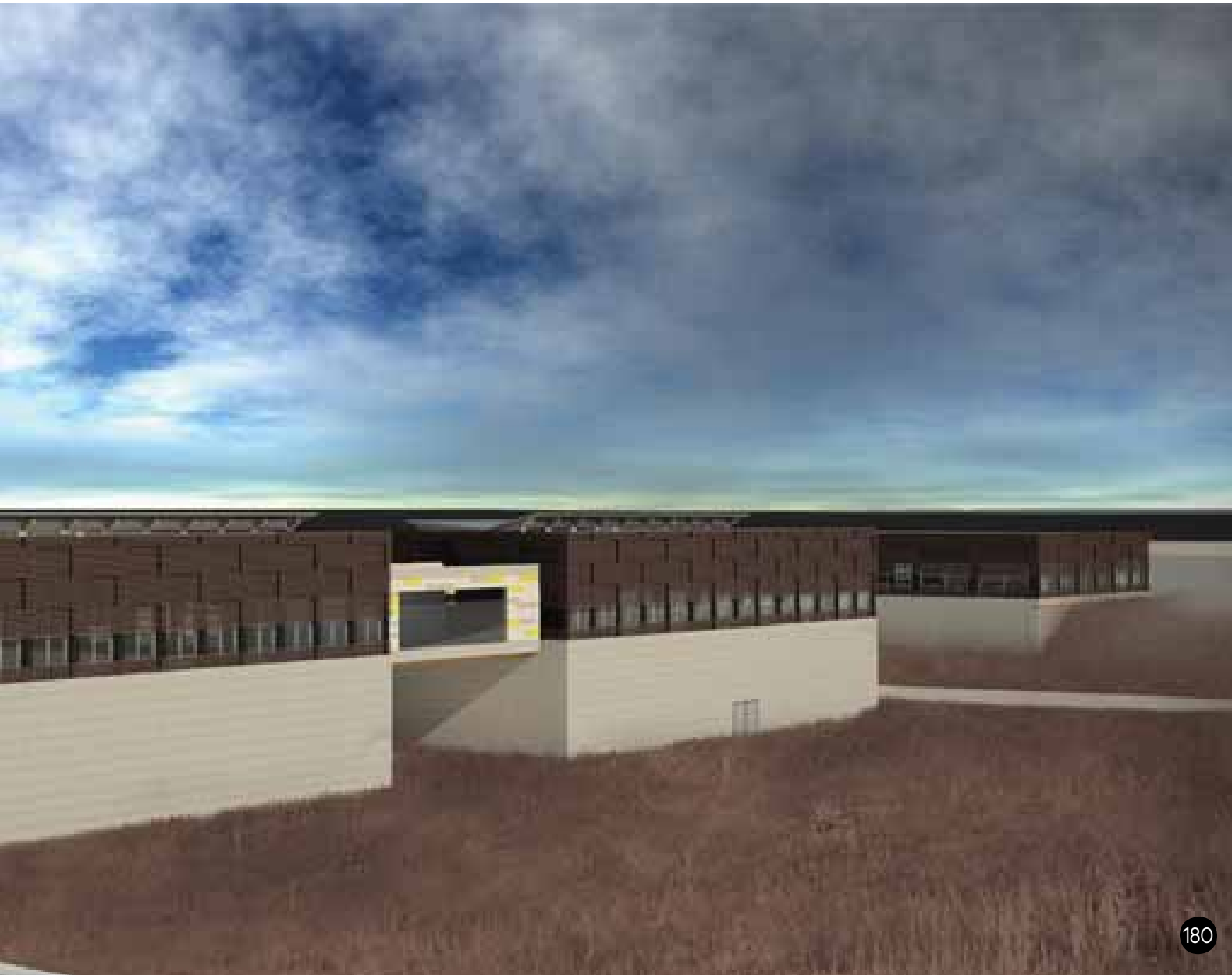
WOOD RAINSCREEN SYSTEM. DAYTIME



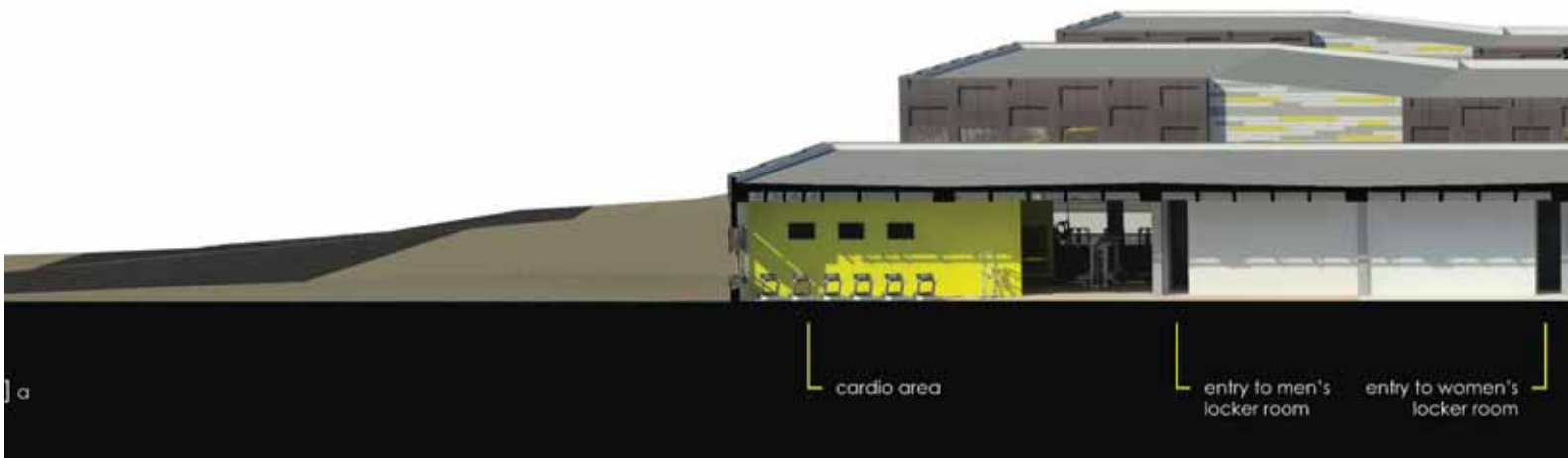
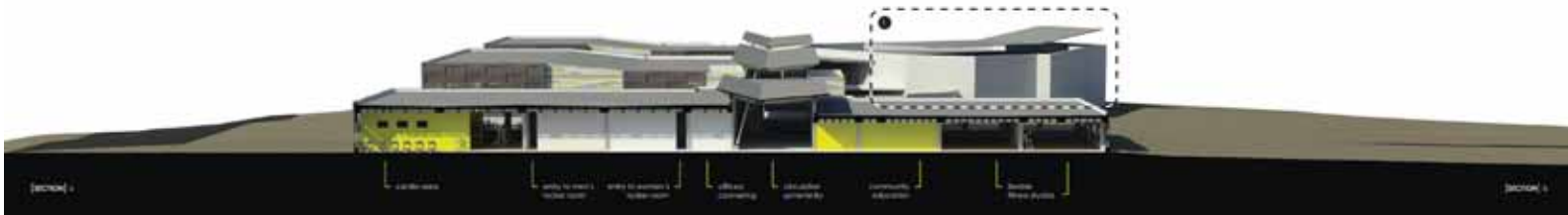
179

