

CLUB 701

Youth Center

By

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Comprehensive Design Project Proposal For
Department of Apparel, Merchandising, Interior Design and Hospitality Management
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Statement of Intent

Club 701 – Youth Center

3900 54th St. South

West Fargo, ND, 58078

Statement of Intent Discussion

Wellness among our youth is vital to the success of communities and humanity. A space where teenagers aged 12-18 can go to relieve stress, enhance wellbeing, practice life skills, and develop relationships can promote wellness amongst the community.

There is a large need for mental wellness support among the youth in our communities. Club 701 will provide supportive environments for development of life skills, emotional wellbeing, physical wellbeing, and personal expression. The facility will include areas for self-reflection, spaces to socialize and manage friendships amongst one another, and studio rooms to encourage physical activity. Club 701 allows youth and students to take control of their lives as they explore different creative means of expression and hobbies while promoting their wellbeing and mental health.

Club 701 will provide the youth of our community with after school courses that teach practical life skills through fun hobbies and activities. Quiet spaces will allow for individual youth reflection times and a time for guests to unplug from the digital world and destress from the troubles that come with school, home life, and more. Fitness studios such as yoga rooms and high intensity workout routines can help encourage active lifestyles in the youth. Educational means will be supported through the use of an open reading lounge where students can review information in the form of literature. Private counseling rooms as well as group therapy rooms such as art therapy, physical therapy, and music therapy will give the youth a time to relax and approach life with a more open mindset.

The design of Club 701 will be based on thorough research of mental wellbeing within spaces. Journal articles, websites, and research studies have been reviewed to gather information along with interviews and site visits that were conducted to take note of real-life applications. Mental health services come in a wide variety of spaces including counseling/therapy centers, inpatient/outpatient care facilities, and relaxation/meditation centers. The goal of Club 701 is to incorporate mental wellbeing into the activities and spaces provided throughout the building.

Club 701 will be designed to fit the specific needs of youth in the community. One of the most prevalent problems youth face today is a dependence on the digital world. This can negatively affect their ability to make real world friendships and engage in group activities. We will respond to this by having designated spaces that restrict the use of technology and encourage growth in social skills, and healthy relationships. Because of Fargo’s harsh climate, seasonal depression is very common. This can cause people to feel trapped and alone. To prevent this, we incorporated the use of biophilic design to allow the youth to escape the negative emotions that come with winter and grow in a space that is rich with nature. We will also use light to our advantage. These will include natural light, adaptive lights, and light therapy.

During the course of this project, each team member will utilize the skills they have acquired through our previous interior design courses, our real-world experience, and our collective knowledge from our previous experiences. Some of these skills will be efficient space planning, ADA compliance, IBC compliance, as well as designing a space that will allow the users to have everything, they need to accomplish their goals. The overall project cumulates our individual education experiences at NDSU by working with professionals, developing design solutions, how to present projects/solutions and many other key professional skills. We each have unique knowledge on topics like lighting, acoustics, color theory, and many others. Through interviews, we have worked towards gathering information and conducting our own studies to better understand the concepts of designing a mental health related adolescent center.

Mission Statement

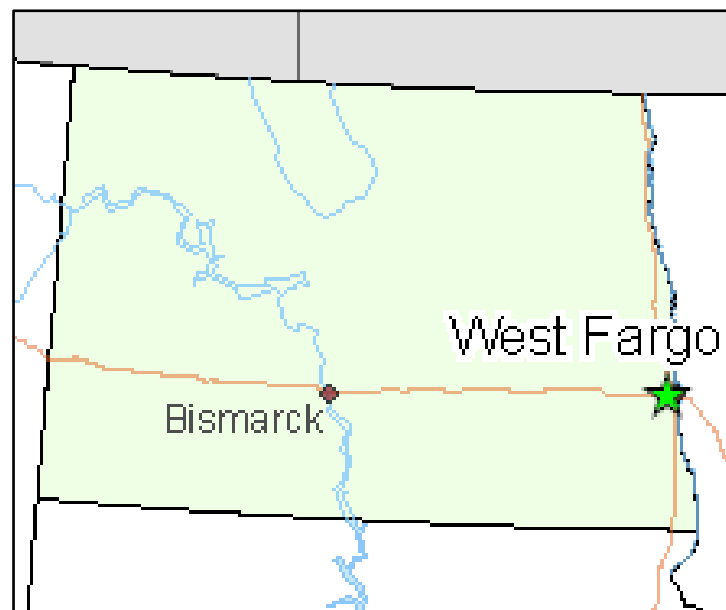
At Club 701 Youth Center we empower local youth by cultivating transferable life skills through academic and athletic performance. We are passionate about creating a safe environment to develop dedication, discipline, desire, and the confidence to pursue excellence in all endeavors. Through the development of mind and body, our members create infinite possibilities for their future. Our vision has always been to provide the young people in our community the opportunity to participate in extracurricular activities and academic support regardless of economic means. We believe all young people deserve the chance to thrive and seek to remove the barriers that prevent many young people from participating in activities that help create well rounded adults (Community Youth Center, 2021).

Existing Conditions Analysis

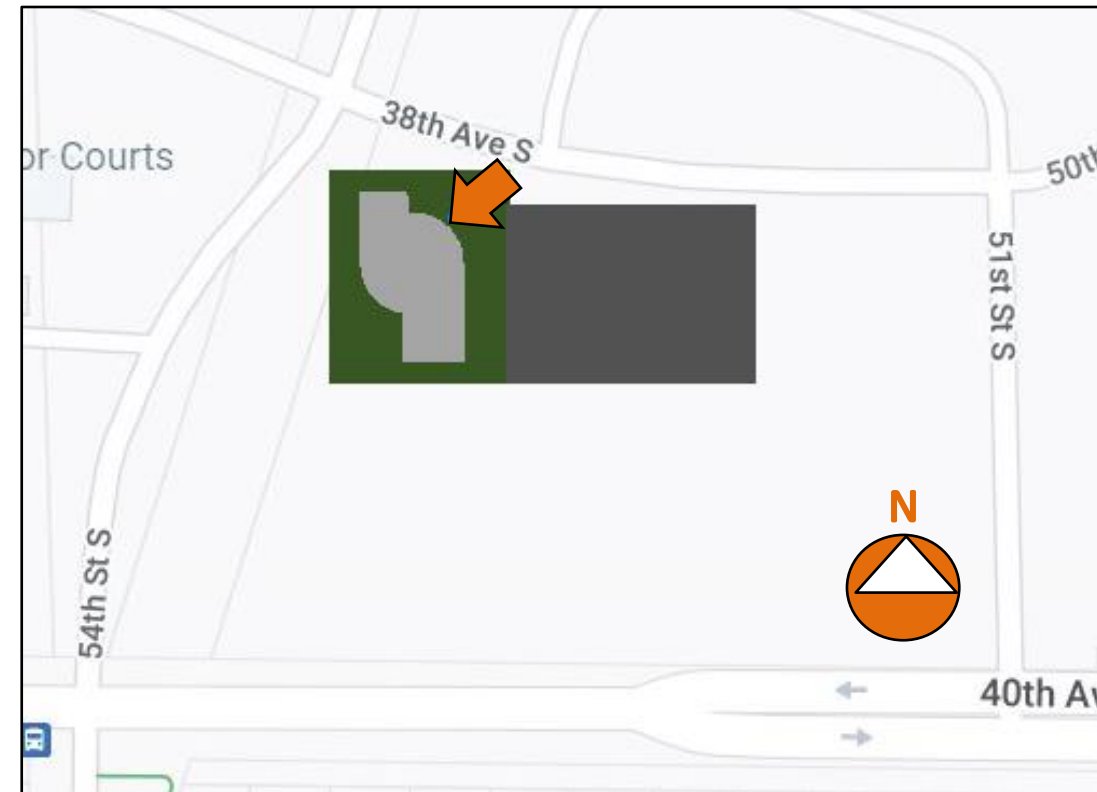
Site

West Fargo, North Dakota is located in the Midwest near the Canadian border at only 904 ft above sea level. The recorded number of residents in West Fargo, ND as of 2022 is 41,186 (World Population Review, 2022). West Fargo is known for its brutally cold winter months filled with lots of snow. Located directly next to Fargo, North Dakota, the two towns contain a lot of history in the downtown area including the most famous Fargo Theatre. During the warmer season, temperatures rest around 80 degrees Fahrenheit whereas winter months usually land in the 10 degrees Fahrenheit range (Weather Spark, 2022). North Dakota is a particularly windy state with an overall average wind speed of 9 to 12 miles per hour. Winter can last around 7 months of the year in Fargo, North Dakota. The average amount of sunlight in the winter months is 8-9 hours.

Club 701 Youth Center is located in walking distance from both West Fargo Sheyenne High School and Liberty Middle School to provide easy convenience to young students. Year round, students and youth ages 12-18 have the convenience of walking to Club 701 before/after school or even on breaks and weekends. Being close to the Red River, guests of Club 701 can enjoy walks through nature in warmer months through the tree line alongside the river. The building entrance will be facing northeast in orientation. Directly to the east of the building, a large parking lot will included for visitor convenience. With the current orientation, the space will have more security from the busy roads near by while still giving easy access to the building overall.



Birds Eye View of West Fargo, North Dakota. (City-Data, 2022)

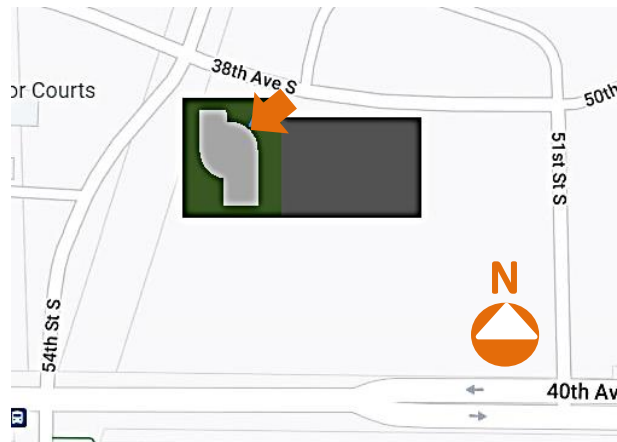


Birds Eye View of Site. (Google Maps, 2022)

Building

For this project, the Alumni Center building shell from North Dakota State University located currently in Fargo, North Dakota and built in 1997, will be used for the design of Club 701 Youth Center. Made up of two floors and a full basement, the Alumni Center is finished in face brick throughout the entire exterior with cast stone bands that run across the building. The roof of the building is made of metal standing seam roof system. Large columns are placed throughout the building for structural and aesthetic purposes making the building appear grand and drawing attention to the main entrance facing northeast. As stated previously the building contains two floors and one basement. A set of glass entrance doors are located on the southwest corner of the main level providing access to the large outdoor lounge area with overhead canopies overlooking nature. Upon entrance to the main level of the building, there is immediate exposure to the large windows that view a large outdoor patio area. This natural lighting draws a calming feeling into all areas of the building. Another set of glass doors are included on the second level with an arched glazed detail provide access to a small deck encircled by steel railing directly over the main entrance off the second floor.

For this project, Club 701's main entrance to the building will be located along 38th Avenue South, facing northeast (as noted by the arrow on the site plan). Guest will be able to access different parts of the building through the main entrance. Only three blocks away from both the Sheyenne High School and Liberty Middle School, the youth only must walk a short distance to arrive at the facility and can use more private pathways to avoid walking near heavily trafficked roads.



Birds Eye View of Site. (Google Maps, 2022)



Exterior Image of Alumni Center - Entrance door facing SW. (North Dakota State University, 2022)



Exterior Image of Alumni Center – Back Patio Area (North Dakota State University, 2022)

Interior

The interior of the Club 701 consists of the original construction as it was built in September of 1997. Stairs and elevators along with current location of restrooms will remain as is in the current structure of the building shell. All interior walls are finished in gypsum board. Existing exterior windows will remain as is and no additional exterior windows will be added. Glass patio doors allow access to the green space outside and the deck on the second level. The current space is categorized as a mixed occupancy using both B Office spaces and A-3 Assembly. The Alumni Center has an overall square footage of just below 29,000 sq ft. The ceiling height reaches a maximum of around 35’ upon immediate entrance on the main level. Other areas of the space have a maximum ceiling height of 9 feet four inches. Each floor will provide different amenities to users of the space depending on their individual needs. The first floor will be used as a social area, the second floor is for more private spaces and the basement will be utilized in the youth center for group classes.

Existing Elements to be Retained

- Exterior windows
 - Exterior doors
 - Balconies
 - Patios
 - Mechanical systems
 - Restrooms
- Ceiling heights
 - Structural beams/columns
 - Exterior landscaping
 - Stairwells
 - Elevators
 - Restrooms

Square Footage Per Floor:

Level 1 – 10,302 sq ft
Level 2 – 8,191 sq ft
Basement – 10,302 sq ft



Interior Image of Alumni Center – Level 1 Atrium
(NDSU Harry D. McGovern Alumni Center, 2022)

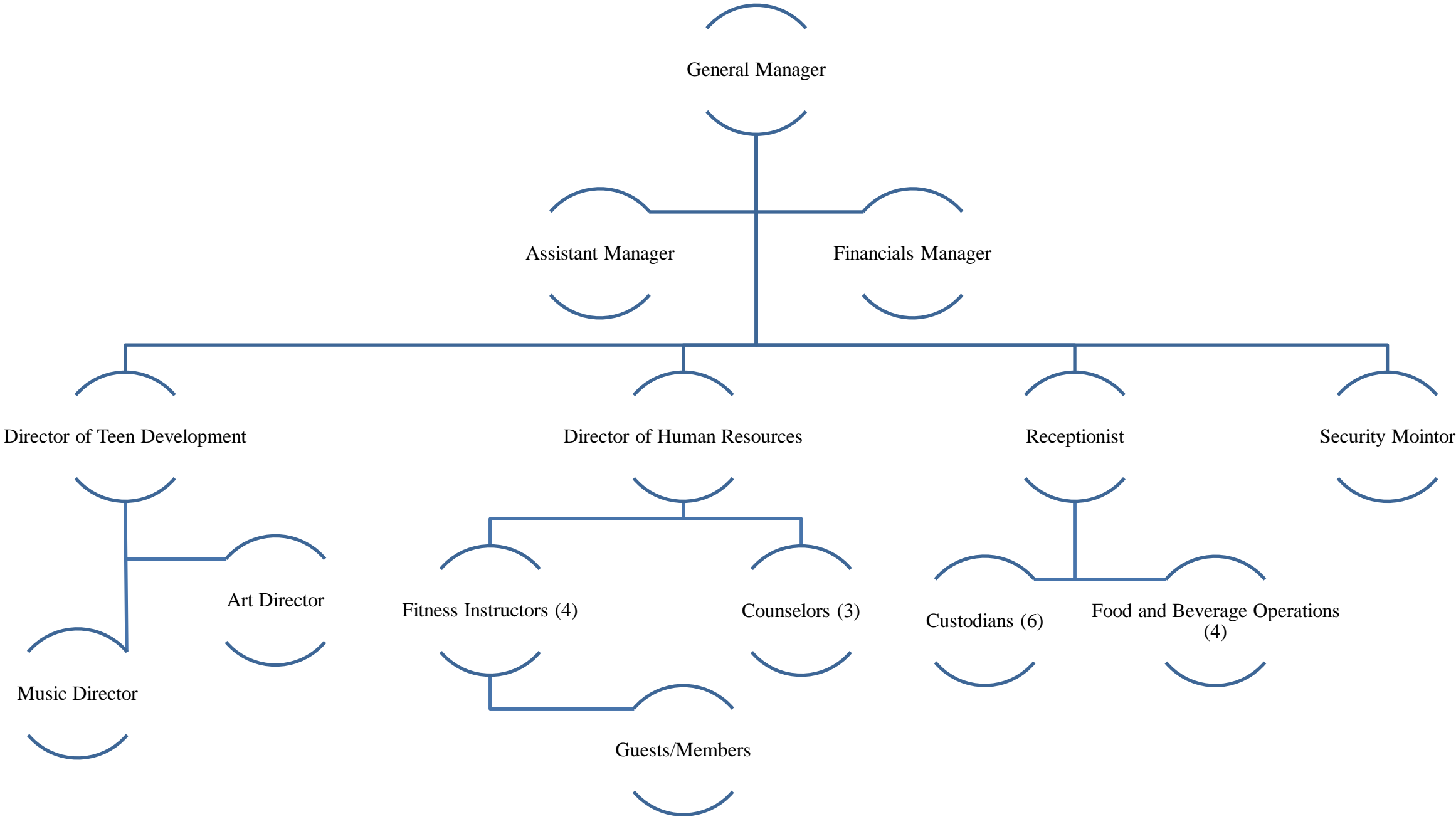


Interior Image of Alumni Center - Level 2 Conference Room
(NDSU Harry D. McGovern Alumni Center, 2022)



Interior Image of Alumni Center – Level 1 Lounge
(NDSU Harry D. McGovern Alumni Center, 2022)

Organizational Chart



User/Client

General Manager:

- Oversees the organization. Manages the day-to-day responsibilities of the youth center. The assistant manager will report to the general manager regarding information about the center. They will know the ins and outs of the company (Chicago Youth Centers, 2022).

Assistant Manager:

- Assists the general manager with organizing day-to-day responsibilities of the youth center. All other managers, supervisors, and employees will report to the assistant manager (Chicago Youth Centers, 2022).

Receptionist(2):

- The receptionist will be responsible for greeting guests and checking in members to the facility. They will help new guests sign up for a membership, take phone calls, and answer any questions guests' parents may have (Workable, 2022).

Fitness Instructors (4):

- Teach classes on various group physical exercise courses. Organize and manage the flex fitness studios and work together with the general and assistant managers to create fitness class schedules (Better Team, 2022c).

Music Director:

- Instruct music classes for the youth and train teens how to use music as a coping mechanism for mental health (Better Team, 2022c).

Art Director:

- Instruct art classes for the youth and train teens how to use painting, drawing, sculpting, and other forms of art as a coping mechanism for mental health (Better Team, 2022c).

Events Coordinator:

- Schedule and plan various events for youth and staff. Work directly alongside music director, art director, and fitness instructors to plan fun group activities for all to participate in (Dakota Boys and Girls Ranch, 2022).

Financials Manager:

- Manage all incoming donations and report funding back to the general facility manager. The financial manager has similar responsibilities to a treasurer of a club or organization (Better Team, 2022a).

Director of Teen Development:

- Manages all classes and courses guests can take. Capable of approving or declining different courses and positions (Chicago Youth Centers, 2022).

Director of Human Resources:

- Ensure all employees and visitors are treated equally and provided the rights they deserve as employees and guests (Chicago Youth Centers, 2022).

Food and Beverage Operations (4):

- Created food menus and recipes for staff and members. Operates cafe sales and organizes all events involving food operations (Kerr, 2018).

Custodians (6):

- Keep facilities clean and tidy. Work to ensure interior environments remain safe and healthy (Job Descriptions, 2021).

Counselors (3):

- Works with the youth to manage emotions, thoughts, and feelings. The counselors work with members of the facility to process life experiences (Better Team, 2022b).

Guests/Members:

- Participate in the activities and utilize amenities of the facility. Spend time relaxing, socializing, and learning life skills.

Security Monitor:

- Guards the facility and ensures safety and security of all users of the space.

