

**Project Deliverable D: Conceptual Design**

Group 10

October 15, 2023

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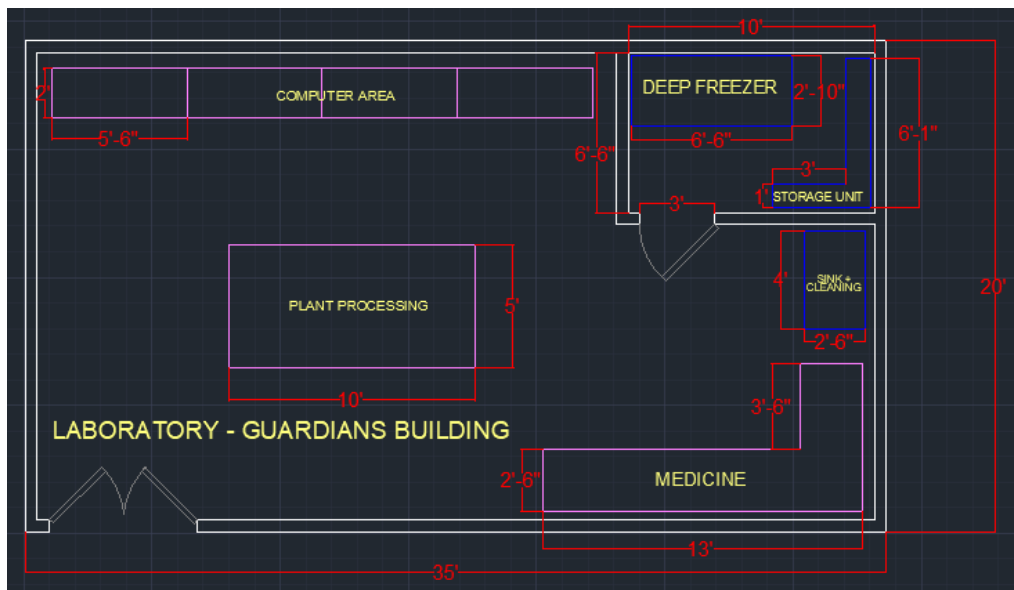
# Abstract

The client (The Guardians) requests a building that will highlight the First Nation culture and provide a working and community space to grow as a program. As part of group 10 from the GNG1103 course, each member is tasked to design a different subsystem that meets the needs of the client. This report will present several subsystems as follows: the laboratory designed by Lauren Mills, the office space designed by Natalie Lacoste, the community area designed by Ethan Tran, the bathrooms designed by Alex Lin, the boardroom designed by Spencer Gelinias, and the common room designed by Rachel McDonald.

# 1. Introduction

The following subsystems make up six of the most important spaces for the design of the building. The laboratory, the office space, the common area, the lean to, the bathrooms, the boardroom, and the common room. Each subsystem was created by one member of the team and peer edited to make sure it adhered to the following key aspects most important to The Guardian program. The building's accessibility features, its reflection of the environment and sustainability, and the inclusion of important indigenous cultural elements and spaces. Each subsystem design includes subsections describing how these three key elements were considered for and implemented in that design.

## 2. Guardians Laboratory



The laboratory is a multifunction room that can support the Guardians' with their monitoring/analytical work, their plant processing work, and their traditional medicine work. The lab is an open 30'x25' room with a 10'x6'-6" storage closet in the right hand corner. The storage closet contains a large, lab grade deep freezer (6'-6"x2'-10") that will not grow harmful bacteria for harvest samples and

medicine. Furthermore, the closet has a storage unit for lab equipment and material that does not have to be kept at a specific temperature.

Along the far wall are four tables that can account for two computers each for the monitoring and data team. In the right hand corner on the nearest wall, there is a table where the medicine work can be done, along with a sink just next to the table for easy clean up and washing. Finally, a large plant processing table is located in the center of the room yet can be easily moved since it is on caster wheels. The entryway to the lab is a double door entry which is wide enough for the plant processing table to pass through.