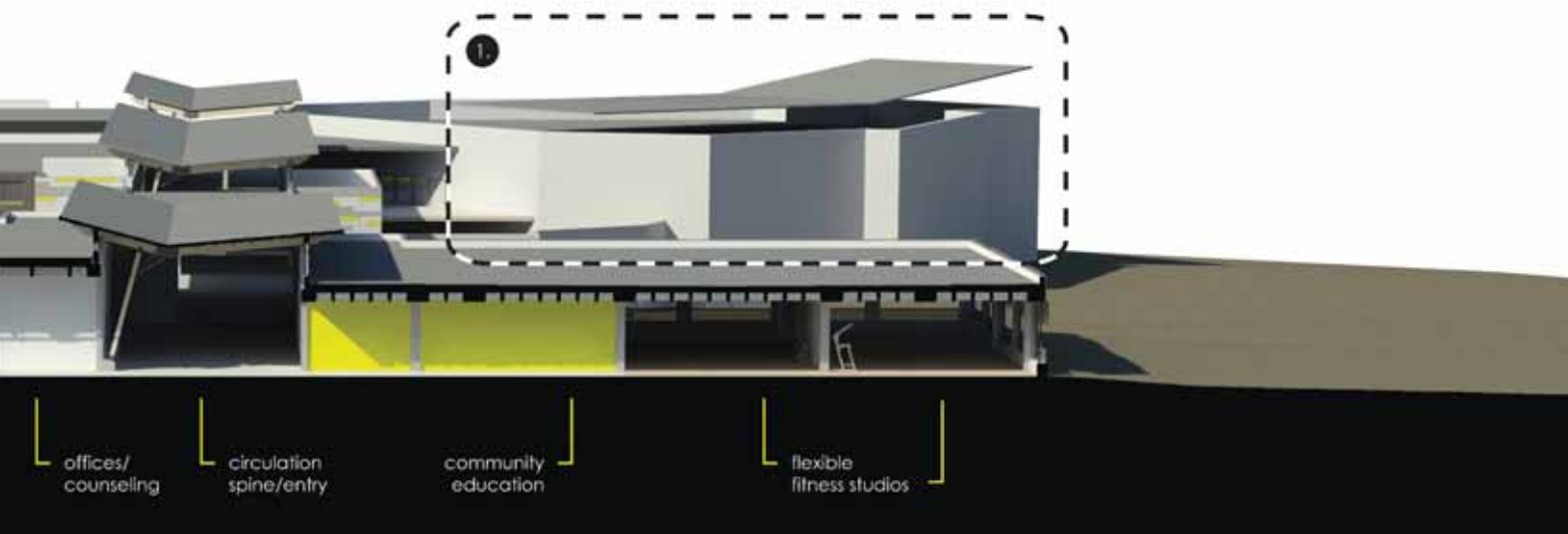
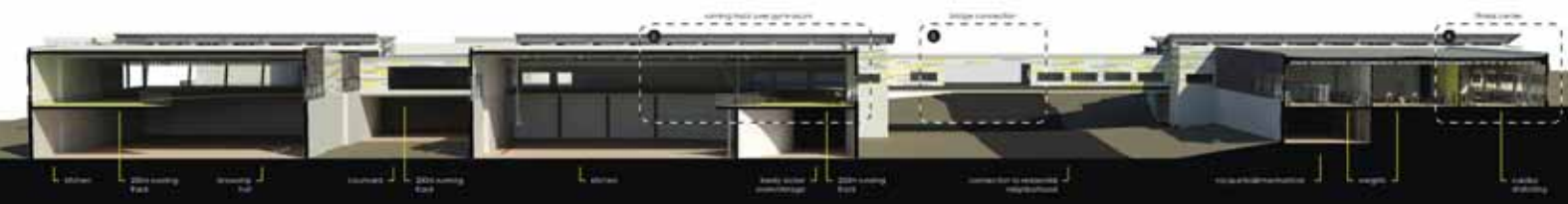
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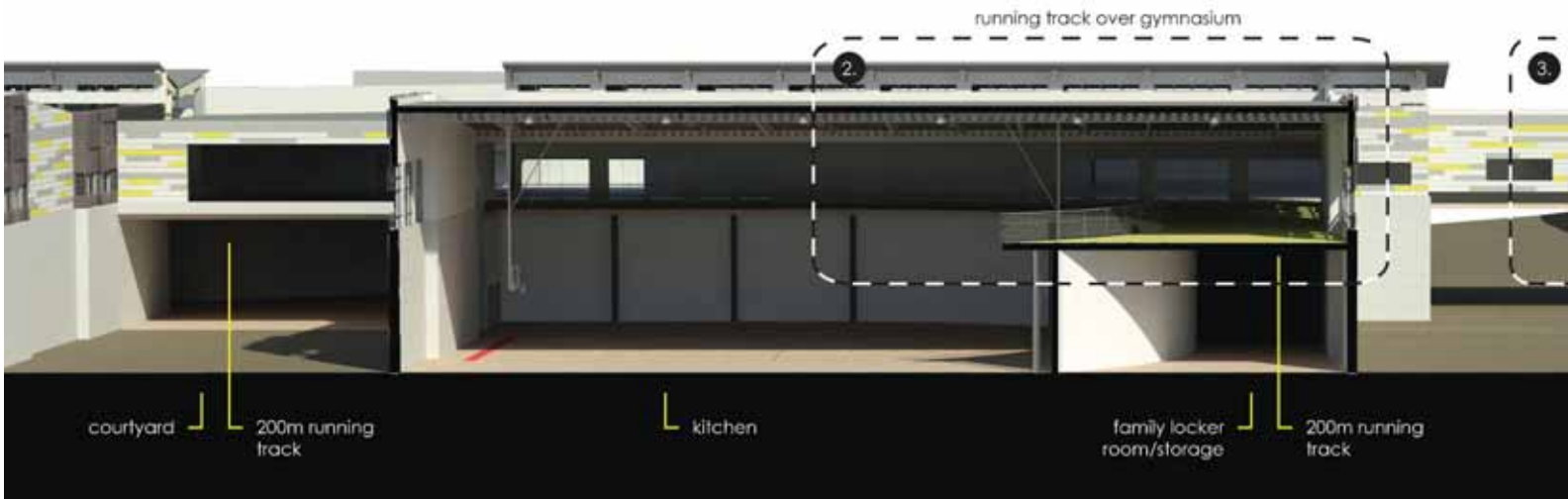
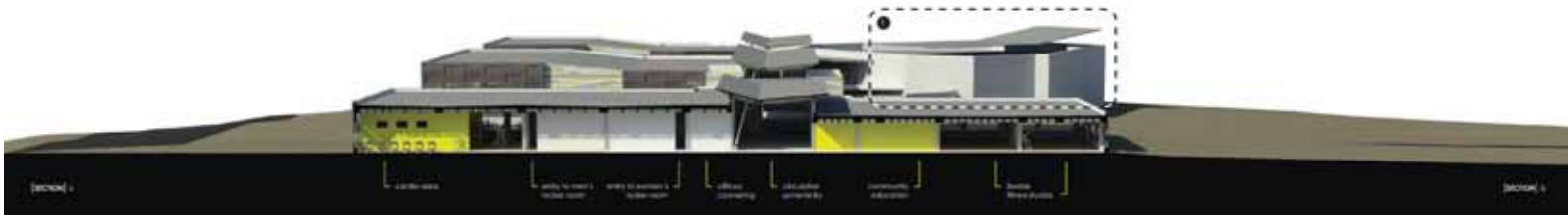