Goals & Objectives

1. Create a space that establishes a sustainable environment.
- a. Implement lighting design solutions that utilize natural light whenever possible (Canazei et al., 2022).

b. Incorporate biophilic design elements through the use of live plants (Zhong et al., 2021).

c. Designing the space to include WELL standards to provide users with good health and positive wellbeing (Bazille, 2021).

d. Include wall protection sheets, use type three wall coverings or impact resistant gypsum board walls (BWBR, 2022).
2. Ensure the facility can adapt to the wants and needs of all end users.
- a. Design rooms that appeal to the demographics of peoples using the space (Chapman, 2006).

b. Providing various amenities to give adolescents a sense of freedom and choice during their developmental phases (Hamama et al., 2011).

c. Provide lighting within the rooms that can be adjusted per the users’ preferences – dimmable, color changing, circadian rhythm, etc. (Miwa & Hanyu, 2006).

d. Incorporate visual and tactile signs for wayfinding as to be accessible to all (Smith et al., 2012).

e. Maintain multiple assets of amenities including counseling, art, games, and athletics (Dakota Boys and Girls Ranch, 2022).

f. Include private lounge/breakroom for staff (Dakota Boys and Girls Ranch, 2022).

g. Design with flex furniture that can be arranged and adapted per the users’ needs (BWBR, 2022).
3. Design a facility that promotes mental wellbeing.
- a. Incorporating dawn simulators to provide a more natural source of light for promoting mental health and creating a visually appealing space (Canazei et al., 2022).

b. Including both neutral and vibrant pops of colors into the space to promote both peace and creativity (Paron, 2020).

c. Combine sensory elements into the design through large windows and specialty lighting, sound machines and acoustical separation, and the use of tactile and visual textures (Dalay, L., 2020).

d. Bringing the outside within the interior of the building through live greenery (Dalay, L., 2020).

e. Creating spaces for different types of physical activity like yoga, dance, weightlifting, cardio, etc. (Rachele et al. 2014).

f. Incorporating white, pink, or brown noise in a space to create a space with consistent, calming sound that establishes and improves sound privacy (Ylagan, 2021).

g. Using wood in a space to improve stress reduction, task performance improvement, blood pressure reduction, calmness, etc. (Sun, et al, 2020).
4. Implement spaces that promote both socialization and individualized reflection.
- a. Dividing spaces designated to meet relaxation needs and contribute to a worry-free environment from spaces of loud volume and chaos (Chapman, 2006).

b. Incorporating a variety of private and public spaces to give teens a sense of control (Chapman, 2006).

c. Incorporating bright and vibrant lighting in public, active spaces and dimmer soft lighting in private spaces (Canazei et al., 2022).

d. Provide film on windows and soundproofing within the counselors’ offices to keep confidentiality. (Burns, 2022).

Design Concept Statement

Club 701 Youth Center is an inclusive teen community center that will allow the youth of the Fargo-Moorhead area to receive the resources they need to approach today's world and challenges. Through our research, we discovered that elements of interior design can have major impacts on the mental health and wellbeing of our society's youth. Club 701 will include muted primary and secondary colors to ensure a youthful atmosphere that is appealing to the younger age group while remaining calming enough for older teens to focus and develop their emotions/feelings. The color scheme will be brought throughout every space and will include various shades of red, orange, yellow, green, and blue. Each floor will be divided into loud and quiet areas. The basement will house loud spaces such as fitness and music rooms, the first floor will host medium volume activities such as art and lounging, and the second floor will be strictly for quiet spaces like relaxation rooms and sensory therapy rooms. Additional private counseling rooms for staff to meet one on one with the teens a part of Club 701 will be included on the second floor to ensure privacy and confidentiality for the youth. These offices will allow the staff to escape from their jobs and take time to work on their own wellbeing. Nature is reflected in our mission by incorporating biophilic design and natural lighting into spaces wherever possible. Teens will be happily greeted upon entering Club 701 with an inviting reception area reflecting the facilities branding as well as a lobby to allow for socialization and waiting. Safety and security will be approached by allowing doors to be locked in the case of a security threat and access to private rooms will only be allowed with the incorporation of key card access. The first floor will include a large “greenhouse lounge” (horticulture therapy greenhouse) that will allow teens to escape the cold and enjoy time in a warm peaceful space equipped with walking paths, tables, and private lounge seating. Adequate resources will be provided to students such as a reading lounge to check out books, studying, and expand on students' learning capabilities. The lower level will include louder amenities where teens can go to exert energy. This includes fitness rooms, public lounges, and music rooms. Teens will be able to use this space to get physical exercise all year long which will aid in the prevention of seasonal depression. Being on the lower level away from private spaces, teens can enjoy time with their peers without feeling the need to restrict volume. The noise from these activities will be contained ensuring distractions will be minimized on the floors above. The third floor will be for the facility’s quietest activities. These will include private lounge seating, counseling rooms, sensory rooms, relaxation rooms, and a few sound insulated multipurpose rooms. Club 701 will approach the needs of every individual through the use of all three stories of the building.

Scope of Work

As interior designers for Club 701 – Youth Center, we are responsible for design a space that will provide supportive environments for the development of life skills, emotional wellbeing, physical wellbeing, and personal expression amongst the youth. The facility will include areas for self-reflection, spaces to socialize and manage relationships with peers, and studio rooms to encourage physical activity. The research process will be used to gather data to expand our knowledge and be able provide successful design solutions. Programing and the completion of construction documents will incorporate our research findings to provide detailed information about the design of Club 701.

<p>Research will include:</p> <ul style="list-style-type: none">• Literature Reviews• Annotated Bibliographies• Interviews & Site visits• Content Analysis• Gathering & Sorting Information• Research Report & Poster	<p>Final design process will include:</p> <ul style="list-style-type: none">• Presentation Folio• Perspectives & Renderings• Material Displays• Presentation Boards• Digital Presentation• 30 minute Public Presentation	<p>Spaces designed will include:</p> <p>(All group members will help design each space, but one member will be in charge of the design for their assigned space noted below)</p> <p>Level 1:</p> <ul style="list-style-type: none">• Lobby/Reception (ALL)• Horticulture Therapy Greenhouse (ALL)• Art Room (Jasmine)• Café (Natalia)• Reading Lounge (Natalia)• Multipurpose Room (Nathan) <p>Level 2:</p> <ul style="list-style-type: none">• Study Lounge (ALL)• Counseling Rooms [3] (Nathan)• Staff Lounge (Nathan)• Sensory Rooms [3] (Natalia)• Yoga Studio (Jasmine)• Relaxation Rooms [2] (Jasmine) <p>Basement:</p> <ul style="list-style-type: none">• Public Lounge (ALL)• Game Room Lounge (Natalia)• Flex Fitness Rooms [2] (Jasmine)• Multipurpose Rooms [2] (Nathan)	<p>Spaces allocated but not designed will include:</p> <p>Level 1:</p> <ul style="list-style-type: none">• Restrooms [2]• Office• Closet• Open Office• Storage Rooms [3]• Utility Room• Café Kitchen• Vestibule <p>Level 2:</p> <ul style="list-style-type: none">• Restrooms [2]• Locker Rooms [2]• Storage Room <p>Basement:</p> <ul style="list-style-type: none">• Restrooms [2]• Storage Room• Mechanical/Electrical Room• Locker Rooms [2]
<p>Programing and preliminary design steps will include:</p> <ul style="list-style-type: none">• Statement of Intent• Mission Statement• Field Survey:<ul style="list-style-type: none">◦ Existing Conditions Analysis• User/Client Description• Goals & Objectives• Design Concept Statement• Scope of Work• Programming<ul style="list-style-type: none">◦ Program Requirements Form◦ Room Data Sheets◦ Adjacency Matrix◦ Bubble/Blocking Diagram• Code Analysis	<p>Construction documents will include:</p> <ul style="list-style-type: none">• Floor Plans• FF&E Plans• Room Finish Plans• Reflected Ceiling Plans• Lighting Plans• Interior Elevations• Section Drawings• Detail Drawings• Large Scale Drawings• Fire & Life Safety Plans• Power & Communication Plans		

Programming

Level 1



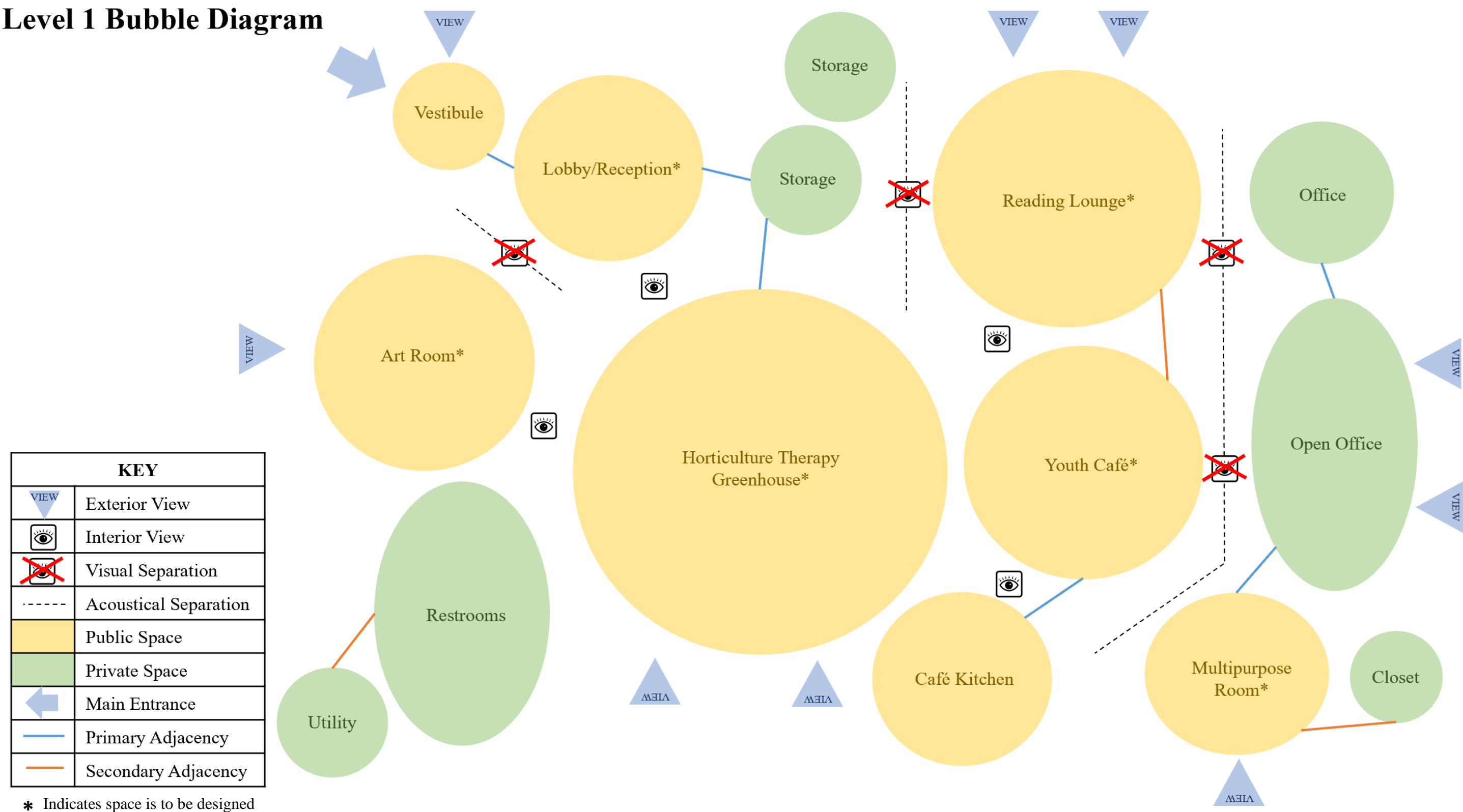
Level 1 Adjacency Matrix

<div>CLUB 701</div> <div>Youth Center</div>	Lobby/Reception*	Reception*	Reading Lounge *	Open Office	Café*	Horticulture Therapy Greenhouse*	Art Room*	Storage Room (3)	Restroom(2)	Office	Multipurpose Room	Café Kitchen	Closet	Utility Room	Vestibule
Lobby/Reception*															
Reception*															
Reading Lounge*															
Open Office															
Café *															
Horticulture Therapy Greenhouse *															
Art Room*															
Storage Room (3)															
Restroom (2)															
Office															
Multipurpose Room*															
Café Kitchen															
Closet															
Utility Room															
Vestibule															

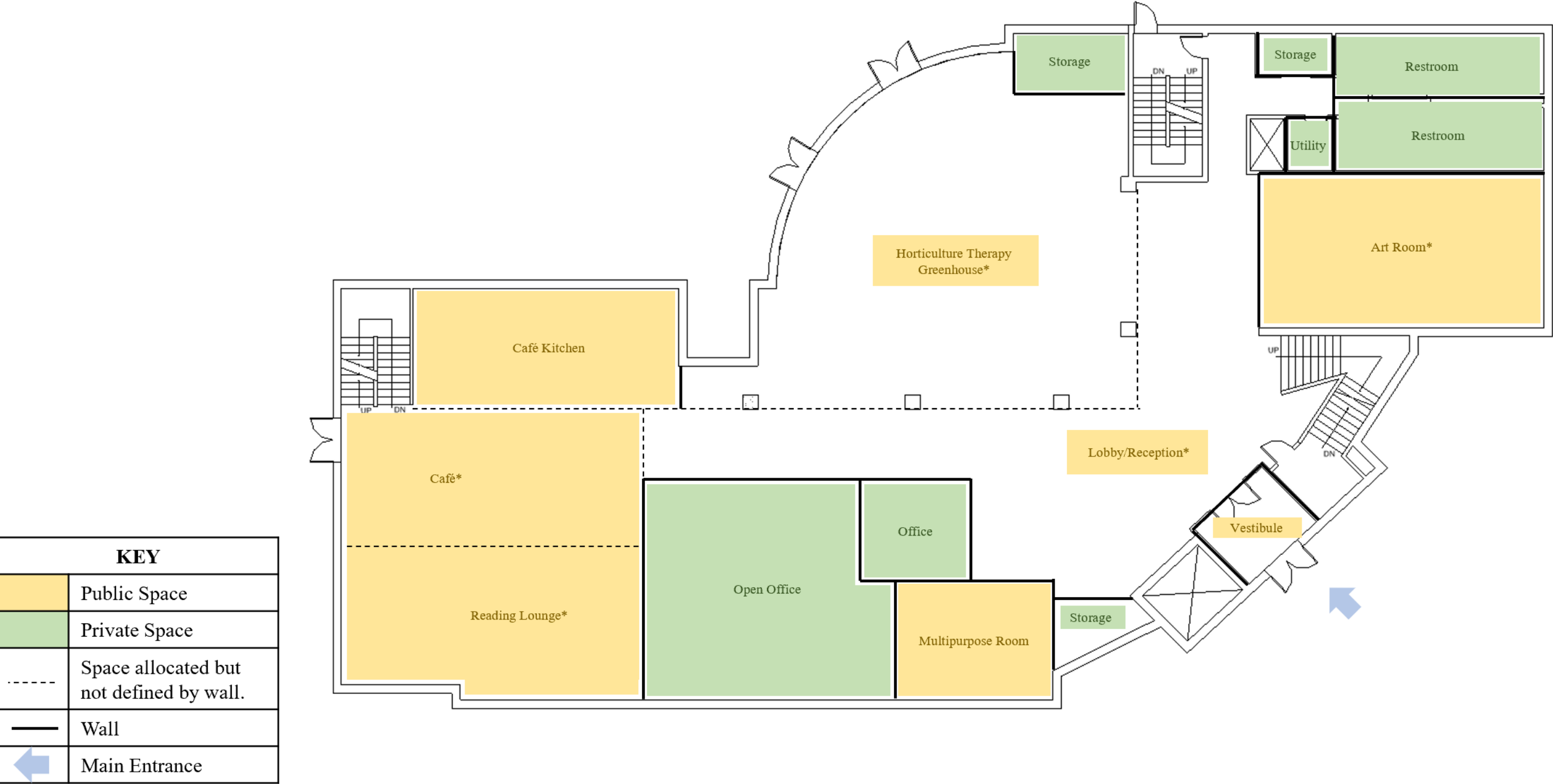
KEY	
Primary/Mandatory	
Secondary/Desirable	
Undesirable	
Neutral	

* Indicates space is to be designed

Level 1 Bubble Diagram



Level 1 Blocking Diagram



* Indicates space is to be designed

Level 1 Room Data Sheets

<div>Room Name: Art RoomRoom Location: Level 1Users: Guests/Members, Art Director, Custodians</div> <div>Activities: Water color painting, acrylic painting, drawing, sketching, sculpting, writing, learning, teaching, oil pastel shading, rendering, collaging.</div>					
Furniture/Equipment	<div>Furniture:</div> <div><ul style="list-style-type: none">- Work tables [4]- Stools [10]- Standing easels [2]- Chairs [4]- Storage cabinets [2]- Taborets [2]- Drying rack [3]- Donkey easels [2]- Custom Storage Units [2]</div>	<div>Equipment:</div> <div><ul style="list-style-type: none">- N/A</div>	<div>Hours of Operation:</div> <div><ul style="list-style-type: none">- 9:00am-5:00pm Monday – Saturday</div>	<div>Special Provisions:</div> <div><ul style="list-style-type: none">- ADA Compliant</div>	<div>Occupancy:</div> <div><ul style="list-style-type: none">- 17 Occupants- Educational Vocational Room</div>
Mechanical / Electrical	<div>Heating / Vent / AC:</div> <div><ul style="list-style-type: none">- Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant</div>	<div>Plumbing / Fixtures:</div> <div><ul style="list-style-type: none">- Restrooms near by- Utility sinks [2]</div>	<div>Communications:</div> <div><ul style="list-style-type: none">- Wireless Internet- Data</div>	<div>Electrical:</div> <div><ul style="list-style-type: none">- Outlets at 18” A.F.F. every 12’ per code-Smoke and fire alarm-Standard room switch controls- Recessed linear panel lights [35]- Hanging Pendants [11]- LED Strip lighting</div>	<div>Room Size:</div> <div><ul style="list-style-type: none">- 822 sf</div>
Architectural	<div>Floors:</div> <div><ul style="list-style-type: none">- Finished/polished/stained concrete</div>	<div>Wall Partitions:</div> <div><ul style="list-style-type: none">- Gypsum Board- 1-hour min. fire rating per code- Commercial wallcovering/ paint</div>	<div>Ceilings:</div> <div><ul style="list-style-type: none">- 1-hour min. fire rating per code- 9’ – 0’ Ceiling height- Gypsum wallboard- 1-hour min. fire rating per code</div>	<div>Doors / Windows:</div> <div><ul style="list-style-type: none">- Single casement windows unfixed (5)- Double glass door (1)</div>	<div>Natural Lighting:</div> <div><ul style="list-style-type: none">- Windows facing North (5)- Automatic window treatments</div>
<div>Additional Information</div> <div><ul style="list-style-type: none">-“The presence of a window, a soothing color palette, and soft, dim lighting are a few of the most commonly selected characteristics of the ideal therapy office” (Ylagan, 2021, p. 33).-“Youth centers in particular were designed... Areas were provided for arts and crafts, music and dancing, and indoor sports” (Owens, 1997, p. 158).-“Public areas, particularly commercial and recreation areas, should be designed to encourage the activities of teens rather than discourage them as is typically the case” (Owens, 1997, p. 165).</div>					

Room Name: Lobby/Reception Room Location: Level 1 Users: Guests/Members, all of staff					
Activities: Waiting, gathering information, lounging, socializing, checking in, registering, gathering information.					
Furniture/Equipment	Furniture: <ul style="list-style-type: none">- Side Chairs [2]- Task Chair- Bench- Side TableSide tables [1]- Coffee TableCoffee table [1]- Receptacle- Custom Reception Desk- Custom Storage	Equipment: <ul style="list-style-type: none">- N/A	Hours of Operation: <ul style="list-style-type: none">- 9:00am-9:00pm Monday - Saturday	Special Provisions: <ul style="list-style-type: none">- ADA Compliant	Occupancy: <ul style="list-style-type: none">- 137 Occupants- Assembly Unconcentrated
Mechanical / Electrical	Heating / Vent / AC: <ul style="list-style-type: none">- Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	Plumbing / Fixtures: <ul style="list-style-type: none">- N/A	Communications: <ul style="list-style-type: none">- Wireless Internet- Data	Electrical: <ul style="list-style-type: none">-Outlets at 18” A.F.F. every 12’ per code-Smoke and fire alarm-Standard room switch controls- Baffles with lighting [15]-LED Strip lighting	Room Size: <ul style="list-style-type: none">- 2,043 sf
Architectural	Floors: <ul style="list-style-type: none">- Luxury Vinyl Plank- Ceramic Tile	Wall Partitions: <ul style="list-style-type: none">- Gypsum Board- 1-hour min. fire rating per code- Commercial wallcovering/ paint	Ceilings: <ul style="list-style-type: none">- 1-hour min. fire rating per code- 8’ – 0” Ceiling height- Gypsum wallboard- 1-hour min. fire rating per code	Doors / Windows: <ul style="list-style-type: none">- Double doors- Single casement windows fixed (4)	Natural Lighting: <ul style="list-style-type: none">- Windows facing North-East (4)- Automatic Window Treatments
Additional Information <ul style="list-style-type: none">-“The effects of wood-derived stimulation can provide multiple physiological and psychological benefits such as stress reduction, task performance improvement, blood pressure reduction, and more” (Sun, et al, 2020, p. 1).- Ensuring that the space will have sufficient natural sunlight is crucial. This is one of the most important elements for a space to improve mental health (An, et al, 2016).- Avoiding visual cluster through intentional space planning of furniture (Bazille, 2021).- Providing views of nature through large windows or biophilia throughout the space (Bazille, 2021).- Integrate animals into the interior through aquariums, art, material patterns, and resources for therapy (Dalay, 2020).- Incorporate biophilia through live walls/plants, water features, and lighting (Dalay, 2020).- If art is not utilized, the space will miss out on an easy way to incorporate thought provoking designs (Kim & Heo, 2021).- When choosing wood species for a space, these options could be considered (Martin Lopez & Diaz, 2022).- In spaces that don’t require specific colors to influence mood, these options could be applied (Martin Lopez & Diaz, 2022).					

