Housing, Crises, and Relationality

NWT Housing Forum/Symposium
January 22, 2025

David T Fortin, PhD, OAA, SAA, Architect AAA, AIBC

What makes something "Critical"?

"of the nature of a crisis, in a condition of extreme doubt or danger"

1660s

etymonline.com

"involving judgment as to the truth or merit of something" is from 1640s; that of "having the knowledge, ability, or discernment to pass judgment"

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etymonline.com

"Critical Theory" in the narrow sense designates several generations of German philosophers and social theorists in the Western European Marxist tradition known as the Frankfurt School. According to these theorists, a "critical" theory may be distinguished from a "traditional" theory according to a specific practical purpose: a theory is critical to the extent that it seeks human emancipation, "to liberate human beings from the circumstances that enslave them." Because such theories aim to explain and

transform all the circumstances that enslave human beings, many "critical theories" in the broader sense have been developed. They have emerged in connection with the many social movements that identify varied dimensions of the domination that human beings experience in modern societies.

James Bohman, Stanford Encyclopedia of Philosophy

My Heroes Have Always Been Indians

Cora J. Voyageur
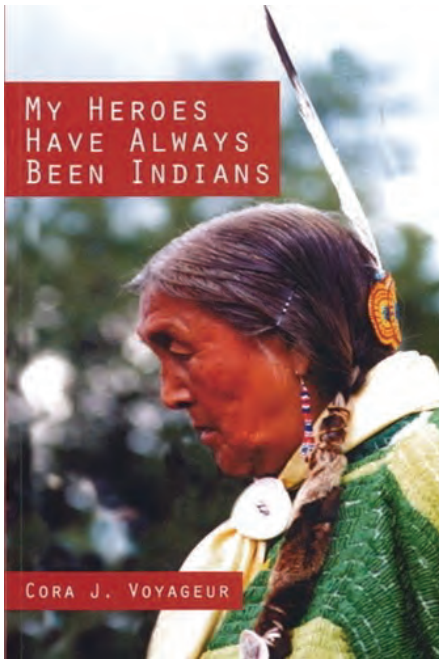
Architectural Internship (McKinley Burkhart Architects)

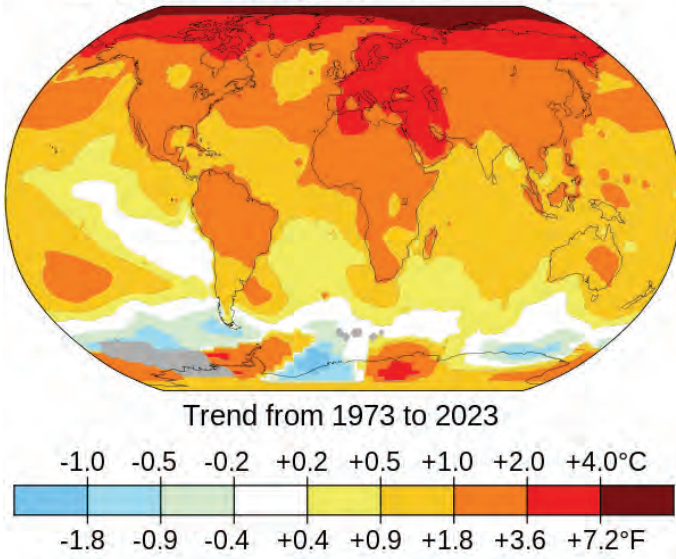Early Academic Work

A Fundamental Crisis in our Relations
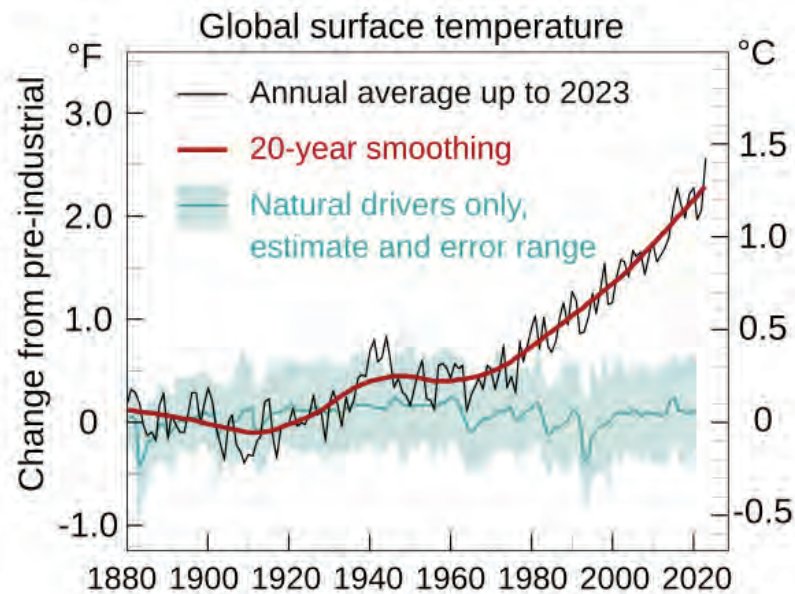

Architectural Internship (McKinley Burkhart Architects)

Early Academic Work, Kibera, Nairobi
Montana State University

Temperature change over the past 50 years

Trend from 1973 to 2023

| -1.0 | -0.5 | -0.2 | +0.2 | +0.5 | +1.0 | +2.0 | +4.0°C |
| -1.8 | -0.9 | -0.4 | +0.4 | +0.9 | +1.8 | +3.6 | +7.2°F |

"Climate"?

Global surface temperature

°F — Annual average up to 2023
— 20-year smoothing
— Natural drivers only, estimate and error range

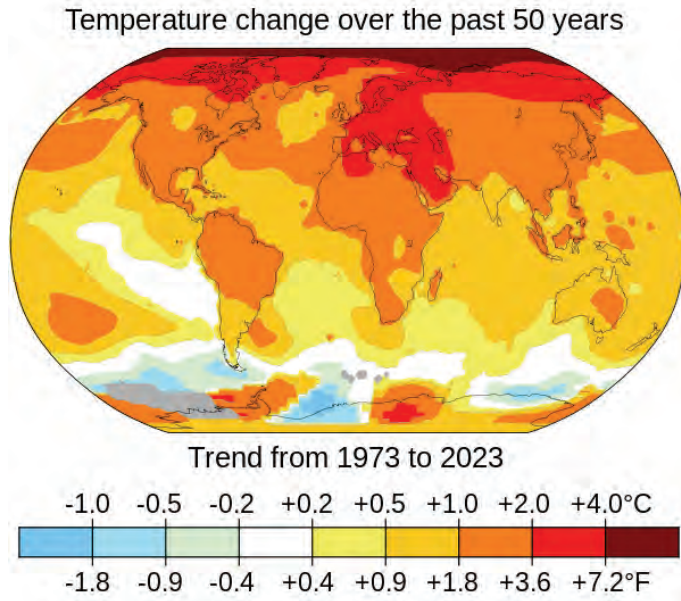# Uprising: The Power of Mother Earth

Christi Belcourt, Isaac Murdoch

Christi Belcourt, *This Painting Is a Mirror*, 2012. Acrylic on canvas. Collection of Crown-Indigenous Relations and Northern Affairs Canada. Photo: Lawrence Cook.
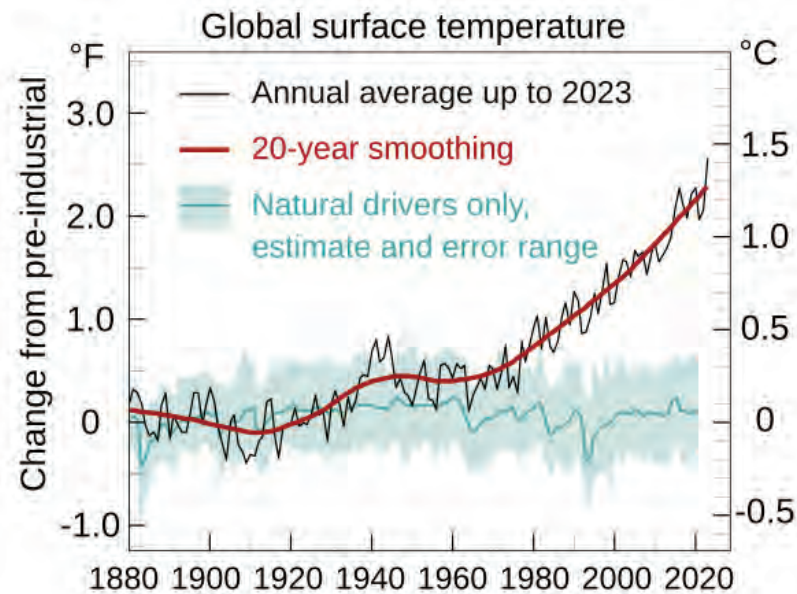
https://canadianart.ca/?agenda=uprising-the-power-of-mother-earth-2/

Temperature change over the past 50 years

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"Climate"?

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A Fundamental Crisis in our Relations

Uprising: The Power of Mother Earth

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Critical Relationalism.

What Relations Matter?

THEORY NOTE

BENJAMIN KLASCHE [iD]

Tallinn University, Estonia & Helsinki University, Finland

AND

BIRGIT POOPUU [iD]

Tallinn University, Estonia

What relations matter? This question sits at the heart of this article and addresses in a more thoroughgoing way the methodological and ethico-political problems that some relational thinkers have debated. We are interested in deep relationalism and the methodological problem of delineating which relations matter in a reality defined by an ever-unfolding web of relations. By acknowledging the relationality of critical international relations (IR) theories, this methodological puzzle is explored by recognizing the situatedness of relations that are being analyzed. Moreover, this helps us to start a conversation on the ethical and political dimensions of deeply relational approaches. By placing the ontological work of deep relationalism in dialogue with the epistemological and ethico-political aspects of critical theory, we are putting forth an account of *critical relationalism*. Furthermore, we are not only arguing for a critical approach to relationalism but also adding to one of the main methodological debates in relationalism that asks us to carefully consider which relations matter (for our analysis) and how we should access them? Finally, this piece advocates for more plural grounds for relationalism in IR to critically reflect on *which relations our theoretical approaches can take us to* and why this matters.

Critical Relationalism.

What Relations Matter?

"Previous relational approaches have not sufficiently problematized their epistemological commitments, i.e., how they know which relations matter in any given instance. Or alternatively, which knowledge do they rely on when thinking about relations?…

…[Without] the specificity of particular relations and knowledge we reproduce relations of inequality with the denial of its ramifications on the urban centres of 'the West' as the grounds for racial capitalism.

…[It] matters who conceptualizes the reactions we centre in our analyses, our worlds, and thus which corners and issues of the world we see and problematize."

Benjamin Klasche and Bruit Poopuu, "What Relations Matter?"

Critical Relationalism.

What Relations Matter?

"Their starting points, e.g. the relations they call out, should be our starting points."

Benjamin Klasche and Bruit Poopuu, "What Relations Matter?"

The Production
of Houses

Christopher Alexander

WITH

Howard Davis · Julio Martinez · Don Corner

"In short, the production systems which we have at present define a pattern of control which makes it almost impossible for things to be done carefully or appropriately, because, almost without exception, decisions are in the wrong hands, decisions are being made at levels far removed from the immediate concrete places where they have impact...and, all in all, there is a colossal mismatch between the organization of the decision and control, and the needs for appropriateness and good adaptation which the biological reality of the housing system actually requires."

Christopher Alexander, Howard Davis, Julio Martinez, and Don Corner, The production of housing (New York: Oxford, 1985), 40.

https://www.spiritualpilgrim.net/04_America_The-Covenant-Nation/17_Cold-War/17g_Shifts-in-American-Culture-r.htm

https://www.spiritualpilgrim.net/04_America_The-Covenant-Nation/
17_Cold-War/17g_Shifts-in-American-Culture-r.htm

$1,995.00 and Our FREE BUILDING PLANS

WILL BUILD, PAINT AND COMPLETE, READY FOR OCCUPANCY, THIS MODERN NINE-ROOM $3,000.00 HOUSE

HOW TO GET ANY OF OUR PLANS FREE FULLY EXPLAINED ON PAGE 2.
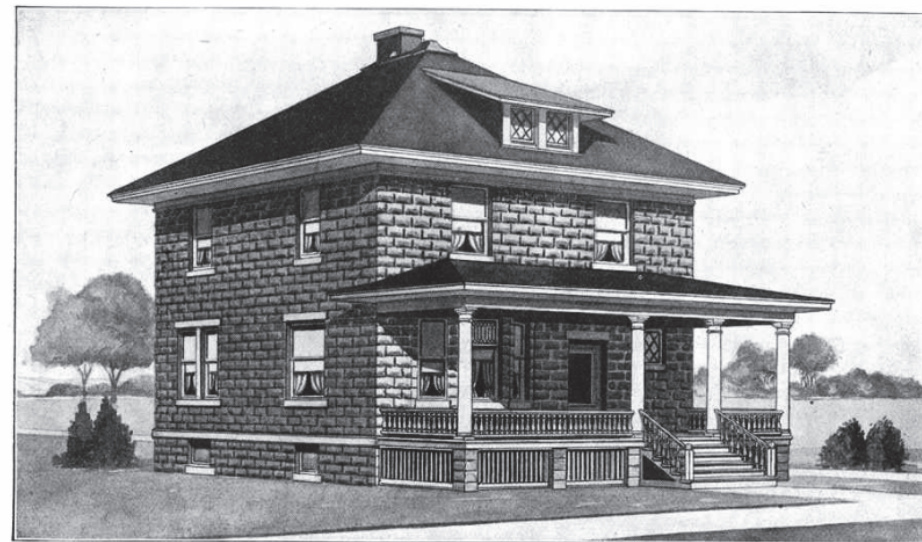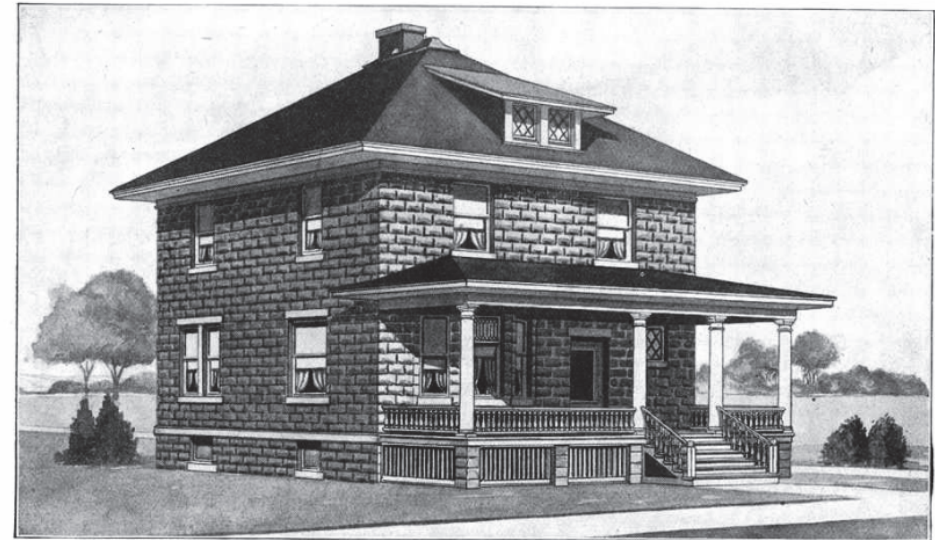
MODERN HOME No. 52

Concrete Block Construction. On the opposite page we illustrate a few of the materials we specify on this our $1,995.00 house.