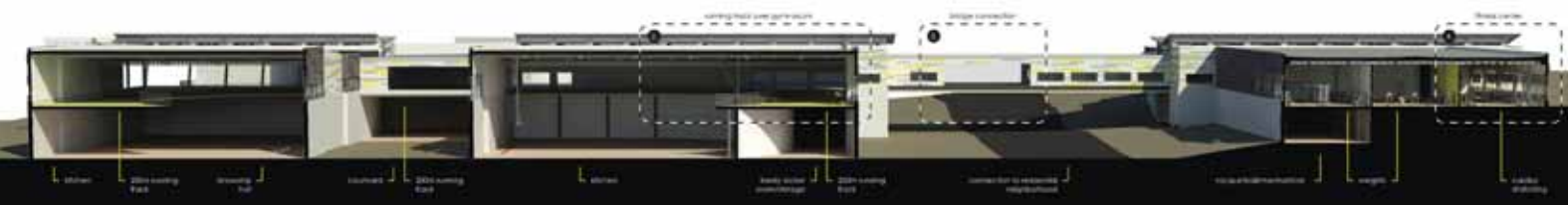
SECTION A





SECTION B



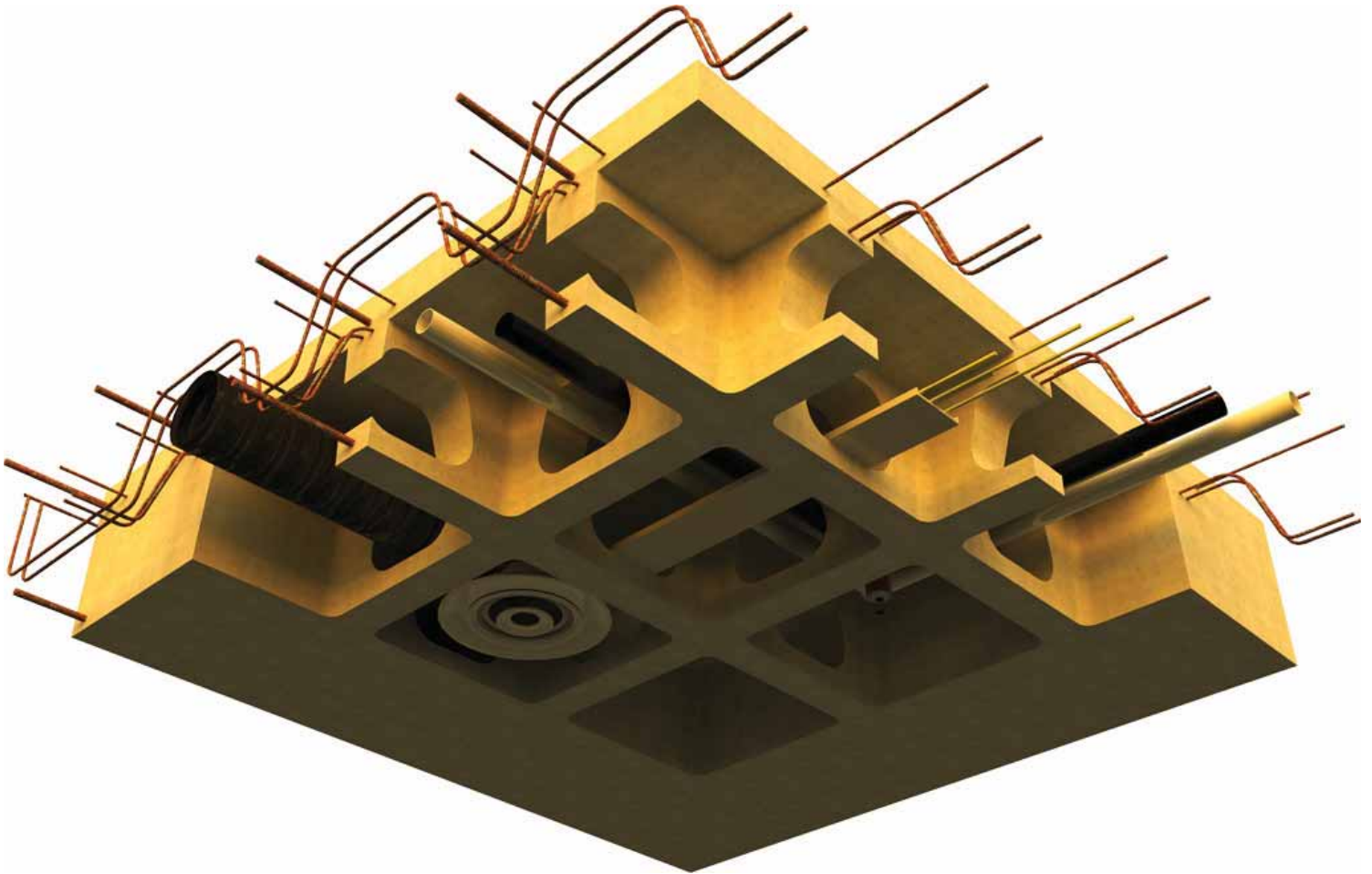


STRUCTURAL DETAIL

MECHANICAL / ELECTRICAL / HVAC INTEGRATION

REDUCED MATERIAL

ARCHITECTURAL EXPRESSION



[NURTURE]well-being

7.1 Conclusion.

APPENDIX A:

ASSEMBLIES OF GOD: Fundamental Truths

1. WE BELIEVE...The Scriptures are Inspired by God and declare His design and plan for mankind.
2. WE BELIEVE...There is only One True God—revealed in three persons...Father, Son, and Holy Spirit (commonly known as the Trinity).
3. WE BELIEVE...In the Deity of the Lord Jesus Christ. As God's son Jesus was both human and divine.
4. WE BELIEVE...though originally good, Man Willingly Fell to Sin—ushering evil and death, both physical and spiritual, into the world.
5. WE BELIEVE...Every Person Can Have Restored Fellowship with God Through 'Salvation' (trusting Christ, through faith and repentance, to be our personal Savior). [1 of 4 cardinal doctrines of the AG]
6. WE BELIEVE...and practice two ordinances—(1) Water Baptism by Immersion after repenting of one's sins and receiving Christ's gift of salvation, and (2) Holy Communion (the Lord's Supper) as a symbolic remembrance of Christ's suffering and death for our salvation.
7. WE BELIEVE...the Baptism in the Holy Spirit is a Special Experience Following Salvation that empowers believers for witnessing and effective service, just as it did in New Testament times. [1 of 4 cardinal doctrines of the AG]
8. WE BELIEVE... The Initial Physical Evidence of the Baptism in the Holy Spirit is 'Speaking in Tongues,' as experienced on the Day of Pentecost and referenced throughout Acts and the Epistles.
9. WE BELIEVE...Sanctification Initially Occurs at Salvation and is not only a declaration that a believer is holy, but also a progressive lifelong process of separating from evil as believers continually draw closer to God and become more Christlike.
10. WE BELIEVE...The Church has a Mission to seek and save all who are lost in sin. We believe 'the Church' is the Body of Christ and consists of the people who, throughout time, have accepted God's offer of redemption (regardless of religious denomination) through the sacrificial death of His son Jesus Christ.
11. WE BELIEVE...A Divinely Called and Scripturally Ordained Leadership Ministry Serves the Church. The Bible teaches that each of us under leadership must commit ourselves to reach others for Christ, to worship Him with other believers, to build up or edify the body of believers—the Church and to Meet human need with ministries of love and compassion.
12. WE BELIEVE...Divine Healing of the Sick is a Privilege for Christians Today and is provided for in Christ's atonement (His sacrificial death on the cross for our sins). [1 of 4 cardinal doctrines of the AG]

13. WE BELIEVE...in The Blessed Hope—When Jesus Raptures His Church Prior to His Return to Earth (the second coming). At this future moment in time all believers who have died will rise from their graves and will meet the Lord in the air, and Christians who are alive will be caught up with them, to be with the Lord forever. [1 of 4 cardinal doctrines of the AG]

14. WE BELIEVE...in The Millennial Reign of Christ when Jesus returns with His saints at His second coming and begins His benevolent rule over earth for 1,000 years. This millennial reign will bring the salvation of national Israel and the establishment of universal peace.

15. WE BELIEVE...A Final Judgment Will Take Place for those who have rejected Christ. They will be judged for their sin and consigned to eternal punishment in a punishing lake of fire.

16. WE BELIEVE...and look forward to the perfect New Heavens and a New Earth that Christ is preparing for all people, of all time, who have accepted Him. We will live and dwell with Him there forever following His millennial reign on Earth. 'And so shall we forever be with the Lord!'

APPENDIX B:

CHRISTIAN PHILOSOPHY

In order to develop a design philosophy that will carefully embrace the needs for the Colorado community, biblical principles will become the foundation for the design. "See to it that no one takes you captive through hollow and deceptive philosophy, which depends on human tradition and the basic principles of this world rather than on Christ" (Colossians 2:8, NIV).

SOCIAL JUSTICE

After establishing research objectives and laying the groundwork for design philosophy, psychological design strategies are investigated for architectural solutions. "It is evident that pursuing social justice is one of the highest moral responsibilities of the church and of the individual Christian. Recognizing that life can and should be just, though not necessarily fair, Christians should be at the forefront of the effort to pursue social justice through voluntary church and charitable social work. While it is important for every believer and church to practice private, voluntary acts of charity and social justice, it is also essential that every Christian develop sound convictions regarding social action by the state" (Wheaton, 2008). A person's greatest need is to know God, and the greatest calling is to make Him known. Take for example the biblical narrative of social justice in the parable of the Good Samaritan:

"On one occasion an expert in the law stood up to test Jesus. "Teacher," he asked, "what must I do to inherit eternal life?" "What is written in the Law?" he replied. "How do you read it?" He answered: "'Love the Lord your God with all your heart and with all your soul and with all your strength and with all your mind'; and, 'Love your neighbor as yourself.'" "You have answered correctly," Jesus replied. "Do this and you will live."

But he wanted to justify himself, so he asked Jesus, "And who is my neighbor?" In reply Jesus said: "A man was going down from Jerusalem to Jericho, when he fell into the hands of robbers. They stripped him of his clothes, beat him and went away, leaving him half dead. A priest happened to be going down the same road, and when he saw the man, he passed by on the other side. So too, a Levite, when he came to the place and saw him, passed by on the other side.

But a Samaritan, as he traveled, came where the man was; and when he saw him, he took pity on him. He went to him and bandaged his wounds, pouring on oil and wine. Then he put the man on his own donkey, took him to an inn and took care of him. The next day he took out two silver coins and gave them to the innkeeper. 'Look after him,' he said, 'and when I return, I will reimburse you for any extra expense you may have.' "Which of these three do you think was a neighbor to the man who fell into the hands of robbers?" The expert in the law replied, "The one who had mercy on him." Jesus told him, "Go and do likewise" " (Luke 10:25-37).

SOCIAL ARCHITECTURE

As visitors from the community approach the site, it is important to carefully consider the path a person will follow as they approach the building. The architecture should encourage the visitor to come inside, while engaging an individual's curiosity and faith. The enhancement of their worship experience will prepare them for an encounter with the living God. This shift will draw the focus away from the building and will cause worshipers to evaluate their own hearts. "You do not delight in sacrifice, or I would bring it; you do not take pleasure in burnt offerings. The sacrifices of God are a broken spirit; a broken and contrite heart O God, you will not despise" (Psalm 51:16-17).

