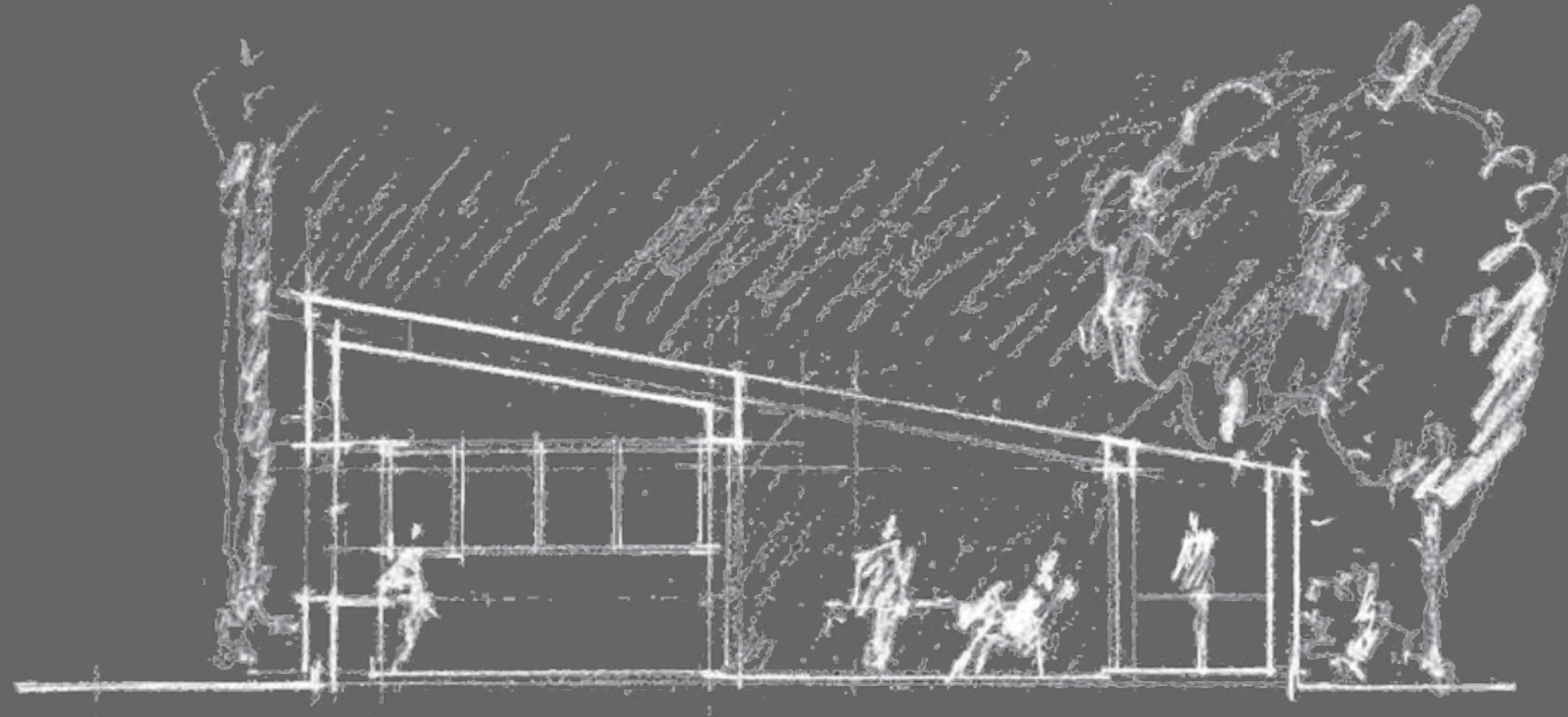


AIAO Small Firm Exchange

July 18, 2022



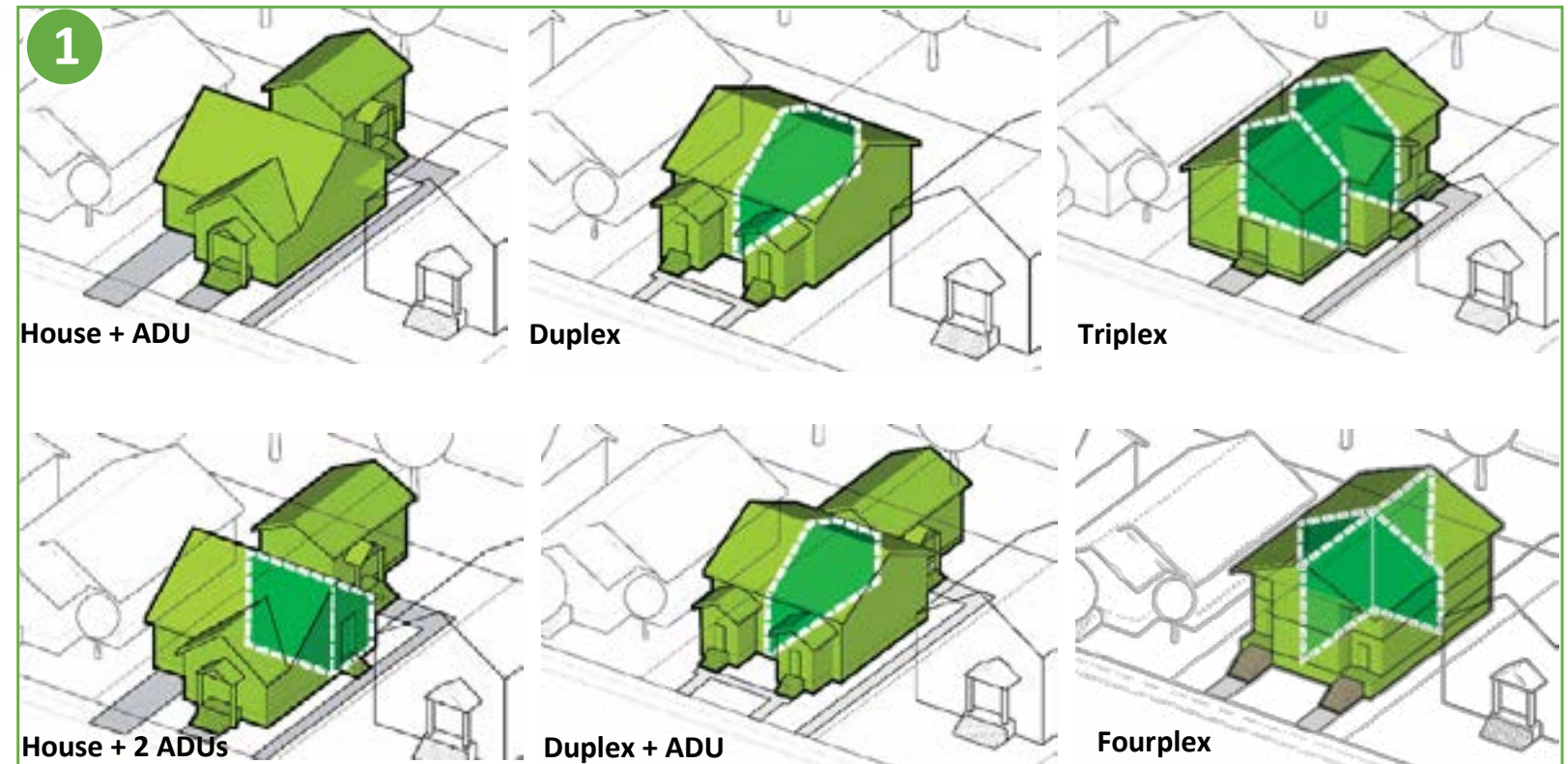
woofter bolch architecture



“Portland just passed the best low-density zoning reform in US History.”