OUR $1,995.00 HOUSE

illustrated above, consists of nine good sized rooms and bathroom, as shown in these floor plans—

FIRST FLOOR.

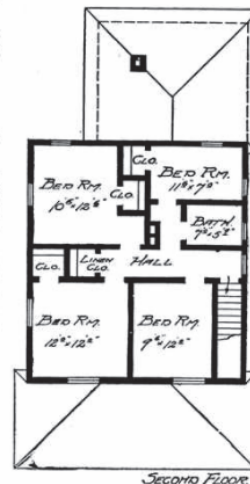|	
Kitchen	13 feet by 10 feet
Pantry.	
Dining Room	14 feet by 12 feet
Living Room	14 feet by 16 feet 6 inches
Reception Hall	11 feet 6 inches by 11 feet
Bedroom	11 feet 6 inches by 14 feet

SECOND FLOOR.

Bedroom	12 feet by 12 feet
Bedroom	9 feet 6 inches by 12 feet
Bedroom	10 feet 6 inches by 12 feet 6 inches
Bedroom	11 feet 6 inches by 7 feet
Bathroom	7 feet by 5 feet 9 inches
Linen closet and hall.	Bedrooms have closets.

The Arrangement of Our Houses

is such that they can be well heated with very little expense. Our $1,995.00 house is but one of the many
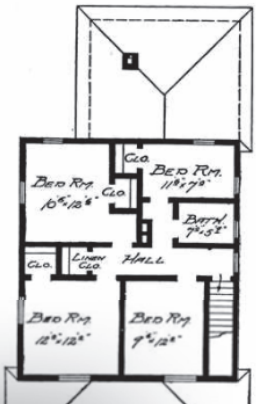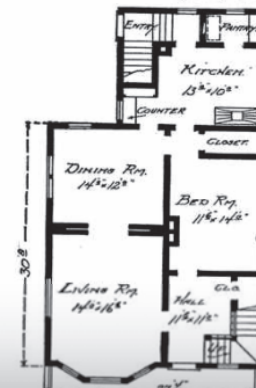
DO NOT ATTEMPT BUILDING WITHOUT PLANS, don't pay an architect $100.00 or $150.00 for plans which in no way

compare in accuracy or detail with the plans we will furnish you free of charge on condition that you send us a small portion of your mill work order. If you were to attempt to build a house similar to the house illustrated above, it would cost you from $500.00 to $1,000.00 more.

**See how you can get the plans for this house free on page 2.**

Housing at Six Nations of the Grand River
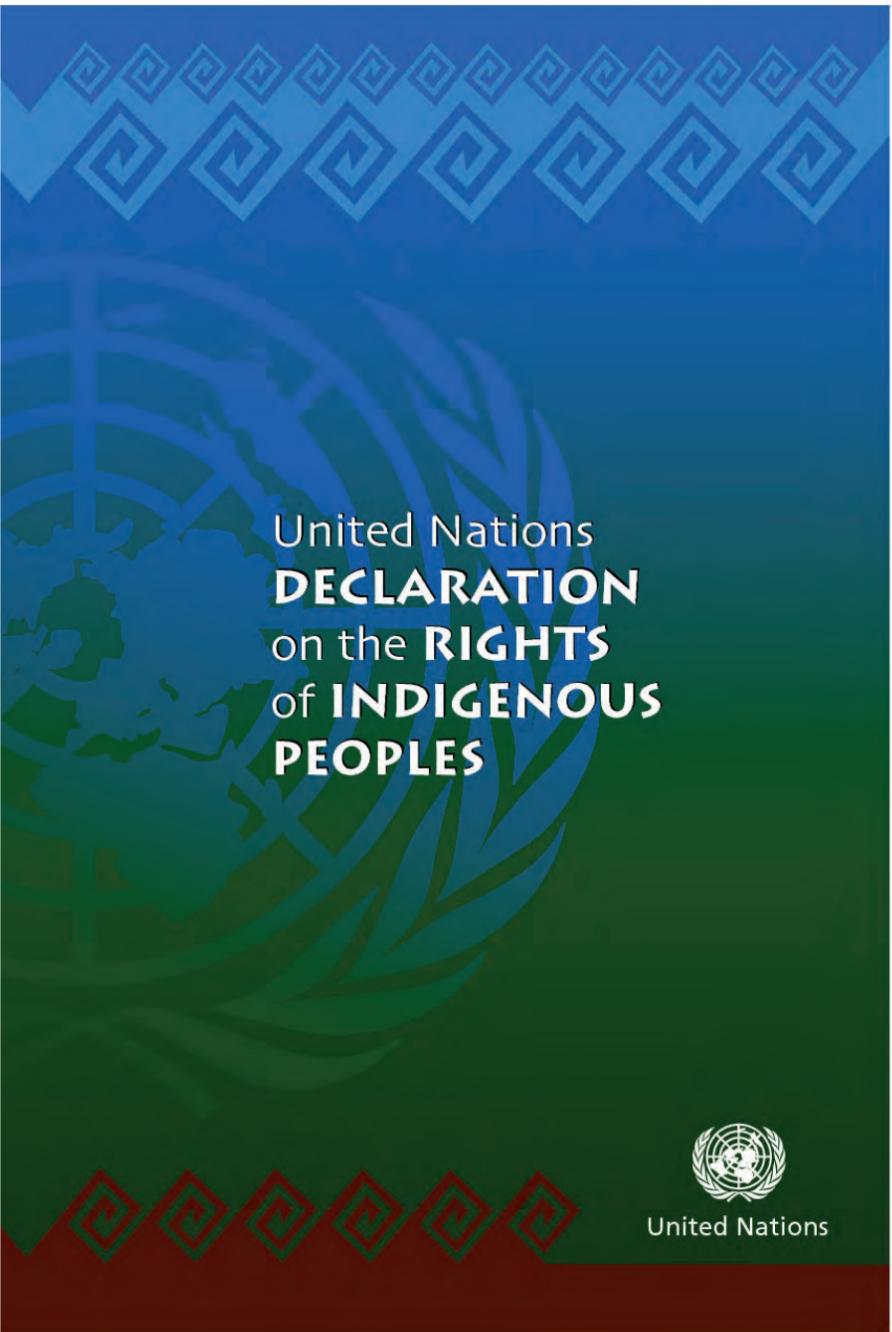
2007 United Nations Declaration on the Rights of Indigenous Peoples

Article 11, Number 1:

Indigenous peoples have the right to practice and revitalize their cultural traditions and customs. This includes the right to *maintain, protect and develop* the past, present and *future manifestations of their cultures*, such as archeological and historical sites, artefacts, *designs*, ceremonies, *technologies and visual and performing arts and literature*.
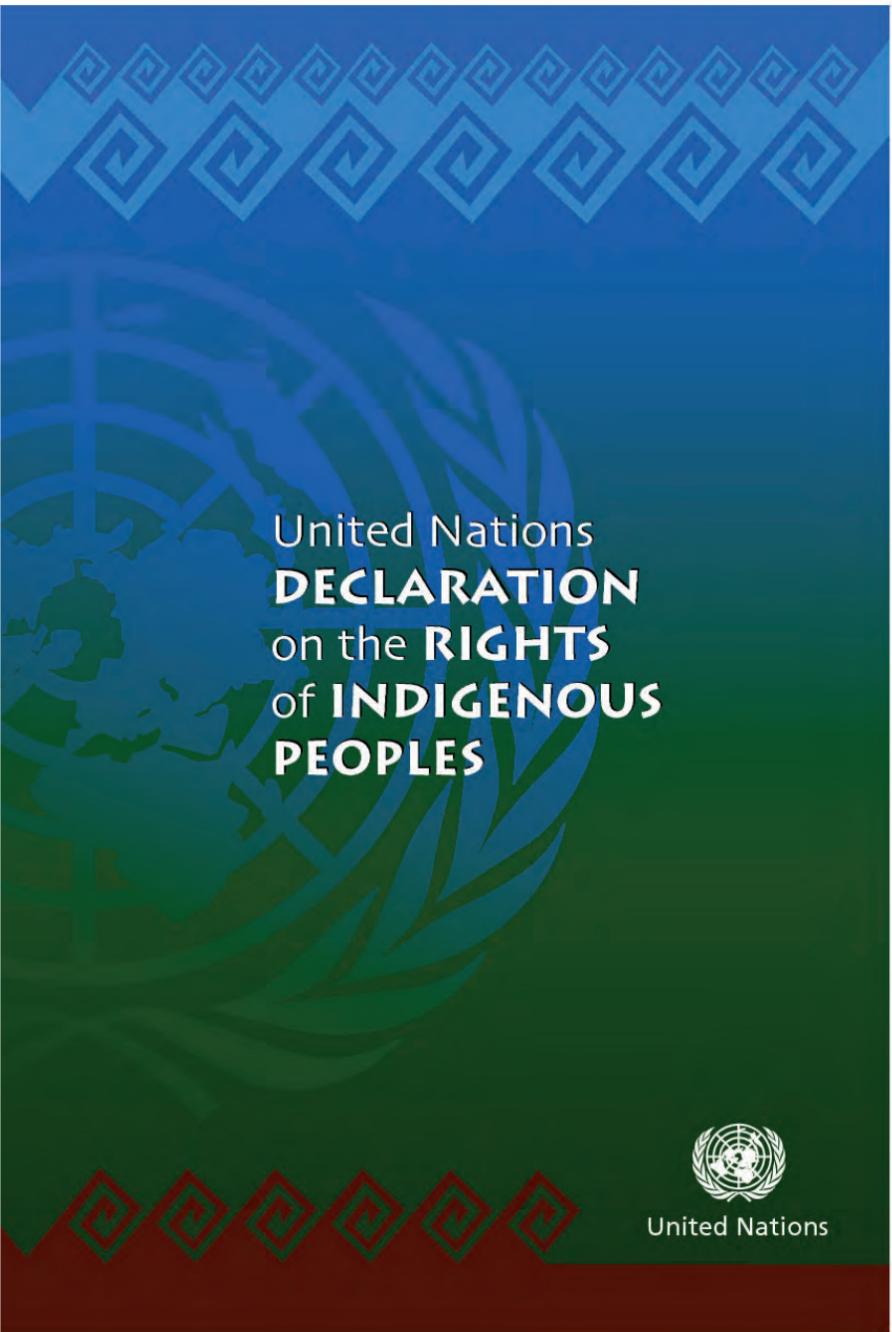
2007 United Nations Declaration on the Rights of Indigenous People

Article 23:

Indigenous peoples have the right to determine and develop priorities and strategies for exercising their right to development. In particular, Indigenous peoples have the right to be *actively involved* in developing and determining health, housing and other economic and social programmes *affecting them* and, as far as possible, to *administer such programmes through their own institutions*.

"The Built Environment: Understanding how physical environments influence the health and well-being of First Nations peoples living on-reserve." Roberta Stout (2018).

THE BUILT ENVIRONMENT:
Understanding how physical environments influence the health and well-being of First Nations peoples living on-reserve

Roberta Stout

NATIONAL COLLABORATING CENTRE FOR ABORIGINAL HEALTH • CENTRE DE COLLABORATION NATIONALE DE LA SANTÉ AUTOCHTONE

EMERGING PRIORITIES

Research highlighted through this paper suggests there are direct linkages between the health and well-being of First Nations peoples and their experiences with deterritorialization and imposed western development, which rapidly transitioned them away from traditional lifestyles and significantly altered their landscapes, foodscapes, and fitscapes.

© Credit: iStockPhoto.com, ID 184910646

https://nccdh.ca/resources/entry/the-built-environment-understanding-how-phys-envts-influence-the-health-and

Red Feather Development, Straw Bale Home Program (2010-12)
Lame Deer, MT

Red Feather Development, Straw Bale Home Program (2010-12)
Lame Deer, MT

Home as Community

Red Feather Development, Straw Bale Home Program (2010-12)
Lame Deer, MT

Home as Process - not object or commodity

THE MÉTIS ARCHITECT…(?)

A research project studying Canadian prairie Métis design thinking

about   The Métis Architect…(?)

Search …

ABOUT

Métis Folk House, Batoche, Saskatchewan (Photo: J Surkan)

This blog is the home base for a research project on prairie Métis architectural design being undertaken by Assistant Professor David T. Fortin of Laurentian University in Sudbury, Ontario. The project is funded by the Social Sciences and Humanities Research Council (SSHRC) and supported by the Laurentian University School of Architecture, Gabriel Dumont Institute in Saskatoon, Louis Riel Institute in Winnipeg, and with assistance from the Métis Settlements in Alberta. The blog will keep an ongoing update on the research and is intended to welcome feedback and input from anyone interested.

Please click here for information about the Project Team.

MÉTIS EDUCATIONAL INSTITUTIONS
- Gabriel Dumont Institute (GDI)
- The Louis Riel Institute

MÉTIS NATIONS AND FEDERATIONS
- Alberta Métis Settlements General Council
- Canadian Métis Council
- Manitoba Métis Federation

RESEARCH FUNDING AND SUPPORTERS

CATEGORIES:
- Alberta
- Communities
- Conferences and Public Talks
- Conversations
- Introduction to the Project
- Manitoba
- Material Culture
- Saskatchewan

ARCHIVES
- June 2018
- May 2018
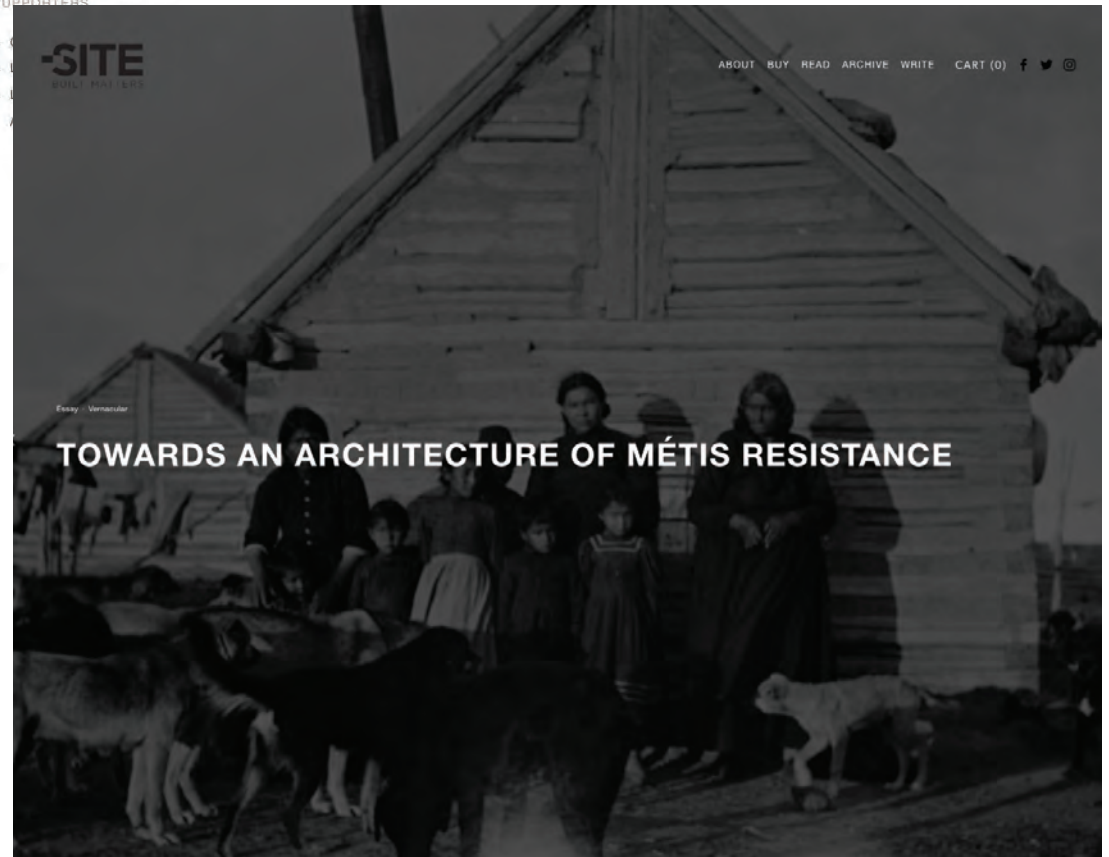
-SITE
BUILT MATTERS