Room Name: Horticulture Therapy Greenhouse Room Location: Level 1 Users: Guests/Members, custodians, counselors Activities: Relaxing, resting, socializing, sketching, writing, reflecting, planting, eating, walking.					
Furniture/Equipment	<u>Furniture:</u> - Side Chairs [2] - Swinging Chairs [2] - Benches [6] - Custom Planter Boxes [6] - Sofa [1]	<u>Equipment:</u> - N/A	<u>Hours of Operation:</u> - 9:00am-9:00pm Monday - Saturday	<u>Special Provisions:</u> - ADA Compliant	<u>Occupancy:</u> - 141 Occupants - Assembly Unconcentrated
Mechanical / Electrical	<u>Heating / Vent / AC:</u> - Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> - Water feature wall	<u>Communications:</u> - Wireless Internet	<u>Electrical:</u> -Outlets at 18” A.F.F. every 12’ per code -Smoke and fire alarm -Standard room switch controls -Recessed Panel Lighting - Strip Plant Lighting	<u>Room Size:</u> - 2111 sf
Architectural	<u>Floors:</u> - Concrete base - Raised dirt beds - Ceramic tile - Commercial Carpet tile	<u>Wall Partitions:</u> - Gypsum Wall partitions [2]	<u>Ceilings:</u> - 1-hour min. fire rating per code - 16’ – 0” Ceiling height - Gypsum wallboardAcoustical Ceiling Tile - 1-hour min. fire rating per code	<u>Doors / Windows:</u> - Double casement windows unfixed (3) - Double door (3)	<u>Natural Lighting:</u> - Windows facing West (3) - Automatic Window Treatments
Additional Information - “To overcome the problematic separation of humans and nature, humans have substantially transformed their environments to enter a mode of being in which humans and nature are more connected,” (Zhong et al., 2021, p. 133). -“Natural elements (such as greenery, savannah-like landscapes, and clear running water) have an automatic calming effect on physiological arousal” (An, et al, 2016, p. 2). -“Natural elements buffered the relationship between role stressors and job satisfaction, depressed mood, and anxiety” (An, et al, 2016, p. 1). -“Employees in the WELL-certified offices were more satisfied with spatial comfort, connection to the outdoor environment, interior air quality (IAQ), thermal comfort, visual comfort, and noise distraction and privacy, although statistical significance was not determined” (Bazille, 2021, p. 6).					

Room Name: Reading Lounge Room Location: Level 1 Users: Guests/Members, Director of Teen Development, custodians, counselors Activities: Reading, writing, learning, studying, resting, relaxing.					
Furniture/Equipment	<u>Furniture:</u> - Bookcases [15] - Lounge chairs [2] - Bean bags [2] - Custom work table [1] - Modular sofa [1] - Side table [2] - Ottoman [2] - Stools [5] - Custom planters [2] - Table lamps [4]	<u>Equipment:</u> - Fireplace	<u>Hours of Operation:</u> - 9:00am-9:00pm Monday – Saturday	<u>Special Provisions:</u> - ADA Compliant	<u>Occupancy:</u> - 52 Occupants - Assembly Unconcentrated
Mechanical / Electrical	<u>Heating / Vent / AC:</u> - Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> - N/A	<u>Communications:</u> - Wireless Internet - Wired Internet - Data	<u>Electrical:</u> - Outlets at 18” A.F.F. every 12’ per code -Smoke and fire alarm -Standard room switch controls - Suspended Luminaires - Hanging Pendants - Recessed Cans Recessed Linear Lights [21] -LED Strip lighting	<u>Room Size:</u> - 780 sf
Architectural	<u>Floors:</u> - Commercial Carpet Tile	<u>Wall Partitions:</u> - Gypsum Board - 1-hour min. fire rating per code - Commercial wallcovering/ paint	<u>Ceilings:</u> - 1-hour min. fire rating per code - 8’ – 0” Ceiling height - Gypsum wallboardAcoustical ceiling tile - 1-hour min. fire rating per code	<u>Doors / Windows:</u> - Single casement windows fixed (7)	<u>Natural Lighting:</u> - Windows facing East (7) - Automatic Window Treatments
Additional Information -“Youth centers in particular were designed... Areas were provided for arts and crafts, music and dancing, and indoor sports” (Owens, 1997, p. 158). -“Public areas, particularly commercial and recreation areas, should be designed to encourage the activities of teens rather than discourage them as is typically the case” (Owens, 1997, p. 165). -“The fire element need not only be present to contribute to the environment, but it can also create an atmosphere of warmth in the interior by simulating fire with heat, color palette and light” (Dalay, 2020, p. 9).					

Room Name: Café Room Location: Level 1 Users: Visitors and Staff Activities: Eating, relaxing, socializing, cooking, ordering.					
Furniture/Equipment	<u>Furniture:</u> - Café tables [6] - Chairs [6] - High top tables [2] - Stools [12] - Booth [6] - Receptacles [2] - Custom planters [2]	<u>Equipment:</u> - N/A	<u>Hours of Operation:</u> - 9:00am-7:00pm Monday – Saturday	<u>Special Provisions:</u> - ADA Compliant	<u>Occupancy:</u> - 55 Occupants - Assembly Unconcentrated
Mechanical / Electrical	<u>Heating / Vent / AC:</u> - Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> - N/A	<u>Communications:</u> - Wireless Internet - Wired Internet - Data	<u>Electrical:</u> - Outlets at 18” A.F.F. every 12’ per code - Smoke and fire alarm - Standard room switch controls - Recessed Cans - Suspended Luminaires - Recessed linear lights [6] - LED Strip lighting	<u>Room Size:</u> - 517 sf
Architectural	<u>Floors:</u> Luxury Vinyl Plank	<u>Wall Partitions:</u> - Gypsum Board - 1-hour min. fire rating per code - Commercial wallcovering/ paint - DIRRT wall system	<u>Ceilings:</u> - 1-hour min. fire rating per code - 8’ – 0” Ceiling height - Gypsum wallboardAcoustical ceiling tile - 1-hour min. fire rating per code	<u>Doors / Windows:</u> - Single casement windows fixed (7)	<u>Natural Lighting:</u> - Windows facing East (7) - Automatic Window Treatments
Additional Information -“Youth centers in particular were designed... Areas were provided for arts and crafts, music and dancing, and indoor sports” (Owens, 1997, p. 158). -“Public areas, particularly commercial and recreation areas, should be designed to encourage the activities of teens rather than discourage them as is typically the case” (Owens, 1997, p. 165).					

Room Name: Multipurpose Room Room Location: Level 1 Users: All of staff					
Activities: Meeting, presenting, socializing, event hosting.					
Furniture/Equipment	<u>Furniture:</u> <ul style="list-style-type: none">- Tables [6]- Chair [6]- Custom cabinet	<u>Equipment:</u> <ul style="list-style-type: none">- Television	<u>Hours of Operation:</u> <ul style="list-style-type: none">- 9:00am-7:00pm Monday – Saturday	<u>Special Provisions:</u> <ul style="list-style-type: none">- ADA Compliant	<u>Occupancy:</u> <ul style="list-style-type: none">- 28 OL
	<u>Heating / Vent / AC:</u> <ul style="list-style-type: none">- Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> <ul style="list-style-type: none">- N/A	<u>Communications:</u> <ul style="list-style-type: none">- Wireless Internet- Television Data- Phone/Data	<u>Electrical:</u> <ul style="list-style-type: none">- Outlets at 18” A.F.F. every 12’ per code- Smoke and fire alarm- Standard room switch controls- Recessed linear lights [6]- LED Strip lighting	<u>Room Size:</u> <ul style="list-style-type: none">- 245 sq ft
	<u>Floors:</u> <ul style="list-style-type: none">- Commercial carpet tile	<u>Wall Partitions:</u> <ul style="list-style-type: none">- Gypsum Board- Commercial paint- Wall tile	<u>Ceilings:</u> <ul style="list-style-type: none">- 9’ – 0” Ceiling height- 8’ – 6” soffits- Gypsum wallboard- Acoustical ceiling tile- 1-hour min. fire rating per code	<u>Doors / Windows:</u> <ul style="list-style-type: none">- Single doors [3]- Single casement windows [4]	<u>Natural Lighting:</u> <ul style="list-style-type: none">- Single casement windows facing north [4]- Automatic Window Treatments
Additional Information					

Room Name: Café Kitchen Room Location: Level 1 Users: Food and Beverage Operations, Guests/Members, custodians					
Activities: Problem-solving, organizing, scheduling, taking breaks, managing.					
Furniture/Equipment	<u>Furniture:</u>	<u>Equipment:</u>	<u>Hours of Operation:</u>	<u>Special Provisions:</u>	<u>Occupancy:</u>
Mechanical / Electrical	<u>Heating / Vent / AC:</u>	<u>Plumbing / Fixtures:</u>	<u>Communications:</u>	<u>Electrical:</u>	<u>Room Size:</u> ~ 575 sq ft
Architectural	<u>Floors:</u>	<u>Wall Partitions:</u>	<u>Ceilings:</u>	<u>Doors / Windows:</u>	<u>Natural Lighting:</u>
Additional Information					

<div>Room Name: Storage [3]Room Location: Level 1Users: All of staff</div> <div>Activities: Storing, packing, unboxing.</div>					
Furniture/Equipment	<div>Furniture:</div>	<div>Equipment:</div>	<div>Hours of Operation:</div>	<div>Special Provisions:</div>	<div>Occupancy:</div>
Mechanical / Electrical	<div>Heating / Vent / AC:</div>	<div>Plumbing / Fixtures:</div>	<div>Communications:</div>	<div>Electrical:</div>	<div>Room Size: ~ 100 sq ft</div>
Architectural	<div>Floors:</div>	<div>Wall Partitions:</div>	<div>Ceilings:</div>	<div>Doors / Windows:</div>	<div>Natural Lighting:</div>
<div>Additional Information</div>					

<div>Room Name: OfficeRoom Location: Level 1Users: All of Staff</div> <div>Activities: Meeting, talking, working, taking notes.</div>					
Furniture/Equipment	<div>Furniture:</div>	<div>Equipment:</div>	<div>Hours of Operation:</div>	<div>Special Provisions:</div>	<div>Occupancy:</div>
Mechanical / Electrical	<div>Heating / Vent / AC:</div>	<div>Plumbing / Fixtures:</div>	<div>Communications:</div>	<div>Electrical:</div>	<div>Room Size: ~ sq ft</div>
Architectural	<div>Floors:</div>	<div>Wall Partitions:</div>	<div>Ceilings:</div>	<div>Doors / Windows:</div>	<div>Natural Lighting:</div>
<div>Additional Information</div>					

<div>Room Name: Open OfficeRoom Location: Level 1Users: All of Staff</div> <div>Activities: Meeting, talking, working, taking notes.</div>					
Furniture/Equipment	<div>Furniture:</div>	<div>Equipment:</div>	<div>Hours of Operation:</div>	<div>Special Provisions:</div>	<div>Occupancy:</div>
Mechanical / Electrical	<div>Heating / Vent / AC:</div>	<div>Plumbing / Fixtures:</div>	<div>Communications:</div>	<div>Electrical:</div>	<div>Room Size: ~ sq ft</div>
Architectural	<div>Floors:</div>	<div>Wall Partitions:</div>	<div>Ceilings:</div>	<div>Doors / Windows:</div>	<div>Natural Lighting:</div>
<div>Additional Information</div>					

<div>Room Name: UtilityRoom Location: Level 1Users: All of Staff.</div> <div>Activities: Storing, boxing.</div>					
Furniture/Equipment	<div>Furniture:</div>	<div>Equipment:</div>	<div>Hours of Operation:</div>	<div>Special Provisions:</div>	<div>Occupancy:</div>
Mechanical / Electrical	<div>Heating / Vent / AC:</div>	<div>Plumbing / Fixtures:</div>	<div>Communications:</div>	<div>Electrical:</div>	<div>Room Size: ~ sq ft</div>
Architectural	<div>Floors:</div>	<div>Wall Partitions:</div>	<div>Ceilings:</div>	<div>Doors / Windows:</div>	<div>Natural Lighting:</div>
<div>Additional Information</div>					

<div>Room Name: VestibuleRoom Location: Level 1Users: All of Staff, Guests/MembersActivities: Waiting.</div>					
Furniture/Equipment	<div>Furniture:</div>	<div>Equipment:</div>	<div>Hours of Operation:</div>	<div>Special Provisions:</div>	<div>Occupancy:</div>
Mechanical / Electrical	<div>Heating / Vent / AC:</div>	<div>Plumbing / Fixtures:</div>	<div>Communications:</div>	<div>Electrical:</div>	<div>Room Size: ~ sq ft</div>
Architectural	<div>Floors:</div>	<div>Wall Partitions:</div>	<div>Ceilings:</div>	<div>Doors / Windows:</div>	<div>Natural Lighting:</div>
<div>Additional Information</div>					

<div>Room Name: Restrooms [2] Room Location: Level 1 Users: Guests/Members, all of staff</div> <div>Activities: Self-care, hygiene, washing, grooming.</div>					
Furniture/Equipment	<u>Furniture:</u>	<u>Equipment:</u>	<u>Hours of Operation:</u>	<u>Special Provisions:</u>	<u>Occupancy:</u>
Mechanical / Electrical	<u>Heating / Vent / AC:</u>	<u>Plumbing / Fixtures:</u>	<u>Communications:</u>	<u>Electrical:</u>	<u>Room Size:</u> ~ 225 sq ft
Architectural	<u>Floors:</u>	<u>Wall Partitions:</u>	<u>Ceilings:</u>	<u>Doors / Windows:</u>	<u>Natural Lighting:</u>
Additional Information					

Level 2



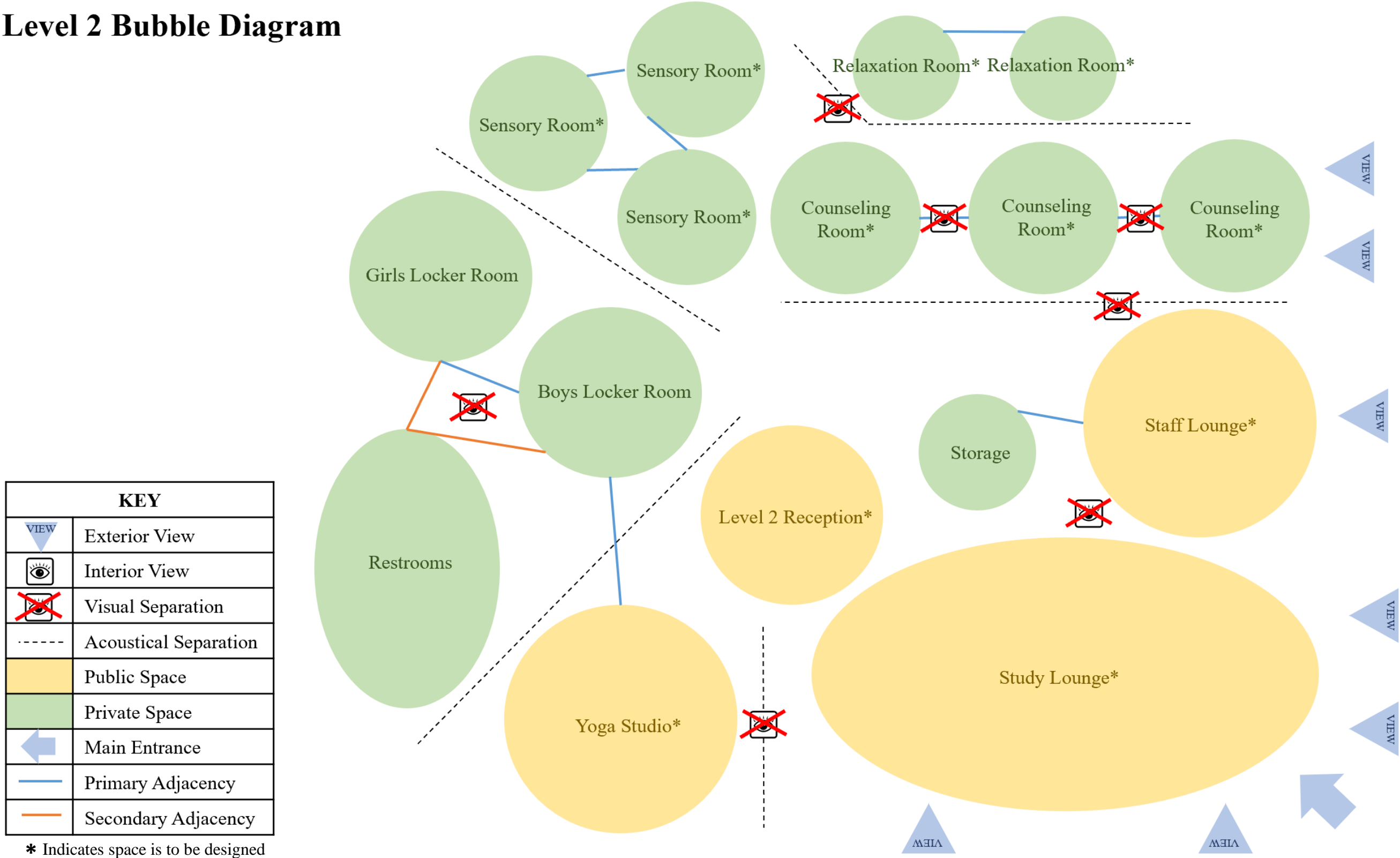
Level 2 Adjacency Matrix

<div>CLUB 701</div> <div>Youth Center</div>	Yoga Studio *	Relaxation Rooms (2) *	Staff Lounge *	Counseling Rooms (3) *	Storage	Restroom (2)	Study Lounge *	Sensory Rooms (3) *	Locker Rooms (2)	Level Two Reception *
Yoga Studio *										
Relaxation Rooms (2) *										
Staff Lounge *										
Counseling Rooms (3) *										
Storage										
Restroom (2)										
Study Lounge *										
Sensory Rooms (3) *										
Locker Rooms (2)										
Level Two Reception *										

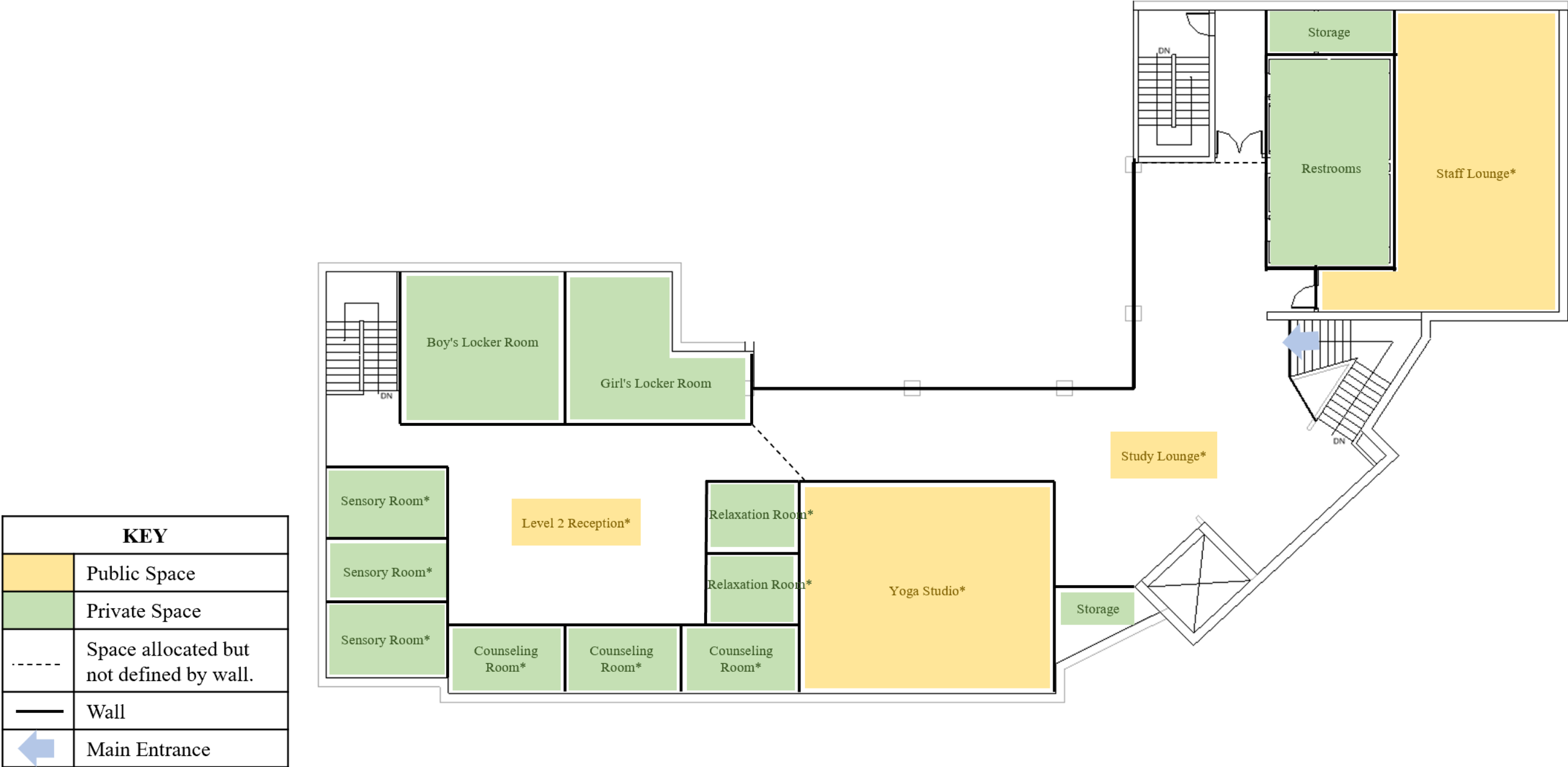
KEY	
Primary/Mandatory	
Secondary/Desirable	
Undesirable	
Neutral	