Michael Andersen, Sightline Institute

Volume 2 – Zoning Code Amendments



City of Portland BDS, Residential Infill Project Diagrams

Residential Infill Project – Part 2

Complying with State Mandates to Expand Housing Choices

June 2022 – Zoning Code Amendments—As-Adopted

Adopted June 1, 2022
Effective June 30, 2022
Ordinance No. 190851

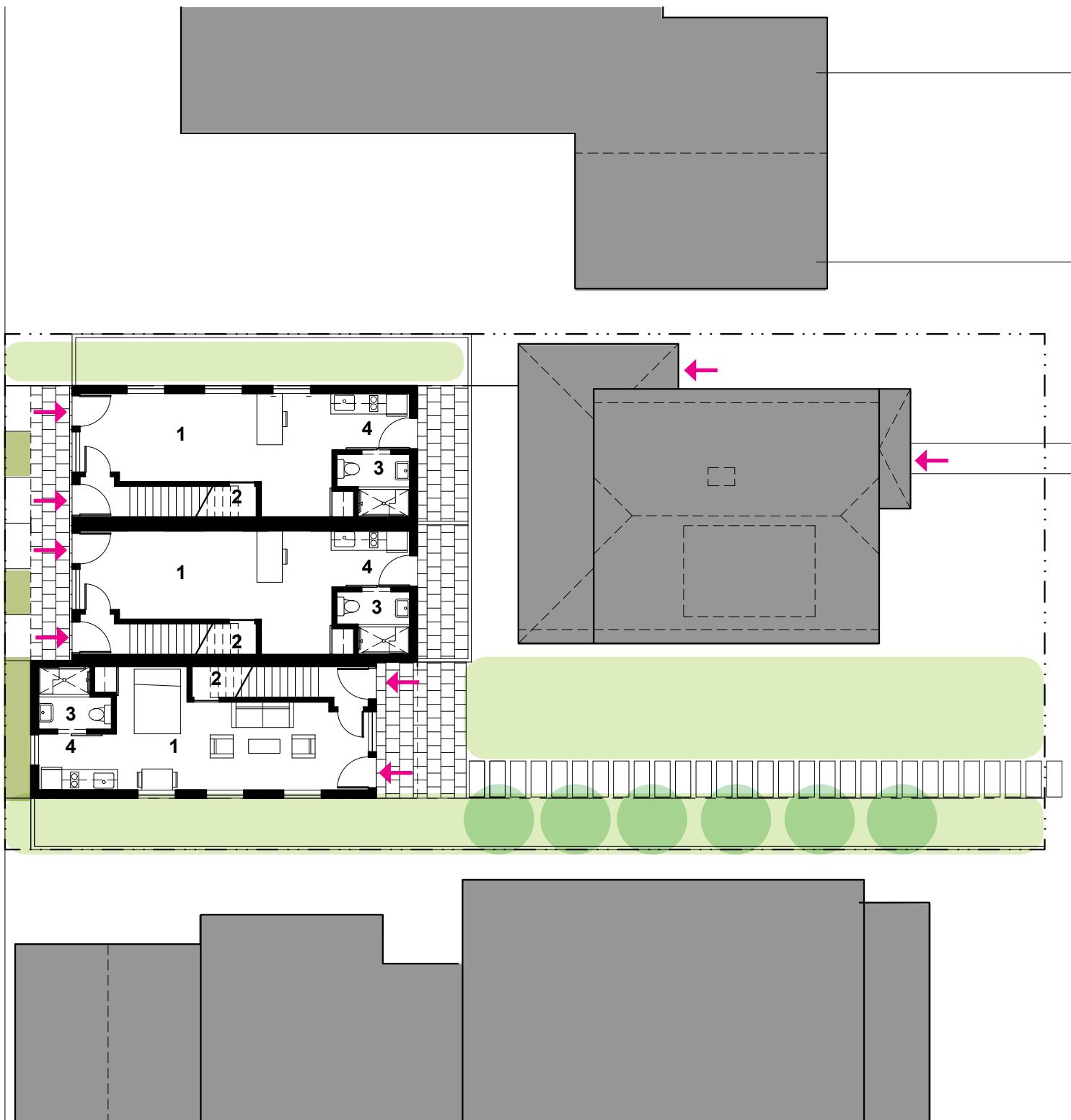


THE BUREAU OF
**PLANNING &
SUSTAINABILITY**



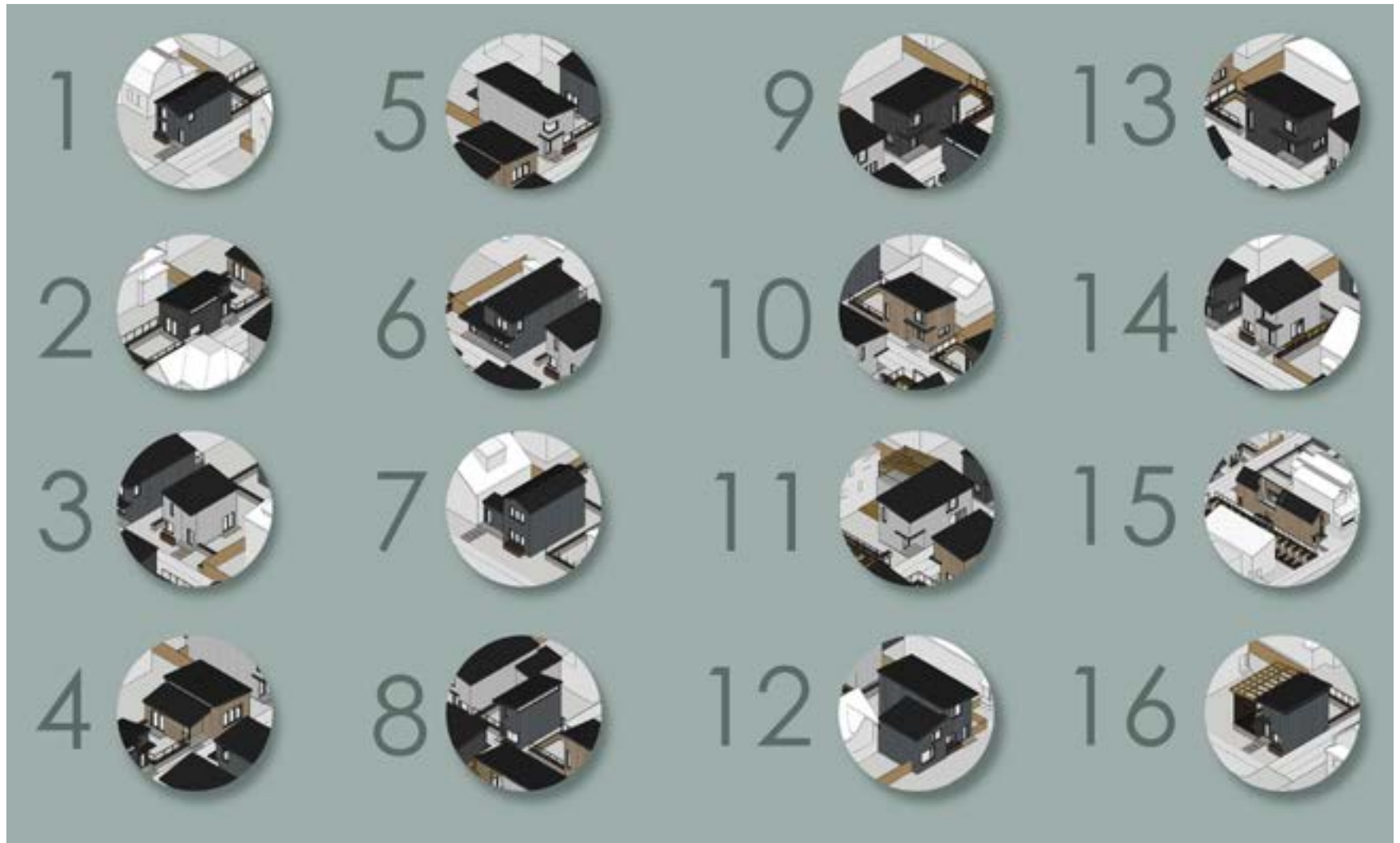
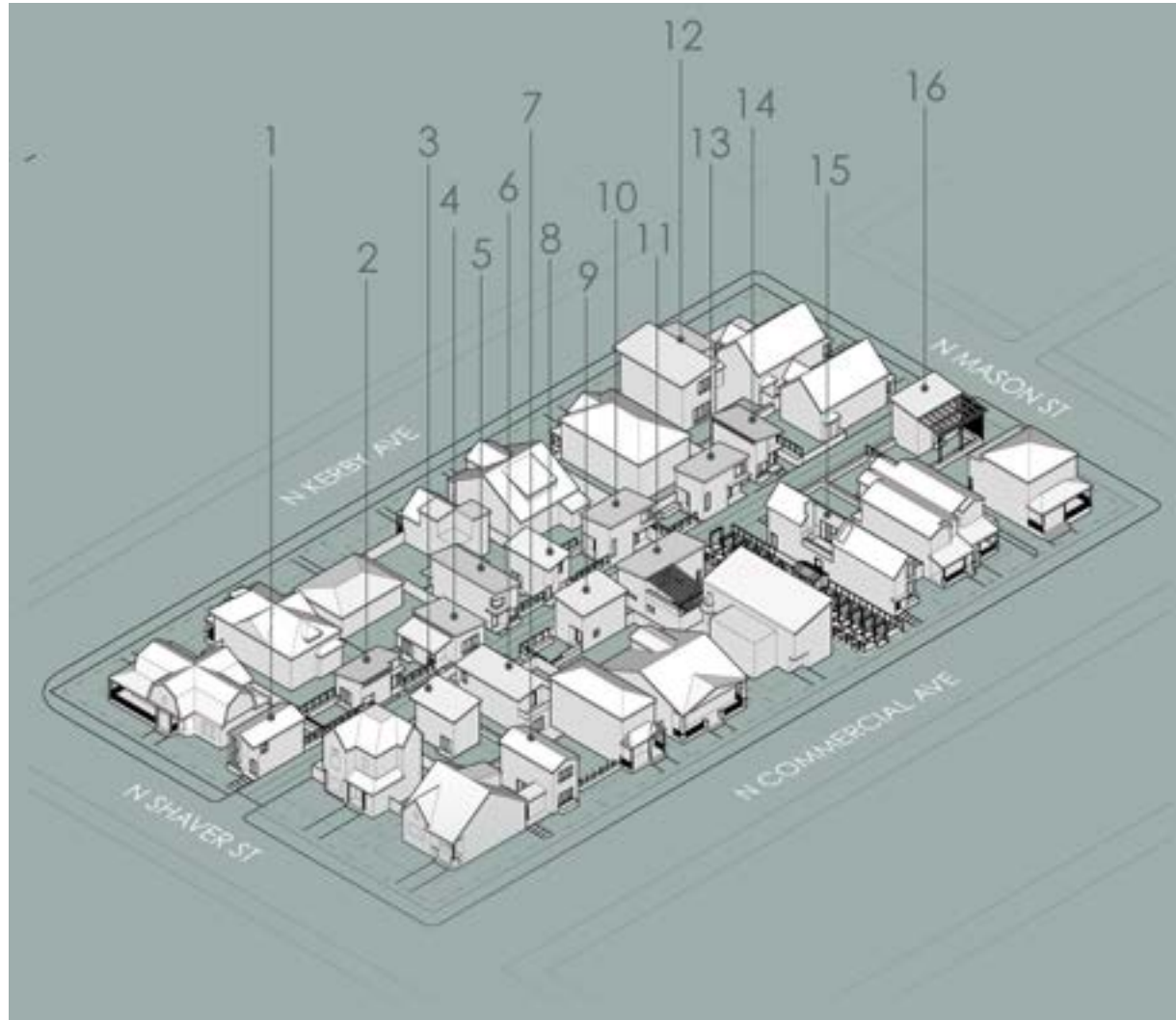