ABOUT   BUY   READ   ARCHIVE   WRITE   CART (0)

Essay / Vernacular

TOWARDS AN ARCHITECTURE OF MÉTIS RESISTANCE

SPATIAL PROGRAM IN THE METIS HOME

19TH CENTURY MÉTIS LOG HOME   INAC DESIGNED HOME

LIVING AREA
KITCHEN
BEDROOM
BATHROOM
STORAGE

Architectural plans of a folk home (Left) and of a "Three Bedroom Low Cost House" (Right). The folk home was a single room dwelling that allowed for a flexible use of space. The second home was designed by Indigenous and Northern Affairs Canada (INAC) in 1968. This standardized, compartmentalized plan impeded Métis culture and tradition by disallowing flexible space where cultural and traditional activities could occur within the home. (Drawings: Jason Surkan)

First Nations National Building Officers Association, National Research Council of Canada, Morrison Hershfield

Technical Specifications for Remote Northern Indigenous Housing
2018-2022

Technical Specifications for Remote Northern Indigenous Housing

2018-2022

A Path to Healthy Housing:
A Proposal for Community Engagement with First Nations and Métis Communities in Remote Northern Locations

April 6, 2018

Technical Specifications for Remote Northern Indigenous Housing
2018-present

A Path to Healthy Housing

Advisory Board: luugigyoo Patrick Stewart, Jerry Otowadjiwan, Helen Bobiwash, Justice Seidel, Eladia Smoke, Sammy Hunter, Chuck Petahtegoose, Jake Chakasim

2019-2020 additions: Larry Jones, Georgina Recollet and Dawn Lavell-Harvard

A Path to Healthy Housing: Guiding Principle Diagram
(Original, 2018. Revised with Alex Wilson, 2023)

Technical Specifications for Remote Northern Indigenous Housing
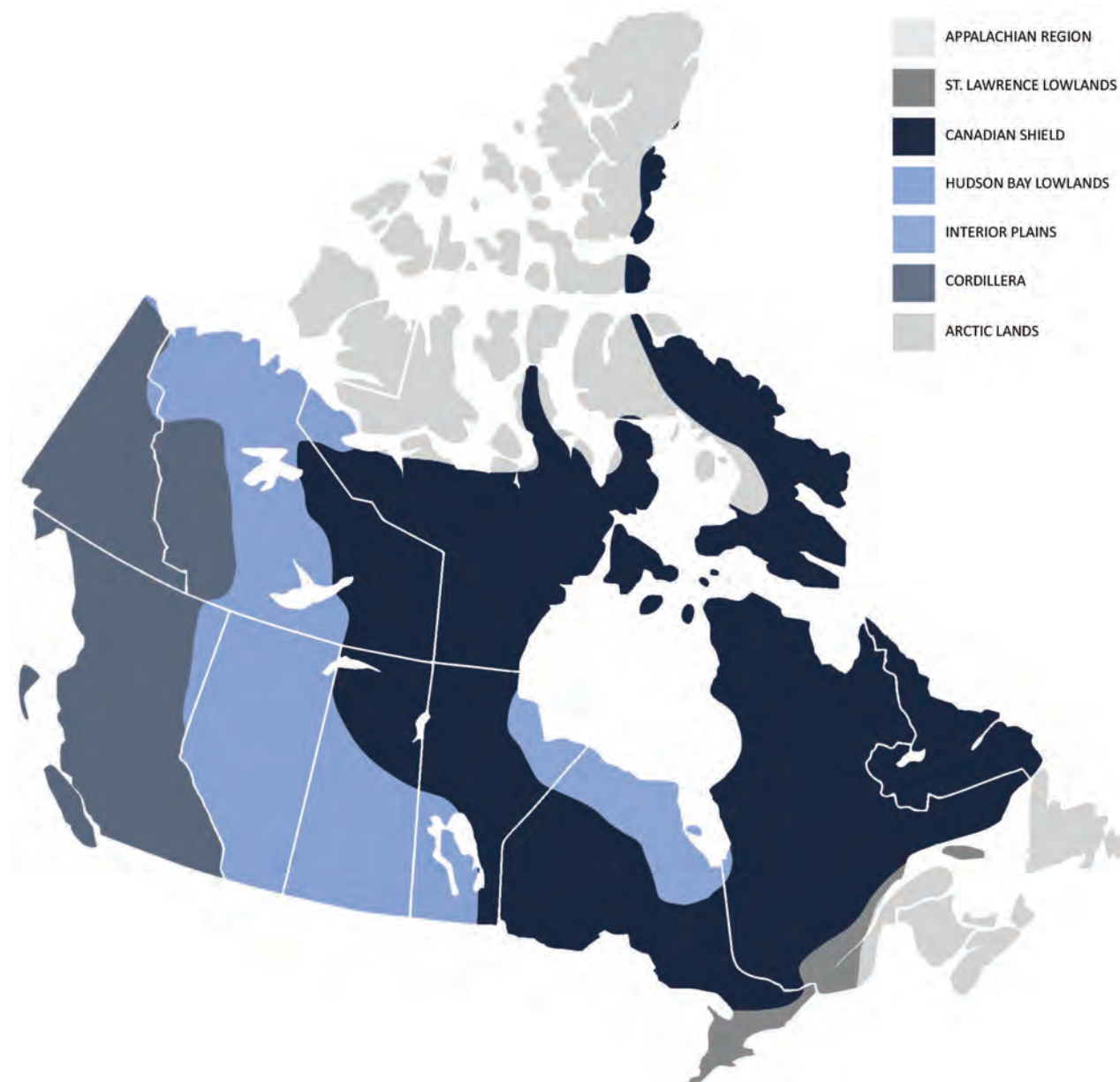2018-present

What is remote and northern?

Technical Specifications for Remote Northern Indigenous Housing
2018-present

APPALACHIAN REGION

ST. LAWRENCE LOWLANDS

CANADIAN SHIELD

HUDSON BAY LOWLANDS

INTERIOR PLAINS

CORDILLERA

ARCTIC LANDS

Technical Specifications for Remote Northern Indigenous Housing
2018-present

BUNIBONIBEE CREE NATION, MB

FORT SEVERN, ON

DELINE, NWT

TAHLTAN, BC

Schedule A -- Statement of Work and Project Deliverables //

2.06 A Path to Healthy Housing Workshop Booklet

A digital copy of this document that was created during the above mentioned housing workshop will be provided to the Design Architect to expand on the background information pertaining to this RFP.

2.07 Site Visits

A total of three (3) or four (4) site visits at different times throughout the year to understand the climatic conditions of the community as they pertain to design of housing, are required for the Design Architect with the Host Nation. Funding for the visits and expenses incurred on these trips is provided by David T Fortin Architect INC. The Design Architect may be reimbursed for related expenses incurred as long as original receipts are mailed to David T Fortin Architect, however, the preference is for expenses to be paid directly by David T Fortin Architect INC.

The first visit would include an 'Introduction Meeting' whereby the team would meet in the community. Being the longest, and initial meeting, a proposed schedule has been developed below. The team should prioritize listening and observing and documenting the life of the community and how they perceive their existing and desired housing situations. The Design Architect will Perform Indoor Air Quality Tests as guided by David T Fortin Architect. The Design Architect should consider specific mapping/drawing/modeling strategies that will encourage multigenerational participation throughout this visit. Furthermore, community members should be encouraged to consider building traditional homes as an option as this is essential for healthy community growth.

The second visit to the community by the design team would occur approximately 3 months later giving the Design Architect plenty of time to conduct research about traditional and proposed contemporary methods. Part of the responsibility of the visiting team during this visit would be the following: share the positives and negatives of the two researched approaches to housing (traditional and modern) to help community members better understand their options; and explain various options of proposed building systems and how they could support healthy community growth.

The second visit should also consist of a series of workshops over the 2 days, including exercises relating design with the land, daily routines, and other cultural influences, a number of rough housing or schematic "models" will be agreed on, led by the community, for the Design Architect to develop towards resolution.

The last visit would include the design team (architect and intern/student only, with translator as needed) returning to share the final models and drawings/renderings with the community, based on the rough models developed during the previous visit. The intent would not be to present one single fit-all house but a demonstration of multiple variations of the housing design system that respond to the parameters defined by the community. This final visit would essentially be a 1-day meeting to review the houses in a more complete way and record feedback from the community on the final designs, as well as the overall process for similar engagements in the future.

Ideally, there would be a range of options presented that all honour a hybrid systems approaches that are inspired by traditional building tectonics, typologies and materials, whilst translating these systems into a contemporary Indigenous architecture.

Schedule A -- Statement of Work and Project Deliverables

Upon receipt of the final documentation for the "model process" houses, the coordinator will arrange a final meeting/workshop with the initial Advisory Board to review the resultant designs and discuss lessons learned for future engagement processes.

2.08 Proposed Schedule for Initial (1 of 3) Community Visit

Arrive in the Evening prior to Day 001 of the schedule to settle in and rest before community visit. The first visit is to be completed in the fall/early winter in the Host Nation. The below schedule is speculative. Final details will be arranged with a liaison in the community. A wide variation in itineraries is expected based on community suggestions, as well as member availability and capacity.

Day 001 //
Morning
Opening Ceremonies and Greetings from Community Elders
Protocol Offerings from Guest Architect and Team
Meeting at Band Office with Community Leaders
Community Lunch
Afternoon
Community Tour of Infrastructure, School, Housing, etc. to give a sense of the community's built environment.
Meetings with community builders, home inspectors, housing maintenance crews, infrastructure managers, etc. to hear their perspectives on what is and isn't working in their communities;
Evening
Meeting with specific groups independently, such as women's groups, youth, and young men groups;

Day 002 //
Morning
Going out onto the land to practice cultural activities with community members. These activities could possibly include hunting, fishing, gathering, crafting, trapping, visiting bush cabins built by community members.
Community Lunch
Afternoon
Land-Based Collaboration continued. The architect can gain a sense of locally available materials that could be used in the construction of the home.
This could also include visits to existing housing in community to record technological success and failure as well as use of the home
Evening
Possibility to share ceremony with the community in the evening.

Day 003 //
Morning
Community Design Charrette at School or Band Office.
Presentation of Architectural Firms Work to Community in the Design Workshop
Collaborative Desgin Time
-The sharing of stories and teachings by Elders and/or knowledge carriers;- series of workshops whereby community members outline their values related to housing and their barriers to affordable housing;
-Discussions about communal living spaces and multi-generational and multi-familial living arrangements;
-Workshops where community members could draw and/or use cultural artifacts to express their relationship to housing, including the possibility of modest building exercises related to traditional ways of construction;
-Discussions about renewable energy options (solar panels, wind turbines, passive heating and cooling, water conservation, etc.);
-Discussions about promoting locally-owned construction-related companies

Community Lunch (Tea/Coffee and Bannock, or other relevant local foods, to be available throughout the Design Workshop)

Technical Specifications for Remote Northern Indigenous Housing
2018-present

Schedule A -- Statement of Work and Project Deliverables

Afternoon
Community Design Workshop at School or Band Office Continued (Tea/Coffee and Bannock to be available throughout the Design Workshop)
Conduct Indoor Air Quality Questionnaires

Day 004 //
Morning
Further Development of Design Workshop and Review of the Previous Days Events with Community.
Drawing/Brainstorming Session with Architect as Lead
Community Lunch (Tea/Coffee and Bannock to be available throughout the Design Workshop)
Afternoon
Open for Design Architect to tour more homes, interview community members, gather further information, etc.
Community Feast
Closing Ceremonies

Travel at the end of Day 004 or early morning on the day after to home. It will be important for the Architects to spend a significant amount of time in the community and be hosted by a family, or group of families within the community to experience the community's culture. The goal of the first community visit is to build a meaningful relationship with the community. This tentative schedule is entirely flexible to meet the communities needs and is to serve only as a reference for suggested activities.

2.09 List of Deliverables to David T Fortin Architect from Design Architect

Note: This list of deliverables is not a definitive list, however, it is a suggested deliverable list that is meant to create a comprehensive design project. The Final Report and Architectural Drawings (2.00-2.26) are mandatory.

Cultural and Context Report (Text, Drawings, Photographs and Diagrams)

0.00 -- Site Mapping
0.01 -- Historical Community Research
0.02 -- Documented Interviews with Elders, Youth and Community Members
0.03 -- Traditional Land Use Mapping
0.04 -- Winter Travel Trails/Routes Mapping (As Relevant)
0.05 -- Summer Water/Land Travel Routes Mapping (As Relevant)
0.06 -- Animal/Fish Harvesting Sites (As Relevant)
0.07 -- Berry/Medicine Gathering Sites (As Relevant)
0.08 -- Locations of Hunting/Fishing Camps (As Relevant)
0.09 -- Local Material Harvesting Sites
0.10 -- Traditional Housing Typologies and Technologies
0.11 -- Traditional Detailing Techniques
0.12 -- Documented Analysis of Current Housing including Indoor Air Quality Surveys/Analysis, Construction Deficiencies, Alterations done by Owners
0.13 -- Solar, Wind and Environmental Analysis

Logistics Plan

1.00 -- Delivery and Storage of Materials to Remote Community Plan
1.01 -- Connection to Infrastructure Plan
1.02 -- Housing Budget including Delivery Costs and Affordability Analysis

List of Architectural Drawings

2.00 -- Cover Sheet
2.01 -- Drawing Index
2.02 -- Architectural Symbols
2.03 -- Site Plan
2.04 -- Structural Grid Drawing
2.05 -- Ground Floor Plan
2.06 -- First Level Floor Plan (Optional)
2.07 -- Reflected Ceiling Plan Ground Floor
2.08 -- Reflected Ceiling Plan First Level

Schedule A -- Statement of Work and Project Deliverables

2.14 -- Window Types and Details
2.15 -- Window Schedule
2.16 -- Room Finishes Schedule
2.17 -- Exterior Elevations South and East
2.18 -- Exterior Elevations North and West
2.19 -- Building Section 01
2.20 -- Building Section 02
2.21 -- Building Section Details
2.22 -- Building Section Details
2.23 -- Stair Plans and Details
2.24 -- Plan and Wall Details
2.25 -- Interior Elevations
2.26 -- Mill Work
2.27 -- Consideration of Water and Sewage Tank Locations

Perspectives

3.00 -- Isometric View SE
3.01 -- Isometric View SW
3.02 -- Isometric View NW
3.03 -- Isometric View NE
3.04 -- Exterior Rendering
3.05 -- Exterior Rendering 02
3.06 -- Interior Rendering
3.07 -- Interior Rendering 02

Physical Models

4.00 -- 1:500 Site Plan demonstrating house relation to community and other houses (Optional)
4.01 -- 1: 50 or 1:25 Building Model (optional)
4.02 -- 1:10 Detail Model (optional)

Maintenance and Lifespan of Home

5.01-- Proposed Maintenance Strategy and Schedule/Cost/Education
5.02 -- Incremental Growth/Renovation Plan for Home
5.03 -- Life Cycle- Assessment
5.04 -- Environmental Plan Including Post-Life Material Recycling and Upcycling as relevant
5.05 -- Cultural, Health, Social and Economic Benefits of the Design Project to Community members into the Future

5.06 -- Explanation of how this Project Promotes Ownership of the Home into the Future as per Community Policies
5.07 -- Explanation of Generation, Gender, or Accesibility Aspects taken into Consideration (As Relevant)

Final Report

All community research is to be compiled into a final report that is provided to the community in both digital (PDF) and print copies. Print copies are to be delivered to the host community. A template and assistance for this section will be provided by David T Fortin Architect INC. A sample format of a final report can be provided to the architect for reference by request.