## 2.1. Accessibility

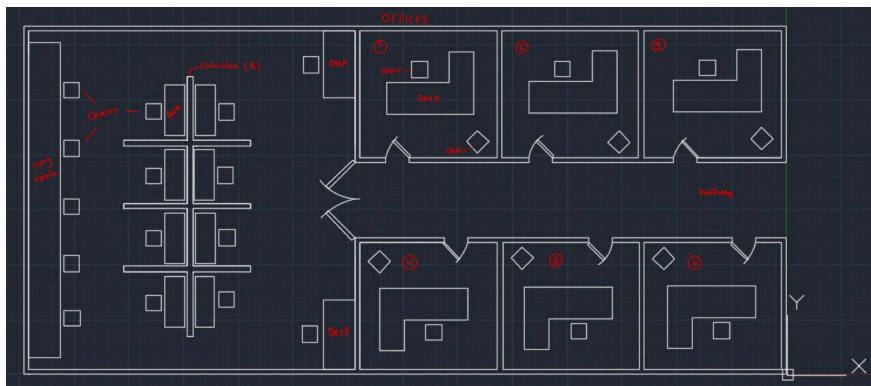
Given that the lab is one story, there is no issue in navigating through different floors via stairs and/or elevators which makes the room accessible to all. Furthermore, the doors are automatics for those who cannot open a door for various reasons such as the door being too heavy or a person not being able to use their hands at the moment. The plant processing table will be divided into a standing portion with higher countertops and a lower portion for those who do not/cannot stand for various periods of time. As a whole, the lab room is large enough to have room for wheelchairs and supplies to pass between the furniture, making the lab run smoothly and efficiently given a busy work day.

## 2.2. Environment and Culture

The indigenous culture cannot easily be incorporated into the furniture of the lab. The plant processing and medicine table must be a relatively sterile environment, and thus they are made out of stainless steel in order to prevent the table from absorbing any material that is being handled. The computer tables and the chairs, however, are made of traditional wood to bring some culture into the room. Additionally, one of the walls will be a mural painted by a local artist as a reminder of the

Guardians identity. The wall along the computer lab will have windows to provide natural sunlight and views of surrounding nature.

### 3. Office Spaces



For the office spaces, there are 6 total closed-door offices for private work, with 3 along each side of the hallway. Each office is 12'x13' to have enough space for a L-shaped desk and chair (plus an additional chair and space for a guest).

At the end of the hallway, there is a large, open room (30'x30') where there are 8 cubicles (each are 6'x6') for a semi-private workspace, as well as a long table at the far end for individual work or for potential collaborative work. The long table is spacious enough for 5 comfortable workspaces, however there is much more room for additional chairs especially for collaborative work. There are also two individual desk spaces near the double door entrance as backup workspaces, if there is a need for more.

### 3.1. Accessibility

The double doors to the large workspace will have automatic door openers for those who are less able to open the doors. To further the accessibility of the workspaces, the design has been created as one floor to avoid the use of stairs, which not all people can easily use. This also avoids an elevator, which is costly. Both the hallway and the large workspace are spacious to allow for easy maneuvering in case anyone who enters these areas is restricted by wheelchairs or simply to prevent the cramped feeling that many offices have.

### 3.2. Environment

To bring in elements of the environment, each office has windows to bring in natural light. The large workspace will have a skylight over the cubicles to emphasize the natural sunlight and the nature outside. Natural light is also beneficial to the wellbeing of the office space users.

Since many offices usually look bland due to the lack of design and colour and the client does not want this look, the cubicles should be made of wood. This also allows them to be sturdier and last longer, which is a worthy investment. Wooden cubicles bring in the use of natural resources to elevate the space and this highlights the environmentally-influenced space that the client wants.

Along the walls of the large workspace room that do not have tables, there should be windows with planters where employees or community members can set up and maintain a small garden or whatever plants they'd like. The more plants, the more the space will be livened up.