ALLEY









PSU School of Architecture Student Work: Madeline Peck

SHERIDAN SMALL HOMES

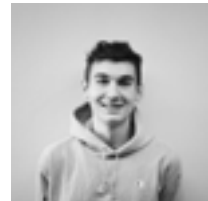
PROVIDENCE SMALL HOUSE COLLABORATIVE STUDIO



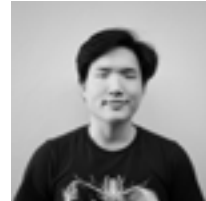
JONATHAN KNOWLES - STUDIO DIRECTOR



COLIN CHRISTENSEN



ANDREA DRAGANI



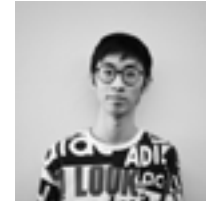
SUNG HYUN HONG



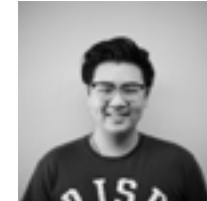
JAKE LEFEBRE



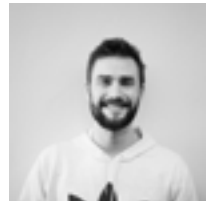
KATHRYN MAHER



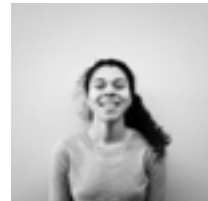
CLAY LIN



DIYI ZHANG



CAMERON LEANDRI



ALEXA THORNE



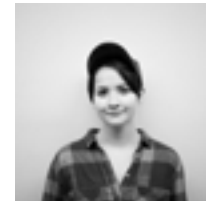
LAURENCE VON LIGNAU



ANDY HOJOA



MADELEINE REID



HANNAH GENSAW



CAURIA DUARTE

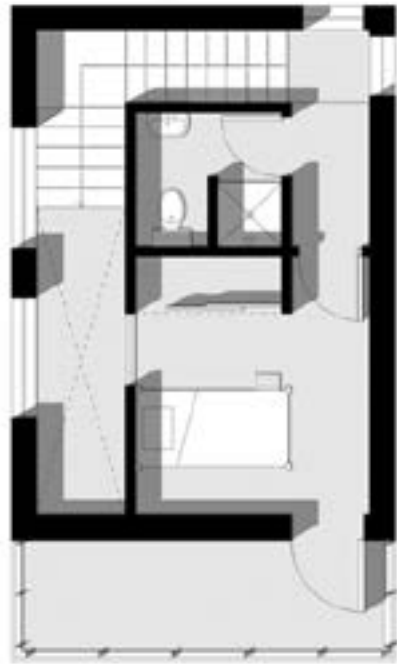


NEW LEVELS

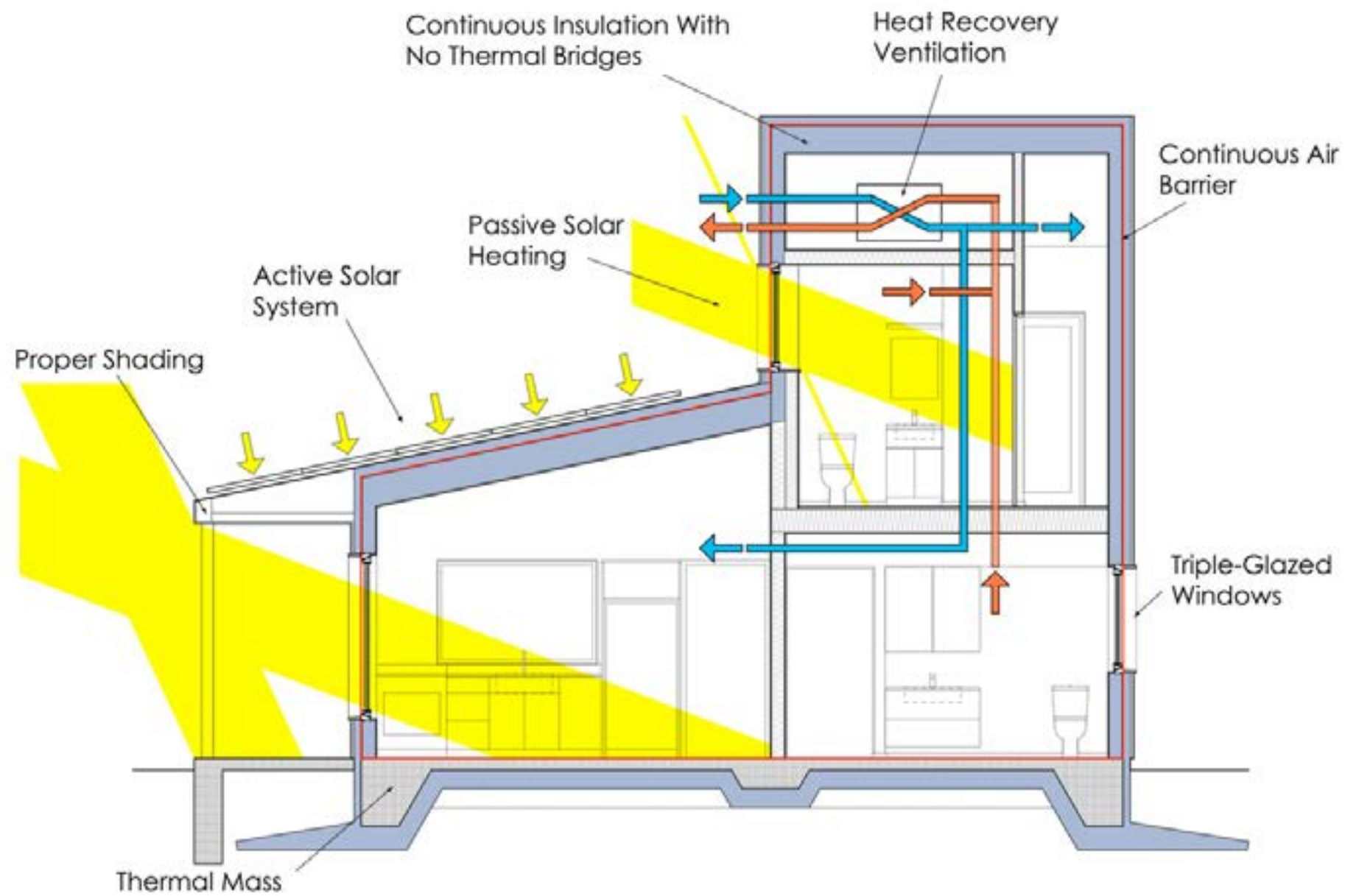


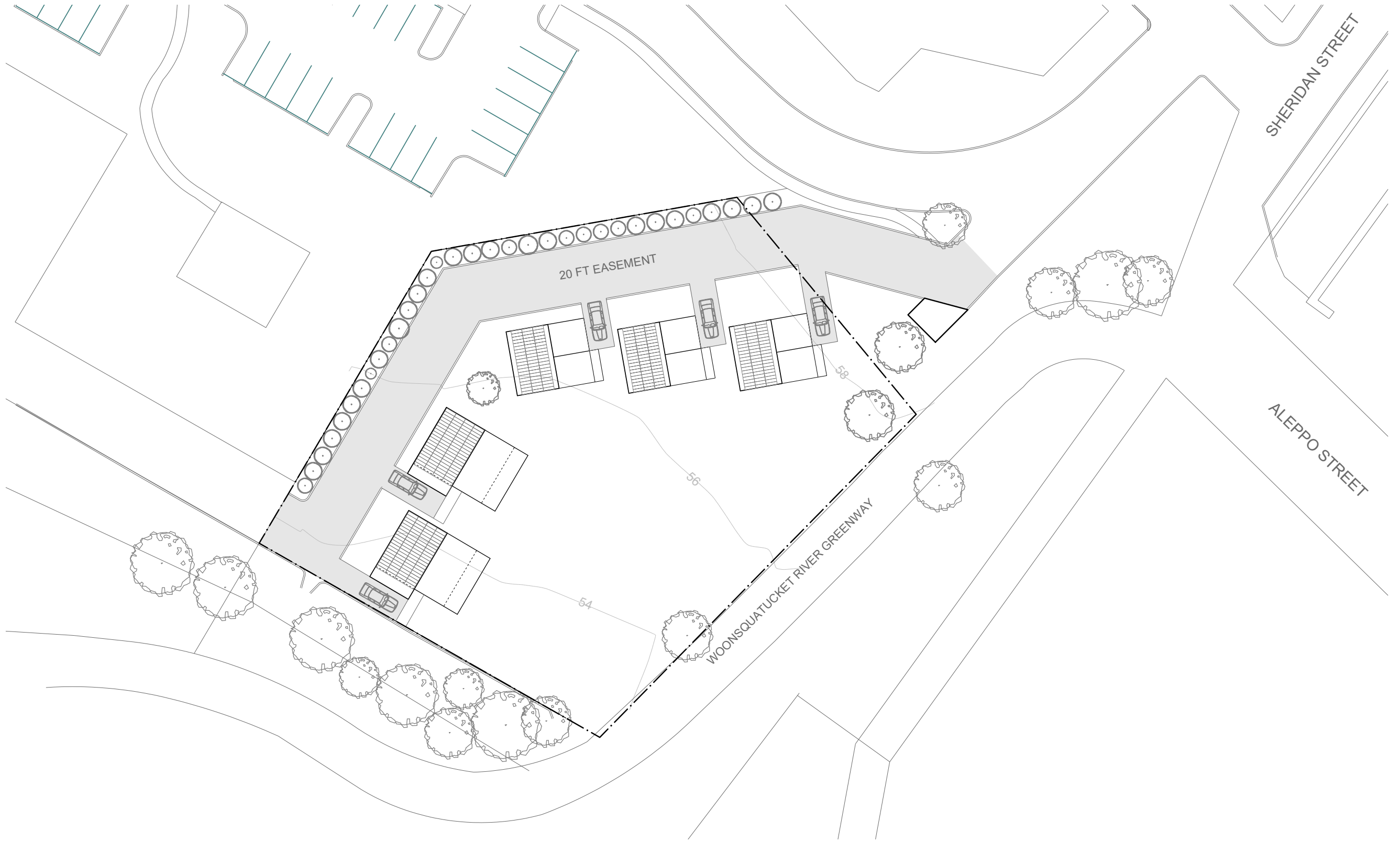
LIGHT BOX





GROSS AREA: 854 sq-ft
NET AREA: 646 sq-ft





SHERIDAN STREET

ALEPPO STREET

20 FT EASEMENT

WOONSOCKET RIVER GREENWAY

54

56

58





EMPOWERED LIVING

DESIGN COMPETITION

Salt Lake City wanted to see what ideas its design-minded residents had for affordable, sustainable, accessible housing. Together with the American Institute of Architects Utah Chapter and the Community Development Corporation of Utah, Salt Lake City launched the Empowered Living Design Competition, inviting designers, architects and others to submit their designs for small residences that could help address the City's affordable housing shortage.

