2020 FIRST PLACE

# Nicholas Earman

# UNIVERSITY OF CINCINNATI

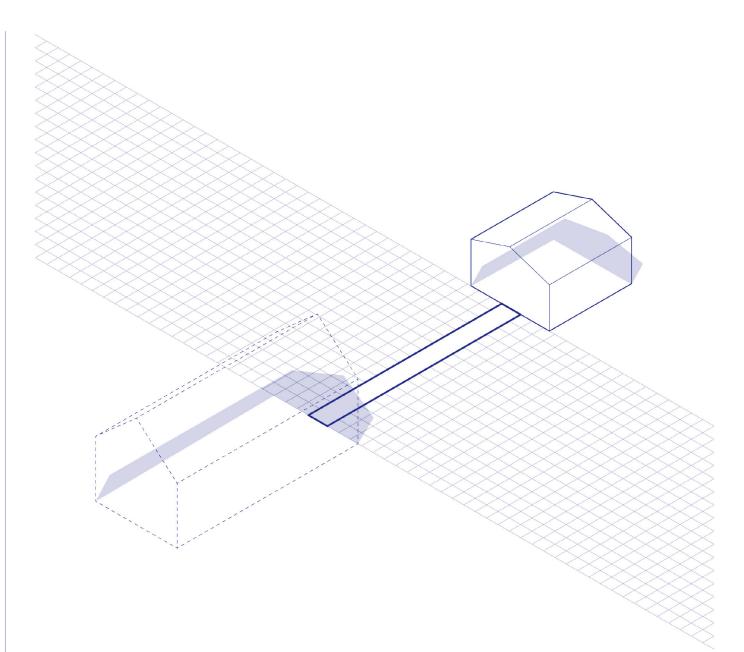
FACULTY ADVISOR - TERRY BOLING





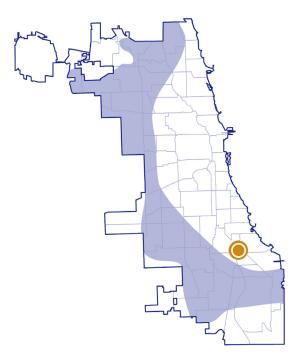
Bungalows for a Millennial Family











Proposed Site and Surrounding Chicago Bungalow Housing Belt



... the median household income of the Park Manor Neighborhood in Chicago, IL. This is less than half the U.S. average of **\$60,000**.

The neighborhood has an average of 2.3 persons per household. This can pose a number of obstacles, including the feasibility of homeownership. The typical bungalow in the surrounding area can easily cost upwards of **\$100,000**.

Each home is working through an ever-changing state of affairs and the present day Chicago Bungalow isn't entirely adaptable to this change.

Data from the United States Census Bureau ACS 5-Yea Estimate (2017)



Homeownership in the 2lst century looks entirely different than it did when the Chicago bungalows were first built in 1910: This proposal attempts to recognize these differences by introducing **affordable customization** into the context of urban housing. Increasing the density of people across every lot is the quickest way to increase the median household income while **maximizing on transparency** to naturally uphold the safety of the streets.



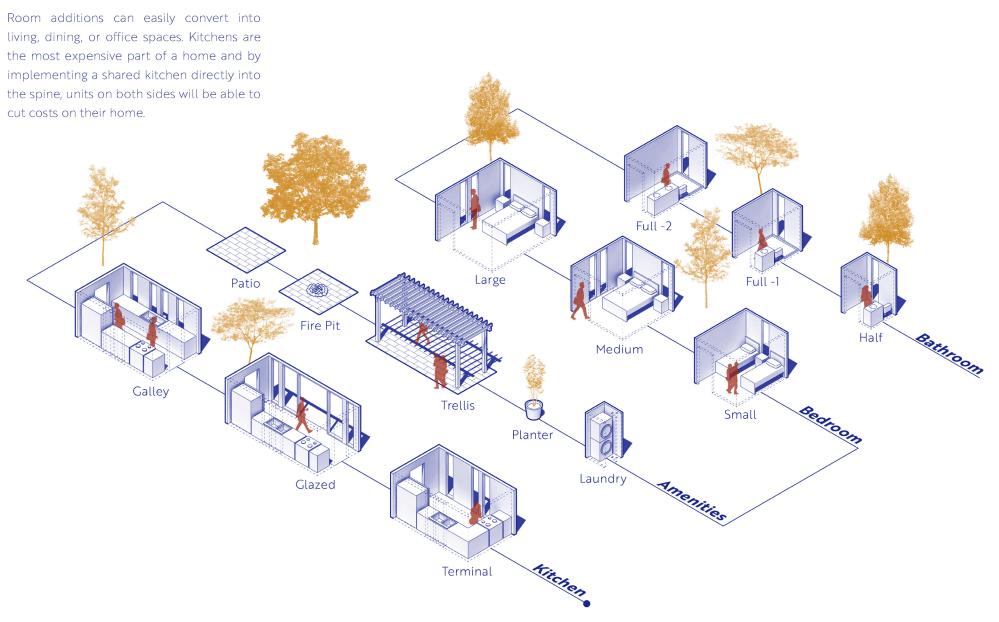
Whether homeowners are seeking a transition into multi-generational housing, spiking their revenue with rental units, or expanding on their bungalow's current square footage, the spinal corridor system offers **individualized flexibility** to any existing or newly-built home.