Intellectual Property

A digital set of drawings in CAD or Revit format are to be provided to David T Fortin Architect INC. as well as any 3D models created in the process to aid in the creation of consistent graphic representations of each project for presentation purposes only. This project is collaborative by nature and sharing of design material is key to the overall success of the project. All work will be accredited to the respective architectural offices in which it was created at all stages in the project, who own copyright to their design and may use their designs at their discretion. David T Fortin Architect may use any representation of the design as needed, however, must credit the Design Architect team in each case.

Engineering

Engineering services are being provided by the NRCC as it pertains to this project. David T Fortin Architect INC. is responsible for coordinating services between contractors.

Technical Specifications for Remote Northern Indigenous Housing
2018-present

A Path to Healthy Housing: Eladia Smoke of Smoke Architecture in Bunibonibee Cree Nation, MB

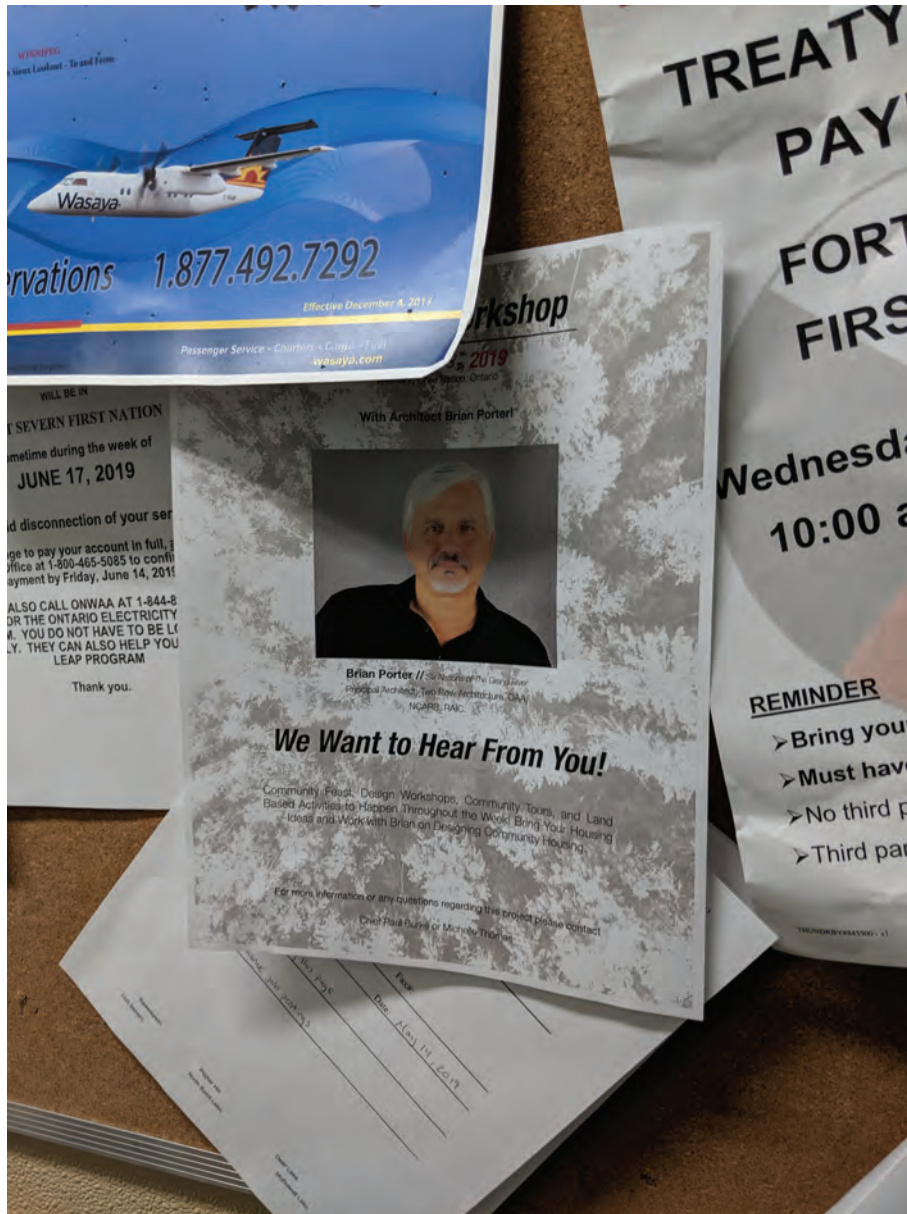# Technical Specifications for Remote Northern Indigenous Housing
2018-present

A Path to Healthy Housing: Brian Porter of Two Row Architects in Fort Severn First Nation, ON (with KPMB Architects)

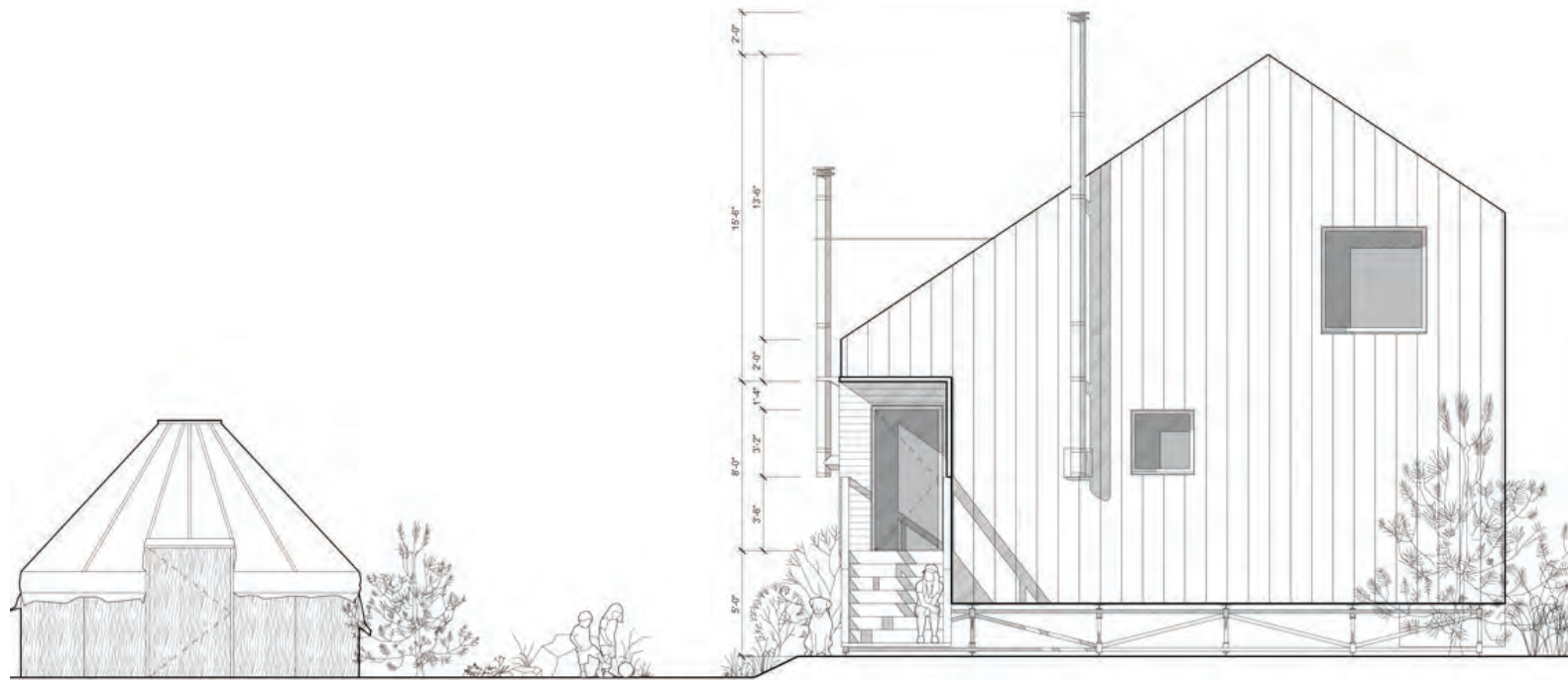# Technical Specifications for Remote Northern Indigenous Housing
2018-present

Two Row Architect (Brian Porter) with KPMB, Visit 1, Ft Severn First Nation (2019)

Technical Specifications for Remote Northern Indigenous Housing
2018-present

Two Row Architect (Brian Porter) with KPMB, Visit 1, Ft Severn First Nation (2019)

Technical Specifications for Remote Northern Indigenous Housing
2018-present

A Path to Healthy Housing: Two Row Architects - Fort Severn First Nation, ON
(with KPMB Architects, drawing by Rosa Newman)

Technical Specifications for Remote Northern Indigenous Housing
2018-present

A Path to Healthy Housing: Alfred Waugh of Formline Architecture in Deline, NWT
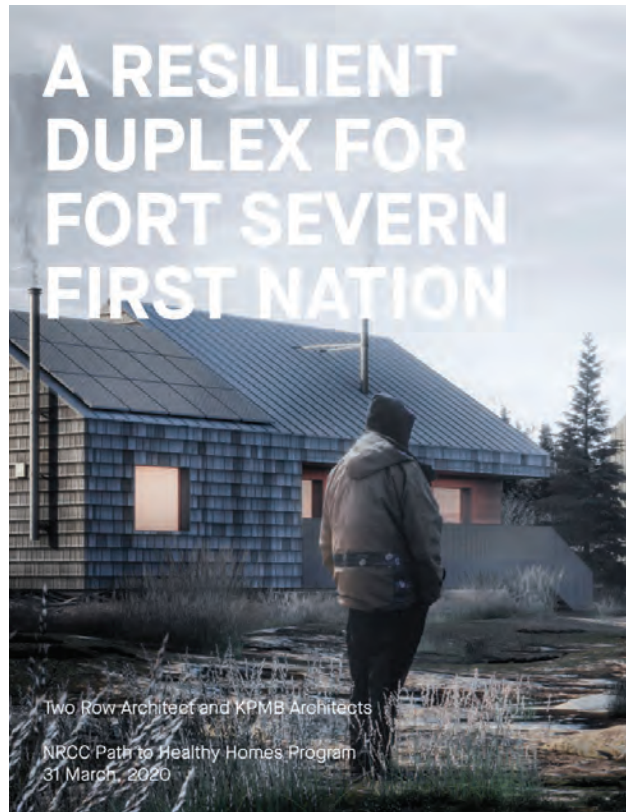
Technical Specifications for Remote Northern Indigenous Housing
2018-present

A Path to Healthy Housing: Alfred Waugh of Formline Architecture - Deline, NWT

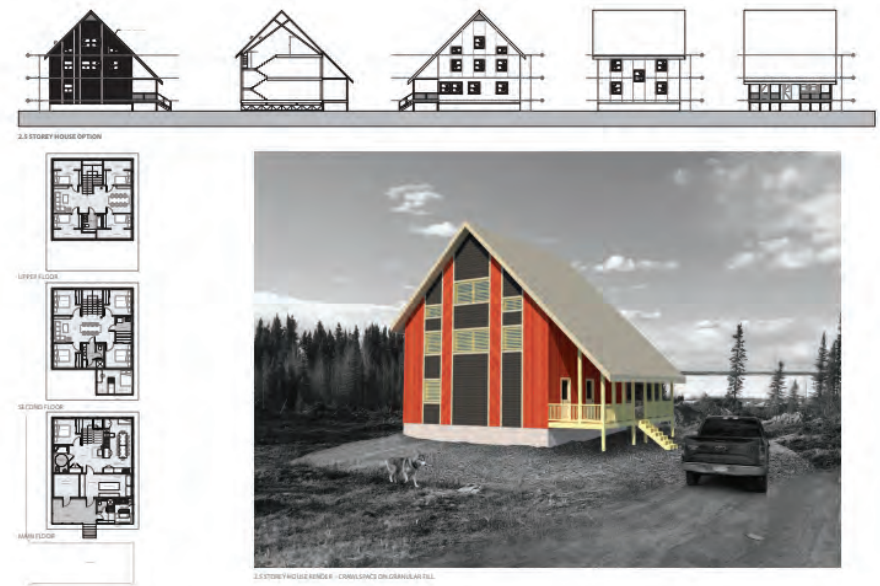Two Row Architects / KPMB (Brian Porter & Matt Hickey with Laurence Holland)

Formline Architecture (Alfred Waugh)

Smoke Architecture (Eladia Smoke & Larissa Roque)

Obsidian Architecture (Kelly Bapty)

Indigenous Services Canada
Indigenous Homes Innovation Initiative
2019-2022

National News

Feds to test limits of Indigenous housing ideas through new contest

APTN National News
Aug 07, 2018

The Trudeau Liberals are offering Indigenous communities $30 million in prize money as part of a contest that could end up rewriting the rules about how the federal government funds badly needed housing on-reserve.

Key to the contest is to draw in private sector builders to help finance the construction and repairing of homes in First Nations, Inuit and Metis communities.