Clement from Alexandria once said, "It is not a place that is called church, nor a house made of stones and earth, it is the holy assembly of those that live in righteousness" (Roberts, 2004).

APPENDIX C:

THE CHURCH OF GOD

Since the beginning of time, the idea of community has always existed. In fact, it is God who created it. If indeed we hope to create worthwhile architecture, then we must first know the architect of the universe. For the builder of a house has greater honor than the house itself (Hebrews 3:3). In the New Testament, the Church is described not as a building, but rather as a community of believers. The hymn by Richard Avery reads "The Church is not a building, the Church is not a steeple, the Church is not a resting place, the Church is a people" (Hymnary.org). So as a community we come together to worship the God of creation. The history of God's chosen people is a story of community and love. "Know therefore that the Lord your God is God; he is the faithful God, keeping his covenant of love to a thousand generations of those who love him and keep his commands" (Deuteronomy 7:9). If we receive this love and follow His commands, then we know that we are His children and that we have an inheritance with Him.

COMMUNITY OF THE TRINITY

Starting in Genesis, we read, "Let us make man in our image, in our likeness..." (Genesis 1:27). The Gospel of John tells us that Jesus was with God the Father from the beginning, and that the world was made through Him. We also see that the Holy Spirit or Spirit of God is present from the beginning. Understanding the Trinity's purpose will help us better understand the character of God. A few of

the notable characteristics of God: Transcendent (Acts 17:24-25), Unchangeable (Malachi 3:6), Eternal (Psalm 90:2), Wise (Romans 11:33), Knowable (Psalm 46:10), Omnipotent (Isaiah 14:27), Omnipresent (Psalm 139:7-10), Omniscient (Hebrews 4:13), Faithful (Isaiah 25:1), Truthful (Numbers 23:19), Good (James 1:17), Patient (2 Peter 3:9,15), Love (Romans 5:8), Gracious (1 Peter 5:10), Merciful (Titus 3:5), Holy (Leviticus 11:44-45), Peaceful (1 Corinthians 14:33), Righteous (Deuteronomy 32:4), Perfect (Psalm 18:30) and Glorious (Psalm 24:10). Despite man's unfaithfulness throughout history, God's just and compassionate character has always remained the same. The question is, are people willing to humble themselves to know the God of the universe?

THE STORY OF SALVATION

From the Fall of Man, the Old Testament tells us of God's saving deeds and stories of God's people. "Since a good story is powerful and influential, stories were used to persuade God's people to be faithful and to obey God. Stories of God's saving deeds in times of distress for the faith community became important for the faithful person to hear. Hearing these stories made it possible for individual believers to place their little lives in God's hands" (Fettke 18-19). Throughout biblical history we see God's hand of direction and provision in the lives of his followers. These men and women were faithfully committed to this community no matter the cost. What would the Church look like if we did not

have this community with God? Needless to say, it would be a mess! In fact, sometimes it already is, but this is not the way it was intended.

The Greek word for Church, *ekklesia*, is used about 117 times in the New Testament (Strong's concordance). It is defined as "the called out ones". After Pentecost, the Early Church really lived up to this name. The question is, do we today? Does the Church look different or do we look like everyone else? The Early Church was persecuted for their faith, and because of this persecution, it forced believers to take a stance. One could not be on both sides of the fence. If one was, it could mean risking his/her life for something he/she was not sure about. The bible speaks about two types of communities, an earthly and a heavenly one. Failing to recognize the difference will result in a lifestyle of spiritual complacency and apathy. So what changed over the course of history that has brought this contentment into the Church? Let us take a closer look at these two types of communities and the differences between them. We are born into the earthly community, but invited into a heavenly one. The heavenly community is by invitation only, but the invitation is for all. The Word tells one that he/she must lose his/her life to gain it (Matthew 16:35) and to deny oneself (Luke 9:23-24). This is clearly not the same teaching that we learn in America.

How does our culture or society come to grip with

these terms? As the conflict between the truth of God and the philosophy of this present world clash, Christians continue to put their hope in the

One who said that He will come again. Jesus himself said that no one would come to the Father except through Him (John 14:6). So when that day comes he will gather together his "called out" faithful and chosen followers. Because we are born into a sinful world and are all sinners, we need a relationship with Jesus Christ to restore our relationship with God the Father. Jesus was sent from the Father, to die as a sacrifice for our sins.

Before this time, all sins that were previously committed were not yet accounted for, but only put off by another year. When Jesus sprinkled His blood in the perfect tabernacle in heaven, our sins were atoned for and we were able to access a right relationship with God our Father. "Just as man is destined to die once, and after that to face judgement, so Christ was sacrificed once to take away the sins of many people; and he will appear a second time, not to bear sin, but to bring salvation to those who are waiting for him (Hebrews 9:27-28), Christ impressed these truths to His disciples through the gift of the Holy Spirit and still teaches these truths to His disciples today.

APPENDIX D:

WINTER

A. Keep the heat in and the cold temperatures out during the winter.

01. Avoid building on cold northern slopes.
02. Build on the middle of slopes to avoid both the pools of cold air at the bottom and the high winds at the top of hills.
03. Use a compact design with minimum surface-area-to-volume ratio. For example, use two instead of one-story buildings.
04. Build attached or clustered buildings to minimize the number of exposed walls.
05. Use earth sheltering in the form of underground or bermed structures.
06. Place buffer spaces that have lower temperature such as stairs, garages, gymnasiums, heavy work areas, etc.) along the north wall. Place a sun-space buffer room on the south wall.
07. Use temperature zoning by both space and time since some spaces can be kept cooler than others at all times or at certain times. For example, bedrooms can be kept cooler during the day, and living rooms can be kept cooler at night when everyone is asleep.
08. Minimize window area on all orientations except south.
09. Use double or triple glazing, low-e coatings, and movable insulation on windows.
10. Use plentiful insulation in walls, roofs, under floors, over crawl spaces, on foundation walls, and around slab edges.
11. Insulation should be a continuous envelope to prevent heat bridges. Avoid structural elements that are exposed on the exterior, since they pierce the insulation. Avoid fireplaces and other masonry elements that penetrate the insulation layer.
12. Place doors on fireplaces to prevent heated room air from escaping through the chimney. Supply fireplaces and stoves with outdoor combustion air.