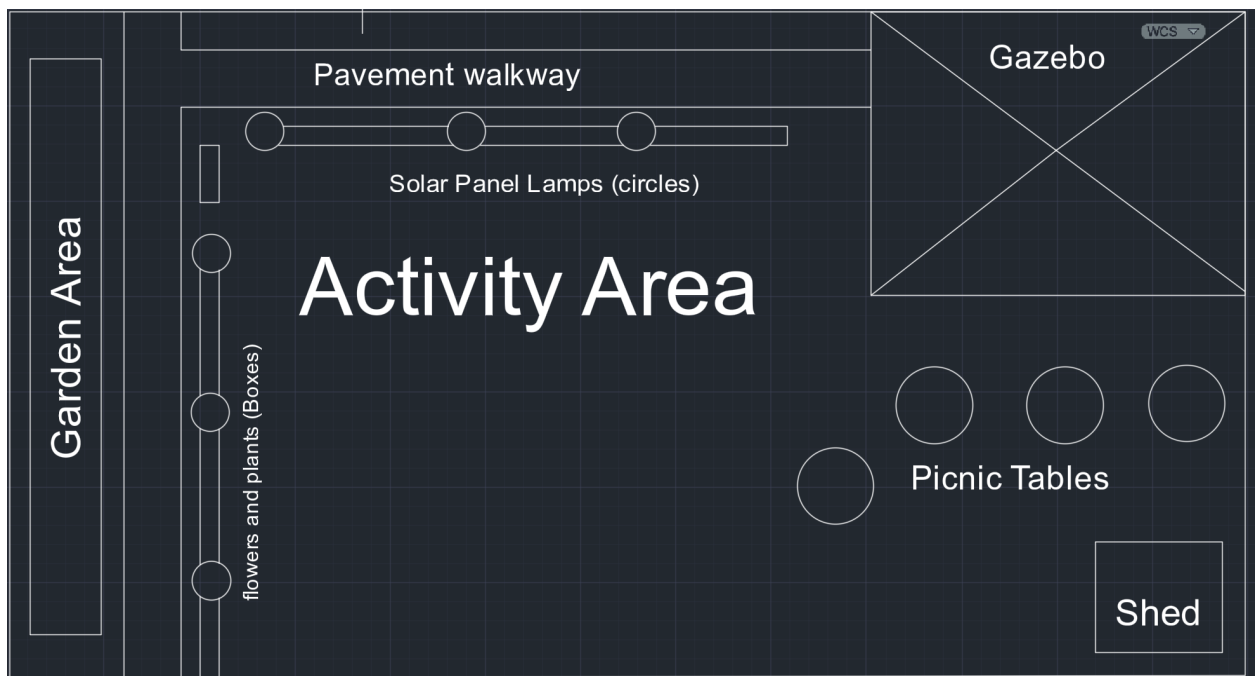
The floors of the hallway going past the offices and leading to the large room should not be concrete but should be a stone pathway type of flooring. (The top layer should be flattened and smooth to avoid creating a tripping hazard). Stone also brings nature into the design.

### 3.3. Culture

In light of preserving First Nations culture, each office will feature an original painting by a First Nations artist, preferably local. To involve the community, members can be asked to submit their own

artwork so that there is an added touch of the artwork coming from within. For the large workspace room, the walls should be covered in artwork to avoid the bland ‘concrete’ look and to allow for more expression for the community. A good idea is for the children of the community to paint a mural. This will liven up the space with culture and color.

## 4. Community Area



The community activity area will be about 60’x90’ with a pavement walkway leading to the 28’x28’ gazebo and leading back to the building. There will be about 3-4 round picnic tables outside the gazebo and 4-5 rectangle picnic tables under the gazebo. Furthermore, a garden area will be added along the walkway while being around 40’x8’. In addition, also along the pavement walkway are solar panel lamps (circles) with boxes of plants and flowers (rectangles) between them. There is also a shed to put in any equipment from activities, gardening tools, lawn mowers, etc.



## 4.1. Accessibility

A pavement walkway was implemented in order for people in wheelchairs, using crutches or other disabilities to be able to access the gazebo and the rest of the area. The area for activities will be flat grass land so it should be accessible for people with any sort of disabilities.