The Liberals have made overtures to the private sector to help cover the cost for on-reserve infrastructure to close the estimated $30 billion needed to repair and upgrade homes

---

Your turn is coming soon.   Learn more

British Columbia

Concerns mount over federal government's Indigenous housing contest

Contest for communities to win $30 million toward housing projects called 'Hunger Games of on-reserve housing'

Courtney Dickson · CBC News · Posted: Aug 13, 2018 1:11 PM PT | Last Updated: August 13, 2018

Statistics Canada found that 20 per cent of First Nations people live in over-crowded homes. (Government of Canada)

The Canadian government will launch a contest this fall for First Nations communities to win $30 million toward innovative housing projects on reserve.

impact canada

- Impact Measurement (Vancouver Island University)
- IHII Webinar Series (Project Updates, Sharing, etc.)
- Process
  - Phase 1 - Accelerator Requirements
    - Feasibility Study
    - Formal Community Endorsement
    - Itemized Class D Estimate
    - Proof of securing additional funding
    - Operations and Maintenance Plan
  - Phase 2 - Construction
    - A) Technical
    - B) Implementation

IHII Steering Committee

From left to right: Sean Willy, Will Goodon, Pamela Glode-Desrochers, Marcel Lawson-Swain, Dawn Madahbee Leach. Terry Audla is not pictured.

https://impact.canada.ca/en/case-studies/indigenous-homes-innovation-initiative#section1

Launch of the Indigenous Homes Innovation Initiative (IHII),
January, 2020 - Nanaimo, BC

PURPOSE BUILT

TOOLKIT 1.0

Planning for Indigenous Impact

A guide to impact-driven design and development

MASS.

Canada

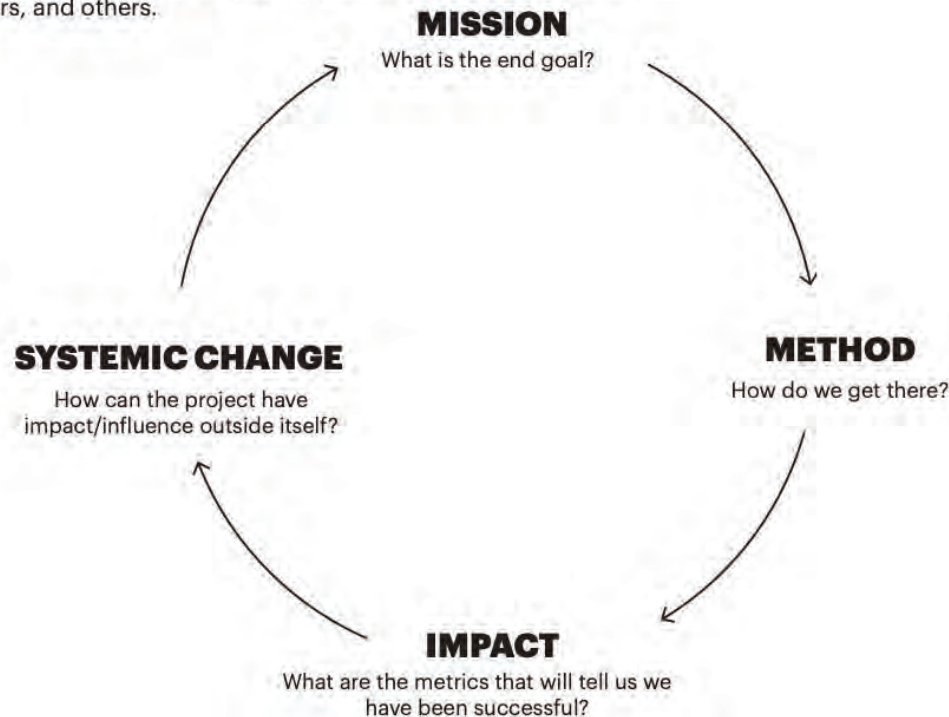Indigenous Services Canada

Services aux Autochtones Canada

IMPACT-BASED DESIGN METHODOLOGY (IDM)

What is the Impact-Based Design Methodology?

The Impact-Based Design Methodology (IDM) is a process that allows a broad array of individuals and groups to develop a common language which can drive the success of a project. By identifying a shared mission we can maintain our vision as the project becomes more complex. The IDM is an exercise broken into four parts: mission, method, impact, systemic change. This is a non-linear process and it's ok to go back. In fact, it's designed to provoke a dialogue that results in clarity.

The IDM is a great tool to distill the intentions for your project to foster conversations with funders, community members, and others.

MISSION
What is the end goal?

METHOD
How do we get there?

IMPACT
What are the metrics that will tell us we have been successful?

SYSTEMIC CHANGE
How can the project have impact/influence outside itself?

Whitefish Lake First Nation #128, Alberta
Financing Model by **Whitefish Lake First Nation**, Landscape and Community Design by **MASS Design Group,** Housing by **David T Fortin Architect Ltd.**

Neighbourhood | Site Plan

Neighbourhood Shelterbelt

Communal Root Cellar

Main Entry

Ampitheater
Outdoor Seating + Gathering

Adaptable Space
Hockey Rink
Soccer Pitch

Neighbourhood Fence

Gathering / Firepit

Existing Housing

Gardens

Shared Driveway

Bioswale
Site Drainage

House Options
One Story, 1200sf
Two Story, 1500sf

Drawing by MASS Design Gp (Taylor Sinclair, Jospeh Kunkel)

Whitefish Lake First Nation #128, Alberta
Landscape and Community Design by **MASS Design Group,** Housing by **DTFA**
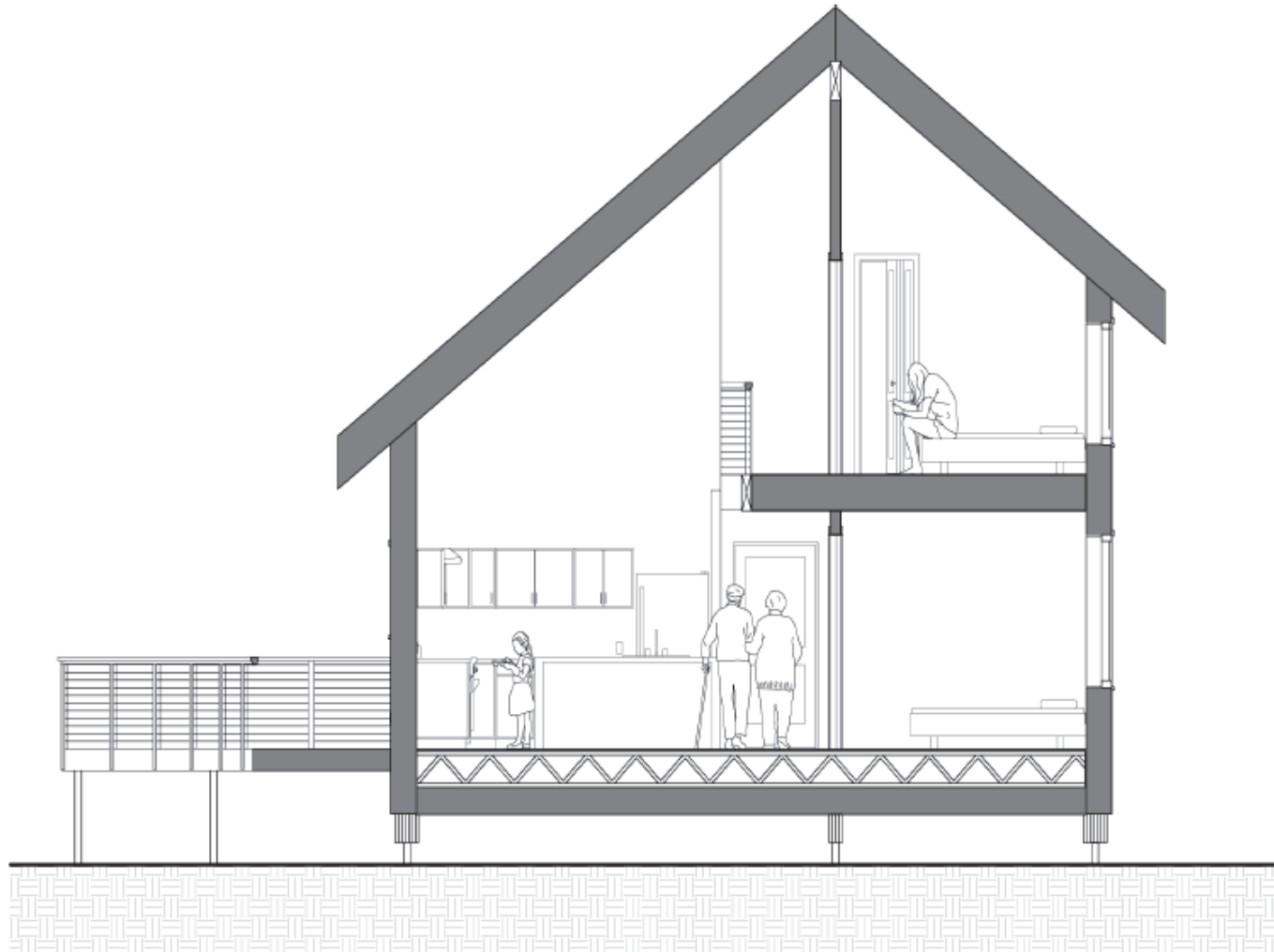
WFL #128 V2 HOME | SECTION

0   1   2 M

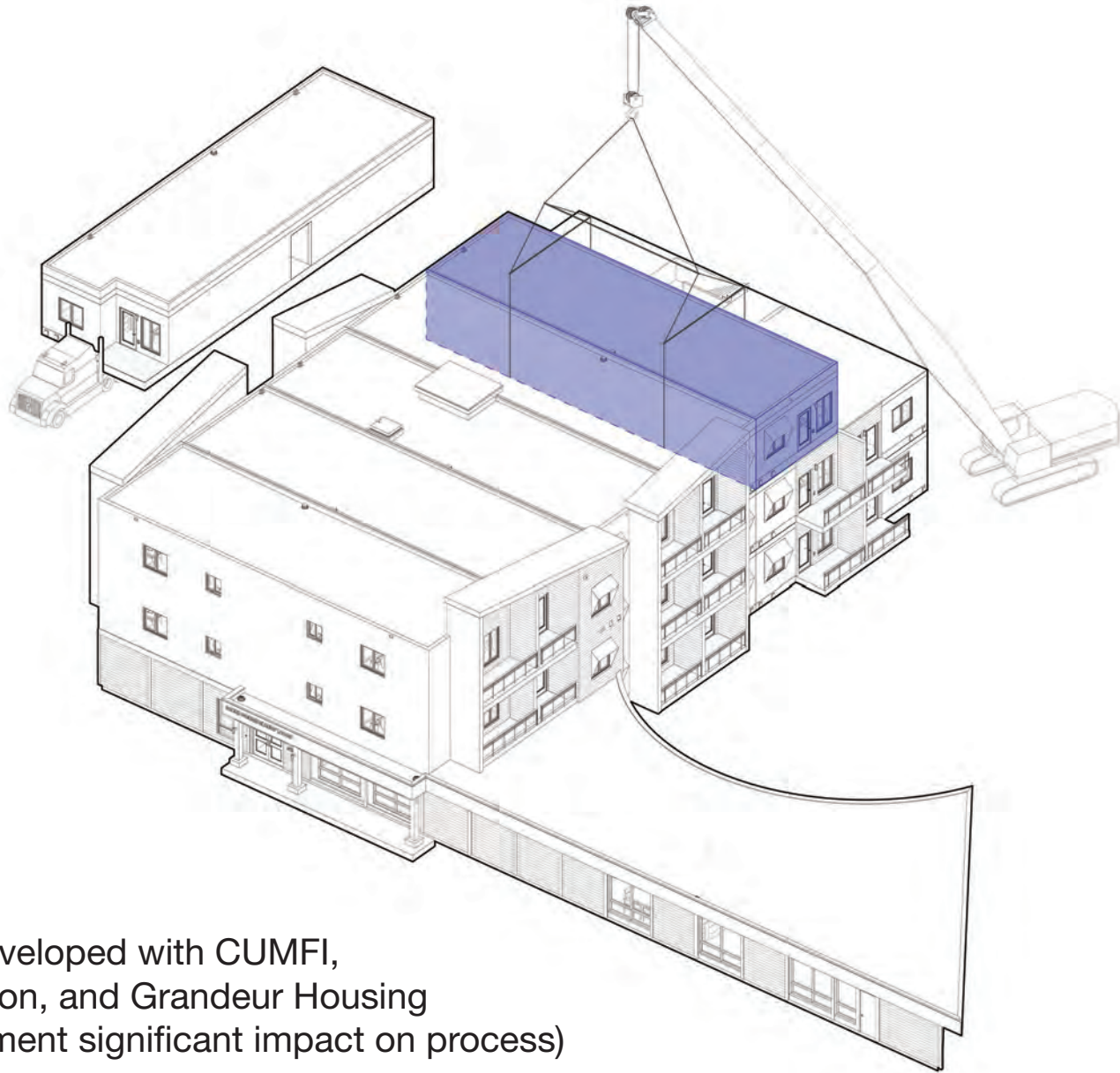Whitefish Lake First Nation #128, Alberta
Landscape and Community Design by **MASS Design Group,** Housing by **DTFA**

Central Urban Métis Federation Inc. (CUMFI)
Round Prairie Elders' Lodge, Saskatoon, SK

Central Urban Métis Federation Inc. (CUMFI)
Round Prairie Elders' Lodge, Saskatoon, SK

Integrated design developed with CUMFI,
Big Block Construction, and Grandeur Housing
(Indigenous procurement significant impact on process)

Central Urban Métis Federation Inc. (CUMFI)
Round Prairie Elders' Lodge, Saskatoon, SK

Exterior informed by Traditional Métis Housing and Stories

Central Urban Métis Federation Inc. (CUMFI)
Round Prairie Elders' Lodge, Saskatoon, SK

Amenity Wing inspired by
Traditional Métis Folk Home

© Gabriel Dumont Institute and/or individual
community members and/or partner institutions.
Images are for personal research purposes only.
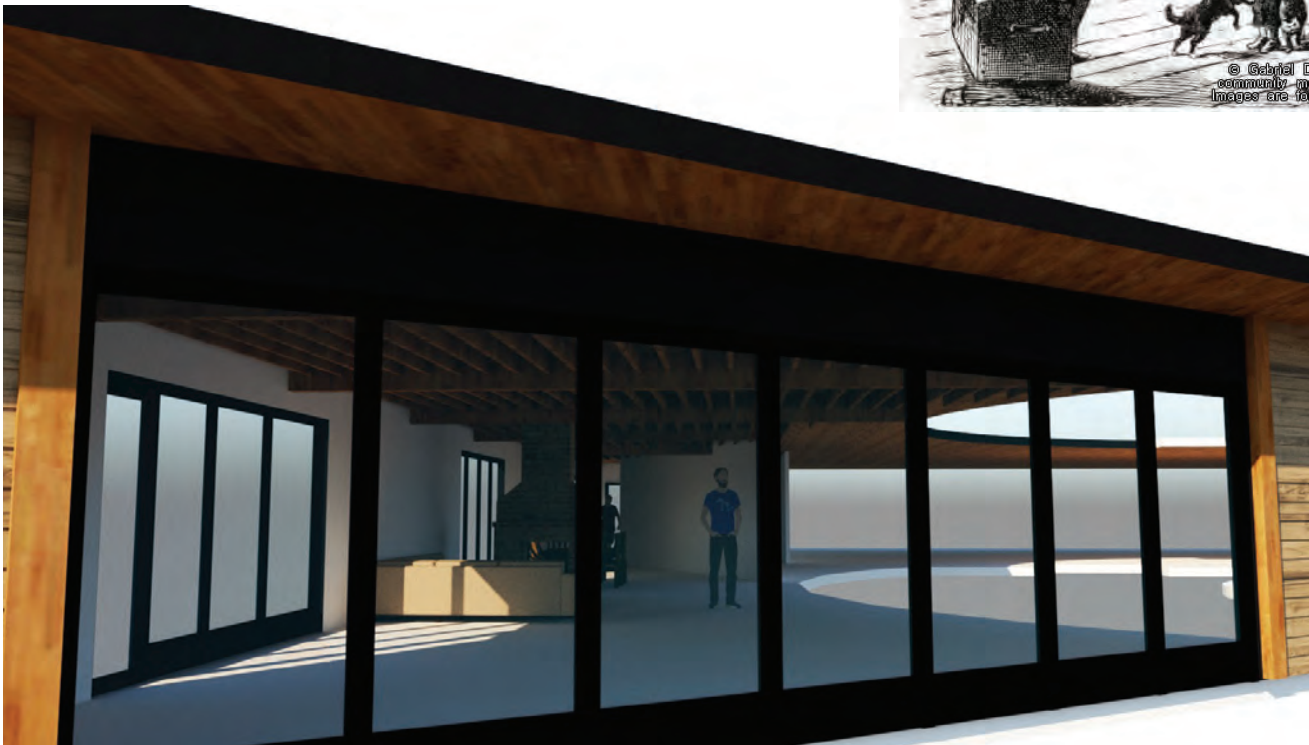
Central Urban Métis Federation Inc. (CUMFI)
Round Prairie Elders' Lodge, Saskatoon, SK