WINTER

B. Protect from the cold winter winds.

01. Avoid windy locations, such as hilltops.
02. Use evergreen vegetation to create wind breaks.
03. Use garden walls to protect the building and especially entrances from cold winds.
04. In very windy areas, keep the buildings close to the ground (one-story).
05. Use compact designs to minimize the surface area exposed to the wind.
06. Use streamlined shapes with rounded corners to both deflect the wind and minimize the surface-area-to-volume ratio.
07. Cluster buildings for mutual wind protection.
08. Use long sloping roofs, as in the New England saltbox houses, to deflect the wind over the building and to create sheltered zones on the sunny side.
09. Place garages and other utility spaces on the winter windward side. This is usually the north, northwest, and northeast side of the building.
10. Use sun spaces and glazed-in porches as wind breaks.
11. Use earth sheltering or build in hollows. Also, the wind can be deflected by earth berms built against the wall or by constructing protective earth banks a short distance from the building.
12. Minimize openings, especially on the side facing the winter winds, and place the main entry on the leeward side.
13. Use storm windows, storm doors, air locks, and revolving doors to minimize infiltration.
14. Close all attic and crawl-space vents.
15. Use tight construction, caulking, and weather stripping to minimize infiltration. Use high-quality operable windows and doors.
16. Place outdoor courtyards on the south side of the building.
17. In winter, even windows in freestanding garden walls should be closed to protect the enclosure from cold winds.
18. In snow country, use snow fences and wind screens to keep snow from blocking entries and south-facing windows.

APPENDIX D:

WINTER

C. Let the winter sun in.

01. Build on south, southeast, or southwest slopes.
02. Check for solar access that might be blocked by landforms, vegetation, and manmade structures.
03. Avoid trees on the south side of the building.
04. Use only deciduous trees on the southeast and southwest sides.
05. Also use deciduous trees on the east and west sides if winter is very long.
06. The long axis of the building should run east-west.
07. Most windows should face south.
08. Use south-facing clerestories and dormers instead of sky-lights.
09. Place spaces that benefit the most from solar heating along the south wall. Spaces that benefit the least should be along the north wall (eg., storage rooms, garages).
10. Use an open floor plan to enable sun and sun-warmed air to penetrate throughout the building.
11. Use direct-gain, Trombe walls, and sunspaces for effective passive solar heating.
12. Use thermal mass on the interior to absorb and store solar radiation.
13. Use light-colored patios, pavements, or land surfaces to reflect additional sunlight through windows.
14. Use specular reflectors (polished aluminum) to reflect additional sunlight through windows.
15. Use active solar collectors for domestic hot water, swimming-pool heating, space heating, and process heat for industry.
16. If there is little or no summer overheating, use dark colors on exterior walls (especially the south wall).
17. Create sunny but wind protected outdoor spaces on the south side of the building.

SUMMER

D. Use thermal mass to reduce day-to-night temperature swings in the summer.

01. This cooling strategy is also known as “night flush cooling” because the thermal mass is usually cooled with night ventilation.
02. Use massive construction materials since they have a high heat capacity. Use materials such as brick, concrete, stone, and adobe.
03. Place insulation on the outside of the thermal mass.
04. If massive materials are also to be used on the outside, sandwich the insulation between the inside and outside walls.
05. Use earth or rock in direct contact with the uninsulated walls.
06. Keep daytime hot air out of the building by closing all openings.
07. Open the building at night to allow cool air to enter. Use the strategies of natural ventilation to maximize the night cooling of the thermal mass.
08. Use water as a thermal mass because of its very high heat capacity. Use containers that maximize heat transfer into and out of the water.
09. Use radiant or evaporative cooling for additional temperature drop in the thermal mass at night.
10. Use mechanical equipment at night when it is most efficient to create a heat sink. By cooling the building at night, the cool thermal mass can soak up heat the next day.
11. Use earth sheltering to maximize the benefits of mass.

REFERENCES

Ackerman, N. W. (1958). *The psychodynamics of family life*. NY: BasicBooks, Inc.

Aurora Historical Society. (2011). Aurora timeline. Retrieved from <<http://aurorahistorical.org/archives/aurora-timeline/>>.

Balcomb, D. J. (1992). *Passive solar buildings*. Cambridge, MA: MIT Press.

Bell, B. I. (2004). *Good deeds, good design: Community service through architecture*. New York, NY: Princeton Architectural Press.

Cavuato, S. J. 2011. *Master planning new church facilities*. Retrieved from <http://www.ag.org/top/church_workers/facil_gen_master_planning.cfm>.

Cilento , Karen. (21 Oct 2009). *Integrated teaching building, Chinese University of Hong Kong / URBANUS*. ArchDaily. Retrieved from <<http://www.archdaily.com/38495>>.

City of Aurora. (2011). Aurora history. Retrieved from <<https://www.auroragov.org/CityHall/AboutAurora/History/index.htm>>.

Clinebell, H.J. (1965). *Mental health through christian community*. Abingdon Press: New York, NY.

EPA. (2011) U. S. Environmental Protection Agency. Retrieved from < <http://www.epa.gov/iaq/pubs/in sidestory.html>>.

Fettke, S.M. (2007). *Old testament Literature: His Story*. Springfield, MO: Global University.

Furuto, A. (19 Nov 2011). *A Vision Plan for the Dead Sea / Sasaki Associates*. ArchDaily. Retrieved from <<http://www.archdaily.com/185096>>.

Graham, C. (13 Feb 2012). *Life Centre*. Architecture Australia. Retrieved from< <http://www.architecture media.com/aa/>>.

- Global Footprint Network. (2010). *Tracking Human Demand on Nature*. Retrieved from <http://www.footprintnetwork.org/documents/Ecological_Footprint.pdf>.
- Hall, K. B. (2001). *Community by design*. New York, NY: McGraw-Hill.
- Henry , C. (19 Sep 2011). *OÖ Science-Center Wels I / Archinauten Dworschak + Mühlbacher ZT Gmbh*. ArchDaily. Retrieved from <<http://www.archdaily.com/169259>>.
- Henry , C. (February 13, 2012). *West Vancouver Community Centre / HCMA*. ArchDaily. Retrieved from <<http://www.archdaily.com/121025>>.
- Kolleeny, F. J. (2003). *Designing for Well-Being: Environments That Enhance The Quality of Life*. Architectural Record.
- Lapham, B.W. (2009). *Creation for the creator*. Eden Prairie, MN.
- Larson, J. (2009). *Symbiosis – Bridging the Gap: The end of single-source power plants and the transformation to a closed-loop energy supply*. Denver, CO.
- Lechner, N. (2008). *Heating, Cooling, Lighting: Sustainable Design Methods for Architects*. John Wiley & Sons.
- Lynch, K. (1960). *The image of the city*. MIT Press: Cambridge, MA.
- McDonough, W. (2003). *The Cradle-to-Cradle Alternative*. State of the World 2004. Worldwatch Institute: Washington, DC
- Minner, K. (02 Jan 2011). *Gleneagles Community Center / Patkau Architects*. ArchDaily. Retrieved February 13, 2012. <<http://www.archdaily.com/100591>>.
- Minner, K. (29 Oct 2010). *Sephardic Community Center / BKS K*. ArchDaily. Retrieved from <<http://www.archdaily.com/84992>>.