* Indicates space is to be designed

Level 2 Bubble Diagram



Level 2 Blocking Diagram



* Indicates space is to be designed

Level 2 Room Data Sheets

Room Name: Yoga Studio Room Location: Level 2 Users: Guests/Members, counselors, custodians, Fitness Instructors					
Activities: Teaching, yoga, physical activity, meditation, relaxing, stretching, resting.					
Furniture/Equipment	Furniture: - N/A	Equipment: - N/A	Hours of Operation: - 9:00am-9:00pm Monday – Saturday	Special Provisions: - ADA Compliant	Occupancy: - 19 Occupants - Exercise Room
Mechanical / Electrical	Heating / Vent / AC: - Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	Plumbing / Fixtures: - N/A	Communications: - Wireless Internet - Data	Electrical: - Outlets at 18” A.F.F. every 12’ per code - Smoke and fire alarm - Standard room switch controls - Recessed Cans	Room Size: - 948 sf
Architectural	Floors: - PVC Sports Flooring	Wall Partitions: - Gypsum Board - 1-hour min. fire rating per code - Commercial wallcovering/ paint	Ceilings: - 1-hour min. fire rating per code - 8’ – 0” Ceiling height - Acoustical Ceiling Tile - Gypsum wallboard - 1-hour min. fire rating per code	Doors / Windows: - Double casement windows fixed (5) - Double door (1)	Natural Lighting: - Windows facing East (3) - Automatic Window Treatments
Additional Information -“Youth centers in particular were designed... Areas were provided for arts and crafts, music and dancing, and indoor sports” (Owens, 1997, p. 158). -“Public areas, particularly commercial and recreation areas, should be designed to encourage the activities of teens rather than discourage them as is typically the case” (Owens, 1997, p. 165). -“Health is seen as being on a continuum from illness to well-being and how an individual experiences their environment can play a role in harming or promoting their mental and physical health (Roskams & Haynes, 2019). Therefore, occupants affect the ability to provide truly healthy workplaces, capable of promoting health and well-being as well as minimizing the risk of disease” (Bazille, 2021, p. 8).					

Room Name: Relaxation Rooms [2] Room Location: Level 2 Users: Guests/Members Activities: Relaxing, napping, listening to music, breathing exercises, resting.					
Furniture/Equipment	<u>Furniture:</u> - Swinging chair (1) - Massage chair (1) - Side table (1) - Bean bag (1) - Floor lamp (1) - Shelves (2) - Basket (1)	<u>Equipment:</u> - Television (1) - Sound machine (1) - Calming garden fountain (1)	<u>Hours of Operation:</u> - 9:00am-9:00pm Monday – Saturday	<u>Special Provisions:</u> - ADA Compliant	<u>Occupancy:</u> - 8 Occupants - Assembly Unconcentrated
Mechanical / Electrical	<u>Heating / Vent / AC:</u> - Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> - N/A	<u>Communications:</u> - Wireless Internet - Data	<u>Electrical:</u> - Outlets at 18” A.F.F. every 12’ per code - Smoke and fire alarm - Standard room switch controls - Recessed Cans	<u>Room Size:</u> - 114 sf
Architectural	<u>Floors:</u> - Commercial Carpet Tile	<u>Wall Partitions:</u> - Gypsum Board - 1-hour min. fire rating per code - Commercial wallcovering/ paint	<u>Ceilings:</u> - 1-hour min. fire rating per code - 8’ – 0” Ceiling height - Gypsum wallboard - 1-hour min. fire rating per code	<u>Doors / Windows:</u> - Single door (1)	<u>Natural Lighting:</u> - N/A
Additional Information - “Nature sounds like ocean waves can be placed or played inside a therapist’s office to drown out any background noise and create a calming environment” (Ylagan, 2021, p. 15). - “Biophilic design can be experienced in a variety of sensory ways such as sight, sound, touch, smell, and taste” (Dalay, 2020, p. 4). - “The element that generates more positive emotions in respondents within studied concepts – color, textures, objects, furniture and equipment – is texture, especially soft textiles such as cotton, polyester, linen, and wool” (Martin Lopez & Diaz, 2022, p. 28).					

Room Name: Sensory Rooms [3] Room Location: Level 2 Users: Guests/Members					
Activities: Listening to music, adjusting light and sound, calming activities (puzzles, etc.), relaxing, resting.					
Furniture/Equipment	<u>Furniture:</u> <ul style="list-style-type: none">- Large ottoman (1)- Bean bag (1)- Hanging chairs (2)- Rug (1)	<u>Equipment:</u> <ul style="list-style-type: none">- N/A	<u>Hours of Operation:</u> <ul style="list-style-type: none">- 9:00am-9:00pm Monday – Saturday	<u>Special Provisions:</u> <ul style="list-style-type: none">- ADA Compliant	<u>Occupancy:</u> <ul style="list-style-type: none">- 14 Occupants- Assembly Unconcentrated
Mechanical / Electrical	<u>Heating / Vent / AC:</u> <ul style="list-style-type: none">- Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> <ul style="list-style-type: none">- N/A	<u>Communications:</u> <ul style="list-style-type: none">- Wireless Internet- Data	<u>Electrical:</u> <ul style="list-style-type: none">- Outlets at 18” A.F.F. every 12’ per code- Smoke and fire alarm- Standard room switch controls- Recessed Cans- LED Strip lighting	<u>Room Size:</u> <ul style="list-style-type: none">- 206 sf
Architectural	<u>Floors:</u> <ul style="list-style-type: none">- Commercial Carpet Tile	<u>Wall Partitions:</u> <ul style="list-style-type: none">- Gypsum Board- 1-hour min. fire rating per code- Commercial wallcovering/ paint	<u>Ceilings:</u> <ul style="list-style-type: none">- 1-hour min. fire rating per code- 8’ – 0” Ceiling height- Gypsum wallboard	<u>Doors / Windows:</u> <ul style="list-style-type: none">- Single door	<u>Natural Lighting:</u> <ul style="list-style-type: none">- N/A
Additional Information -“There is little color, pattern, or stimuli in the room. This may be a successful environment for a child with acute sensitivities, but difficult for a therapy professional or those with hypo-sensory reactions who seeks stimulation from their environment,” (Paron, 2020, p. 4). -“The five colors most appreciated by respondents are gray, brown, white, blue, and beige” (Martin Lopez & Diaz, 2022, p. 23). -“There is little color, pattern, or stimuli in the room. This may be a successful environment for a child with acute sensitivities, but difficult for a therapy professional or those with hypo-sensory reactions who seeks stimulation from their environment,” (Paron, 2020, p. 4).					

Room Name: Counseling Rooms [3] Room Location: Level 2 Users: Guests/Members, counselors, Director of Teen Development, Director of Human Resources Activities: Counseling, problem-solving, organizing, scheduling, taking breaks.					
Furniture/Equipment	<u>Furniture:</u> - Task chair (1) - Desk (1) - Side chair (2) - Rug (1) - Floor lamp (1) - Lounge chair (1)	<u>Equipment:</u> - Television (1)	<u>Hours of Operation:</u> - 9:00am-5:00pm Monday – Saturday	<u>Special Provisions:</u> - ADA Compliant	<u>Occupancy:</u> - 2 Occupants - Business
Mechanical / Electrical	<u>Heating / Vent / AC:</u> - Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> - N/A	<u>Communications:</u> - Wireless Internet - Data	<u>Electrical:</u> - Outlets at 18” A.F.F. every 12’ per code - Smoke and fire alarm - Standard room switch controls - Recessed Cans	<u>Room Size:</u> - 172 sf
Architectural	<u>Floors:</u> - Commercial carpet tile	<u>Wall Partitions:</u> - Gypsum Board - 1-hour min. fire rating per code - Commercial wallcovering/ paint	<u>Ceilings:</u> - 1-hour min. fire rating per code - 8’ – 0” Ceiling height - Gypsum wallboard	<u>Doors / Windows:</u> - Double casement windows unfixed (5) - Single door (1)	<u>Natural Lighting:</u> - Window Facing South (1) - Automatic Window Treatments
Additional Information - “The presence of a window, a soothing color palette, and soft, dim lighting are a few of the most commonly selected characteristics of the ideal therapy office” (Ylagan, 2021, p. 33). - “To become socially mature, teens need social interaction with their peers and with adults” (Owens, 1997, p. 161).					

Room Name: Study Lounge Room Location: Level 2 Users: Guests/Members					
Activities: Studying, reading, writing, drawing, sketching, resting, listening to music.					
Furniture/ Equipment	<u>Furniture:</u> <ul style="list-style-type: none">- Study pods (4)- Custom study nooks (4)	<u>Equipment:</u> <ul style="list-style-type: none">- N/A	<u>Hours of Operation:</u> <ul style="list-style-type: none">- 9:00am-9:00pm Monday – Saturday	<u>Special Provisions:</u> <ul style="list-style-type: none">- ADA Compliant	<u>Occupancy:</u> <ul style="list-style-type: none">- 121 Occupants- Assembly Unconcentrated
Mechanical / Electrical	<u>Heating / Vent / AC:</u> <ul style="list-style-type: none">- Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> <ul style="list-style-type: none">- N/A	<u>Communications:</u> <ul style="list-style-type: none">- Wireless Internet- Data	<u>Electrical:</u> <ul style="list-style-type: none">- Outlets at 18” A.F.F. every 12’ per code- Smoke and fire alarm- Standard room switch controls- Recessed Cans- Hanging Pendants- Recessed cans [4]- Sconces- LED Strip lighting	<u>Room Size:</u> <ul style="list-style-type: none">- 1808 sf
Architectural	<u>Floors:</u> <ul style="list-style-type: none">- Commercial Carpet Tile	<u>Wall Partitions:</u> <ul style="list-style-type: none">- Gypsum Board- 1-hour min. fire rating per code- Commercial wallcovering/ paint	<u>Ceilings:</u> <ul style="list-style-type: none">- 1-hour min. fire rating per code- 8’ – 0” Ceiling height- Gypsum wallboard	<u>Doors / Windows:</u> <ul style="list-style-type: none">- Double casement windows fixed (5)	<u>Natural Lighting:</u> <ul style="list-style-type: none">- Windows Facing West (5)- Automatic Window Treatments
Additional Information <ul style="list-style-type: none">- “Biophilic design can be experienced in a variety of sensory ways such as sight, sound, touch, smell, and taste” (Dalay, 2020, p. 4).- “Private spaces such as the home may be seen as a haven, while the growing romanticism about nature stresses its healing properties as the opposite of polluting and harmful science and technology (Macnaghton & Urry 1998, p. 114),” (Chapman, 2006, p. 10).- “The words “relaxing” and “worry free” were often used to describe all these favourite places – which is a comment not only upon the “sanctuary” which the places of withdrawal represent but also upon the environmental settings and life experiences which “bother” teenagers and from which 93% of Year 11 and 12 students said they like to take “time out”,” (Chapman, 2006, p. 15).					

Room Name: Staff Lounge Room Location: Level 2 Users: All of staff Activities: Eating, taking a break, resting, cooking, socializing.					
Furniture/Equipment	<u>Furniture:</u> <ul style="list-style-type: none">- Tables (3)- Chairs (12)- Lounge chairs (2)- Sofa (1)- Side table (2)- Coffee table (1)- Rug (1)	<u>Equipment:</u> <ul style="list-style-type: none">- N/A	<u>Hours of Operation:</u> <ul style="list-style-type: none">- 9:00am-7:00pm Monday – Saturday	<u>Special Provisions:</u> <ul style="list-style-type: none">- ADA Compliant	<u>Occupancy:</u> <ul style="list-style-type: none">- 66 Occupants- Assembly Unconcentrated
Mechanical / Electrical	<u>Heating / Vent / AC:</u> <ul style="list-style-type: none">- Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> <ul style="list-style-type: none">- Kitchen sink (1)- Refrigerator (1)	<u>Communications:</u> <ul style="list-style-type: none">- Wireless Internet- Data	<u>Electrical:</u> <ul style="list-style-type: none">- Outlets at 18” A.F.F. every 12’ per code- Smoke and fire alarm- Standard room switch controls- Recessed Cans	<u>Room Size:</u> <ul style="list-style-type: none">- 978 sf
Architectural	<u>Floors:</u> <ul style="list-style-type: none">- Cork flooring	<u>Wall Partitions:</u> <ul style="list-style-type: none">- Gypsum Board- 1-hour min. fire rating per code- Commercial wallcovering/ paint	<u>Ceilings:</u> <ul style="list-style-type: none">- 1-hour min. fire rating per code- 8’ – 0” Ceiling height- Gypsum wallboard	<u>Doors / Windows:</u> <ul style="list-style-type: none">- Double casement windows unfixed (4)- Single doors (2)	<u>Natural Lighting:</u> <ul style="list-style-type: none">- Windows Facing North (4)- Automatic Window Treatments
Additional Information <ul style="list-style-type: none">-“The effects of wood-derived stimulation can provide multiple physiological and psychological benefits such as stress reduction, task performance improvement, blood pressure reduction, and more” (Sun, et al, 2020, p. 1).-“The search for escape and “sanctuary” has been largely characterized as the response of adults struggling to make a living in an apparently increasingly hostile and competitive work environment,” (Chapman, 2006, p. 9).					

<div>Room Name: Storage [2]Room Location: Level 2Users: All of staff</div> <div>Activities: Storing, packing, unboxing.</div>					
Furniture/Equipment	<div>Furniture:</div>	<div>Equipment:</div>	<div>Hours of Operation:</div>	<div>Special Provisions:</div>	<div>Occupancy:</div>
Mechanical / Electrical	<div>Heating / Vent / AC:</div>	<div>Plumbing / Fixtures:</div>	<div>Communications:</div>	<div>Electrical:</div>	<div>Room Size: ~ 80 sq ft</div>
Architectural	<div>Floors:</div>	<div>Wall Partitions:</div>	<div>Ceilings:</div>	<div>Doors / Windows:</div>	<div>Natural Lighting:</div>
<div>Additional Information</div>					

Room Name: Locker Room [2] Room Location: Level 2 Users: Guests/Members Activities: Self-care, hygiene, washing, grooming.					
Furniture/Equipment	<u>Furniture:</u>	<u>Equipment:</u>	<u>Hours of Operation:</u>	<u>Special Provisions:</u>	<u>Occupancy:</u>
Mechanical / Electrical	<u>Heating / Vent / AC:</u>	<u>Plumbing / Fixtures:</u>	<u>Communications:</u>	<u>Electrical:</u>	<u>Room Size:</u> ~ 80 sq ft
Architectural	<u>Floors:</u>	<u>Wall Partitions:</u>	<u>Ceilings:</u>	<u>Doors / Windows:</u>	<u>Natural Lighting:</u>
Additional Information					

Room Name: Restrooms [2] Room Location: Level 2 Users: Guests/Members and all of staff Activities: Self-care, hygiene, washing, grooming.					
Furniture/Equipment	<u>Furniture:</u>	<u>Equipment:</u>	<u>Hours of Operation:</u>	<u>Special Provisions:</u>	<u>Occupancy:</u>
Mechanical / Electrical	<u>Heating / Vent / AC:</u>	<u>Plumbing / Fixtures:</u>	<u>Communications:</u>	<u>Electrical:</u>	<u>Room Size:</u> ~ 160 sq ft
Architectural	<u>Floors:</u>	<u>Wall Partitions:</u>	<u>Ceilings:</u>	<u>Doors / Windows:</u>	<u>Natural Lighting:</u>
Additional Information					

Basement



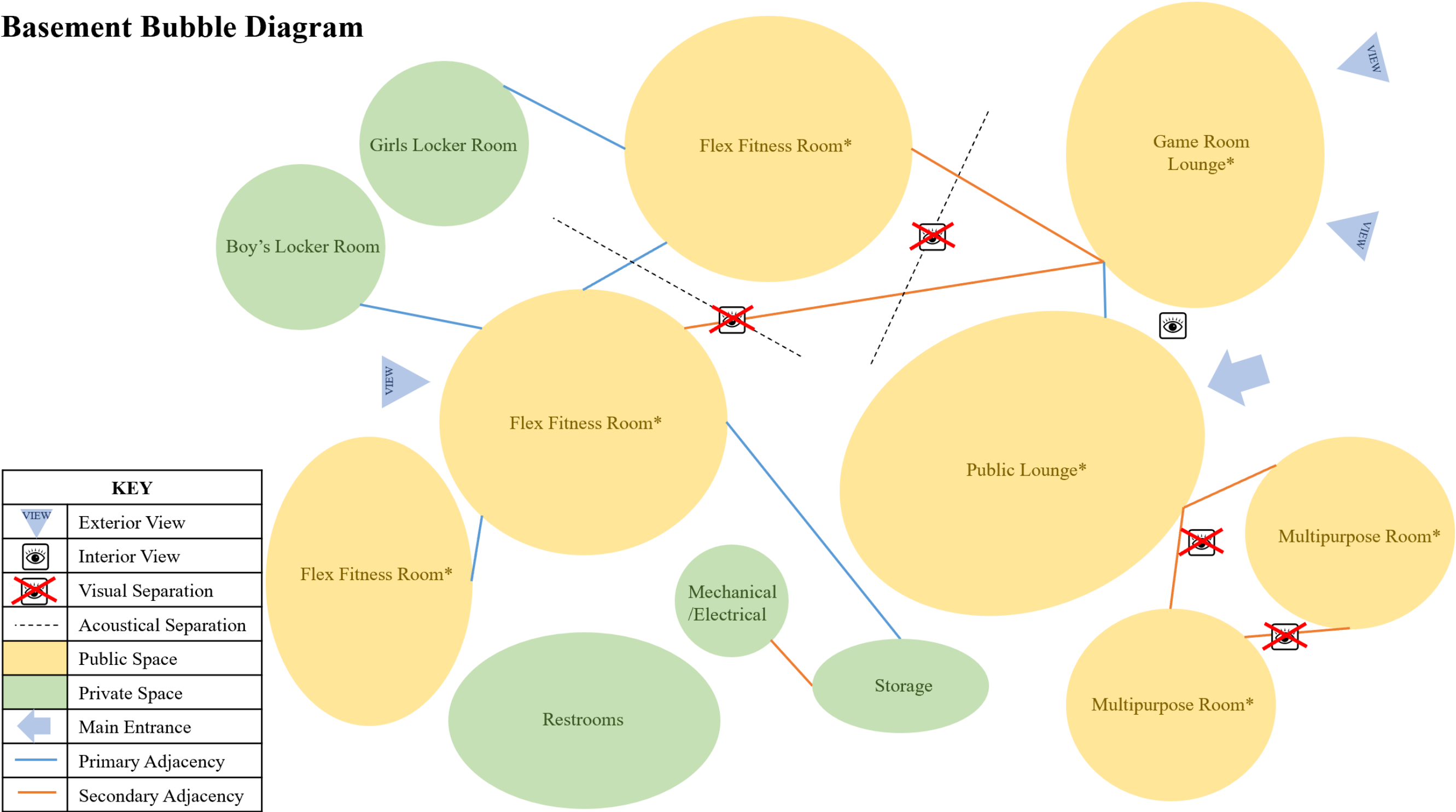
Basement Adjacency Matrix

<div>CLUB 701</div> <div>Youth Center</div>	Flex Fitness Rooms [2]*	Game Room Lounge*	Public Lounge*	Multipurpose Rooms [2]*	Restrooms [2]	Storage Room [2]	Mechanical/Electrical	Locker Rooms [2]
Flex Fitness Rooms [2]*								
Game Room Lounge*								
Public Lounge*								
Multipurpose Rooms [2]*								
Restrooms [2]								
Storage Rooms [2]								
Mechanical/Electrical								
Locker Rooms [2]								