Métis-inspired interiors

Drawings by Jason Surkan

Central Urban Métis Federation Inc. (CUMFI)
Round Prairie Elders' Lodge, Saskatoon, SK

Central Urban Métis Federation Inc. (CUMFI)
Round Prairie Elders' Lodge, Saskatoon, SK

Round Prairie Elders' Lodge (2021), Saskatoon, Saskatchewan

Central Urban Métis Federation Inc. (CUMFI)
Round Prairie Elders' Lodge, Saskatoon, SK

Central Urban Métis Federation Inc. (CUMFI)
Round Prairie Elders' Lodge, Saskatoon, SK

Central Urban Métis Federation Inc. (CUMFI)
Round Prairie Elders' Lodge, Saskatoon, SK

Opaskwayak Cree Nation
Universal Utility Core

The OCN Universal Utility Core project "…focuses on the most expensive, labour intensive, and operationally critical components of a house and aims to reduce its cost, increase quality, and construct quantities of utility core units that can meaningfully address this challenge in OCN and potentially throughout the Northern and Remote community regions through commercial manufacturing controlled by Indigenous communities."

Opaskwayak Cree Nation
Universal Utility Core

Continuation of work initiated by the One House Many Nations project (OCN, Professor Alex Wilson, Professor Jacob Mans and the Decentralized Design Lab, others).

Ideas

One House Many Nations: Building sustainable homes to solve a national crisis

f   y   p   c   in   ✉

CBC Radio · Posted: Oct 15, 2018 10:41 AM ET | Last Updated: October 15, 2018

One House Many Nations House Prototype presented at EDIT 2017 (Expo for Design, Innovation & Technology).

CORE TAXONOMY

Decision Variables - 32 options

1- Whole or Component
2- Node or Linear
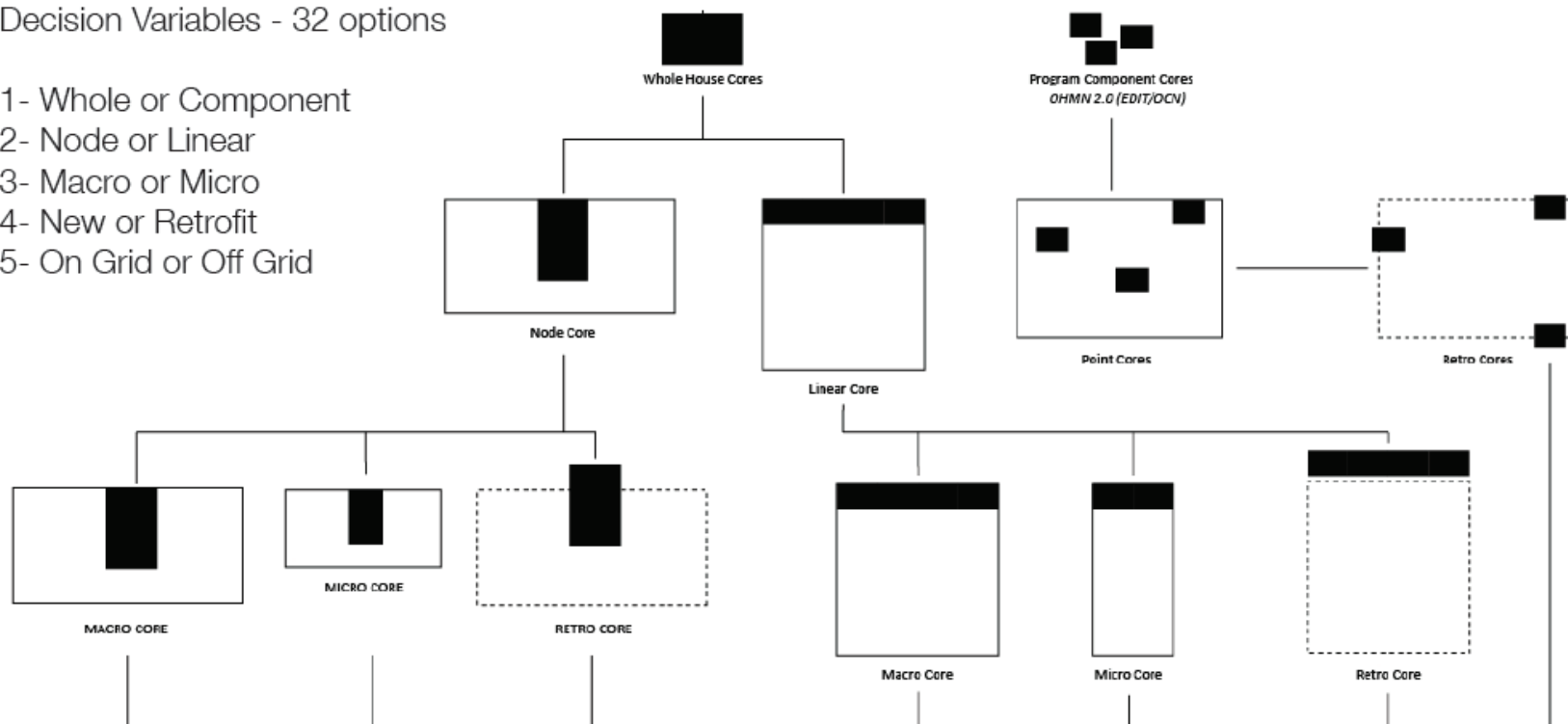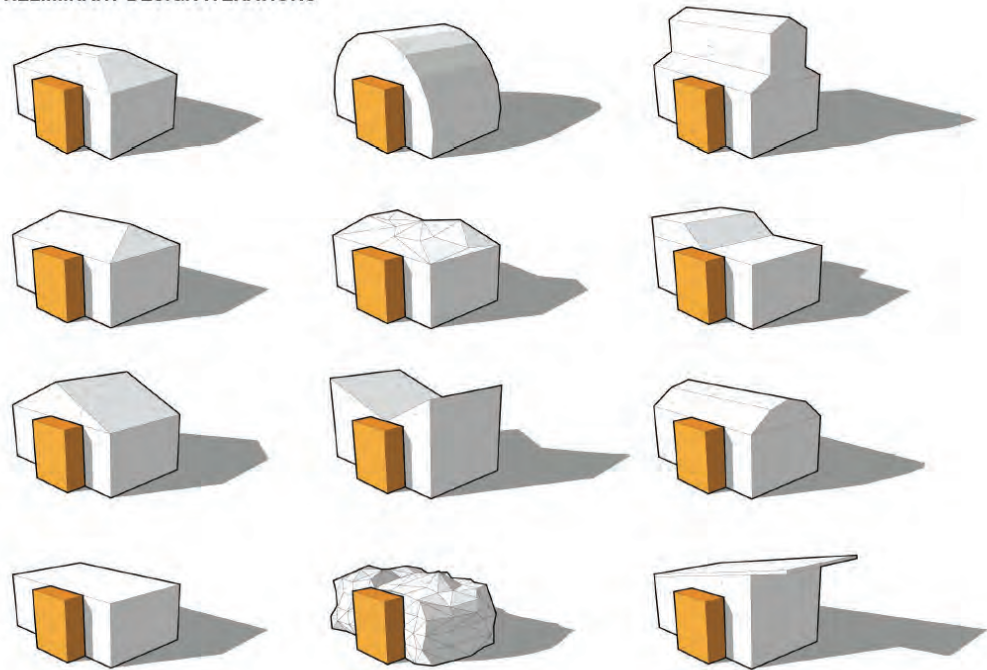3- Macro or Micro
4- New or Retrofit
5- On Grid or Off Grid

Whole House Cores

Program Component Cores
OHMN 2.0 (EDIT/OCN)

Node Core

Linear Core

Point Cores

Retro Cores

MACRO CORE

MICRO CORE

RETRO CORE

Macro Core

Micro Core

Retro Core

Figure 61. Preliminary UUC designs by Decentralized Design Lab.

Image courtesy of Jacob Mans, Decentralized Design Lab

Opaskwayak Cree Nation
Universal Utility Core

ROOF DESIGN ITERATIONS

PENT

A-FRAME

BOX GABLE

SALTBOX

SHED

SALTBOX

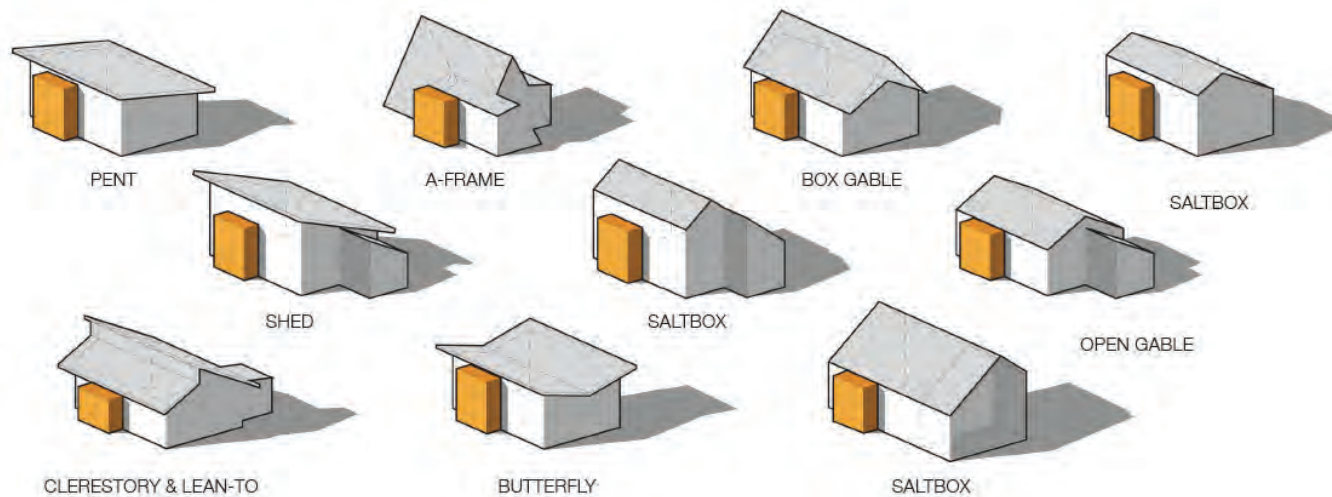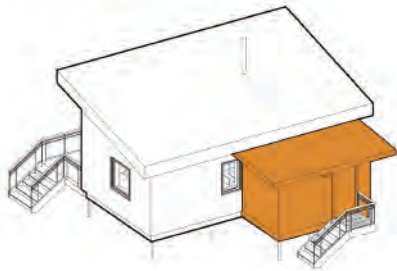OPEN GABLE

CLERESTORY & LEAN-TO

BUTTERFLY

SALTBOX
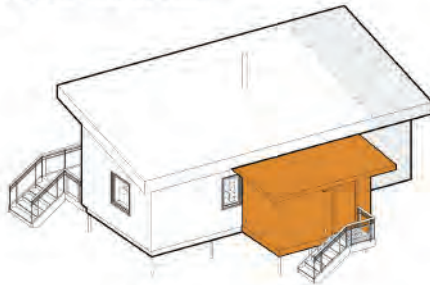
Figure 62. Preliminary roof designs by David T Fortin Architect.

Opaskwayak Cree Nation
Universal Utility Core

STANDARD 1 BEDROOM

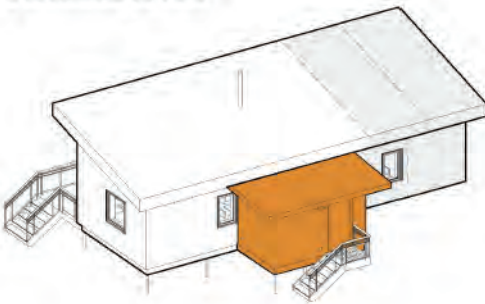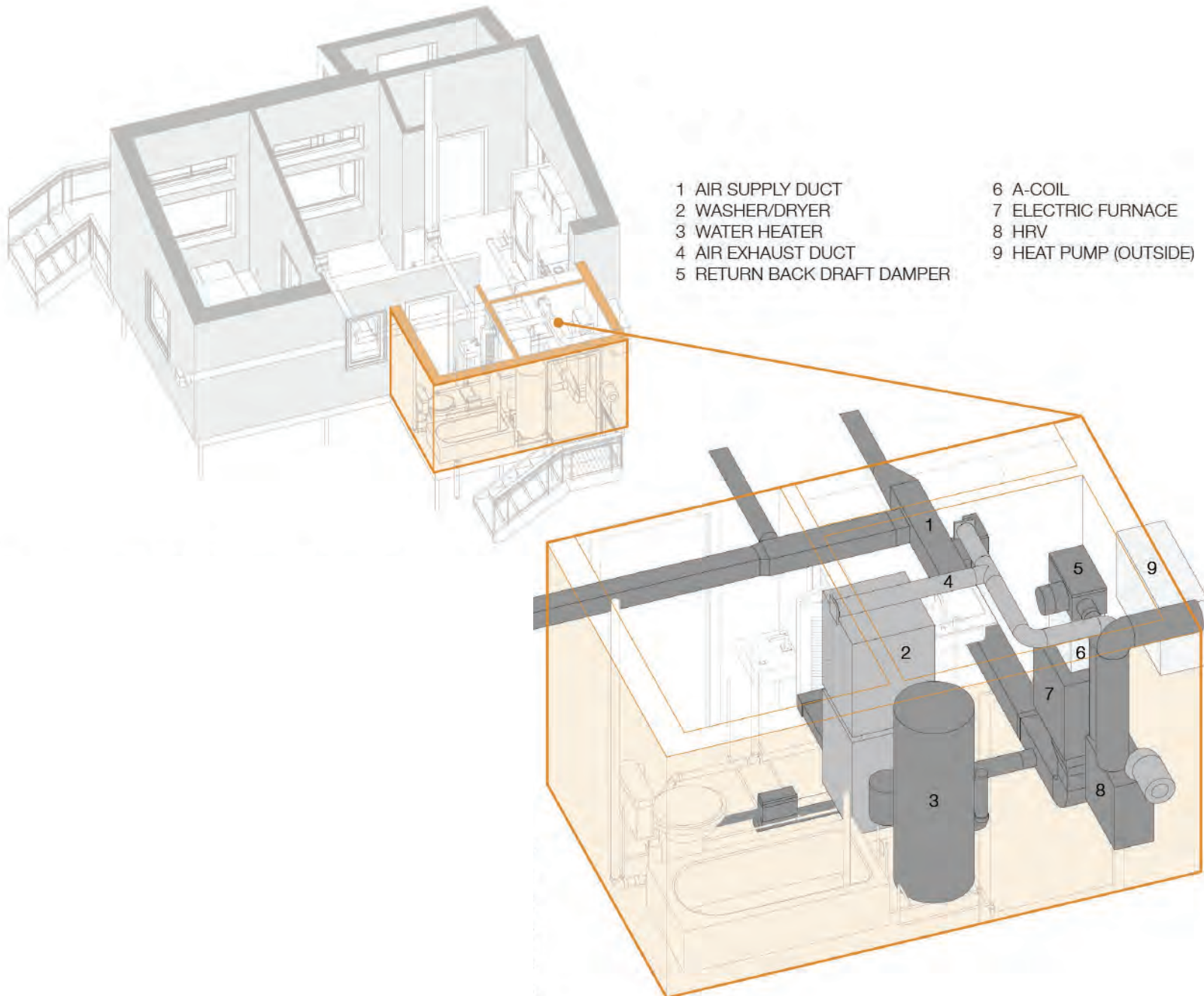**2 BEDROOM OPTION**