REFERENCES

- Moon, J.K. (2004). *New Testament Literature: A Study Guide*. Springfield, MO: Global University.
- Norman, D. A. (2004). *Emotional design*. New York, NY: Basic Books.
- Novacek, A. (2001). *Community Recreation Center*. Buffalo, MN.
- Palermo, G. S. (2001). *Architecture as Environmentally Embedded Social and Material Justice*. *Contemporary Justice Review*, 4(2), 181.
- Rath, M. C. (1989). *Jesus People U.S.A. Community, An Inner City Community*. Minneapolis, MN.
- Roberts, N. W. (2004). *Building type basics for places of worship*. Hoboken, NJ: John Wiley & Son's, Inc.
- Rosenberg, A. (11 Apr 2011). *EMPAC / Grimshaw*. ArchDaily. Retrieved from <<http://www.archdaily.com/124708>>.
- Rosenberg, Andrew. "Tampa Covenant Church / Alfonso Architects" 07 Nov 2010. ArchDaily. Retrieved February 13, 2012. <<http://www.archdaily.com/86741>>.
- Rosenberg, A. (10 Jan 2011). *Westside Bruennen / Daniel Libeskind*. ArchDaily. Retrieved from <<http://www.archdaily.com/101991>>.
- Rosenfield, K. (07 Feb 2012). *PierESCAPE / Aedas Architects, Davis Brody Bond and Martha Schwarz Partners*. ArchDaily. Retrieved from <<http://www.archdaily.com/205205>>.
- Russo, D.J. (1974). *Families and Communities: A New View of American History*. Nashville, TN: American Association for State and Local History.
- Saieh, N. (31 Aug 2011). *Mortensrud church / JSA*. ArchDaily. Retrieved from <<http://www.archdaily.com/1929>>.
- Saieh, Nico. (22 Apr 2010). *Myongji University Bangmok Library / Gansam Architects & Associates* Arch Daily. Retrieved from <<http://www.archdaily.com/57299>>.

- Saieh, Nico. (23 Dec 2008). *Nk'Mip Desert Cultural Centre – HBBH Architects ArchDaily*. Retrieved from <<http://www.archdaily.com/10629>>.
- Saieh, N. (25 Apr 2010). *Surry Hills Library and Community Centre / FJMT ArchDaily*. Retrieved from <<http://www.archdaily.com/57339>>.
- Saieh, N. (20 Jan 2009). *The Prayer Chapel / debartolo architects ArchDaily*. Retrieved from <<http://www.archdaily.com/12045>>.
- Saieh, N. (05 Nov 2009). *Xi'an Jiaotong-Liverpool University Administration & Information Centre / Aedas ArchDaily*. Retrieved from <<http://www.archdaily.com/39697>>.
- Shinnick, F. 2011. Personal Interview by Tyler Brandriet.
- Simpson, K S. (1992). *A T.E.C. Center: Together encountering Christ*. Belle Prairie, MN.
- Schmit, T. R. (1994). *Breuer Green – Interpreting the Past, Inventing The Future: A Campus Masterplan and Outdoor Student Gathering Area*. Bismarck, ND.
- Schneekloth, L. H. (1995). *Placemaking the art and practice of building communities*. New York, NY: John Wiley & Son's, Inc.
- Steffen, A. (2006). *Worldchanging : a user's guide for the 21st century*. NY: Abrams.
- Sovik, E.A. (1997). *Remembrance and Hope*. *Journal on Religion, Art & Architecture*, 2.
- Sternberg, E. M. (2009). *Healing spaces: The science of place and well-being*. London, England: The Belknap Press of Harvard University Press.
- Strong, J. (2010). *The New Strong's Expanded Exhaustive Concordance of the Bible*. Nashville, TN: Thomas Nelson.

REFERENCES

U.S. EPA/Office of Air and Radiation. The Inside Story: A Guide to Indoor Air Quality. Retrieved Nov 7, 2011. <<http://www.epa.gov/iaq/pubs/insidestory.html>>.

Vedantam, S. (2006). *Social Isolation Growing in U.S.* The Washington Post Company.

Wade, Lanny A. (1962). *Protestant Mountain Chapel.* Hygiene, Co.

Wheaton, J. (2008). *A Biblical View of Social Justice.* <<http://thechristianworldview.com/tcwblog/archives/741>>.

Wikipedia. (2011). Aurora Colorado. <http://en.wikipedia.org/wiki/Aurora,_Colorado>.

IMAGE CREDITS

- 1 <http://healthwatchmd.com>
- 2 <http://healthwatchmd.com>
- 3 <http://healthwatchmd.com>
- 4 happy-family.gemzies.com
- 5 www.gettyimages.com
- 6 <http://xstrata.com>
- 7 www.alisdairmiller.com
- 8 theothersideofthemoon2009.blogspot.com
- 9 www.flickr.com, Miguel A. Lopes
- 10 www.flickr.com, Wayne Moran
- 11 www.flickr.com, Tom Stone
- 12 <http://www.corbisimages.com>
- 13 psych-your-mind.blogspot.com
- 14 <http://www.istockphoto.com>, Lise Gagne
- 15 <http://seanlockephotography.com>
- 16 primareducation.com
- 17 janekratochvil.wordpress.com
- 18 www.flickr.com, Bethel Church
- 19 thebridgemaker.com
- 20 jsrccmagazine.webs.com, Rebekah Wright
- 21 www.gettyimages.com, Jupiterimages
- 22 <https://www.auroragov.org>
- 23 <http://olive-drab.com>
- 24 myauroraems.com
- 25 <http://columbusjcc.org>
- 26 www.chicagoreader.com, Howard Simmons
- 27 www.colostate-pueblo.edu
- 28 www.architecturemedia.com, Rhiannon Slatter
- 29 www.architecturemedia.com, Rhiannon Slatter
- 30 www.atelierwagner.com.au, Rhiannon Slatter