“There is no easy fix that will solve homelessness and housing insecurity. It’s going to require a multi-faceted approach and a lot of innovation and creativity,” Mayor Erin Mendenhall said. “The design concepts generated by this competition have the potential to help fill a gap in our housing stock. These small, unique properties could be life-changing for those who inhabit them.”



SITE

The design of the structure should consider one or more of the following site conditions. These are not actual sites, but represent the various types of sites where a Tiny Home or ADU structure may be constructed in Salt Lake City:

1. A standalone site - very small residual site for a single, standalone residence
2. A cluster site - a larger parcel where multiple residences could be located in a small planned development
3. An accessory dwelling site where the residence may be located in a rear or side yard of a primary structure
4. An accessory dwelling or subdivided lot where the residence may be located at the rear of a lot, but which may have frontage to a public or semi-public way such as an alley or transit corridor.

You may design a Tiny Home or ADU to be applicable to any or all of these site scenarios.

- ADU located at rear of lot with alley frontage
- Maximum allowable ADU size = 650 sf
- To the greatest extent possible promote one's *sense of place* among the community of which it is a part

PROGRAM

Option 1 – ADU

Comply with all requirements listed in this document, but also comply with Utah adopted 2015 IRC Codes, <https://up.codes/viewer/utah/irc-2015>. The maximum allowable size is 650 square feet.

Option 2 - Tiny Home

Comply with all requirements listed here but also comply with Utah Adopted 2015 IRC Codes including Appendix Q. The maximum allowable size is 400 square feet.

https://up.codes/viewer/utah/irc-2015/chapter/new_Q/tiny-houses#new_Q

DWELLING UNIT

The object of the competition is to design a home (Option 1 or Option 2) suitable for one or two persons as a permanent residence. The home should provide the basic needs of shelter and comfort, while, to the greatest extent possible, promoting one's *sense of place* among the community of which it is a part.

A list of spaces required in both Options 1 and 2 are as follows:

- Sleeping Space
- Living Space
- Cooking Space
- Bathroom space including sink, shower, and toilet at a minimum
- Spaces to accommodate storage needs

Universal and innovative arrangements are encouraged, but constructability and economy should take precedent. Finishes are left to the discretion of the designers, but durability and low maintenance interiors and exteriors are important.