KEY	
Primary/Mandatory	
Secondary/Desirable	
Undesirable	
Neutral	

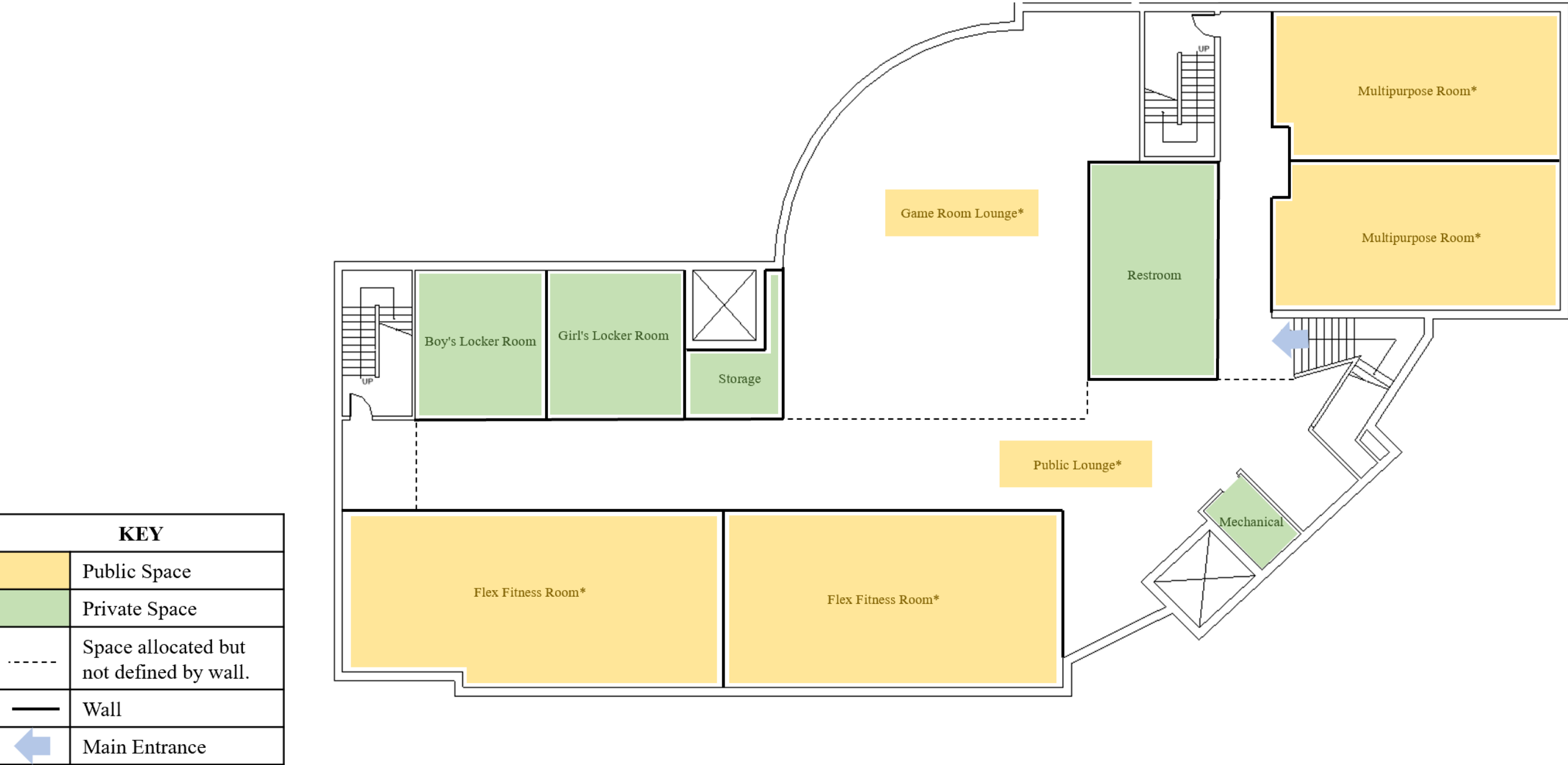
* Indicates space is to be designed

Basement Bubble Diagram



* Indicates space is to be designed

Basement Blocking Diagram



* Indicates space is to be designed

Basement Room Data Sheets

Room Name: Flex Fitness Rooms [2] Room Location: Basement Users: Guests/Members, Fitness Instructors, counselors					
Activities: Exercising, fitness classes, games, activities, socializing, teaching.					
Furniture/ Equipment	Furniture: <ul style="list-style-type: none">- N/A	Equipment: <ul style="list-style-type: none">- Television- Illuminated exit signage	Hours of Operation: <ul style="list-style-type: none">- 9:00am-9:00pm Monday - Saturday	Special Provisions: <ul style="list-style-type: none">- ADA compliant	Occupancy: <ul style="list-style-type: none">- 24 occupants- Exercise room
Mechanical / Electrical	Heating / Vent / AC: <ul style="list-style-type: none">- Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	Plumbing / Fixtures: <ul style="list-style-type: none">- Water fountains near by	Communications: <ul style="list-style-type: none">- Wireless Internet- Data	Electrical: <ul style="list-style-type: none">- Outlets at 18” A.F.F. every 12’ as per code- Smoke and fire alarm- Standard room switch controls- Recessed Cans	Room Size: <ul style="list-style-type: none">- 1190 sf
Architectural	Floors: <ul style="list-style-type: none">- PVC Sports Flooring	Wall Partitions: <ul style="list-style-type: none">- DIRRT wall system	Ceilings: <ul style="list-style-type: none">- Exposed Ceilings- 8’ – 0’ Ceiling heightGypsum wallboard- 1-hour min. fire rating per code	Doors / Windows: <ul style="list-style-type: none">- single door (1)- Single casement windows unfixed (10)	Natural Lighting: <ul style="list-style-type: none">- Windows facing East (10)- Automatic Window Treatments
Additional Information <ul style="list-style-type: none">-“Regular physical activity in youth has various immediate benefits, including improved musculoskeletal health, mental health, growth, and development. Recent systematic reviews have found that physical activity in adolescence had positive short-term effects on self-esteem, positive effects on academic performance, and the potential to reduce depression” (Rachele et al. 2014, p. 282).- “Youth centers in particular were designed... Areas were provided for arts and crafts, music and dancing, and indoor sports” (Owens, 1997, p. 158).-“Public areas, particularly commercial and recreation areas, should be designed to encourage the activities of teens rather than discourage them as is typically the case” (Owens, 1997, p. 165).					

Room Name: Game Room Lounge Room Location: Basement Users: Guests/Members					
Activities: Games, activities, socializing, building relationships, mingling, relaxing.					
Furniture/ Equipment	<u>Furniture:</u> <ul style="list-style-type: none">- Sofas (2)- Lounge Chairs (4)- Bar Tables (3)- Side Tables (2)- Stools (6)	<u>Equipment:</u> <ul style="list-style-type: none">- Pool Table (2)- Foosball Table (1)- Pinball Machines (2)- Televisions (2)- Gaming Systems (4)	<u>Hours of Operation:</u> <ul style="list-style-type: none">- 9:00AM-9:00PM Monday - Saturday	<u>Special Provisions:</u> <ul style="list-style-type: none">- ADA Compliant	<u>Occupancy:</u> <ul style="list-style-type: none">- 128 occupants- Gaming Floor
Mechanical / Electrical	<u>Heating / Vent / AC:</u> <ul style="list-style-type: none">- Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> <ul style="list-style-type: none">- N/A	<u>Communications:</u> <ul style="list-style-type: none">- Wired Internet- Wireless Internet- Data	<u>Electrical:</u> <ul style="list-style-type: none">- Outlets at 18” A.F.F. every 12’ per code- 12’- Smoke and fire alarm- Standard room switch controls- Recessed Cans- Pendants [4]- Suspended Luminaires- LED Strip lighting	<u>Room Size:</u> <ul style="list-style-type: none">- 1492 sf
Architectural	<u>Floors:</u> <ul style="list-style-type: none">- Commercial carpet tileLuxury vinyl tile	<u>Wall Partitions:</u> <ul style="list-style-type: none">- Gypsum Board- 1-hour min. fire rating per code- Commercial wallcovering/ paint	<u>Ceilings:</u> <ul style="list-style-type: none">- 1-hour min. fire rating per code- 8’ – 0’ Ceiling height- Gypsum wallboard	<u>Doors / Windows:</u> <ul style="list-style-type: none">- N/A	<u>Natural Lighting:</u> <ul style="list-style-type: none">- N/A
Additional Information -“Youth centers in particular were designed... Areas were provided for arts and crafts, music and dancing, and indoor sports” (Owens, 1997, p. 158). -“Public areas, particularly commercial and recreation areas, should be designed to encourage the activities of teens rather than discourage them as is typically the case” (Owens, 1997, p. 165). -“To become socially mature, teens need social interaction with their peers and with adults” (Owens, 1997, p. 161).					

Room Name: Public Lounge Room Location: Basement Users: Guests/Members					
Activities: Interacting, socializing, relaxing, talking, group studying, games.					
Furniture/ Equipment	<u>Furniture:</u> <ul style="list-style-type: none">- Sofas (3)- Lounge chairs (6)- Side Tables (4)- Coffee Tables (3)- Ottomans (3)- Rugs (3)	<u>Equipment:</u> <ul style="list-style-type: none">- N/A	<u>Hours of Operation:</u> <ul style="list-style-type: none">- 9:00am-9:00pm Monday – Saturday	<u>Special Provisions:</u> <ul style="list-style-type: none">- ADA Compliant	<u>Occupancy:</u> <ul style="list-style-type: none">- 99 occupants- Assembly Unconcentrated
Mechanical / Electrical	<u>Heating / Vent / AC:</u> <ul style="list-style-type: none">- Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> <ul style="list-style-type: none">- N/A	<u>Communications:</u> <ul style="list-style-type: none">- Wireless Internet- Data	<u>Electrical:</u> <ul style="list-style-type: none">- Outlets at 18” A.F.F. every 12’ per code-Smoke and fire alarm-Standard room switch controls- Recessed Cans-Baffle lighting- Suspended Luminaires-LED Strip lighting	<u>Room Size:</u> <ul style="list-style-type: none">- 1492 sf
Architectural	<u>Floors:</u> <ul style="list-style-type: none">- Commercial carpet tile	<u>Wall Partitions:</u> <ul style="list-style-type: none">- Gypsum Board- 1-hour min. fire rating per code- Commercial wallcovering/ paint	<u>Ceilings:</u> <ul style="list-style-type: none">- 1-hour min. fire rating per code- 8’ – 0’ Ceiling height- Gypsum wallboard	<u>Doors / Windows:</u> <ul style="list-style-type: none">- N/A	<u>Natural Lighting:</u> <ul style="list-style-type: none">- N/A
Additional Information -“Youth centers in particular were designed... Areas were provided for arts and crafts, music and dancing, and indoor sports” (Owens, 1997, p. 158). -“Public areas, particularly commercial and recreation areas, should be designed to encourage the activities of teens rather than discourage them as is typically the case” (Owens, 1997, p. 165). -“To become socially mature, teens need social interaction with their peers and with adults” (Owens, 1997, p. 161).					

Room Name: Multipurpose Rooms [2] Room Location: Basement Users: Guests/Members, Counselors, Facility Directors					
Activities: Club meetings, staff meetings, socializing, event hosting.					
Furniture/Equipment	<u>Furniture:</u> <ul style="list-style-type: none">- Task chairs (16)- Moveable tables (4)	<u>Equipment:</u> <ul style="list-style-type: none">- Television (1)- Projector (1)	<u>Hours of Operation:</u> <ul style="list-style-type: none">- 9:00am-9:00pm Monday – Saturday	<u>Special Provisions:</u> <ul style="list-style-type: none">- ADA Compliant	<u>Occupancy:</u> <ul style="list-style-type: none">- 51 Occupants- Assembly Unconcentrated
Mechanical / Electrical	<u>Heating / Vent / AC:</u> <ul style="list-style-type: none">- Temperature controlled by individual thermostat; central HVAC system; 35 – 50 cfm outdoor air per occupant	<u>Plumbing / Fixtures:</u> <ul style="list-style-type: none">- Water Fountain near by- Restrooms near by	<u>Communications:</u> <ul style="list-style-type: none">- Wired Internet- Wireless Internet- Data	<u>Electrical:</u> <ul style="list-style-type: none">- Outlets at 18” A.F.F. every 12’ per code-Smoke and fire alarm-Standard room switch controls- Fixed chandelier [82]- Recessed Panels-LED Strip lighting	<u>Room Size:</u> <ul style="list-style-type: none">- 761 sf
Architectural	<u>Floors:</u> <ul style="list-style-type: none">- Commercial carpet tile	<u>Wall Partitions:</u> <ul style="list-style-type: none">- Gypsum Board- 1-hour min. fire rating per code- Commercial wallcovering/ paint	<u>Ceilings:</u> <ul style="list-style-type: none">- 1-hour min. fire rating per code- 8’ – 0’ Ceiling height- Gypsum wallboard8’ – 6” soffits-	<u>Doors / Windows:</u> <ul style="list-style-type: none">- Single casement windows fixed (5)- Double door (1)	<u>Natural Lighting:</u> <ul style="list-style-type: none">- Windows facing North (5)- Automatic Window Treatments
Additional Information -“A large amount of background noise can lead to difficulties concentrating, headaches, increased blood pressure, and irritability and is particularly unfavorable when conversations such as those in psychotherapy are occurring” (Ylagan, 2021, p. 15).					

Room Name: Restrooms [2] Room Location: Basement Users: Visitors and Staff					
Activities: Self-care, hygiene, washing, grooming.					
Furniture/Equipment	<u>Furniture:</u>	<u>Equipment:</u>	<u>Hours of Operation:</u>	<u>Special Provisions:</u>	<u>Occupancy:</u>
Mechanical / Electrical	<u>Heating / Vent / AC:</u>	<u>Plumbing / Fixtures:</u>	<u>Communications:</u>	<u>Electrical:</u>	<u>Room Size:</u> ~ 180 sq ft
Architectural	<u>Floors:</u>	<u>Wall Partitions:</u>	<u>Ceilings:</u>	<u>Doors / Windows:</u>	<u>Natural Lighting:</u>
Additional Information					

Room Name: Storage Room Location: Basement Users: All of staff					
Activities: Storing, packing, unboxing.					
Furniture / Equipment	<u>Furniture:</u>	<u>Equipment:</u>	<u>Hours of Operation:</u>	<u>Special Provisions:</u>	<u>Occupancy:</u>
Mechanical / Electrical	<u>Heating / Vent / AC:</u>	<u>Plumbing / Fixtures:</u>	<u>Communications:</u>	<u>Electrical:</u>	<u>Room Size:</u> ~ 300 sq ft
Architectural	<u>Floors:</u>	<u>Wall Partitions:</u>	<u>Ceilings:</u>	<u>Doors / Windows:</u>	<u>Natural Lighting:</u>
Additional Information					

Room Name: Mechanical/Electrical Room Location: Basement Users: Custodians, Electricians, Mechanical Workers Activities: Storing.					
Furniture / Equipment	<u>Furniture:</u>	<u>Equipment:</u>	<u>Hours of Operation:</u>	<u>Special Provisions:</u>	<u>Occupancy:</u>
Mechanical / Electrical	<u>Heating / Vent / AC:</u>	<u>Plumbing / Fixtures:</u>	<u>Communications:</u>	<u>Electrical:</u>	<u>Room Size:</u> ~ 300 sq ft
Architectural	<u>Floors:</u>	<u>Wall Partitions:</u>	<u>Ceilings:</u>	<u>Doors / Windows:</u>	<u>Natural Lighting:</u>
Additional Information					

Room Name: Locker Room [2] Room Location: Basement Users: Guests/Members Activities: Self-care, hygiene, washing, grooming.					
Furniture/ Equipment	<u>Furniture:</u>	<u>Equipment:</u>	<u>Hours of Operation:</u>	<u>Special Provisions:</u>	<u>Occupancy:</u>
Mechanical / Electrical	<u>Heating / Vent / AC:</u>	<u>Plumbing / Fixtures:</u>	<u>Communications:</u>	<u>Electrical:</u>	<u>Room Size:</u> ~ 300 sq ft
Architectural	<u>Floors:</u>	<u>Wall Partitions:</u>	<u>Ceilings:</u>	<u>Doors / Windows:</u>	<u>Natural Lighting:</u>
Additional Information					

Codes Analysis

Code Analysis Report

PROJECT INFORMATION			
Project Address/Location	Club 701 Youth Center, West Fargo, North Dakota		
Project Description	Youth Center		
Project Type	<input type="checkbox"/> New Building <input checked="" type="checkbox"/> Existing Building		
Square Footage	Building: 29,011 sf		
	Floor(s):		
	Basement: 10,500 sf		
	1 st : 10,302 sf		
2 nd : 8,191 sf			
Building Construction	Foundation: Concrete slab on grade Building Frame: Concrete foundation walls with CMU, brick, and steel beams, pre-cast concrete flooring Exterior Walls: Finished in face brick with cast stone bands Roof: Metal standing seam Other: Fully sprinklered, fire extinguishers throughout		
CODE PUBLICATIONS REQUIRED for PROJECT – Codes & Regulations			YEAR OF PUBLICATION
Building Code	<input checked="" type="checkbox"/> IBC <input type="checkbox"/> NFPA 5000 <input type="checkbox"/> Other:		2021
Performance Code	<input checked="" type="checkbox"/> ICCPC <input type="checkbox"/> NFPA <input type="checkbox"/> Other:		2021
Fire Code	<input checked="" type="checkbox"/> IFC <input type="checkbox"/> UFC <input type="checkbox"/> Other:		2018
Life Safety Code	Life Safety Code (NFPA 101)		
Plumbing Code	<input type="checkbox"/> IPC <input type="checkbox"/> UPC <input checked="" type="checkbox"/> Other: NDSPC		2018
Mechanical Code	<input checked="" type="checkbox"/> IMC <input type="checkbox"/> UMC <input type="checkbox"/> Other:		2021
Electrical Code	<input type="checkbox"/> ICCEC <input checked="" type="checkbox"/> NEC <input type="checkbox"/> Other:		2020
Energy Code	<input checked="" type="checkbox"/> ICCEC <input type="checkbox"/> NFPA 9000 <input type="checkbox"/> Other:		2021
Accessibility Regulations & Standards	<input checked="" type="checkbox"/> ADA Guidelines <input type="checkbox"/> Fair Housing Act (<i>residential</i>) <input checked="" type="checkbox"/> ICC/ANSI A117.1: Accessible and Usable Buildings and Facilities <input type="checkbox"/> Other:		
Additional Codes for Jurisdiction	Fire Protection and Prevention Ordinance 5354		
	International Property Maintenance Code		2021
	International Fuel and Gas Code		2021
	Classification of Ordinance Violations Ordinance 5346		
	Laws, Rules, and Wining Standards of North Dakota		2020
Fargo Sign Code			
Portions of Land Development Code			

1.0 SCOPE AND ADMINISTRATION		
Chapter/Section	Description	
101.1	Title. These regulations shall be known as the Building Code of the City of Fargo, hereinafter referred to as “this code”.	
101.2	Scope. The edits of this code shall apply to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every structure.	
101.3	Purpose. This code is intended to establish the minimum requirements to provide reasonable levels of safety, health and general welfare.	
101.4.2	Mechanical. The provisions of the International Mechanical Code shall apply to the installation, alterations, repairs, and replacement of mechanical systems. This includes equipment, appliances, and fixtures for ventilating, heating, cooling, air-conditioning, and energy-related systems.	
101.4.5	Fire Prevention. The provisions of the International Fire Code shall apply to matters affecting to structures, hazards, explosions, handling, materials, and devices. This includes conditions hazardous to life, property, or public welfare.	
101.4.6	Energy. The provisions of the International Existing Building Code shall apply to matters governing the repair, alteration, change of occupancy, addition and relocation of existing buildings.	
102.1	General. If there is a conflict with the code requirements, the most restrictive code will be used.	
102.2	Other Laws. The IBC does not nullify any provisions of state, local, or federal law.	
102.6	Existing Structures. With an existing building, any new construction must comply with the current code. Any existing structure that is not up to the current code does not need to be changed unless specifically stated.	
2.0 DEFINITIONS		
Chapter/Section	Description	
201.1	Scope. All terms used for this code have the definitions of this chapter.	
201.3	Terms defined in other codes. Any terms not defined below are as defined in other code books.	
201.4	Terms not defined. Any terms not defined in this section are defined as context implies.	
202	Accessible – A site or facility that applies with Chapter 11.	
202	Accessible Means of Egress – Continuous pathway accessible to all users and the public.	
202	Accessible Route – Unobstructed pathway that applies with Chapter 11.	
202	Aisle – Enclosed exit access that defines travel.	
202	Area of Refuge – An area where a person unable to utilize stairs can remain temporarily during emergency evacuations.	
202	Atrium – Space enclosing two or more floors/stories.	
202	Automatic Sprinkler System – Used for fire protection services, piping ran through the building to apply to fire protection engineering standards.	
202	Building – Any structure used for shelter or consisting of occupancy.	
202	Circulation Path – Exterior or interior passageway leading guests from one area to another.	
202	Corridor – Enclosed pathway that applies to means of egress.	
202	Employee Work Area – Any spaces used by employees or workers for work only.	
202	Exit – Area that lies between the exit access and exit discharge.	
202	Exit Access – Portion that leads to the occupied area of a building.	

