

Interpreted Needs Statement	Design Criteria
The design of the building is reflective of their culture and values	Materials used to build the building (natural materials: wood) Shape of building Adding green space
The building has enough space for members to complete their work with the required equipment	Size of building and each space (m ²) Restrooms Kitchenette Number of offices and size Meeting room
The building has a covered, mixed-use outdoor space attached to one side	Area of outdoor space (m ²) Height of roof (m)
The lab space is easily accessible from the vehicle area to facilitate easy transportation of equipment	Door from outdoor space to lab area Size of the lab
The building has cameras around the outside for security reasons.	Cameras
There are small sheds separate from the building for vehicle storage	Size (m ³)
The project has no specific cost requirement	Cost (\$)

Functional Requirements:

- Lab workspace for plant processing
- Small offices
- Kitchenette
- Restrooms
- Outdoor space for cultural activities and vehicle parking
- Sheds for off-season vehicle storage
- Garage door from outdoor space to lab

Non-functional requirements

- Cameras for security
- Materials used to build the building

Constraints

- Area of each room (m²)
- Area of building (m²)
- Area of outdoor space (m²)
- Height of outdoor space roof (m)
- Cost (\$)

Target Specifications

Design Specifications	Relation (=, < or >)	Value	Units	Verification Method
<i>Functional Requirements:</i>				
Lab workspace for plant processing	=	yes	n/a	Incorporated in design
Small offices	=	5	offices	Incorporated in design
Kitchenette	=	yes	n/a	Incorporated in design
Bathrooms	=	2	restrooms	Incorporated in design
Outdoor space for cultural activities and vehicle parking	>	6x3x3	meters	analysis
Sheds for offseason vehicle storage	>	1	shed	Incorporated in design
Garage door from outdoor space to lab	=	yes	n/a	Incorporated in design
<i>Non-Functional Requirements:</i>				
Cameras for security	>	4	cameras	analysis
Materials used to build the building	=	Wood/sustainable materials	n/a	Incorporated in design
<i>Constraints:</i>				
Area of kitchenette and restrooms	>	15	m ²	analysis
Area of each office	>	12	m ²	analysis
Area of building	>	1500	m ²	analysis
Area of outdoor space	>	60 x 100	meters	analysis
Cost	<	500,000	dollars	estimate

*The values in the table are based on the client meeting as well as typical sizing for the criteria.

Reflection

Meeting with the client allowed us to empathize with their needs and hear the motivation behind certain requirements. The preparation before the meeting allowed us to easily communicate with the client on specifications and design criteria, a process that could have taken multiple days and emails otherwise. This includes functional requirements, such as the number of offices they require to be built;

and non-functional requirements, such as the materials they wish to be used for the building. Meeting with the client also helped us identify their priorities in the design. For example, a priority in creating an outdoor space for community activities. Any questions that the client was unable to answer were noted down and were further discussed between the team to present potential options during the next meeting. Thus, we were able to narrow down the client's needs and develop design criteria and specifications.

Technical benchmarking is unavailable as there are no comparable products.