YOUTH HOSTEL Elk Island National Park, Alberta, Canada

SITE: The main building is located in the center of the triangular lot. The parking lot is to the west, with roof covering over the parking spaces. The outbuilding housing the photovoltaic system is on the western extreme of the lot. Both the parking structures and outbuilding feature photovoltaic arrays.

ENTRANCE: Built from local, sustainably sourced wood and stone, and featuring green walls of local floral, provides a welcoming atmosphere.

PATH: An outdoor area providing guests views of the natural surroundings. Accessible to the national park via walking and bike paths.

SUSTAINABLE DESIGNS: Local materials, daylighting rooftops, and solar panels over the roofs and parking structures lower the energy usage of the building.

CONTEXT: The site is accessible from the main North Gate Road to the north, which branches from Elk Island Parkway. Elk Island National Park Visitor Centre is on the junction of these roads, 750 feet from the site.
First Floor Plan:
The circular common area is both the heart of the building and the reason. The semi-open void radiates off from its housing bedrooms, bathrooms, central laundry and storage. The wooden interior courtyards separate the main public areas of the building, allowing a connection to nature, but not noise, to permeate the structure.

Observation deck—a secondary gathering space, accessible via stairs or elevator. The space provides a panoramic view of the surrounding forest, and the skylight allows for views of the esplanade and northern lights.

Second Floor Plan:
The upper common room is located directly above its lower counterpart, offering increased privacy and greater views.

Dining room surrounded by two communal kitchens to the north and south, a lush interior courtyard to west, and the exterior patio space to the east. A place for guests to gather with access to the exterior patio that feels as much outside as inside.

The roof angles are tilted towards the southern sun, providing day-lighting to the hallways and common spaces of the building. The solar panels on the roof, green roofs, and parking shelters take advantage of this angle. During the summer, the roof angle partially blocks the higher sun arc, reducing cooling costs.

Geothermal System:
Heat pumps in outbuilding pump hot water from deep in the ground through a district heating system in floor of main building.

Green roofs are located over the bathrooms, kitchen, and laundry rooms. These roofs incorporate local foliage while providing thermal insulation and reduced HVAC costs. The collection of grey water is used for toilets, sinks, laundry machines, and landscape irrigation.

As a key design element, the geothermal system is proudly displayed through textured, laminated glass flooring in the Lobby, common area, and interior hallways.

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