	202	Exit Discharge – Portion that leads to termination of the facility or building.
	202	Exit Passageway – Fire protection room upon use of exit accessway.
	202	Exterior Wall – Enclosing a building using bearing or nonbearing dependent on code.
	202	Facility – All portions of a building located on a given site.
	202	Floor Area – Occupied area.
	202	Gypsum Board – Generic name for wall material.
	202	Interior Finish – Floor, wall, ceiling finishes.
	202	Occupant Load – Number of individuals allowed to remain in a space according to means of egress.
	202	Permit – Document or certification issues by a building official.
	202	Public – Use Areas – Interior spaces open to the general public.
	202	Public Entrance – Entrance not restricted or used for service.
	202	Smoke Alarm -Alarm that alerts to smoke; can be single or multiple station.
	202	Stairway – Flights of stairs with landings and platforms that forms a continuous connection between levels either on the exterior or interior.
	202	Wall Load Bearing – A wall that is either wood/metal stud that supports more than 100 lbs/ft of vertical weight or masonry, concrete, or timber that supports more than 200 lbs/ft of vertical weight.
3.0 USE AND OCCUPANCY CLASSIFICATION		
	Chapter/Section	Description
	303.3	Assembly Group A-2: assembly use for food and drink consumption.
	303.4	Assembly Group A-3: intended for worship, recreation, or amusement.
	304.1	Business (B): spaces used as offices, professional or service transactions, including record storage.
	311.2	Storage Group (S-2): Moderate-hazard storage. This includes (but is not limited to) books, clothing, cardboard, furniture, glue, and wax candles.
4.0 SPECIAL DETAILED REQUIREMENTS BASED ON USED AND OCCUPANCY		
	Chapter/Section	Description
	401.1	Detailed Occupancy and Use Requirements. This chapter is an addition of the occupancy and construction requirements in other chapters.
	404.1	General. The provisions of section 404 are for buildings containing atriums.
	404.2	Use. The floor of the atrium shall only be used for low fire hazard uses. The materials used must comply with the international fire code.
	404.3	Automatic Sprinkler System. An approved sprinkler system must be installed throughout the space.
	404.4	Fire Alarm System. A fire system must be provided in accordance with section 907.2.14.
	404.5	Smoke Control. A smoke control system must be installed that complies with section 909.
	404.6	Enclosures to Atriums. Atrium spaces should be separated from other spaces with a 1-hour fire barrier constructed in accordance with section 707.
	404.7	Standby Power. Equipment required to provide smoke control should be provided with backup power in accordance with section 909.11.
	404.8	Interior Finish. The interior finishes of the walls and ceiling must be at least class B. This doesn’t change whether there is a sprinkler system or not.
	404.9	Exit Access Travel Distance. Exit access for areas to open atrium shall comply with the requirements of section 1017.

	411.1	General. Special amusement areas having an occupancy load of 50 or more must comply with the requirements of a Group B occupancy.
	411.2	Automatic Sprinkler System. Buildings containing special amusement areas shall be equipped with a sprinkler system.
	411.3	Automatic Smoke Detection. Buildings with special amusement areas must be equipped with automatic smoke alarms.
	411.4	Emergency Voice/Alarm Communications System. An emergency voice/alarm communication system shall be provided that complies with section 907.2.12.
	411.6	Exit Marking. Exit signs shall be installed in accordance with section 1013.
	411.6.1	Photoluminescent Exit Signs. Where photoluminescent exit signs are installed, activating light source and viewing distance shall be in accordance to listing and markings of the signs.
	411.7	Interior Finish. Interior finish in special amusement areas shall be Class A in accordance with Section 803.1.

Calculating Occupant Load			
Function (Use) of Space (IBC 2015 Table [1004.1.1], accessory or incidental)	Load Factor (sf/occupant)	Approx. Area (sf)	Occupant Load
Basement – 472 OL			
100 – Public Lounge – Assembly Unconcentrated	15 net	2,017 sf	135
100A – Mechanical/Electrical Room – Mechanical Equipment Room	300 gross	44 sf	1
101 – Flex Fitness Room – Exercise Room	50 gross	966 sf	20
102 – Flex Fitness Room – Exercise Room	50 gross	965 sf	20
103 – Boy’s Locker Room – Locker Room	50 gross	363 sf	7
104 – Girl’s Locker Room – Locker Room	50 gross	362 sf	7
105 – Storage – Accessory Storage Area	300 gross	155 sf	1
106 – Game Room Lounge – Assembly/Gaming Floor	11 gross	2,017 sf	184
109 – Multipurpose Room – Assembly Unconcentrated	15 net	715 sf	48
110 – Multipurpose Room – Assembly Unconcentrated	15 net	720 sf	48
Level 1 – 390 OL			
200 – Lobby/ Reception – Assembly Unconcentrated	15 net	2,043 sf	137
200A – Vestibule – Assembly Unconcentrated	15 net	116 sf	8
200B – Lobby Lockers – Locker Room	50 gross	83 sf	2
201 – Storage – Accessory Storage Area	300 gross	72 sf	1
202 – Multipurpose Room – Assembly Unconcentrated	15 net	411 sf	28
202A – Closet – Accessory Storage Area	300 gross	50 sf	1
203 – Office – Business	150 gross	99 sf	1
204 – Open Office – Business	150 gross	878 sf	6
205 – Reading Lounge – Library Reading Room	50 net	811 sf	17
206 – Café – Assembly Unconcentrated	15 net	907 sf	61
207 – Café Kitchen – Kitchen, Commercial	200 gross	435 sf	3
208 – Horticulture Therapy Greenhouse – Assembly Unconcentrated	15 net	1,992 sf	133
209 – Storage – Accessory Storage Area	300 gross	98 sf	1
210 – Storage – Accessory Storage Area	300 gross	49 sf	1
212 – Utility – Accessory Storage Area	300 gross	33 sf	1
214 – Art Room – Educational Vocational Room	50 net	822 sf	17
Level 2 – 235 OL			
300 – Study Lounge – Library Reading Room	50 net	2,100 sf	42
301 – Yoga Studio – Exercise Room	50 gross	750 sf	15
302 – Relaxation Room – Assembly Unconcentrated	15 net	114 sf	8
303 – Relaxation Room – Assembly Unconcentrated	15 net	117 sf	8
304 – Counseling Room – Assembly Unconcentrated	15 net	191 sf	13
305 – Counseling Room – Assembly Unconcentrated	15 net	130 sf	9
306 – Counseling Room – Assembly Unconcentrated	15 net	173 sf	12
307 – Sensory Room – Assembly Unconcentrated	15 net	155 sf	11
308 – Sensory Room – Assembly Unconcentrated	15 net	163 sf	11
309 – Sensory Room – Assembly Unconcentrated	15 net	153 sf	11
310 – Boy’s Locker Room – Locker Room	50 gross	333 sf	7
311 – Girl’s Locker Room – Locker Room	50 gross	300 sf	6
312 – Level 2 Reception – Assembly Unconcentrated	15 net	1113 sf	75
313 – Storage – Accessory Storage Area	300 gross	89 sf	1
316 – Staff Lounge – Assembly Unconcentrated	15 net	872 sf	59
Total Occupant Load			1,177
NOTES			

1. The 2015 IBC makes a distinction between "gross" and "net" areas for calculating occupant load. In reality, the difference rarely matters all that much, and it is much simpler to use "gross" for all figures.

2. "Gross" areas include wall thicknesses and utility spaces (chases, shafts, mechanical/electrical spaces, etc.).

3. Use only whole numbers for areas; do not use decimal places.

4. Occupant load numbers are always rounded up to the nearest whole number.

5.0 GENERAL BUILDING HEIGHTS AND AREAS		
	Chapter/Section	Description
	501.1	Scope. This chapter specifies the allowed height and area of structures erected and additions added to an existing building.
	504.3	Height in Feet. The maximum height in feet of a building shall not exceed the limits specified in 504.3 Table.
	504.4	Number of Stories. Maximum number of stories above grade plane of a building shall not exceed the limits specified in 504.4 Table.
	506.2	Allowable Area Determination. The allowable area of a building shall be determined in accordance with the applicable provisions of 506.2.1, 506.2.2, and 506.3.
6.0 TYPES OF CONSTRUCTION		
	Chapter/Section	Description
	602.1	General - Buildings and structures to be built or altered in height or area are to be classified in one of the construction types defined in sections 602.2 – 602.5. The building elements shall have a fire-resistance rating not less than specified in Table 601 and exterior walls not less than specified in Table 705.5. When required to have a fire-resistance rating by Table 601, building elements shall comply with the applicable provisions of Section 703.2.
	602.2	Types I and II. Type II Construction: The frame, exterior walls, and floor constructions are composed of metal studs and concrete which are noncombustible materials
	603.1	Allowable Materials. Combustible materials that are allowed in type II construction include: roof construction, millwork, interior finishes, and flooring.
7.0 FIRE AND SMOKE PROTECTION FEATURES		
	Chapter/Section	Description
	701.1	Scope. This chapter specifies materials and systems and assemblies used for structural fire resistance and fire rated construction.
	703.2	Fire Resistance. The fire-resistance rating of building elements, components or assemblies shall be determined in accordance with Section 703.2.1 or 703.2.2 without the use of automatic sprinklers or any other fire suppression system being incorporated, or in accordance with Section 703.2.3.
	704.1	Requirements. Fire resistance ratings of structural members and assemblies shall comply with this section.
	704.2	Column Protection. Columns are required to have fire protection.
	706.1	Protection of the Primary Structural Frame Other than Columns. Fire walls shall be constructed in accordance with sections 706.2 through 706.11.
	706.3	Materials. Fire walls shall be composed of any approved noncombustible material
	706.4	Fire-Resistance Rating. Fire walls shall have a fire-resistance rating of not less than that required by Table 706.4
	706.7	Combustible framing in fire walls - Adjacent combustible members entering into a concrete or masonry fire wall from opposite sides shall not have less than a 4-inch (102 mm) distance between embedded ends. Where combustible members frame into hollow walls or walls of hollow units, hollow spaces shall be solidly filled for the full thickness of the wall and for a distance not less than 4 inches (102 mm) above, below and between the structural members, with non-combustible materials approved for fire blocking
	707.1	General. Fire barriers installed as required in this code or the International Fire Code.
	702.2	Materials. Fire barriers shall be of materials permitted by the building type of construction
	707.3	Fire-Resistance Rating.
	707.3.1	Shaft Enclosures. The fire-resistance rating of the fire barrier separating building areas from a shaft shall comply with Section 713.4

	707.3.2	Interior Exit Stairway and Ramp Construction. Exit enclosures- the fire resistance rating of the fire barrier separating building areas shall comply with Section 708.4 (2 hours for 4 stories or more)
	708.3	Fire-Resistance Rating. Fire partitions shall have a fire-resistance rating of not less than 1 hour Exceptions: 1. Corridor walls permitted to have a ½ hour fire-resistance rating by Table 1020.2
	708.4	Continuity. Fire partitions shall extend from the top of foundation to the underside of the foundations.
	708.6	Openings. Openings shall be protected in accordance with Section 716.
	709.1	General. The following wall assemblies shall comply with this section: Corridor walls as required by Section 1018.1 (Rated 2 ½ hours with sprinkler system) Elevator lobby separation as required by Section 708.14.1
	709.3	Fire-Resistance Rating. 1-hour fire resistance rating is required for smoke protection.
	709.4	Continuity. Smoke barriers shall form and effective membrane from top of the foundation to the underside of the floor.
	709.3	Fire-Resistance Rating. A 1-hour fire-resistance rating is required for smoke barriers
	710.3	Fire-Resistance Rating. Smoke partitions are not required to have fire resistance unless stated elsewhere in the codes.
	710.4	Continuity. Smoke partitions shall extend from the top of the foundation to the underside.
8.0 INTERIOR FINISHES		
	Chapter/Section	Description
	802.1	Scope. Section 803 limits the allowable fire performance and smoke development of interior wall and ceiling finish materials based on occupancy classification.
	802.2	Interior Floor Finish. Section 804 limits the allowable fire performance of interior floor finish materials based on occupancy classification.
	802.3	Decorative Materials Trim. Decorative materials and trim are restricted by combustibility, fire performance or flame propagation performance criteria in accordance with Section 806
	803.5	Textile Wall Coverings. Textile wallcoverings are to be tested to meet requirements
	803.11	Laminated Products Factory Produced with a Wood Substrate. To meet the requirements for interior wall and ceiling finishes, the exit stairways and corridors will have Class B finishes. The rooms and other enclosed spaces will have Class C finishes
	803.13	Interior Finish Requirements Based on Occupancy. Finish materials that are not more than ¼” thick can be applied to fire-rated walls and noncombustible building elements.
	806.7	Interior Trim. Interior trim will have a minimum Class C finish and will not exceed 10% of the wall area that it is attached to
	808.1	Acoustical Ceiling Systems. Acoustical ceiling systems will meet the interior finish requirements of Section 803
9.0 FIRE PROTECTION SYSTEMS		
	Chapter/Section	Description
	903.2.1 903.2.1.2 903.2.1.3	Group A. An automatic sprinkler system needs to be provided throughout A-1 and A-3 occupancies and throughout all stories including the levels of exit discharge if the following conditions exists: 1. The fire area exceeds 12,000 sq ft. 2. The fire area has an occupant load of 300 or more 3. The fire area is located on a floor other than a level if exit discharge serving such occupancies A-2 occupancies follow the same as above but with the following conditions: 1. The fire area exceeds 5,000 sq ft 2. The fire area has an occupant load of 100 or more 3. The fire area is located on a floor other than the level of exit discharge serving such occupancies

903.2.11.5	Commercial Cooking Operations. Automatic sprinkler systems are to be installed in the commercial kitchen exhaust hood and duct system
903.1.1.1	Automatic sprinkler systems will not be required in rooms or spaces where sprinklers are considered undesirable because of the nature of the contents, where approved by the fire code official. A room where the application of water, or flame and water, constitutes a serious life or fire hazard. Fire service access elevator machine rooms and machinery spaces. Machine rooms, machinery spaces, control rooms and control spaces associated with occupant evacuation elevators designed in accordance with Section 3008
903.1.2.2	Sprinkler protection is to be provided in open ended corridors and associated exterior stairways and ramps
904.1	General. Automatic fire-extinguishing systems, will be designed, installed, inspected, tested and maintained in accordance with the provisions of Section 904.
904.3.4	Alarms and Warning Signs. Where alarms are required to indicate the operation of automatic fire-extinguishing systems, distinctive audible and visible alarms and warning signs shall be provided to warn of pending discharge. Automatic-extinguishing agents poses a hazard to persons and a delay is required to ensure the evacuation of occupants before discharge, a separate warning signal shall be provided to alert occupants once agent discharge has begun. Audible signals shall be in accordance with Section 907.5.2.
906.5	Conspicuous Location. Portable fire extinguishers shall be located in conspicuous locations where they will have ready access and be immediately available for use. These locations shall be along normal paths of travel, unless the fire code official determines that the hazard posed indicates the need for placement away from normal paths of travel.
906.6	Unobstructed and Unobscured. Portable fire extinguishers shall not be obstructed or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the locations of extinguishers.
907.2.1	Group A. A fire alarm system shall be installed in accordance with Sections 907.2.1 through 907.2.1.3 in Group A occupancies having an occupant load of 300 or more.
907.2.14	Atriums Connecting more than two Stories. A fire alarm system shall be installed in occupancies with an atrium that connects more than 2 stories
907.5.2.2	Emergency Voice/Alarm Communication Systems. Emergency voice/alarm communication systems; Zones as follows <ol style="list-style-type: none">Elevator groups.Interior exit stairways.Each floor. Areas of refuge as defined in Chapter 2
907.5.2.3.1	Public Use Areas and Common Use Areas. Public Use Areas and Common Use Areas Visible Alarms notification appliance shall be provided

10.0 MEANS OF EGRESS		
	Chapter/Section	Description
	Administration	
	1001.1	Means of egress systems controls the design, construction, and arrangement of egress components. It is unlawful to alter a building or structure in a matter that will reduce the number of exits or minimum width or required capacity to less than required by Section 1001. The general requirements specified in Sections 1003 through 1015 shall apply to all three elements of the means of egress system, in addition to those specific requirements for the exit access, the exit and the exit discharge detailed elsewhere in this chapter.
	General Means of Egress	
	1003.1	The general requirements specified in Sections 1003 through 1015 shall apply to all three elements of the means of egress system, in addition to those specific requirements for the exit access, the exit and the exit discharge detailed elsewhere in this chapter.
	1003.2	The means of egress shall have a ceiling height of not less than 7 feet 6 inches (2286 mm) above the finished floor.
	1003.3.4	Protruding objects shall not reduce the minimum clear width of accessible routes
	1003.4	Circulation paths of the means of egress shall have a slip-resistant surface and be securely attached.
	1003.6	The path of egress travel along a means of egress shall not be interrupted by a building element other than a means of egress component as specified in this chapter. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by this chapter. The minimum width or required capacity of a means of egress system shall not be diminished along the path of egress travel.
	Occupant Load	
	1004.1	To determine means of egress, the number of occupants will be determined in accordance to Section 1004- Table 1004.1.2
	Means of Egress Sizing	
	1005.1	All portions of means of egress shall be sized in accordance with Section 1005. Exceptions- aisles and aisles accessways in rooms shall comply with Section 1029
	1005.3.1	Means of egress shall be calculated by multiplying the occupant load to serve the stairways by a capacity factor of 0.3” per occupant.
	1005.5	Where more than one exit, or one access to more than one exit, the capacity shall not be reduced to less than 50 percent.