3 BEDROOM OPTION

UTILITY CORE

LIVING/EATING

BEDROOM

VESTIBULE

OPTIONAL DECK

Opaskwayak Cree Nation
Universal Utility Core

1 AIR SUPPLY DUCT
2 WASHER/DRYER
3 WATER HEATER
4 AIR EXHAUST DUCT
5 RETURN BACK DRAFT DAMPER

6 A-COIL
7 ELECTRIC FURNACE
8 HRV
9 HEAT PUMP (OUTSIDE)

Whitefish Lake First Nation #128, Alberta
Landscape and Community Design by **MASS Design Group,** Housing by **DTFA**

Manufacturing Precedents

Blokable

PREFABRICATION

Location: Greater Seattle, USA

Per Square Foot Cost: $150 to $350

Blokable aims to meet the demand for affordable housing in the USA. One strategy for accomplishing this is their approach to real estate as a service, to eliminate the struggle for profit and risk avoidance that occurs in many construction projects.

To develop projects Blokable uses what they call the BlokSense Development Platform that they explain "... is the coordination of enterprise resource planning and supply-chain management, Revit and cloud-based 3D part design and engineering, and prefabrication machining software."

The units Blokable builds are metal framed boxes with infill steel studs that have a glass rock exterior sheathing. Units are fully finished on the interior in the factory then shipped to site where they are assembled into largely 1-3 story developments, with the capacity to reach 6 stories. The goal is for 95% of work to be completed in the factory.[105]

Figure 68. Interior of the Blockable manufacturing facility.

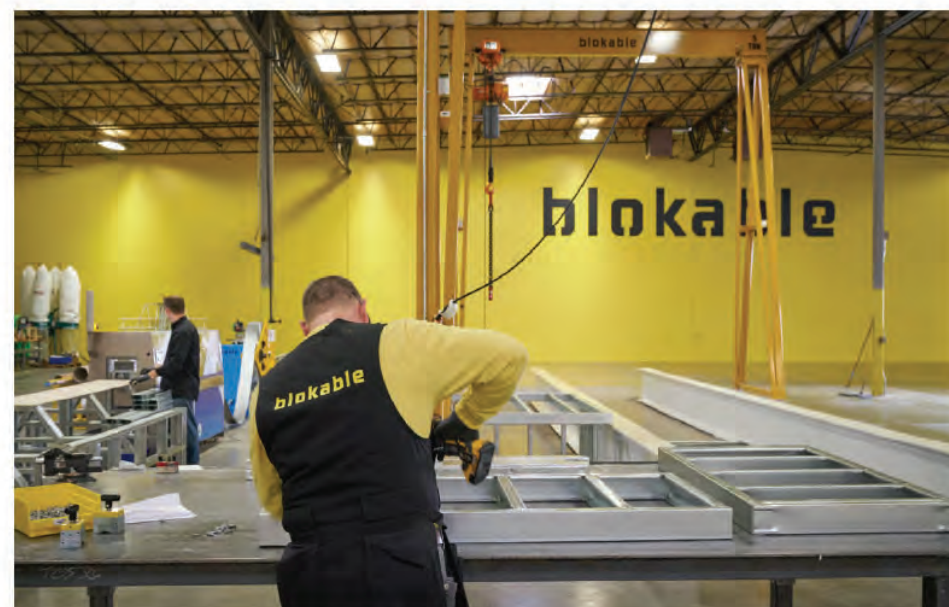Figure 69. Prototype on Blokable's factory floor.

Figure 70. A worker in Blokable's Vancouver, Washington based manufacturing site.

BC Passive House Factory

PREFABRICATION

Architect: Hemsworth Architecture
Structural Engineer: Equilibrium Consulting Inc.

Location: Pemberton, British Columbia
Date Completed: 2014

Size:16,145 ft² (1,500 m²)
Manufacturers: Zehnder, Optiwin, Structurlam

This factory is composed of several different wood products including a glue-laminated timber (Glulam) post-and-beam structure, cross-laminated timber (CLT) walls and prefab roof panels. The exterior cladding is a fir and larch screen which covers the entire exterior of the building.[115]

The factory is organized into two parallel bays, approximately 15 m (50 ft) wide each containing a one-tonne gantry crane which runs the length of the bays. A two story office is located in the southwest corner of the building containing the mechanical room, showroom, meeting room, bathroom, and offices. There is very little large machinery and tools in the space, with most of the space in the facility occupied by material or finished building products that are prepared to be shipped.

Due to increased demand, the facility was expanded with an additional 22,000 ft² making the facilities overall footprint 40,000 ft². The new structure uses prefabricated wall and roof panels on a mass timber structure with open web steel joists. The facility also required some new tools seen above to increase precision and production capacity.[116]
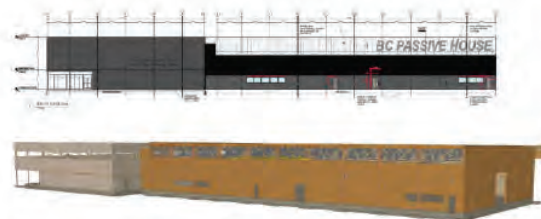

Figure 93. BC Passive House technical drawings.
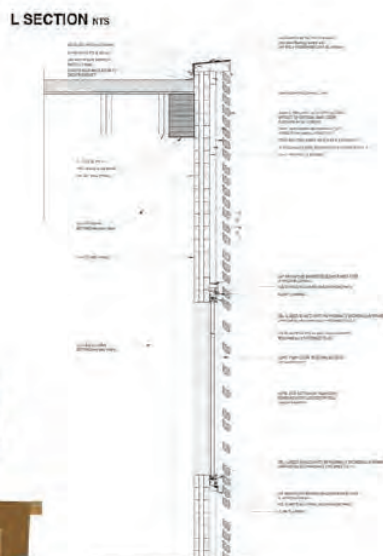
Figure 94. Interior BC Passive House.

L SECTION NTS

Figure 95. Factory wall detail.

Figure 96. Exterior of BC Passive House Factory.

Figure 97. Assembly line in BC Passive House.

FLOOR PLANS

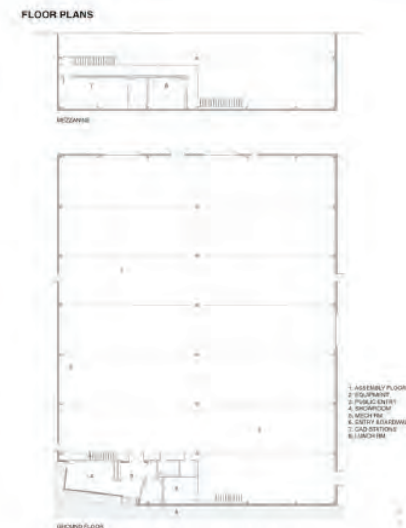Figure 98. Factory floor plan.

L-Shaped Plan

FACILITY LAYOUT

The L-shaped plan is a smaller footprint with fewer stations and a lighter more flexible machinery setup. This plan has less permanent tooling and storage, likely requiring more labour but would allow for more flexibility in the build process. A 1-ton ceiling crane would serve the "Cutting Station", "Wall Assembly" station and "Wall Assembly and Finishing" station. The 1-ton crane also replaces the butterfly table in the linear plan serving to flip the walls for insulating and sheathing, then assists workers to mount the walls on to the floor plate. The transfer of the framed Utility Core from the "Wall Assembly and Finishing" station to the "Mechanical and Electrical" station would be a 90 degree rotation and would require swivel castors and either a few workers or a forklift to move it to the "Mechanical and Electrical" station.

The Receiving yard for raw materials is located on the East side of the building and the Shipping yard and Mechanical receiving is located to the South. The Administration is located between these two entrances on the Southeast corner of the building. Storage is largely located on the West side of the building for access to the finishing, mechanical and electrical installation phases. The insulation storage is located along the North wall of the Administration block and would need to be kept at a low height to allow the supervisor to see into the main assembly space.

TOOLS

Figure 122. Automatic Crosscut Saw.

Figure 123. Miter Saw, Band Saw and Table Saw.
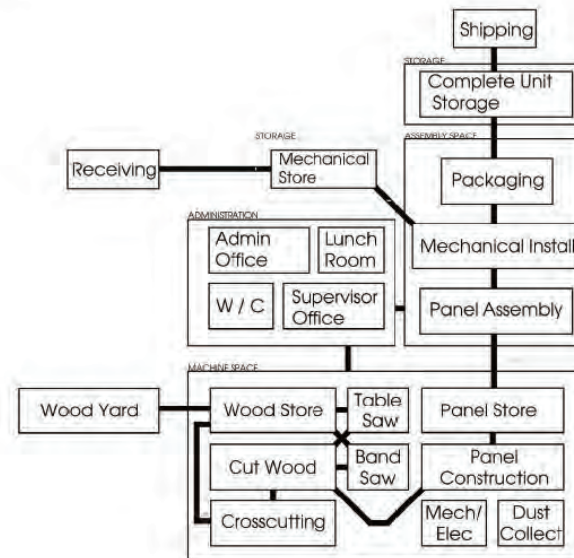
Figure 124. Heavyweight swivel castors (16).

Figure 125. 1-Ton Overhead Crane (2).

L-SHAPED SCHEMATIC PLAN

TURNING THE PANELS 90 DEGREES LEFT WILL REQUIRE EITHER A MONORAIL OF A FORKLIFT TO MAKE THE TURN. ALTERNATIVELY A DOLLY SYSTEM OF SOME SORT COULD BE USED BUT COULD POTENTIALLY CREATE AN ERGONOMIC RISK.
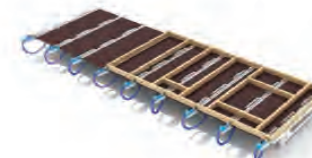
TOOLS

Figure 126. 5-Ton Rolling Gantry Crane.

Figure 127. Flexible Framing Table.

Figure 128. Radial Arm Saw.

General Notes

1. DRAWINGS ARE NOT TO BE SCALED

2. IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ALL ERRORS AND/OR OMISSIONS TO THE PRIME CONSULTANT

3. GENERAL CONTRACTOR WILL BECOME RESPONSIBLE AND HELD LIABLE FOR THESE PLANS AND ALL CONSTRUCTION PRACTICES ONCE CONSTRUCTION COMMENCES

4. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL COUNTERSIGNED

CONSTRUCTION ISSUE / REVISIONS

No.	Revision / Version:	Date:
01	90% DRAWING SET	2020.09.02

UNIVERSAL UTILITY CORE MANUFACTURING FACILITY

HIGHWAY 10, OCN MB

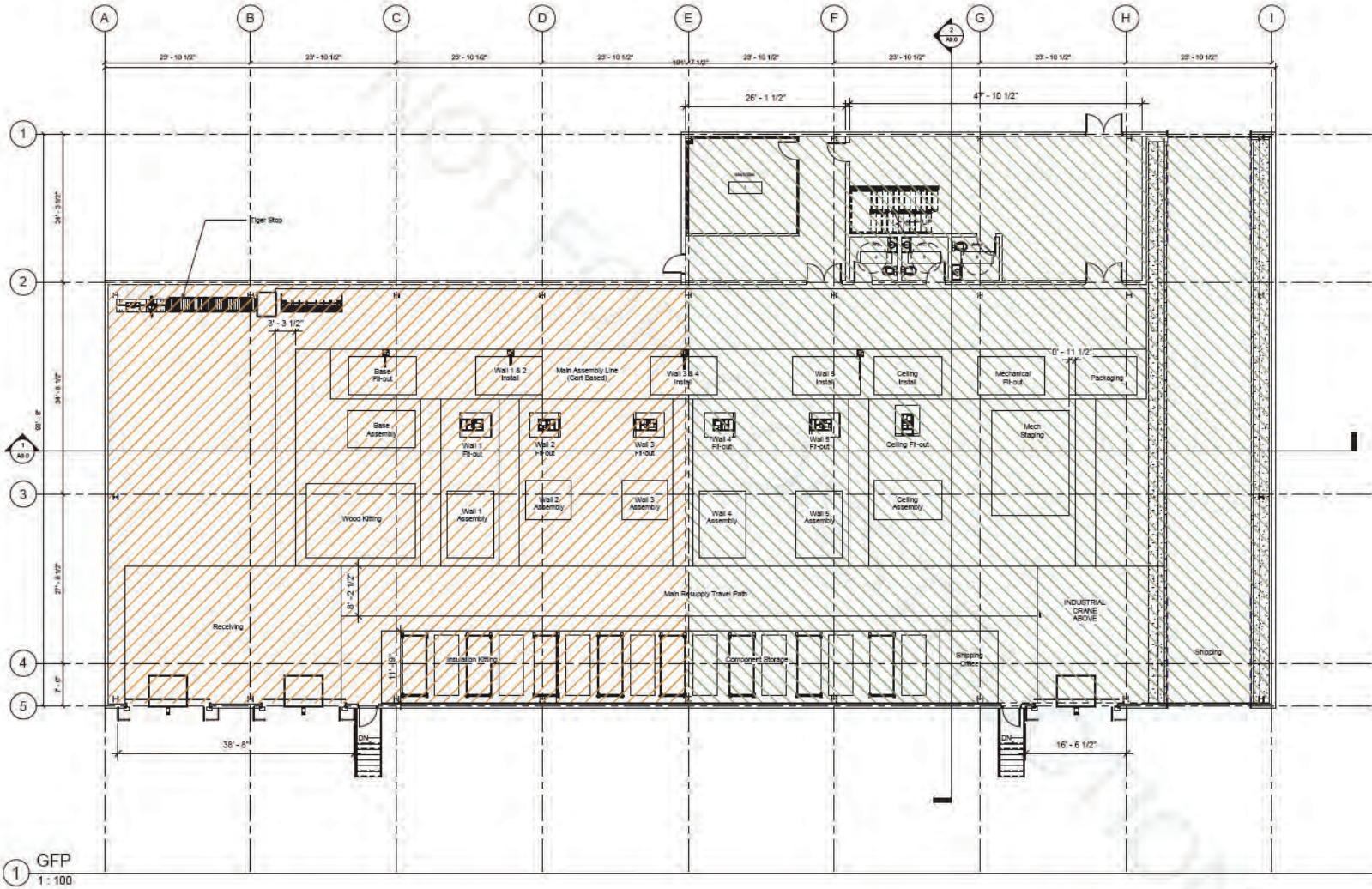**GFP**

PROJECT NO. : 0001
DRAWN BY : Author
CHECKED BY : Checker
DATE : 2020.10.25
SCALE : As indicated
REVISION NO. :
SHEET :