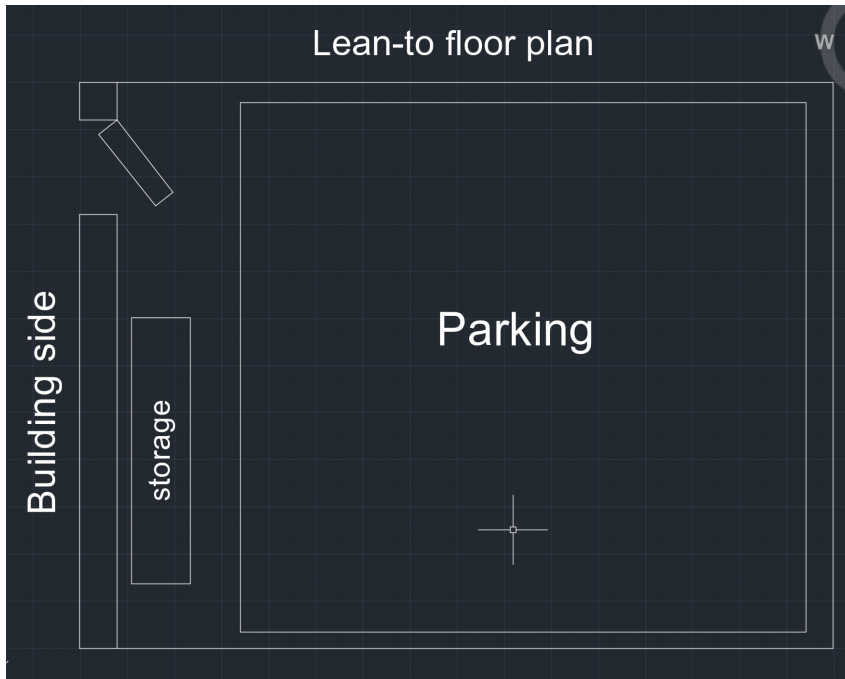
## 4.2. Environment

Along the walkway there are solar panel lamps to save energy and that can power during the night where they will be the most useful. Furthermore, there also are boxes of assortments of plants and flowers. Also, there is a small garden implemented to promote agriculture, independence, and it is cheaper. The activity area is being kept as grass for a better look and park aesthetic. There could possibly be a better alternative to the pavement walkway.

## 4.3. Culture

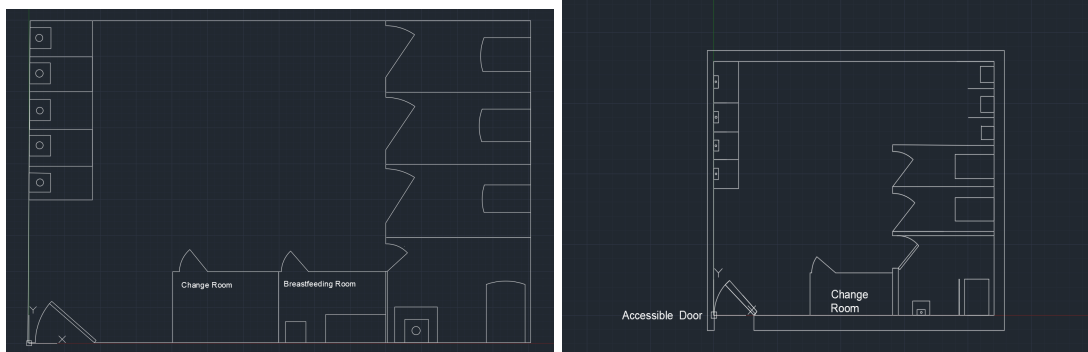
There can be many creative ways to implement culture into this floor plan, there is plenty of space to move anything around or bring in certain equipment in order to do certain cultural activities. There is room for kids, adults and elderly. There could be significant statues, artwork and/or items added to this area that would lighten up the area culturally.

## 5. Lean to



Storage placed close to the entrance for more convenient access, Parking can fit cars and trucks.

## 6. Bathrooms



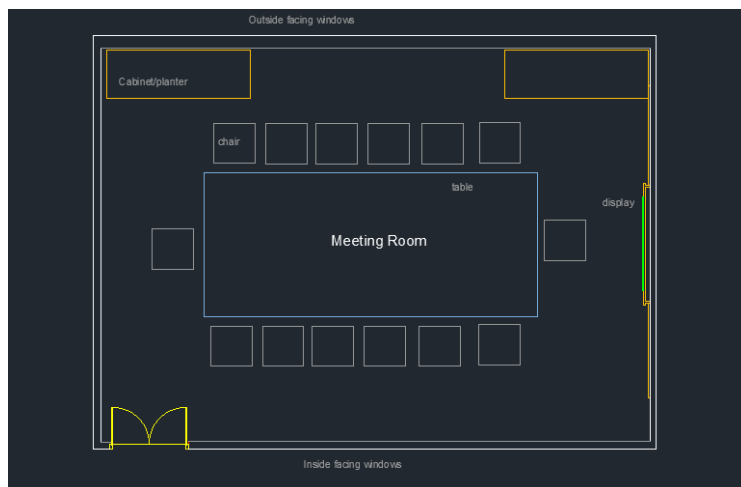
There are two washrooms in total, the men's washrooms and the women's washroom. The washrooms will be 24'x19' each, with regular stalls, urinals, wheelchair accessible/ gender neutral stalls, change rooms and breastfeeding rooms. There are three urinals located in the men's washroom, which are 30"x24". Regular stalls are 98" x36", and for the handicap/gender neutral stalls they are 98" x 60". The change rooms and breastfeeding room are 70" by 50" each. There is a sink within the handicap/gender neutral stalls in both men's and women's washrooms. However, the breastfeeding room is only located in

the women's washroom. In addition, there are also sinks outside of the stalls with mirrors, which will be 15" by 24" each.

