

Regenerative Place-Based Design Practices

for Residential Design & Construction in Sicangu Thamakoche

This document is a draft proposal describing a research project between the University of Washington's College of Built Environments undertaken through the Applied Research Consortium (ARC) and 7 Directions Architects/Planners relating to place-based, regenerative material selection and specification. This document is intended to identify scope, content, expectations, and deliverables for this phase of research.

Team: Bobbie Koch, Student Researcher, M. Arch & M.S. in Architectural History & Theory, Department of Architecture - University of Washington; Wizipan Little Elk, CEO, Rosebud Economic Development Corporation - Rosebud Sioux Tribe; Daniel Glenn, Principal - 7 Directions Architects/Planners; Hyun Woo "Chris" Lee, Associate Professor, Department of Construction Management - University of Washington

Project Abstract: Prior to colonization, the Sicangu Lakota Oyate traditionally gathered the materials to build their homes from within their local environment - a regenerative, place-based cultural practice. Ongoing settler-colonialism and capitalist markets centered upon extraction and anthropocentric building methodologies continue to impact the ways in which Indigenous nations, such as the Sicangu Lakota Oyate (and the world in general), design and construct their homes with little consideration to the place they are being built and the time-immemorial Indigenous values embedded within that place. In response, this ARC project aims to answer *how can the Sicangu Lakota Oyate return to culturally-driven, place-based material practices to design and construct homes in a regenerative way that follows ancestral values?* The research objective is to develop a place-based, culturally-driven framework that can be utilized to analyze and evaluate regenerative material practices in design and construction within Sicangu Lakota homelands. To achieve this objective, the project will involve performing interviews with industry professionals and local knowledge holders. In collaboration with the Rosebud Economic Development Corporation (REDCO) and Sicangu Community Development Corporation (Sicangu CDC), this project targets to (1) directly contribute to current development projects at Keya Wakpala Woicageyapi (Turtle Creek Regenerative Community Development) and Wolakota Regenerative Buffalo Range, and (2) to contribute an Indigenous-driven and cultural-value approach to making regenerative design and construction decisions rooted in place and place-based ancestral knowledges.

Keywords: regenerative, place-based, material practices, community development, tribal housing, mitakuye oyasin, Indigenous architecture, Indigenous methodology, decolonization

Statement of Interest: During my internship with 7 Directions Architects/Planners this past year, I have been honored to be involved in several master planning and residential design projects with my Tribal community - the Sicangu Lakota Oyate, the Rosebud Sioux Tribe. Many of these projects reference the word *regenerative* in the project title or within the project vision. These projects range from *regenerative* community developments to *regenerative* agricultural practices. Since working on these projects and listening to our clients' visions, I have been captivated by the opportunities that come along with the word *regenerative*. *Regenerative* has been loosely described as something that creates more life, where life isn't focused just on our human relatives but our non-human relations too - the animals, the plants, the earth, the sky, the stars. As Lakota peoples, if we are going to return to our time-immemorial practices and ancestral values than creating more life - being *regenerative* - in our places, in our communities, and in our daily lives needs to be brought to the forefront. One of the questions that constantly arise during our client meetings is how can our design and construction practices also be *regenerative*? This is a question that has resonated with me and one that I am keenly interested in exploring during this ARC fellowship year.

Research Proposal: This applied research project is a collaboration between the Rosebud Sioux Tribe and 7 Directions Architects/Planners to explore regenerative, place-based material practices and methods for residential design and construction in Sicangu Thamakoche. This project will involve performing a series of interviews with Sicangu knowledge holders and cultural leaders to develop a conceptual framework to understand the ancestral and contemporary values that should guide design and construction decisions in emerging *regenerative* residential projects. With the developed framework, local materials options and practices will be analyzed and discussed with local and industry experts. The research will end with a case study analysis of a local project through the lens of the developed conceptual framework. Because of the place-based nature of the project, the geographic focus of this research is within Sicangu Lakota homelands today. However, the methodology and process used throughout this research could be used and adapted to other places and values.

Questions:

Primary research question: How can the Sicangu Lakota Oyate return to culturally-driven, place-based material practices to design and construct homes in a regenerative way that follows ancestral values?

Secondary research questions: What does regenerative mean within Tribal development projects? How can our architecture and construction practices be regenerative? How do regenerative material practices differ or build upon life cycle assessment? What local materials are available? How can they be utilized in a non-extractive, reciprocal, and regenerative way?

Research Methods: This research methodology consists of: (1) a literature review; (2) the development of a theoretical/conceptual framework through a series of interviews; (3) analysis of selected local materials, methods and/or practices using the developed conceptual framework; (4) the development of a material/resource depository, and (5) an optional case study analysis of a local residential project. For the project's method, I would like to interview people in a way that follows Indigenous methodologies of storytelling and storywork.

	Research Method	Objectives/Outcomes
1	Literature Review & Interview Prep	1. Further develop understandings on: <ul style="list-style-type: none"> ● Regenerative Practices and Development ● Existing Materials & Methods in Tribal Housing <ul style="list-style-type: none"> ○ Review literature on existing Case Studies: Navajo Flexcrete, Crow Soil-Cement Blocks, Red Feather Straw Bale homes, Grow Homes/Forever Homes ○ Critiques, shortcomings, and limitations 2. Develop an interview toolkit and questions for interviews 3. Develop an interview methodology or process for conducting and analyzing interviews (recording stories)
2	Conceptual Framework Interviews	1. INTERVIEW #1: Conduct conceptual framework interviews 2. Analyze interview data (knowledge and stories shared) 3. Develop a conceptual framework to evaluate materials, methods and practices 4. INTERVIEW #2: Present and discuss developed conceptual framework with interviewees, stakeholders, firm, and academic advisors. <i>Note: Requires IRB approval</i>
3	Regenerative Materials Database Interviews	1. INTERVIEW #3: Conduct initial interviews on past, current, and future regenerative material, methods, and practices within Tribal lands. 2. Develop a preliminary database of regenerative materials, methods, and practices 3. Evaluate materials, methods, and practices using the conceptual framework 4. INTERVIEW #4: Conduct interviews on the functioning of the database, the conceptual framework as an evaluation tool. <i>Note: Requires IRB approval</i>
4	Case Studies (optional)	Potential additional research methodology if time allows, approximately 1 case study where the framework will be tested on a local existing or upcoming project.