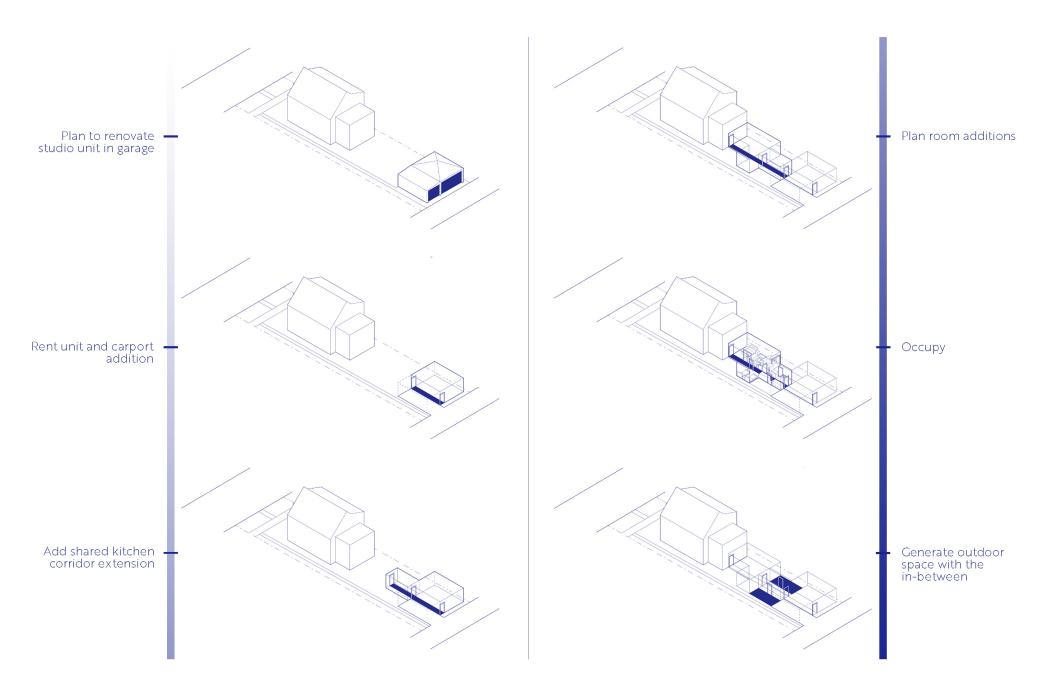
Vehicle ownership is continuously declining alongside the usefulness of allies between main streets. In order to maximize on each lot's potential, I am challenging the current RS-2 zoning definitions for detached houses on individual lots.

By increasing the density of people per lot, homeowners will quickly begin to see profits from rented units or add to shared pools for bill payments.