- 31 www.atelierwagner.com.au, Rhiannon Slatter
- 32 www.architecturemedia.com, Rhiannon Slatter
- 33 www.architecturemedia.com, Rhiannon Slatter
- 34 www.architecturemedia.com, Rhiannon Slatter
- 35 www.architecturemedia.com, Rhiannon Slatter
- 36 www.architecturemedia.com, Rhiannon Slatter
- 37 www.architecturemedia.com, Rhiannon Slatter
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- 42 www.archdaily.com, John Gollings
- 43 www.archdaily.com, John Gollings
- 44 www.archdaily.com, John Gollings
- 45 www.archdaily.com, John Gollings
- 46 www.archdaily.com, John Gollings
- 47 www.archdaily.com, John Gollings
- 48 www.archdaily.com, John Gollings
- 49 www.archdaily.com, James Dow
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- 51 www.archdaily.com, James Dow
- 52 www.archdaily.com, James Dow
- 53 www.archdaily.com, James Dow
- 54 www.archdaily.com, James Dow
- 55 www.archdaily.com, James Dow
- 56 www.archdaily.com, James Dow
- 57 www.archdaily.com, Hubert Kang
- 58 www.archdaily.com, Hubert Kang
- 59 www.flickr.com, HCMA
- 60 www.flickr.com, HCMA

IMAGE CREDITS

- 61 www.flickr.com, Nic Lehoux
- 62 www.archdaily.com, Hubert Kang
- 63 www.archdaily.com, Hubert Kang
- 64 www.archdaily.com, Hubert Kang
- 65 www.archdaily.com, Jeffrey Totaro
- 66 www.archdaily.com, Jeffrey Totaro
- 67 www.archdaily.com, Jonathan Wallen
- 68 www.archdaily.com, Jeffrey Totaro
- 69 www.archdaily.com, Jeffrey Totaro
- 70 www.archdaily.com, Jeffrey Totaro
- 71 www.archdaily.com, Jeffrey Totaro
- 72 www.archdaily.com, Bill Timmerman
- 73 www.archdaily.com, Bill Timmerman
- 74 www.archdaily.com, Debartolo Architects
- 75 www.archdaily.com, Bill Timmerman
- 76 www.archdaily.com, Bill Timmerman
- 77 www.archdaily.com, Bill Timmerman
- 78 www.archdaily.com, Al Hurley
- 79 www.archdaily.com, Al Hurley
- 80 www.archdaily.com, Al Hurley
- 81 www.archdaily.com, Al Hurley
- 82 www.archdaily.com, Al Hurley
- 83 www.archdaily.com, Al Hurley
- 84 www.archdaily.com, Al Hurley
- 85 www.jsa.no, Jan Olav Jensen
- 86 www.jsa.no, Per Berntsen
- 87 www.jsa.no, Jan Olav Jensen
- 88 www.jsa.no, Per Berntsen
- 89 www.jsa.no, Jan Olav Jensen
- 90 www.jsa.no, Per Berntsen

- 91 www.jsa.no, Per Berntsen
- 92 www.archdaily.com, Sasaki Associates
- 93 www.archdaily.com, Sasaki Associates
- 94 www.archdaily.com, Sasaki Associates
- 95 www.archdaily.com, Sasaki Associates
- 96 www.archdaily.com, Sasaki Associates
- 97 www.archdaily.com, Sasaki Associates
- 98 www.archdaily.com, Aedas Architects
- 99 www.archdaily.com, Aedas Architects
- 100 www.archdaily.com, Aedas Architects
- 101 www.archdaily.com, Aedas Architects
- 102 www.archdaily.com, Aedas Architects
- 103 www.archdaily.com, Aedas Architects
- 104 www.archdaily.com, Daniel Libeskind
- 105 www.archdaily.com, Daniel Libeskind
- 106 www.archdaily.com, Daniel Libeskind
- 107 www.archdaily.com, Daniel Libeskind
- 108 www.archdaily.com, Daniel Libeskind
- 109 www.archdaily.com, Daniel Libeskind
- 110 www.archdaily.com, Daniel Libeskind
- 111 www.archdaily.com, Daniel Libeskind
- 112 www.archdaily.com, Paul Rivera
- 113 www.archdaily.com, Paul Rivera
- 114 www.archdaily.com, Paul Rivera
- 115 www.archdaily.com, Paul Rivera
- 116 www.archdaily.com, Paul Rivera
- 117 www.archdaily.com, Paul Rivera
- 118 www.archdaily.com, Paul Rivera
- 119 www.archdaily.com, Nic Lehoux
- 120 www.archdaily.com, Nic Lehoux

IMAGE CREDITS

- 121 www.archdaily.com, Nic Lehoux
- 122 www.archdaily.com, Nic Lehoux
- 123 www.archdaily.com, Nic Lehoux
- 124 www.archdaily.com, Nic Lehoux
- 125 www.archdaily.com, Nic Lehoux
- 126 www.archdaily.com, Dietmar Tolerian
- 127 www.archdaily.com, Dietmar Tolerian
- 128 www.archdaily.com, Dietmar Tolerian
- 129 www.archdaily.com, Dietmar Tolerian
- 130 www.archdaily.com, Dietmar Tolerian
- 131 www.archdaily.com, Dietmar Tolerian
- 132 www.archdaily.com, Dietmar Tolerian
- 133 www.archdaily.com, Gansam Architects & Associates
- 134 www.archdaily.com, Gansam Architects & Associates
- 135 www.archdaily.com, Gansam Architects & Associates
- 136 www.archdaily.com, Gansam Architects & Associates
- 137 www.archdaily.com, Gansam Architects & Associates
- 138 www.archdaily.com, Gansam Architects & Associates
- 139 www.archdaily.com, Gansam Architects & Associates
- 140 www.archdaily.com, Aedas Architects
- 141 www.archdaily.com, Aedas Architects
- 142 www.archdaily.com, Aedas Architects
- 143 www.archdaily.com, Aedas Architects
- 144 www.archdaily.com, Aedas Architects
- 145 www.archdaily.com, Urbanus
- 146 www.archdaily.com, Urbanus
- 147 www.archdaily.com, Urbanus
- 148 www.archdaily.com, Urbanus
- 149 www.archdaily.com, Urbanus
- 150 www.archdaily.com, Urbanus

- 151 www.archdaily.com, Urbanus
- 152 www.archdaily.com, Urbanus
- 153 www.archdaily.com, Urbanus
- 154 Tyler Brandriet
- 155 Tyler Brandriet
- 156 Tyler Brandriet
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NDSU has allowed me to connect with other students, faculty, employers, lifelong friends, my wife and God.