## 6.1. Accessibility

Automatic doors located at the entrance will be very friendly to those in need, while the handicap stalls make it more comfortable and easier for them. There are also gender neutral stalls that are provided to those who wish to use them. The stalls are shared with handicap stalls with sinks built in them. There is a change room in each washroom, which is provided to anyone in need. Lastly, there is a breastfeeding room located in the women's washroom, which is for anyone that wishes to feed their baby.

## 7. Boardroom



The boardroom will be a 24'x14' rectangular room with seating for 12-14 people. This is a place to have meetings using a large wall mounted display on the east wall of the room. The north and south walls are both glass with the north facing the outside of the building and the south facing the building, this keeps the interior bright and makes it seem larger, blinds should be available for more private meetings. The flooring and ceiling material will be consistent with the office spaces.

## 7.1. Accessibility

Automatic double doors entering the boardroom will be wide enough to accommodate wheelchairs. The boardroom is designed with a table that is high enough to accommodate wheelchair

accessibility. The room is also spaced to provide wide passages around the table as well as in front of the presentation display.

## 7.2. Environment

To incorporate elements of the environment into the space, the north wall will consist of energy efficient windows to bring natural light into the space, with planters on both sides of the wall which act as storage drawers/cabinets.

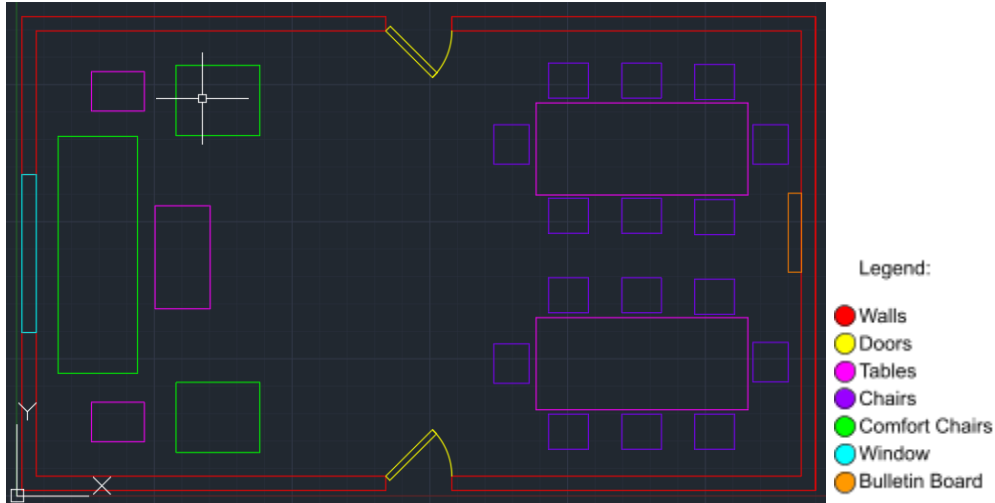
Automatic blinds can be included to reduce glare on the display during presentations.

To reflect the outside scenery the table will be made with local wood material, improving both its appearance and durability over a commercial solution. A natural wood shiplap accent behind the display on the east wall can also bring the outside in.

## 7.3. Culture

In an effort to represent indigenous culture in the boardroom, the west wall will feature a mural by a local indigenous artist which also helps to involve the community in this collaborative project. To avoid a corporate appearance the ceiling and east shiplap accent wall should feature patterns or designs that are significant to indigenous culture or represent an aspect of local scenery/nature.

# 8. Common Room



An important component of any building is a space to build camaraderie, community, and connections. The common room has been designed to encourage interactions between employees and provide a space for relaxation. With the inclusion of both a space to collaborate and a space to socialize, the common room is an open and welcoming space.

## 8.1. Dimensions

The common room is 18' by 30' and is located in the center of the building so it is an equal distance for all to enjoy. To maintain easy accessibility the doors are 30" inches wide, enough to provide easy access for wheelchair users and those with other mobility constraints. At one end of the room, two boardroom tables of dimensions 8' by 3' 6" have been incorporated, each seating eight, with extra room. At the other end of the room, more seating has been provided in the form of a couch of dimensions 9' long and 4' 7" deep and two comfort chairs of dimensions 3' 2" wide and 2' 8" deep. In addition, a coffee table measuring approximately 4' by 2' is placed in the center of the comfort area, with side tables measuring 2' by 1' 6" placed on either side of the couch.

