Design Criteria Deliverable for Algonquins of Pikwàkanagàn Neyagada Wabandangaki Guardian Program

Presented by:
GNG1103-A00 Group 7

Angelique Singh

Liam Cull

Luvraj Budree

Maximilien Salter

Paul Finucan

Owen Jackson

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University of Ottawa

Introduction

In this document, we have defined the requirements, the specifications and the design criteria for our project. These elements are crucial to the planning and eventual design of the prototype buildings we will be presenting to the client.

1. Requirement List

Functional Requirements:

- Has a refrigerated area to store many water, plant and animal samples, as well as large animal carcasses
- Has a biology laboratory space to conduct tests on samples
- Has a computer laboratory space for keeping track of data
- Has a loading dock to facilitate transport of supplies
- Lean-to to store pick up trucks/ATVs
- Outdoor space for cultural events and gardens
- Room for pump and furnace

Non-Functional Requirements:

- Incorporates local timber into structure
- Non-industrial design
- Displays indigenous art and culture

Constraints:

- Building sustainability (specific building materials)
- Time (2 years)
- Minimum building dimensions (L*W*H m)
- Number of occupants to design for

Metrics:

Number	Needs	Design Criteria	Importance (5 - very important, 1- not very important)
1	4-5 Small Offices	- Ceiling height (m) - Floor space (m^2) - Optimal workspace size - Noise level - Number of people occupying space	3
2	Common Workspace Area	- Ceiling height (m) - Floor space (m^2) - Open workspace - Number of people occupying space	4
3	Computer Lab	- Ceiling height (m) - Floor space (m^2) - Individual desktop workspaces - Number of people occupying this space	5

4	Plant Processing Station	- Ceiling height (m) - Floor space (m^2) - Large moveable table for processing - Temperature (°C) - Space to maneuver table in and out of - Number of people occupying this space	5
5	Equipment Storage Space	- Ceiling height (m) - Floor space (m^2)	4
6	Washroom	- Ceiling height (m) - Floor space (m^2) - Amount of utilities needed for employees - Number of people occupying space - Wheelchair accessible	5
7	Outdoor Space	- Floor space (m^2) - Drainage options - Ground materials - Weight capacities	3
8	Lean-to	- Ceiling height (m) - Floor space (m^2) - Access to loading dock - Load bearing properties - Access to seasonal vehicle storage	3
9	Kitchenette	- Height (m) - Width (m) - Depth (m)	5
10	Room For Animal Hides	- Ceiling height - Floor space (m^2) - Temperature (°C)	4
11	Pump and Furnace Room	- Ceiling height (m) - Floor space (m^2) - Specific materials	5

2. Target Specifications

Building Specifications	General Specifications
Dimensions	50’ x 70’ for the main building, 50’ x 20’ for the lean-to
Accommodation Amount	Average capacity: 5-10 people a day

	Maximum necessary capacity: 30+
Materials	Softwoods: Red and Eastern White Pines, Spruce (external materials, common in Ottawa River Valley) Hardwoods: Oaks and Maples (internal decoration, common in Ottawa River Valley) Vinyl or Fibre siding (possibility for areas exposed to weather)
Timeframe	Approximately 2 years

3. Benchmarking (laboratory testing capabilities)

Company	Paradigm Environmental Services	Nagadjitòdjig Akì Guardian Program	Kichi-Sìbì Guardians Program	Allnorth
Laboratory testing & monitoring capabilities	Air & emissions Solid & hazardous waste testing Non-potable water testing Environmental waste Industrial waste-water Contaminated soil and groundwater testing	Moose populations, Rivershed monitoring, At risk species populations Drone footage Seed harvesting and preservation GPS tagging	Fish spawning areas and times, Baitfish population and patterns Fishing and collection data Lake mapping	Water quality monitoring Analysis of erosion Wildlife and vegetation surveys Environmental protection plans Contamination and hazardous waste assessments
Source	Link	Link	Link	Link