Corridor Spine + Room Additions – Exploded Axonometric



Room Addition Catalog

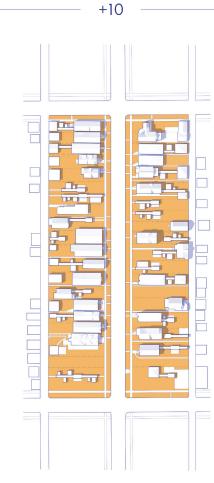


Homeowners plan individualized strategies to build equity on their property. This may mean directly linking additional bedrooms, or building a detached studio rental unit to generate a new revenue stream. Properties begin to form nooks and crevices between room additions. These spaces create strong focal points as well as intimate places for outdoor activities. A tightly nested community is relying significantly less on cars for transportation. The alley has become a lively space that is easily accessible on foot and a much safer environment to be in.



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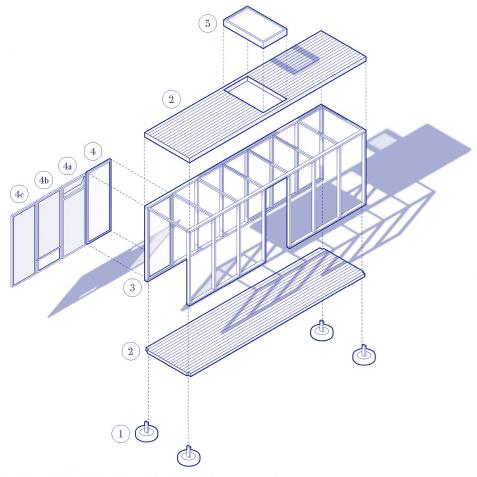






Site Plan Future Projections

- 1 Recycled tire with compressed gravel + sand footings
- 2 Cross-laminated timber (C.L.T.) wall/floor/roof panel
- 3 Slotted square aluminum framing system
- 4 Pre-fabricated polycarbonate window panel a. Pre-fabricated C.L.T. panel with operable polycarbonate clerestory b. Pre-fabricated C.L.T. panel with polycarbonate base window c. Pre-fabricated solid C.L.T. panel
- 5 Pre-fabricated polycarbonate skylight
- 6 Sliding window blinders on track



#### Cross-Laminated Timber

-High dimensional stability

- -No threat to forest conservation
- -Locally sourced from Canadian manufacturer

#### Aluminum

-Low maintenance

-High strength-to-weight ratio

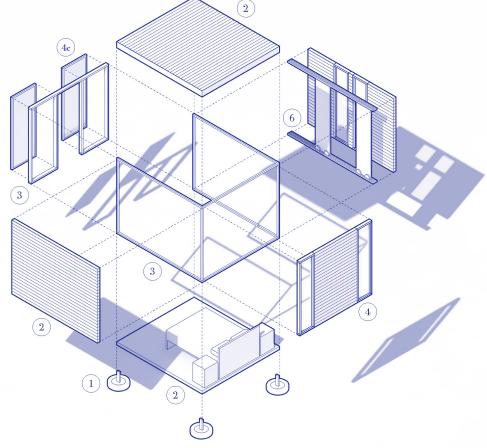
-High rigidity

## Polycarbonate

-High impact-resistant and durable -Variety of grades, some optically transparent -Light and easy installation

## **Recycled Tires**

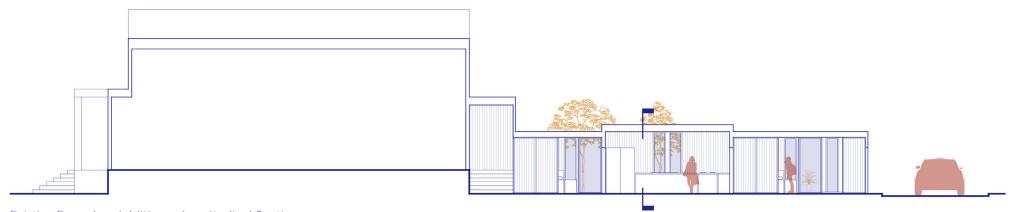
-Reduce landfill -Minimizes greenhouse gas emissions -Strong and flexible material qualities



Corridor Spine Materials – Exploded Axonometric

Room Addition Materials – Exploded Axonometric





Existing Bungalow Addition – Longitudinal Section

"There must be eyes upon the street, eyes belonging to those we might call the natural proprietors of the street. The buildings on a street equipped to handle strangers and to insure the safety of both residents and strangers, must be oriented to the street. They cannot turn their backs or blank sides on it and leave it blind." -Jane Jacobs

Existing Bungalow Addition – Transverse Section Perspective