	1005.7.1	When doors are fully opened egress shall not exceed the required width by more than 7 inches.
	Number of Exits and Exit Access Doorways	
	1006.1	The number of exits or exit access doorways required within the means of egress shall comply with Section 1006.2 for spaces and Section 1006.3 for stories.
	1006.2	To determine maximum occupancy load per one exit or exit accessway will be determined in accordance with Table 1006.2.1
	1006.2.1	Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1
	Exit and Exit Access Doorway Configurations	
	1007.1	Exits, exit access doorways, stairways and ramps shall be separated and determined in accordance with Section 1007.1
	Means of Egress Illumination	
	1008.1	Illumination in means of egress shall be in accordance with Section 1008.2 and under emergency illumination, this shall comply with Section 1008.3
	1008.2	Required in Aisle Accessways in Group A
	1008.2.1	Illumination level shall not be less than 1 footcandle
	1008.2.3	Illumination shall be provided along the path of travel for the exit discharge from each exit to the public way
	1008.3.1	If power supply failure, emergency electrical system will automatically illuminate the following areas: Aisles, corridors, and exit access stairways and ramps.
	1008.3.3	If power supply failure, emergency system will automatically illuminate the following areas: <div><div>1. Electrical equipment rooms</div><div>2. Fire command centers</div><div>3. Fire pump rooms</div><div>4. Generator rooms</div><div>5. Public restrooms with area greater than 300 sq. ft.</div></div>
	1008.3.4	Emergency power system shall provide power for a duration of no less than 90 minutes.
	Accessible Means of Egress	
	1009.1	Accessible spaces shall be provided with no less than one accessible means of egress. This shall be compliant with Section 1006.2 or 1006.3
	1009.2	<div><div>1. Accessible routes to comply with Section 1104</div><div>2. Interior exit stairways to comply with section 1009.3 and 1023</div><div>3. Exit access stairways to comply with Sections 1009.3 and 1019.3</div><div>4. Elevators complying with Section 1009.4</div><div>5. Areas of refuge complying with Section 1009.6.</div></div>

	1009.3	A stairway between building stories will have a minimum of 48 inches, and will have an area of refuge within a floor-level landing or shall comply with Section 1009.6 for an area of refuge
	Stairways	
	1011.2	Minimum width of stairways is not to be less than 44 inches.
	Exit Signs	
	1013.1	Exits and exit access doors will be marked by a visibly approved exit sign visible from any direction. Path of egress travel will be clearly indicated if so not immediately visible to occupants. Exit sign placement shall not be more than 100 feet away from an access corridor
	1013.4	Raised character and braille exit signs- Shall comply with ICC A117.1. Will be adjacent to each area of refuge, exit stairway, exit passageway and exit discharge.
	1009.9	Signage shall be provided at each door providing access to an area of refuge and at each door providing access to an exterior area
	1009.10	Directional signage indicating the location of all other means of egress and which of those are accessible means of egress shall be provided at the following: <div><div>1. At exits serving a required accessible space but not providing an approved accessible means of egress.</div><div>2. At elevator landings</div><div>3. Within areas of refuge.</div></div>
	Handrails	
	1014.1	Handrails required for stairways will be compliant with Section 1011.11
	1014.2	Handrail height measured above stair tread will not be less than 34 inches and not more than 38”
	1014.4	Handrail gripping surface shall be continuous without interruption.
	Guards	
	1015.1	Guards will comply with Section 1015.2- 1015.7
	1015.2	Guards shall be located along open-sided walking surfaces, including mezzanines, equipment platforms, aisles, stairs, ramps, and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Guards shall be adequate in strength and attachment and not less than 42” (1015.3)
	Exit Access	
	1016.1	Exit access shall comply with Section 1003 through 1015 Exit access arrangement will comply with Sections 1016 through 1021
	1016.2	Egress shall not pass-through kitchens, storage rooms, closets, or spaces
	Exit Access Travel Distance	

	1017.1	Travel distance within the exit access of egress shall be in compliance with Section 1017. Refer to table 1017.2
	Aisles	
	1018.1	Aisles will comply with Section 1018. Aisles shall be provided for any occupied portions of exit access that contain seats, tables, furnishings. The minimum width shall be unobstructed.
	1018.2.2	Minimum Aisle Width: The minimum clear width shall be determined by Section 1005.1 for the occupant load served, but shall not be less than 36 inches
	1018.3	Aisle Accessways shall not exceed 30 feet
	Exit Access Stairways and Ramps	
	1019.1	Exit access stairways and ramps serving as an exit access component in a means of egress system shall comply with the requirements of this section. The number of stories connected by exit access stairways and ramps shall include basements, but not mezzanines
	Corridors	
	1020.1	Corridors shall be fire-resistance rated in accordance with Table 1020.1. The corridor walls required to be fire-resistance rated shall comply with Section 708 for fire partitions
	1020.2	Minimum corridor widths per occupancy will be compliant with Table 1020.2
	1020.5	Corridors will not serve as air supply, return, exhaust or ventilation air ducts.
	Exits	
	1022.1	An exit will not be used for any purpose that will interfere with its means of egress function. Exits shall be continuous from the point of entry to the exit discharge.
	1022.2	Buildings used for human occupancy will not have less than one exterior door that meets the requirements of Section 1010.1.1
	Interior Exit Stairways and Ramps	
	1023.1	Interior exit stairways and ramps serving as an exit component in a means of egress system shall comply with the requirements of this section. Interior exit stairways and ramps shall be enclosed and lead directly to the exterior of the building or shall be extended to the exterior of the building with an exit passageway conforming to the requirements of Section 1024
	1023.2	Interior exit stairway will comply with fire resistance rating of no less than 2 hours where 4 stories or more are connected. And no less than a 1 hour where connecting on less than 4 stories. Fire resistance rating should not exceed 2 hours.
	1023.4	Interior exit stairways will be in accordance with Section 716
	1023.9.1	Stairway identification signs shall comply with all of the following requirements: <ul style="list-style-type: none">• The signs shall be a minimum size of 18 inches by 12 inches

		<ul style="list-style-type: none">• The letters designating the identification of the interior exit stairway and ramp shall be not less than 1 1/2 inches in height.• The number designating the floor level shall be not less than 5 inches in height and located in the center of the sign.• Other lettering and numbers shall be not less than 1 inch in height.• Characters and their background shall have a nonglare finish. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.
	Exit Passageways	
	1024.1	Exit passageway capacities shall be determined by Section 1005.1 but the minimum width will not be less than 44 inches. Except if the passageway has an occupant load of less than 50, the width will not be less than 36 inches.
	Luminous Egress Path Markings	
	1025.1	Approved luminous egress path markings delineating the exit path shall be provided in high-rise buildings of Group A, B, E, I-1, M or R-1 occupancies in accordance with this section. <ol style="list-style-type: none">1. Steps2. Landings3. Handrails
	1025.2	Egress lighting should be provided in interior exit stairways and passage ways in accordance to Sections 1025.1 – 1025.2.6.3
	Horizontal Exits	
	1026.1	Horizontal exits serving as an exit in a means of egress system shall comply with the requirements of this section. A horizontal exit shall not serve as the only exit from a portion of a building, and where two or more exits are required, not more than one-half of the total number of exits or total exit minimum width or required capacity shall be horizontal exits.
	1026.2	2 hours separation Fire Wall is the minimum fire resistance rating between buildings or refuge areas connected by a horizontal exit
	Exterior Exit Stairways and Ramps	
	1027.2	For occupancies in other than Group I-2, exterior exit stairways and ramps shall be permitted as an element of a required means of egress for buildings not exceeding six stories above grade plane or that are not high-rise buildings
	Exit Discharge	
	1028.1	Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide a direct path of egress travel to grade. The exit discharge shall not reenter a building.
	1028.2	Exit width will not be less than the minimum width of required capacity of the exits being served

	1028.3	Exit discharge will be open to exterior to minimize the accumulation of smoke and toxic gases.
	1028.4.1	Egress capacity will be determined by Section 1005.1. The minimum width will not be less than 44 inches. Egress courts for Group R-3 and U occupancies will not be less than 36 inches in width. Required capacity of egress courts unobstructed shall be to a height of 7 feet
	Other	

11.0 ACCESSIBILITY		
	Chapter/Section	Description
	1103.1	Where Required. Spaces will be accessible for all users.
	1104.1	Site Arrival Points. Accessible routes will be provided from parking to the main building entrance.
	1104.4	Multistory Buildings and Facilities. Accessible routes will connect each story in the building.
	1104.5	Location. Accessible routes will be located in the same area as circulation paths.
	1105.1	60% of the building entrances must be accessible.
	1109.2	Assembly Area Seating. Accessible toilets will be provided in restrooms.
	1109.3	Self-Service Storage Facilities. Accessible sinks will be provided in every area with a sink.
	1109.5	50% of drinking fountains will be accessible.
	1109.7	All elevators will be accessible.
	1109.9	Storage units will be accessible.
	1109.11	Seating and standing accessibility options to be provided at all times.
	1109.12	5% of locker rooms will be accessible.
	1110.4.10	Exercise Machines and Equipment. Exercise equipment must be accessible.
	1111.1	General. Signage will be utilized to signify accessible elements.
	1111.2	Facilities Serving Group R02, R-3, and R-4 Occupancies. Nearest accessible elements will be indicated through signage.
29.0 PLUMBING		
	Chapter/Section	Description
	2902.1	Minimum Number of Fixtures. The minimum number of plumbing fixtures according to the requirements will be provided.
	2902.2	Separate facilities for each sex will be provided where plumbing fixtures are required.
	2902.3.1	Access. Routes to public toilet facilities will be accessible and not passed through kitchens, storage rooms, or closets.
	2902.3.2	Prohibited Toilet Room Location. Toilet facilities will be located on each story where they are required.
	2902.4	Signage. Proper signage will be provided for toilet facilities.
	2902.5	Drinking Fountain Location. Drinking fountains will be placed in accessible locations.

CALCULATING PLUMBING FIXTURES (LEVEL 1)								
Fixture Type 1098	Fixture Ratio	Standard Fixtures Required				Total Fixtures Required		
		Standard Fixtures		Accessible Fixtures				
		Male	Female	Male	Female	Male	Female	Unisex
<input checked="" type="checkbox"/> Water Closet	1 per 125 1 per 65	3	6	1	1	4	7	--
<input checked="" type="checkbox"/> Urinal	Less than 67%	2	--	--	--	2	--	--
<input checked="" type="checkbox"/> Lavatory	1 per 200	3	3	1	1	4		--
<input type="checkbox"/> Bathtub	--	--	--	--	--	--	--	--
<input type="checkbox"/> Shower	--	--	--	--	--	--	--	--
<input checked="" type="checkbox"/> Service Sink	1 service sink	--		--		--		1 sink
<input checked="" type="checkbox"/> Drinking Fountain	1 per 100	--		--		--		5 DF
<input type="checkbox"/> Other:	--	--	--	--	--	--	--	--

CALCULATING PLUMBING FIXTURES (LEVEL 2)								
Fixture Type 1098	Fixture Ratio	Standard Fixtures Required				Total Fixtures Required		
		Standard Fixtures		Accessible Fixtures				
		Male	Female	Male	Female	Male	Female	Unisex
<input checked="" type="checkbox"/> Water Closet	1 per 125 1 per 65	2	4	1	1	3	5	--
<input checked="" type="checkbox"/> Urinal	Less than 67%	1	--	--	--	1	--	--
<input checked="" type="checkbox"/> Lavatory	1 per 200	2	2	1	1	3	3	--
<input type="checkbox"/> Bathtub	--	--	--	--	--	--	--	--
<input type="checkbox"/> Shower	--	--	--	--	--	--	--	--
<input checked="" type="checkbox"/> Service Sink	1 service sink	--		--		--		1 sink
<input checked="" type="checkbox"/> Drinking Fountain	1 per 100	--		--		--		3 DF
<input type="checkbox"/> Other:	--	--	--	--	--	--	--	--

CALCULATING PLUMBING FIXTURES (BASEMENT)								
Fixture Type 1098	Fixture Ratio	Standard Fixtures Required				Total Fixtures Required		
		Standard Fixtures		Accessible Fixtures				
		Male	Female	Male	Female	Male	Female	Unisex
<input checked="" type="checkbox"/> Water Closet	1 per 125 1 per 65	3	6	1	1	4	7	--
<input checked="" type="checkbox"/> Urinal	Less than 67%	--	--	2	--	2	--	--
<input checked="" type="checkbox"/> Lavatory	1 per 200	2	2	1	1	3	3	--
<input type="checkbox"/> Bathtub	--	--	--	--	--	--	--	--
<input type="checkbox"/> Shower	--	--	--	--	--	--	--	--
<input checked="" type="checkbox"/> Service Sink	1 service sink	--		--		--		1 sink
<input checked="" type="checkbox"/> Drinking Fountain	1 per 100	--		--		--		4 DF
<input type="checkbox"/> Other:	--	--	--	--	--	--	--	--

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Outside Reviewer

Susan Golberg and Lauren Frank- Interior Designers at BWBR Minneapolis

We met with Susan Golberg and Lauren Frank from BWBR for an interview earlier in the semester to discuss successful projects they have designed for the youth in the past. They gave us a lot of great information and ideas to include in our overall space and which amenities and interior features were most beneficial in the overall project which made them both great options for an outside reviewer. They are both excited and willing to help us better our project and designs moving forward. We have sent our blocking diagrams to be reviewed for more feedback. Their professional images, work experience, emails and responses to our content are written below:

Susan Golberg

sgolberg@bwbr.com



Susan has 29 years of experience in health care design, including over a decade with BWBR. As a project manager, she coordinates and facilitates information flow throughout the project team, including clients, consultants, contractors, and third-party vendors. Susan provides technically precise, highly detailed, and well-coordinated results on construction documents. She has worked with some of the biggest health organizations in the region and nation. - BWBR Team Members (<https://www.bwbr.com/team-members/susan-golberg/>)

Lauren Frank

lfrank@bwbr.com



Lauren is passionate about great design for health care environments, and how it can positively impact lives. She enjoys focusing on design solutions for patients and staff alike, specifically on the importance of incorporating healing areas of respite for anyone using the space. She has designed interiors for both new and renovated spaces and has worked on a wide variety of project types, from large critical access hospitals, to education, to both small and complex renovations. -BWBR Team Members (<https://www.bwbr.com/team-members/lauren-frank/>)

EMAIL RESPONSE 12/03/2022:

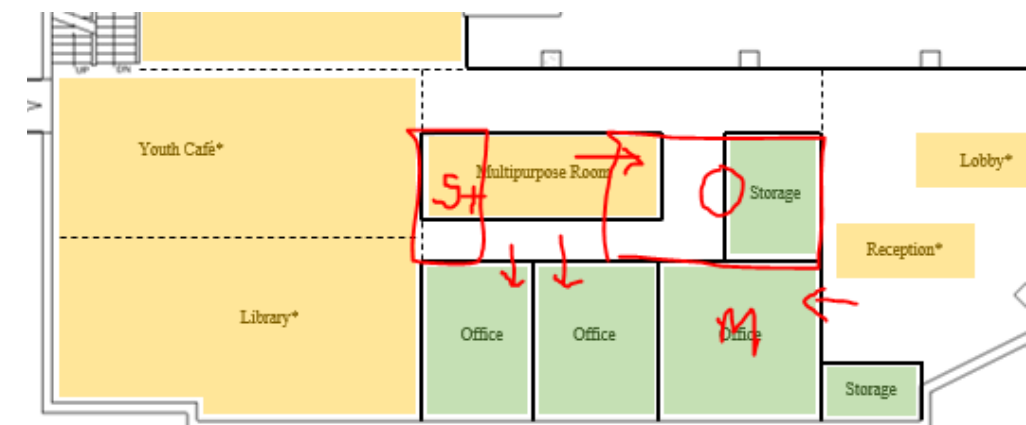
Hi Jasmine, Natalia, and Nathan,

I like the adjacencies that you have here. I like that all the quieter spaces are upstairs. The Sensory rooms are in a more secluded location which is good, but might need some signage for wayfinding. I like that the offices have windows. Good layouts for private and public spaces.

The only thing I see is narrow rooms don't function very well. Perhaps you could change them to be like the screen shot below. The art room may need a storage space, you will need a counter and a sink typically (that is what the L shaped box is supposed to be).

My only other comment would be to consider who is using the spaces, which spaces will be used most often, and placing the most used spaces / more publicly accessed spaces toward the main entrances a bit more. Example – on Level 1 exploring moving the offices toward the plan west side of the building and the café and library closer to the front entrance. People gather around food 😊

I like the overall building shape and design a lot. Nice work! The therapy greenhouse is an awesome idea too. We had a project once that utilized a garden space to grow some herbs and peppers and things for use in their kitchen / café. Might be another benefit of locating the two a bit closer together, and to the front entrance.



EMAIL RESPONSE 04/03/2023:

Jasmine, Nathan and Natalia,

Wow, these look great! When I was in school we never did anything to the level of construction documents. You have gotten into so much detail, this is wonderful.

I have some minor, picky things we could review if you want to.

If you would like, we could set up a Zoom call. When do you have availability? If evenings work better for you, that works for me too.

Thanks,

Susan Golberg

ZOOM MEETING 04/07/2023 NOTES:

- Ensure that wall types are labeled accurately. (Some walls are labeled 1 when they are different widths)
- Add a 2.5” Stud in between plywood and liner of custom planter boxes to add stability
- Reception 2nd floor needs a larger bracket or tube steel to support the counter. What is there now is not enough to hold up the amount of weight it may hold
- They make support brackets that are bent and insert into the wall to ensure that you don’t hit your knee on the bracket at an open counter piece

LAURA FRANK UNAVAILABLE FOR ZOOM MEETING ON 04/07/2023 AT 5:30PM

Appendix A – Field Survey Charts/Matrix

Research Application Chart 1		
Reference	Research Discovery/Findings	Design Application
Abbott-Chapman, J. (2006). Time out in ‘green retreats’ & adolescent wellbeing. <i>Youth Studies Australia</i> , 25(4), 9–16. https://doi.org/10.3316/ielapa.305859630416518	“The impact of gender, socioeconomic status and ethnicity on spatial preferences, constructs of place and measures of wellbeing, as well as use of the environment both built and natural, also require further investigation,” (Chapman, 2006, p. 15).	Design rooms that appeal to demographics of peoples using the space (Chapman, 2006).
	“The words “relaxing” and “worry free” were often used to describe all these favourite places – which is a comment not only upon the “sanctuary” which the places of withdrawal represent but also upon the environmental settings and life experiences which “bother” teenagers and from which 93% of Year 11 and 12 students said they like to take “time out”,” (Chapman, 2006, p. 15).	Separate spaces designated to meet relaxation needs and contribute to a worry-free environment may include biophilic design and other features (Chapman, 2006).
	“Private spaces such as the home may be seen as a haven, while the growing romanticism about nature stresses its healing properties as the opposite of polluting and harmful science and technology (Macnaghton & Urry 1998, p. 114),” (Chapman, 2006, p. 10).	Incorporating private and public spaces gives teens a sense of control. They are able to choose furniture and amenities to fit their needs (Chapman, 2006).
	“The search for escape and “sanctuary” has been largely characterized as the response of adults struggling to make a living in an apparently increasingly hostile and competitive work environment,” (Chapman, 2006, p. 9).	Competitive environments are relative to the outcome of negative emotions; features to create an indoor sanctuary (Chapman, 2006).

Research Application Chart 2		
Reference	Research Discovery/Findings	Design Application
An, M., Colarelli, S. M., O'Brien, K., & Boyajian, M. E. (2016). Why we need more nature at work: Effects of natural elements and sunlight on employee mental health and work attitudes. <i>PLoS ONE</i> , 11(5), 1–17. https://doi.org/10.1371/journal.pone.0155614	“Exposure to natural elements is associated with decreased levels of diastolic blood pressure, depression, and anxiety, and increased attentional capacity” (An, et al, 2016, p .2).	It is important to incorporate natural elements into the design of the space. Otherwise, you miss out on many health benefits (An, et al, 2016).
	“Natural elements buffered the relationship between role stressors and job satisfaction, depressed mood, and anxiety” (An, et al, 2016, p. 1).	Natural elements can be used to make life stressors easier to deal with when in the space (An, et al, 2016).
	“Natural elements (such as greenery, savannah-like landscapes, and clear running water) have an automatic calming effect on physiological arousal” (An, et al, 2016, p. 2).	Adding nature into a design will automatically make it more calming (An, et al, 2016).
	“Sunlight had a more powerful effect than natural elements. It had considerably stronger effects on mental health outcomes, with indirect sunlight associated with about twice as much of the explained variance in depression as natural elements exposure” (An, et al, 2016, p. 10).	Ensuring that the space will have sufficient natural sunlight is crucial. This is one of the most important elements for a space to improve mental health (An, et al, 2016).

Research Application Chart 3		
Reference	Research Discovery/Findings	Design Application
Bazille, H. N. (2021). The impact of well design strategies on employee satisfaction with interior environmental quality and perceived health and well-being. [Master’s Thesis, Cornell University]. <i>eCommons</i> . https://doi.org/10.7298/3vyk-rc03	“Employees in the WELL-certified offices were more satisfied with spatial comfort, connection to the outdoor environment, interior air quality (IAQ), thermal comfort, visual comfort, and noise distraction and privacy, although statistical significance was not determined” (Bazille, 2021, p. 6).	Incorporate white noise for both noise reduction and privacy (Bazille, 2021).
	“Non-physical factors... such as access to nature, cleanliness, furnishings, layout, maintenance, and view” (Bazille, 2021, p. 5).	Providing views of nature through large windows or biophilia throughout the space (Bazille, 2021).
	“Health is seen as being on a continuum from illness to well-being and how an individual experiences their environment can play a role in harming or promoting their mental and physical health (Roskams & Haynes, 2019). Therefore, occupants affect the ability to provide truly healthy workplaces, capable of promoting health and well-being as well as minimizing the risk of disease” (Bazille, 2021, p. 8).	Avoiding visual cluster through intentional space planning of furniture (Bazille, 2021).
		Designing the space to include WELL strategies throughout to provide users with good health and wellbeing (Bazille, 2021).