Project Breakdown:

Timeframe: October 2021 - June 2022

Phase 1: Autumn 2021

Phase 2: Winter 2022

Phase 3: Spring 2022

Hours: 25 hours per week

- 15 hours at 7 Directions Architects/Planners (not always focused on ARC research)
- 10 hours at UW

Important Dates

- Q1 Review: November 18, 2021
- Q2 Review: February 24, 2021
- Q3 Review: May 19, 2021

Basic Literature Review

Ancestral Practices

Prior to colonization, my Sicangu Lakota ancestors traditionally gathered the materials to build their homes from within their local environments - a regenerative, place-based cultural practice. This practice was guided by the most fundamental ancestral Lakota philosophy - Mitakuye Oyasin. Mitakuye Oyasin translates to “we are all related.” The *we* includes not only human relatives, but our non-human relatives as well - the animals, trees, water, air stones and stars. Everything in the universe is connected (White Hat & Cunningham, 2012). Therefore, our traditional Lakota home - or tipi - was more than just a practical and portable tensile structure, my ancestors slept in as they moved across the prairie hunting buffalo. In addition to carrying spiritual significance in form, the materials that make up the tipi structure were/are Relatives. These materials were/are gathered ceremonially with respect and care.

Settler-Colonial Practices

Throughout the 19th and 20th century, American Indian nations, such as the Rosebud Sioux Tribe¹, residential practices shifted from culturally-driven to policy-driven assimilatory practices put forward by the United States Federal Government through Federal Indian Policy. Tribal nations no longer had the agency and self-determination to make their own decisions when it came to housing and development. Federal entities, such as the Bureau of Indian Affairs (BIA) and U.S. Department of Housing and Urban Development (HUD), controlled residential design, construction, and development within Tribal lands (Kingsley et al., 1996; Glenn, 2018). These

¹ The Rosebud Sioux Tribe (RST) is an United States federally recognized Tribal nation. Traditionally, the Rosebud Sioux Tribe was referred to as the Sicangu Lakota Oyate and was part of the Oceti Sakowin or Seven Council Fires. The Oceti Sakowin was a confederation of Lakota, Dakota and Nakota Oyates (or nations). Sicangu Lakota Oyate is one of seven Lakota Oyates (or Lakota nations).

HUD and BIA homes were remotely designed, poorly constructed and disregarded the place and environment to which the homes were ultimately built. However, the Native American Housing Assistance and Self Determination Act of 1996 (NAHASDA) gave agency back to the Tribes by giving funding directly to the Tribes to manage decisions, design, and construction of their own homes rather than being controlled by HUD or the BIA.

Systemic Policy Influences

Today, the lingering impacts of a pre-NAHASDA era continue to influence decisions pertaining to the design, materials and construction of homes in Tribal communities. Despite funding going directly to the Tribes to make their own decisions on housing development, more often than not, the current approach to Tribal housing continues to carry forward the colonial practices structured by HUD and the BIA. These are often top-down, centralized approaches to housing production based on conventional methodologies of building and financing. Additionally, ongoing structures of settler-colonialism and capitalist markets centered upon extraction and anthropocentric building methodologies continue to impact the ways in which Tribes (and the world) design and construct homes and buildings in general. Oftentimes, alternative building materials and methods experience pushback from clients (like Tribal housing authorities) as a result of non-standard methods often being resisted by contractors.

Housing Shortage

Like so many places throughout the country and world, the Rosebud Sioux Tribe (Sicangu Lakota Oyate) is experiencing a housing shortage. According to our Tribal economist, the Tribe currently has an immediate need for 3,000 homes (per Tribal economist). Many entities within the Tribe are addressing this housing shortage through various solutions. Quick immediate solutions include ordering manufactured trailer homes, fabricating Tribal rental homes at the Tribally-owned modular facility, and conventional wood-framed residential construction. All of these quick solutions to bring more homes to our Tribal community are driven less by cultural values than by economics and an immediate need to house Tribal citizens. Where the materials come from for these homes and how they get there is less important than providing families with much needed homes. Although providing much needed housing to our human relations, this approach disregards our other-than-human relations through extractive material practices and further contributes to climate change.

Regenerative Practices [not yet completed, currently emerging]

In my emerging literature review, I am working towards looking at the various ways “regenerative” and “place-based” are defined, used and applied within Tribal and built environment literature (refer to regenerative section of annotated bibliography below). This section of the literature review, I am looking to explore the Tribes “regenerative” goals as a way of returning to the time-immemorial Lakota philosophies and practices, as well as some of the emerging value frameworks like 7GEN values that guide efforts at Wolakota Regenerative Buffalo Range and Keya Wakpala Regenerative Community Development (Sicangu CDC, 2021). As mentioned, this is part of my current and emerging literature explorations. I see this section as establishing what currently exists on Sicangu Lakota Oyate regenerative initiatives, then dive deeper into how this research project will help build upon this work and push these values forward within the Tribal built environment initiatives.

Annotated Bibliography

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