## 8.2. Environment and Accessibility

In a common area, it is very important for mental health and concentration that natural light is available. To aid in this, a large window of approximately 6' by 6' was added on the side of the room with the comfort area. However, there is a lot of wall space, so if a larger window is wanted, it can easily be added. Finally, incorporated at the end of the room with the boardroom tables is a bulletin board, roughly 36" by 24". The idea behind this is it can be used to post core values, employee info or morale boosters.

Whatever flooring is used will be accessible for all, meaning it will not be slippery, or a tripping hazard. It would also be best to avoid carpets or rugs to maintain that accessibility.

## 8.3. Nature and Culture

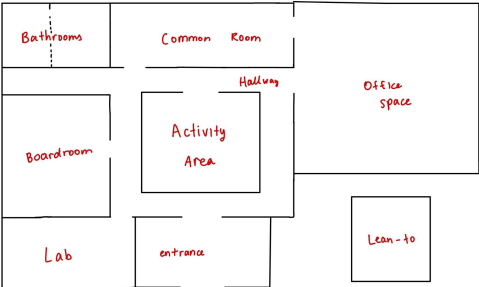
To keep nature incorporated in the common room some ideas include textured walls replicating leaf patterning, wooden tables or even a small indoor garden with easy-to-maintain plants. It is also important to maintain cultural representation which could occur by using certain colours, important symbols or cultural images.

# 9. Building Floor Plan

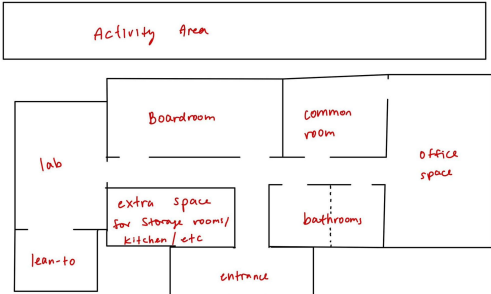
There are three variations of the building floor plan, which were all considered for the design. Although there are minor design differences between all of the versions, there are major functional differences. During the meeting with the client, version 1 was presented as feedback was wanted on the location of the activity area. However, version 3 seems to be the more suitable design for the location and functionality of the activity area. In terms of version 2, the extra space for a kitchenette, storage etc is also a very useful

feature. All versions will be taken into consideration when deciding on the final prototype, based on client feedback, and realistic design.

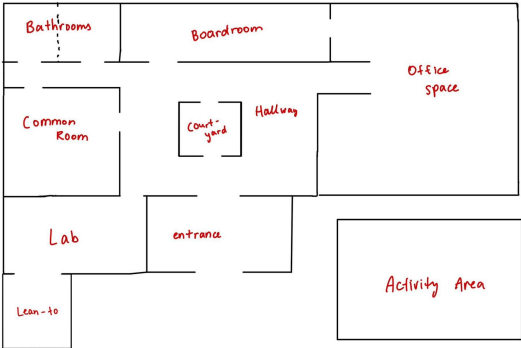
### 9.1 Version 1



### 9.2 Version 2



### 9.3 Version 3



## 10. Conclusion and recommendations

After designing and editing different versions of each room, the best versions were compiled to create individual and overall floorplans of the building. The building is going to be a one story building, with two washrooms, a common room, a boardroom, an office space, a lab space, a lean-to as well as an outdoor activity space and an indoor open space. Accessibilities were involved when we designed the rooms. There are double wide automatic doors in every room entrance, which are provided for those in need. They also make loading and unloading objects or (as the client mentioned) deer a lot easier. The building is designed to be accessed to the community, therefore, we designed an open area within the building. During the client meeting, the client mentioned that they were looking for a space that holds up to 150 people. We decided to add an outdoor space right outside the entrance due to the fact that the indoor open area we designed could not hold that many people. We plan on making the indoor open area a meeting space, where they could have board meetings or any sort of activities. The client also mentioned that they would like the lab to be attached to the lean-to, as well as another entrance to the lab. In that case, it would make it a lot easier to gain access to the lab without entering through the front entrance. An issue we developed is that we didn't design a kitchen area, which the client listed in their presentation. We plan on adding a kitchen area somewhere within the building. In conclusion, we still have a lot to work for getting a more thoroughly designed building and matching the clients' needs.