**WRITTEN NARRATIVE**

“*To leave the world a bit better, whether by a healthy child, a garden patch, or a redeemed social condition; to know that even one life has breathed easier because you have lived — that is to have succeeded.*”

* Ralph Waldo Emerson

Our team design process for the LAGI 2020 Fly Ranch, Design the Future of Fly Ranch competition began with the question, “What does the world look like after our buildings have served their purposes?”

What kind of building might be the most useful? How might we respond to the unique traits of the Fly Ranch site? How might we serve the needs of every visitor? How might we allow the indigenous culture to influence the aesthetics of our artistic and architectural forms? How might we design a forward-looking building, that will resonate with visitors in the immediate future, but then disappear?

To answer these questions, we have developed an outhouse building for LAGI Fly Ranch that can be formed on site using existing materials from the immediate environment. Our proposed construct uses existing, basic technologies, renders an artistic form, provides shelter and creates zero-waste. The construct is temporal, useful, and in the end, it returns to the earth. The construct can be replicated as many times as necessary to meet current and future LAGI Fly Ranch needs. And the building form itself is natural, anamorphic, and anthropomorphic.

Below, we outline our building design, its development, its technology, and its various impacts.

**Technology**Our goal was to design, and ultimately construct, an artistic and useful building, and for it to have the least environmental impact possible. To achieve this, we considered what could be built with the materials and people with proximity to the LAGI Fly Ranch site, with minimal additional tools, technology, and resources.

In addition to manual labor, we anticipate the use of rental equipment, including a truck hoist, a small grinder/chipper, a mixer and a lightweight aluminum form, and believe that will be the extent of the technology that is required to erect our proposed building(s).

Our design - as expressed by the various images depicting our design-development process - incorporates an array of contemporary three-dimensional modelling and rendering technologies, including drafting and modelling computer software programs and physical 3-D printing.

Our primary resource in the design-development process was team collaboration and experimentation.

**Supported Activities**The primary use of our proposed building type is a rest room. However, beyond functional use, through the buildings’ artistic and architectural form, we also believe there is an opportunity for the buildings to create curiosity and an enhanced memory and sense of place in the minds of visitors; the buildings can become temporal landmarks. We believe their architectural forms also support calm, emotional grounding, and introspection, by offering a sense of reverence and protection. In addition, we believe that the process of construction is part of the artistic and aesthetic experience; the user is not only the end-user, but also a participant in each building’s emergence.

**List of System Inputs**Consumables that support human activity, such as toilet paper and sanitizer, are all that should be required to support the outhouse and its operation. Over the life of the building, the owner may find that the addition of enzymes to the latrine pit is necessary, but the initial intention is for a site-made organic pulp to be applied to the base of the latrine in order to initiate the natural biological processes that are necessary for the latrine to function.

**List of System Outputs**Ground-based toilets have been used since the beginning of civilization. Our forms are designed to make use of the site’s dry climate, local materials and resources. Since the latrine will ultimately be filled in at the end of the building’s use-life, the only real output is waste gas. Yet the buildings can be situated so that the prevailing winds of the site are an effective ventilator.  
  
**Primary Materials**

The primary materials used in our design consist of materials that can be harvested from the site (such as soil, found stone, invasive plant species, seeds from indigenous and desirous plants, and water) and recyclable, re-usable materials (such as aluminum, treated lumber, and a green pre-manufactured toilet).

**Order of Magnitude Cost**We estimated that the cost of each building’s construction will be less than $20,000.

**Summary of Strategy for On-site Prototype Development**

The erection of these buildings is designed to be an event where volunteers, local trades, and others work together to complete the buildings.

We envision prototype development initiating in multiple stages, starting with the placement of an erosion control system around the perimeter of the immediate work area and the manual excavation of a traditional pit latrine. That work will be followed by lining the pit with found stones, manually grading the earth at the pit perimeter, and reserving the soil spoils for future use.

Next, a safety platform will be constructed from treated lumber to cover the pit and to provide stability for the future toilet.

Simultaneous to the pit construction, pre-fabricated aluminum forms will be delivered to the site. The aluminum forms are lightweight, can be re-used, and ultimately recycled. The forms will be used to mold the outhouse walls.

Regional and site-sourced invasive plant materials, a seed mix from indigenous plants, and organic fertilizer will be mechanically mixed with water into a cob-like pulp. The pulp will then be added to the molds by hand and left to dry. The slumping of the material will help stabilize the base of the composite structure. Once dry, the aluminum forms will be removed and the remaining 2” thick paper walls will be stacked and secured by peg over the pit and platform.

Upon inspection and local approval, the outhouse(s) could then ostensibly be occupied and placed in use.

Due to the indigenous seeds and fertilizer that are integral to the paper, over time, the paper walls will begin to sprout indigenous plants. This will give the already anthropomorphic form of the construct an added natural expression, consistent with the offerings of nature for that particular site.

Once the outhouses’ use-life has expired, and they are no longer needed, the toilets and the treated wood platforms can be removed (and stored for re-use) and the remaining constructs can either be left to decompose into their respective pits or they can be burned in place. Both ways regenerate the earth with indigenous plant matter and materials and seamlessly meld the former construct into the environment.

The building form and lifecycle described above mimics the historic shelters created by nearby indigenous tribes, whereby circular shelter constructs were made from sagebrush and holes were left in the top for ventilation. For those same historic constructs, when occupant death occurred inside them, they were burned where they stood.

**Environmental Impact Summary**

Due to the proposed construction materials and methods (which employ wood, found stone, locally sourced invasive plant material, re-usable, recyclable aluminum forms, and temporary rented equipment), we don’t anticipate any long-term environmental impacts from the proposed outhouse buildings.

Further, the minimum footprint of each outhouse is roughly 50 square feet, a very minimal footprint. Given the limited area of each construct and the usefulness of having more than one outhouse in a given area, we suggest clustering the outhouses in groups of three or four within the context of a three to four-acre site. This would present virtually no density to the greater site and also corresponds to the intent of a local ordinance allowing one pit privy per acre.

The visual environmental impact of the constructs is also minimal, in that the buildings are created from immediate, natural materials and replicate the natural world in their irregular form. The constructs are artistic, architectural, and functional enhancements to the natural landscape.

Last, we view these constructs and their post-use sites as not only sustainable, but restorative, and leaving the site in a better condition than before. The outhouse presence within the environment and its use is temporal and the constructs leave no discernable trace.