Research Application Chart 4		
Reference	Research Discovery/Findings	Design Application
Bin Seddeq, H. (2020). Designing a mental health institute for adolescents in the Kingdom of Saudi Arabia (healing architecture) [Masters of Architecture thesis, Rochester Institute of Technology]. <i>RIT Scholar Works</i> , Rochester. https://scholarworks.rit.edu/theses/10374/	“Light enhances a good mood. In contrast, heat due to poor lighting negatively affects both mood and the performance of tasks” (Bin Seddeq, 2020, p. 17).	In our spaces, we must ensure that the lighting is adequate without creating excess heat (Bin Seddeq, 2020).
	“The positive health effects according to color therapy are the ability to increase and decrease heart rate, blood pressure, respiratory rate, body temperature, and can be used to treat cancer, depression, and bacterial infections” (Bin Seddeq, 2020, p. 15).	It could be beneficial to include a space that is equipped with light therapy technology. This could benefit the youth of Fargo, especially during the cold, dark winters (Bin Seddeq, 2020).
	“The color of the room is the first thing people perceive when they walk into a room. The color speaks louder than almost any object in a given space” (Bin Seddeq, 2020, p. 14).	The color of each room must be methodically thought out. If it’s an afterthought, it could take away from the goal of the space (Bin Seddeq, 2020).

Research Application Chart 5		
Reference	Research Discovery/Findings	Design Application
Canazei, M., Weninger, J., Pohl, W., Marksteiner, J., & Weiss, E. (2022). The effects of dynamic bedroom lighting on measures of sleep and circadian rest-activity rhythm in inpatients with major depressive disorder. <i>Scientific Reports</i> , 12(6137), 1-13. https://doi.org/10.1038/s41598-022-10161-8	“Light acutely alters vigilance in humans. Timed light exposure additionally has the potential to resynchronize the circadian clock and to improve sleep quality. Thus, timed light exposure is a promising non-pharmacological intervention option in the treatment of affective disorders,” (Canazei et al., 2022, p. 1).	Implement lighting design solutions that utilize natural light whenever possible that will draw individuals into the space (Canazei et al., 2022).
	“Dawn simulators are further perceived as a more natural light intervention, deliver light without side-effects, and thus may be easier and more convenient to use than light therapy devices,” (Canazei et al., 2022, p. 2).	Incorporating dawn simulators into the space can provide a more natural source of light which promotes mental health and creates a more visually appealing space (Canazei et al., 2022).
	“Altered physical activity is a core feature of depression and depressed patients often show lower daytime activity levels and a damped circadian activity profile. During the course of treatment, these physical activity parameters usually improve. We found similar results in our study. Irrespective of bedroom lighting, patients’ daytime physical activity level and their daily activity rhythm amplitude improved over time, indicating a general inpatient treatment response,” (Canazei et al., 2022, p. 9).	Incorporating bright and vibrant lighting in public, active spaces and dimmer soft lighting in private spaces promotes relaxation and socialization when appropriate (Canazei et al., 2022).
	“Morning light therapy is its potential to phase advance the circadian system. This effect has already been shown in people with seasonal affective disorder,” (Canazei et al., 2022, p. 9).	Lighting design should reflect natural circadian rhythms of light in the natural world (Canazei et al., 2022).

Research Application Chart 6		
Reference	Research Discovery/Findings	Design Application
Dalay, L. (2020) The impact of biophilic design elements on the atmospheric perception of the interior space. <i>International Journal of Landscape Architecture Research</i> , 4(2), 4-20. https://orcid.org/0000-0001-7419-3552	“Biophilic design can be experienced in a variety of sensory ways such as sight, sound, touch, smell, and taste” (Dalay, 2020, p. 4). “All sensory elements perceived in the interior through the senses are effective in changing the physical and mental state of the person” (Dalay, 2020, p. 5).	Combine sensory elements into the design through large windows and specialty lighting, sound machines and acoustical separation, and the use of tactile and visual textures (Dalay, 2020).
	“Significant changes in heart rate are observed in places where windows, plants and natural materials are used, which provide daylight and natural views. This physical effect created by biophilic design elements directly affects psychological and mental functions such as stress control and concentration” (Dalay, 2020, p. 10). “The main purpose of Biophilic design concept is to assimilate the space-human-nature relationship within the man-made environment and to ensure the theme of the relationship in the interior by evaluating each physical, mental, and psychological factor” (Dalay, 2020, p. 15). “Landscape areas created inside or outside the building encourage the development of imagination, exploration, and problem-solving skills due to their diversity, texture, and detail” (Dalay, 2020, p. 15).	Provide as much daylight as possible throughout the day through large windows and skylights (Dalay, 2020). Creating a landscape area within the interior of the building through a large greenhouse (Dalay, 2020). Include fireplaces for visual and physical comfort (Dalay, 2020).
	“The fire element need not only be present to contribute to the environment, but it can also create an atmosphere of warmth in the interior by simulating fire with heat, color palette and light” (Dalay, 2020, p. 9).	Integrate animals into the interior through aquariums, art, material patterns, and resources for therapy (Dalay, 2020). Incorporate biophilia through live walls/plants, water features, and lighting (Dalay, 2020).

Research Application Chart 7		
Reference	Research Discovery/Findings	Design Application
Hamama, L., Hamana-Raz, Y., Dagan, K., Greenfeld, H., Rubinstein, C. & Ben-Ezra, M. (2011). A preliminary study of group intervention along with basic canine training among traumatized teenagers: A 3-month longitudinal study. <i>Children and Youth Services</i> , 33, 1975-1980. http://doi.org/10.1016/j.chilyouth.2011.05.021	“The main finding emerge from this study was the decline at the level of PTSD symptoms along with significant reduction in the risk to develop PTSD, among the group intervention that used canines assisted therapy” (Hamama et al., 2011, p. 1979).	Various types of therapy that support life skills and youth development; therapy such as canine assisted therapy and animal therapy (Hamama et al., 2011).
	“The creative process of using canines along group intervention seemed like enhancing their sense of confidence and belief in their abilities, regaining them with a sense of control and ego-mastery,” (Hamama et al., 2011, p. 1979).	Canine assisted therapy to be included in the youth center in a way that does not stigmatize mental health and acknowledges the needs of different age groups (Hamama et al., 2011).
	“Adolescence is a challenging and crucial phase in human development as the foundations of self-identity, social competence, emotional adjustment, and psychological resilience continue to be established (Herbert, 2008),” (Hamama et al., 2011, p. 1975).	Providing various amenities to give adolescents a sense of freedom during their developmental phases (Hamama et al., 2011).
	“Each of these animals has specific skills and abilities to contribute to the therapeutic process,” (Hamama et al., 2011, p. 1976).	Animals have their own characteristics that can match characteristics of the teens using the space; incorporating animal therapy will give teens an understand of their nature (Hamama et al., 2011).

Research Application Chart 8		
Reference	Research Discovery/Findings	Design Application
Kim, J., & Heo, W. (2021). Importance of interior design: An environmental mediator for perceiving life satisfaction and financial stress. <i>International Journal of Environmental Research and Public Health</i> , 18(19), 10195. https://doi.org/10.3390/ijerph181910195	“Generally, the emotional responses are not only one-directional emotions. Rather, the emotional responses can be observed to display various facets, such as intensity, pleasure, discomfort, activation, and other multiple forms of emotions” (Kim & Heo, 2021, p. 2).	Many factors can contribute to a positive emotional reaction. Because of this, it is important to intentionally design every aspect of a space to meet the needs of the user (Kim & Heo, 2021).
	“Consumer satisfaction is a representative example of an environmental effect that influences a person’s psychological response to a certain place” (Kim & Heo, 2021, p. 3).	The design of a space changes the way a person views a business. This means that our design could potentially help someone to understand the mission and vision of the youth center (Kim & Heo, 2021).
	“Anyone can feel art, regardless of their income level, education level and gender” (Kim & Heo, 2021, p. 11).	If art is not utilized, the space will miss out on an easy way to incorporate thought provoking designs (Kim & Heo, 2021).
	“Color is also known to be an important interior design element that is associated with a person’s response, as well as emotional perception (Kim & Heo, 2021, p. 3).	The intentional use of color can be used to manipulate a person’s perception of a space. If done correctly, it could help to guide a person to be more open and comfortable. causing the space to be more effective (Kim & Heo, 2021).

Research Application Chart 9		
Reference	Research Discovery/Findings	Design Application
Martín López, L., & Fernández Díaz, A. B. (2022). Interior environment design method for positive mental health in lockdown times: Color, textures, objects, furniture, and equipment. <i>Designs</i> , 6(2), 35. https://doi.org/10.3390/designs6020035	“It is claimed that people who have adequate space for work, study, exercise, and personal privacy in their homes have lower stress levels compared to those who lack comfortable accommodation” (Martin Lopez & Diaz, 2022, p. 2).	Because many kids don’t have access to these spaces at home, it can be supplemented at a youth center. This also suggests that spaces shouldn’t be used against the design. For example, physical activities should happen in a designated gym area (Martin Lopez & Diaz, 2022).
	“The five colors most appreciated by respondents are gray, brown, white, blue, and beige” (Martin Lopez & Diaz, 2022, p. 23).	In spaces that don’t require specific colors to influence mood, these options could be applied (Martin Lopez & Diaz, 2022).
	“the most popular among respondents is mahogany, followed by walnut and leaving parotta in last place” (Martin Lopez & Diaz, 2022, p. 23).	When choosing wood species for a space, these options could be considered (Martin Lopez & Diaz, 2022).
	“The element that generates more positive emotions in respondents within studied concepts – color, textures, objects, furniture and equipment – is texture, especially soft textiles such as cotton, polyester, linen, and wool” (Martin Lopez & Diaz, 2022, p. 28).	This could be especially applied in a therapy or self-reflection area. The use of soft textiles could aid in producing a calm environment (Martin Lopez & Diaz, 2022).

Research Application Chart 10		
Reference	Research Discovery/Findings	Design Application
Miwa, Y., & Hanyu, K. (2006). The effects of interior design on communication and impressions of a counselor in a counseling room. <i>Environment and Behavior</i> , 38(4), 484-502. https://doi.org/10.1177/0013916505280084	“The results showed that dim lighting yielded more pleasant and relaxed feelings, more favorable impressions of the interviewer, and more self-disclosure than did the bright lighting” (Miwa & Hanyu, 2006, p. 484).	Provide lighting within the rooms that can be adjusted per the users preferences – dimmable, color changing, circadian rhythm (Miwa & Hanyu, 2006).
	“First, the conditions with the dim lighting were rated more pleasant, relaxing, and calm than with the bright lighting (Table 2), and under the pleasant dim lighting, the impressions of the interviewer also became more pleasant, good-humored, pretty, and modest than under the bright lighting (Figure 2)” (Miwa & Hanyu, 2006, p. 496). “From the practical point of view, the knowledge about environmental factors in counseling such as effects of lighting helps counselors to practice their therapy more effectively” (Miwa & Hanyu, 2006, p. 499).	
	“For example, Campbell (1979) and Morrow and McElroy (1981) reported that the students felt more comfortable and welcome when seated in a clean office with foliage plants and posters, and they expected the professor of the office to be more affable, less harried, and to talk common interests. In contrast, students perceived the professors in cluttered offices as hurried and busy, thereby decreasing their pleasant feelings (Campbell, 1979; Morrow & McElroy, 1981)” (Miwa & Hanyu, 2006, p. 486).	Incorporate plants, art, and décor to make users feel more comfortable within the space (Miwa & Hanyu, 2006).

Research Application Chart 11		
Reference	Research Discovery/Findings	Design Application
Owens, P. E. (1997). Adolescence and the cultural landscape: Public policy, design decisions, and popular press reporting. <i>Landscape and Urban Planning</i> , 39(2-3), 153-166, https://doi.org/10.1016/S0169-2046(97)00052-2	“Youth centers in particular were designed... Areas were provided for arts and crafts, music and dancing, and indoor sports” (Owens, 1997, p. 158).	Provide activities and amenities for all types of users (Owens, 1997).
	“Public areas, particularly commercial and recreation areas, should be designed to encourage the activities of teens rather than discourage them as is typically the case” (Owens, 1997, p. 165).	Include spaces for art, physical activity, cooking, homework help, quiet reading, group activities, etc. (Owens, 1997).
	““The teen-aged child desires and needs the knowledge and skills that will help him proceed on his own; his relations with others, his own nature and his environment cry for exploration; his body is changing rapidly and profoundly; he wants both independence and security; he must find personal values in his social setting and participate responsibly in larger groups’ (Defining Teen-Age Needs Produces a Different School, 1955, p. 220)” (Owens, 1997, p. 158).	Provide a space for teens to learn how to transition to adulthood while improving their mental wellbeing during the challenging stage of adolescence (Owens, 1997).
	“To become socially mature, teens need social interaction with their peers and with adults” (Owens, 1997, p. 161).	
	“The period of adolescence is important in an individual’s emotional development (Hendrey et al., 1994). Hanging out with friends, dating, and finding adult role models is critical” (Owens, 1997, p. 161).	

Research Application Chart 12		
Reference	Research Discovery/Findings	Design Application
Paron, AJ. (2020). Perspective design for all needs design empathy. <i>Journal of Interior Design</i> , 45(4), 3-9. https://doi.org/10.1111/joid.12182	“differences can include those labeled with Dyspraxia, Dyslexia, Attention Deficit Hyperactivity Disorder, Dyscalculia, Autistic Spectrum Disorders, Tourette’s Syndrome, and others,” (Paron, 2020, p. 1).	Spaces should be flexible to meet the expectations of universal design (Paron, 2020).
	“hypo reaction is on one end and hyper reaction on the other,” (Paron, 2020, p. 2).	Features such as lighting and sound design along with visual impacts such as colors and textures play into hypo and hyper reactions; variety of materials, lighting, sound, and color incorporated to match all expectations (Paron, 2020).
	“There is little color, pattern, or stimuli in the room. This may be a successful environment for a child with acute sensitivities, but difficult for a therapy professional or those with hypo-sensory reactions who seeks stimulation from their environment,” (Paron, 2020, p. 4).	To ensure all end users are satisfied and not overstimulated, base colors in the space should be neutral but pops of colors incorporated throughout in accents (Paron, 2020). Design the space visually to appeal to all end users (Paron, 2020).

Research Application Chart 13		
Reference	Research Discovery/Findings	Design Application
Rachele, J., Cuddihy, T., Washington, T., & McPhail, S. (2014). The association between adolescent self-reported physical activity and wellness. <i>Journal of Adolescent Health</i> , 55, 281-286. http://dx.doi.org/10.1016/j.jadohealth.2014.01.021	“Regular physical activity in youth has various immediate benefits, including improved musculoskeletal health, mental health, growth, and development. Recent systematic reviews have found that physical activity in adolescence had positive short-term effects on self-esteem, positive effects on academic performance, and the potential to reduce depression” (Rachele et al. 2014, p. 282).	Creating spaces for different types of physical activity like yoga, dance, weightlifting, cardio, etc. to promote wellbeing (Rachele et al. 2014).

Research Application Chart 14		
Reference	Research Discovery/Findings	Design Application
Smith, D., Metcalfe, P., & Lommerse, M. (2012). Interior architecture as an agent for wellbeing. <i>Journal of the HIEA</i> , 19(3), 2-9. http://hdl.handle.net/20.500.11937/21296	“Socially responsible interior architecture is an essential factor in providing the conditions for the wellbeing of individuals and communities” (Smith et al., 2012, p. 3).	Design for the particular needs of the students that will be using the space through amenities and aesthetics (Smith et al., 2012).
	“Interior architecture that is socially responsible provides a reflexive and responsive practice that addresses both the broader context... and the personal and cultural needs of communities” (Smith et al., 2012, p. 5).	
	“Environments that use nonverbal cues to facilitate orientation and way-finding can reduce stress” (Smith et al., 2012, p. 4).	Incorporate visual and tactile signs for wayfinding as to be accessible to all (Smith et al., 2012).

Research Application Chart 15		
Reference	Research Discovery/Findings	Design Application
Sun, M., Nakashima, T., Yoshimura, Y., Honden, A., Nakagawa, T., Saijo, H., Watanabe, Y., Ajimi, T., Yasunari, S., Yamada, Y., Nagano, J., Okamoto, T., Ishikawa, H., Ohnuki, K., Fujimoto, N., & Shimizu, K. (2020). Effects and interaction of different interior material treatment and personal preference on psychological and physiological responses in living environment. <i>Journal of Wood Science</i> , 66(1). https://doi.org/10.1186/s10086-020-01910-2	“Cedar smell has a relaxant effect on humans” (Sun, et al, 2020, p. 1).	Cedar wood emits a smell that is relaxing for humans. This could be incorporated to therapy offices or self-reflection spaces to aid in relaxation (Sun, et al, 2020).
	“Subjects who inhaled the smell of Japanese cedar described a ‘natural’ and ‘peaceful’ feeling; their pulse rates also decreased slightly” (Sun, et al, 2020, p. 1).	The smell of cedar can actually lower one’s blood pressure. This is more evidence that cedar is an effective material for creating a relaxing environment (Sun, et al, 2020).
	“The effects of wood-derived stimulation can provide multiple physiological and psychological benefits such as stress reduction, task performance improvement, blood pressure reduction, and more” (Sun, et al, 2020, p. 1).	The use of wood in a space can improve stress reduction, task performance improvement, blood pressure reduction, and more. This is evidence that it should be used when possible (Sun, et al, 2020).

Research Application Chart 16		
Reference (APA Format)	Research Discovery/Findings	Design Application
Ylagan, V. (2021). The role of interior design in the psychotherapist’s office [University of South Carolina - Columbia, University Honors Senior Thesis]. https://scholarcommons.sc.edu/senior_theses/440	“Nature sounds like ocean waves can be placed or played inside a therapist’s office to drown out any background noise and create a calming environment” (Ylagan, 2021, <i>p. 15</i>).	The use of white noise in a space can create a space with consistent, calming sound. This can also improve sound privacy, and can be achieved with nature sounds (Ylagan, 2021).
	“A large amount of background noise can lead to difficulties concentrating, headaches, increased blood pressure, and irritability and is particularly unfavorable when conversations such as those in psychotherapy are occurring” (Ylagan, 2021, <i>p. 15</i>).	It is important to include additional acoustical separation in rooms that require silence. This could also be applied to any space to reduce as much excess sound as possible (Ylagan, 2021).
	“One’s memory, emotions, and sense of smell are closely linked through the limbic system, and unpleasant smells have been found to elicit negative memories, and vice versa” (Ylagan, 2021, <i>p. 17</i>).	Because smell has the potential to bring back negative memories, it is important to create smell barriers to keep unpleasant smells contained. The use of pleasant smells can invoke positive memories (Ylagan, 2021).
	“The presence of a window, a soothing color palette, and soft, dim lighting are a few of the most commonly selected characteristics of the ideal therapy office” (Ylagan, 2021, <i>p. 33</i>).	A therapy office should have a window, a soothing color palette, and soft, dim lighting (Ylagan, 2021).

Research Application Chart 17		
Reference (APA)	Research Discovery/Findings	Design Application
Zhong, W., Schroder, T. & Bekkering, J. (2021). Biophilic design in architecture and its contributions to health, well-being, and sustainability: A critical review. <i>Frontiers of Architectural Research</i> , 11, 114-141. https://doi.org/10.1016/j.foar.2021.07.006	“The term biophilia was coined by social psychologist Erich Fromm (1964) to describe the ‘love of life’ that explained two fundamental tendencies of living organisms: sustaining life from death threats and the positive integration with each other,” (Zhong et al., 2021, p. 117).	Bringing live plants into interior environments to match humans to humanistic cravings of the natural world (Zhong et al., 2021).
	“sustainable architecture are identified to reflect different design goals, and the benefits of biophilic design are reviewed to investigate the effective design elements. In comparing diverse challenges and rich benefits, the correlation between biophilic design elements and the sustainable goals of architecture is revealed,” (Zhong et al., 2021, p. 122).	Biophilic design promotes nature in interiors and gives an idea of sustainable design which is a need in the world today. Incorporating biophilia into a space through the buildings architecture will draw end users to a more sustainable way of living (Zhong et al., 2021).
	“To overcome the problematic separation of humans and nature, humans have substantially transformed their environments to enter a mode of being in which humans and nature are more connected,” (Zhong et al., 2021, p. 133).	Humans crave connection between nature and humanistic environments to promote a connection between the two. Sustainability can be achieved through the use of plants, greenery, natural lighting, and other biophilic solutions (Zhong et al., 2021).