A2.0

Plan labels:

Tiger Stop
Base Fit-out
Wall 1 & 2 Install
Main Assembly Line (Cart Based)
Wall 3 & 4 Install
Wall 5 Install
Ceiling Install
Mechanical Fit-out
Packaging
Base Assembly
Wall 1 Fit-out
Wall 2 Fit-out
Wall 3 Fit-out
Wall 4 Fit-out
Wall 5 Fit-out
Ceiling Fit-out
Mech Staging
Wood Kitting
Wall 1 Assembly
Wall 2 Assembly
Wall 3 Assembly
Wall 4 Assembly
Wall 5 Assembly
Ceiling Assembly
Main Resupply Travel Path
INDUSTRIAL CRANE ABOVE
Receiving
Insulation Kitting
Component Storage
Shipping Office
Shipping

DN
DN

GFP
1 : 100

LEGEND

ROOM NAME / 101 — DENOTES ROOM NAME AND NUMBER REFERENCE

PT — DENOTES PARTITION ASSEMBLY TAG REFERENCE

— DENOTES WALL ASSEMBLY TAG REFERENCE

— DENOTES DOOR AND DOOR NUMBER

— DENOTES EXTERIOR WALL ASSEMBLY

— DENOTES WOOD STUD PARTITION

WT — 100mm DIA. WEEPING TILE C/W FILTER FABRIC SOCK

EP — ELECTRICAL PANEL REFER TO ELEC.

— DENOTES COLUMN

WH — DENOTES WATER HEATER

FD — FLOOR DRAIN LOCATION TBD BY MECHANICAL

— DENOTES PHASE 01

— DENOTES PHASE 02

DS — DENOTES DOWNSPOUT

RWC — DENOTES RAINWATER COLLECTION

— DENOTES ROOF OVERHANG

NOTES:

1. ALL PARTITIONS ARE TO EXTEND TO U/S OF TOP PLATE ABOVE, UNLESS NOTED OTHERWISE.

2. ALL DIMENSIONS ON FLOOR PLAN ARE FROM STUD FACE TO STUD FACE OR FACE OF EXTERIOR FINISH MATERIAL.

SMOKE + CO2 ALARMS
ALL SMOKE AND CO2 ALARMS WITHIN A SINGLE DWELLING UNIT SHALL BE INTERCONNECTED.

STRUCTURAL NOTES:

SP — DENOTES 2" SCREW PILE FOUNDATION

WP — DENOTES 6" X 6" PT SPF WOOD POST

— DENOTES BUILT UP WOOD BEAM. REFER TO FOUNDATION PLAN FOR SIZES.
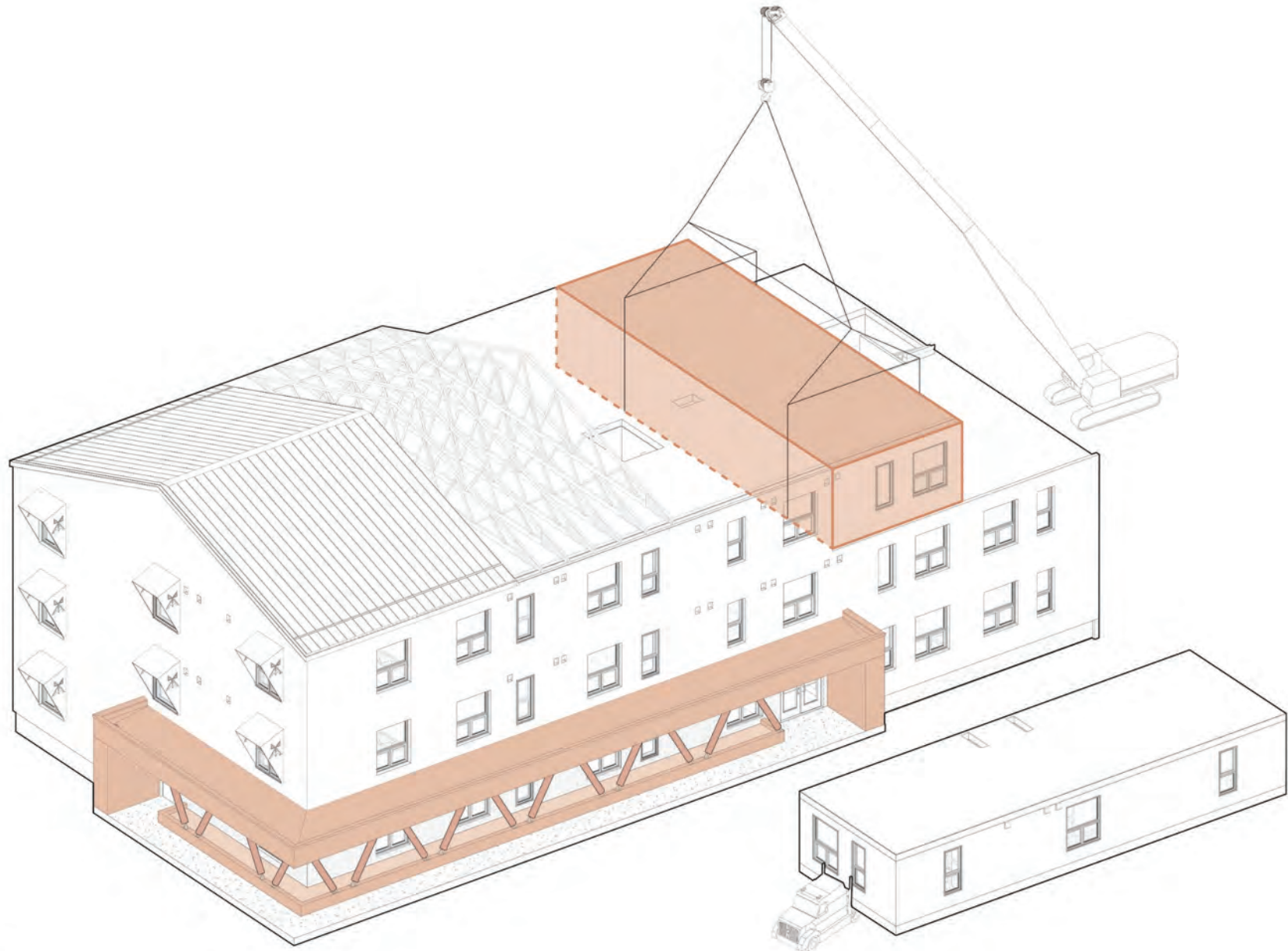
L = 2 - 2" X 6" — DENOTES LINTEL SIZE

CONSTRUCTION NOTES:

C1 — WOOD STAIR, HANDRAIL AND GUARD TO BE DESIGNED AND BUILT IN ACCORDANCE WITH NATIONAL BUILDING CODE REQUIREMENTS. CONTRACTOR TO FIELD VERIFY AND COORDINATE NUMBER OF STAIR RISERS REQUIRED.

misatimosimôwin mîhkowâp (Horse Dance Lodge)
Silver Sage Developments/ Regina Treaty/Status Indian Services (RT/SIS)
Regina, SK

misatimosimôwin mîhkowâp (Horse Dance Lodge)
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Silver Sage Developments/ Regina Treaty/Status Indian Services (RT/SIS)
Regina, SK

Tipi design by Linda Obey Lavallee

misatimosimôwin mîhkowâp
(Horse Dance Lodge)
**Silver Sage Developments/
Regina Treaty/Status Indian
Services (RT/SIS)**
Regina, SK

Photo: John Hill

Architects Against Housing Alienation (AAHA) to represent Canada at the 2023 Venice Biennale of Architecture
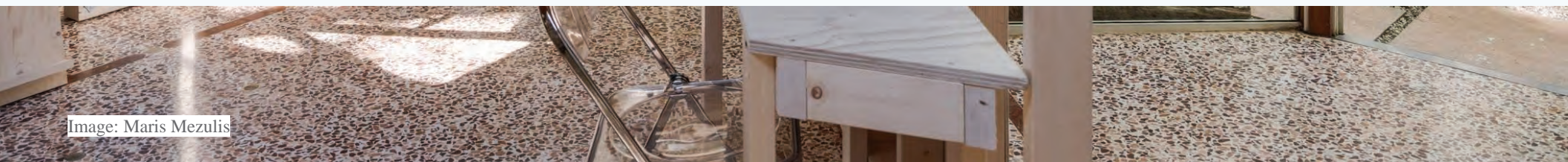
The Canada Council for the Arts is proud to announce that **Architects Against Housing Alienation (AAHA)** will represent Canada in the 18th International Architecture Exhibition – La Biennale di Venezia, from May 20 to November 26, 2023.
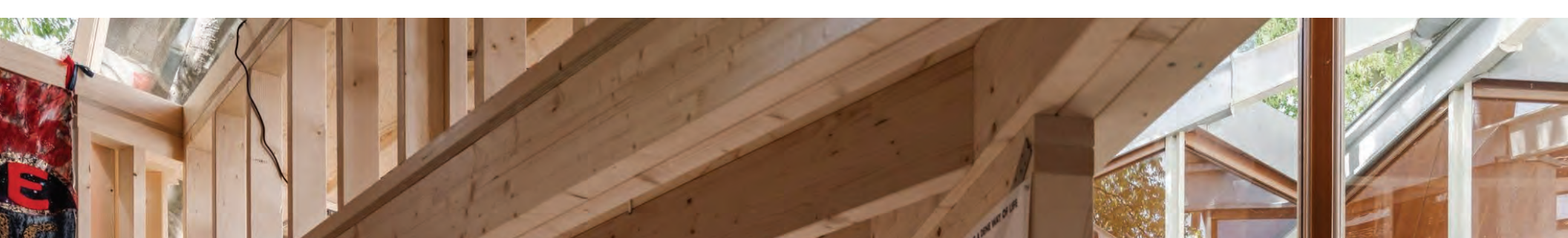
TO END HOUSING ALIENATION IN c\a\n\a\d\a WE DEMAND...[1] LAND BACK! [2] ON THE LAND HOUSING! [3] FIRST NATIONS HOME BUILDING LODGES! [4] REPARATIVE ARCHITECTURE./ [5] A GENTRIFICATION TAX! [6] SURPLUS PROPERTIES FOR HOUSING!/ [7] INTENTIONAL COMMUNITIES FOR UNHOUSED PEOPLE! [8] COLLECTIVE OWNERSHIP! [9] MUTUAL AID HOUSING! [10] AMBIENT ECOSYSTEMS COMMONS!

IDLE NO MORE

BIG RIVER
FIRST NATION

OPASKWAYAK CREE NATION

UNIVERSITY of Manitoba

ONE HOUSE MANY NATIONS

UNIVERSITY OF SASKATCHEWAN

GRND

University of Windsor

DAVID T FORTIN ARCHITECT

SOLO ARCHITECTURE

A Path to Healthy Housing V2: Venice Biennale
2023

TO END HOUSING ALIENATION IN c\a\n\a\d\a WE DEMAND...

[3]FIRST NATIONS HOME BUILDING LODGES!

We demand home building design lodges tied to housing manufacturing facilities on reserves, to build capactiy within communities by grounding the production of houses and their components, in community values, language, and education.

Housing As Commodity

Housing As Commodity

Off-Reserve Stamped Lumber

Off-Reserve Manufactured Shingles

$ Depleted

Off-Reserve Building Centre

OCN

Completed House
Limited Installation
Training

Manufactured Windows and Doors

Housing As Commodity

Community

teachings
kin
Skills
family
network
songs
responsibility
plants
Identity
Employment
stories
Home
animals
spirituality
Individual
Financial
capacity
Land
water
Territories
Land Stewardship

Housing As ~~Commodity~~ Cosmology

Off-Reserve
Stamped Lumber

Partnered Reserve
Industry

On Reserve
Lumber

OCN Employment,
Training, Industry

Home
Building
Lodge

Off-Reserve
Manufactured
Components

Housing As ~~Commodity~~ Cosmology

Windows and doors are primarily **from United States of America**, and the majority of appliances are **from China**

Stamped lumber imported from **northern Ontario and British Columbia**

Local lumber harvested from **forests on OCN land**

Reclaimed materials **extracted from previous housing**

ELDERS LODGE

HEALTH CARE

POLICE STATION

CHILD SERVICES

Over time the house deteriorates, allowing a **cyclical relationship** to occur; as the materials will then be **used in a new house**

Housing As ~~Commodity~~ Cosmology

Emily Kok, Charles Barber, Grisha G

How an Inuit factory producing modular homes aims to ease Nunavut's housing shortage

In Arviat, a facility set to open in 2025 would put Inuit tradespeople to work building modular units tailored to the North's needs

KELLY GRANT HEALTH REPORTER
ARVIAT, NUNAVUT
PUBLISHED DECEMBER 2, 2022 UPDATED DECEMBER 4, 2022

A mother and child sleep side-by-side in this bedroom in Arviat, Nunavut, while four other family members share the second bedroom and another eight sleep on mattresses in the living room. The family is hoping to move into a four-bedroom home. PHOTOGRAPHY BY FRED LUM/THE GLOBE AND MAIL

119 COMMENTS
SHARE
BOOKMARK
LISTEN TO ARTICLE

On the outskirts of the Nunavut hamlet of Arviat, past the polar bear alert signs and the packed-to-the-rafters schools and the community freezer full of caribou meat, lies a gravel pad on which an Inuit company is building something unprecedented.

PROUDLY INDIGENOUS-OWNED & FEMALE-LED

Elevated modular spaces for a sustainable, equitable tomorrow.

Proudly Indigenous-owned and female-led, **NUQO** provides high-quality, durable modular construction solutions that unite **thoughtful design**, **functionality**, and **cultural significance**, fostering empowered communities and laying the foundation for a better future.

The Otipemisiwak Centre (2025), Kamloops, British Columbia (with Stantec)

wâpikwaniy (2011), Gregory Scofield and Amy Briley
Image from Gabriel Dumont Institute Collection

The Otipemisiwak Centre (2025), Kamloops, British Columbia (with Stantec)

Spirit Panel

Dave Pranteau Aboriginal Children's Village, Patrick Stewart Architect

"What relations matter?"