Affordability (30%)

As mentioned previously in this document, one of the objectives of this design competition is to increase the supply of housing that is available in Salt Lake City, especially for low- and moderate-income households. Competitors should pay particular attention to designing homes that are cost-effective to both construct and own, which increases affordability to a range of incomes. This could be achieved through innovative construction methods, design choices, material selections, etc. However, all considerations should be attentive to long-term durability as explained further below. A statement of probable costs is not required in the submittal, but is highly recommended to help with judging in this category.

Durability (10%)

Submissions should exhibit the use of materials that are durable and can withstand both the extreme changes in temperature in the Salt Lake City climate as well as daily “wear and tear” of the home. Given that space is reduced in both types of housing options, it is important to consider how the unit will be used on a regular basis and the types of materials, fixtures, appliances, etc. that will resist degradation over a long period of time.

Sustainability (15%)

Homes should be designed with sustainability as a key component. We encourage submissions to incorporate renewable and recycled building materials and design features such as passive thermal design practices. Submissions should incorporate renewable energy sources, such as solar panels, and use sustainable building methods and construction techniques that create less waste. Sustainable design is a key consideration in winning entries as a way to be environmentally responsible and to reduce ownership and maintenance costs, including through reducing utility costs for income-restricted households.

Accessibility (10%)

Submissions should consider various approaches to accessibility in their design. While the IRC 2015 code does not require compliance with the Americans with Disabilities Act (ADA) this competition values accessibility within the design of each ADU or Tiny Home as it will make them more flexible to serve the needs of a greater population including disabled persons. Please reference ICC A117.1 regarding design requirements and consider the minimum space requirements to allow for each home to be converted into a fully ADA compliant home if needed.

Livability (35%)

A livable home is one that considers the changing needs of various occupants. Homes should be safe, healthy, and environmentally friendly structures and should allow residents to live independently. Submissions should consider how reduced square footage can be livable by addressing, at a minimum, the use of space, healthy materials, low-energy fixtures, window placement, safe environments, and connection to the outside community.

- Affordability
- Durability
- Sustainability
- Accessibility
- Livability

2. Design Concept Narrative

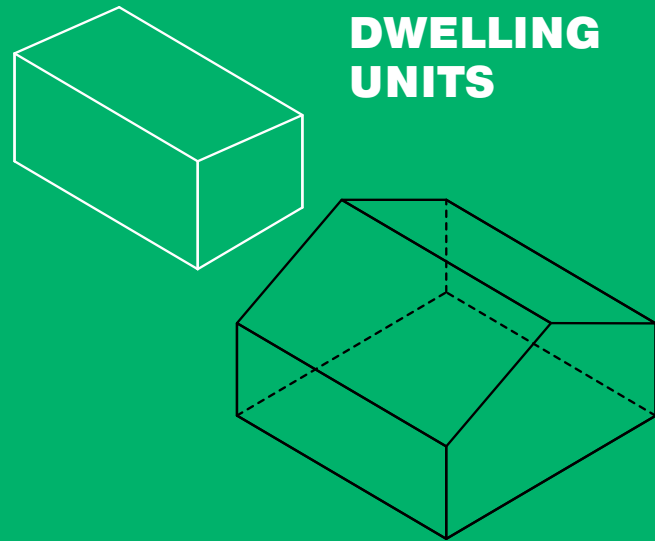
- a. 1500 Words Maximum
- b. Provide a thorough description of your design concept, providing information as to how it addresses the five criteria outlined above. While a cost breakdown is not required, an estimate of the costs of construction should be included within the narrative.

3. Digital Presentation Board

- a. 30” x 42” (1 Board Only)
- b. 300 dpi Resolution
- c. Format PDF
- d. Orientation of Board: Landscape
- e. Content and verbiage of this board is at your discretion but should at a minimum include, floorplan, building elevations, section cut, 3D representation of the design, and site plan.
- f. Board should represent the design and provide graphics and text in support of the narrative and the five competition criteria.

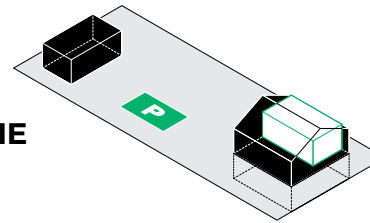
BUILDING AN ADU

GUIDE TO ACCESSORY DWELLING UNITS

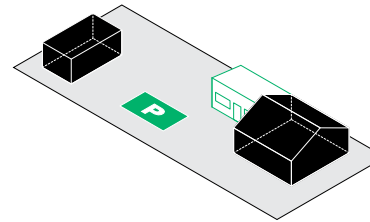


TYPES OF ADU CONFIGURATIONS

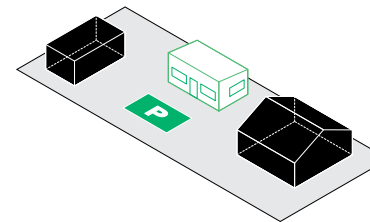
CONVERT PART OF YOUR EXISTING HOME



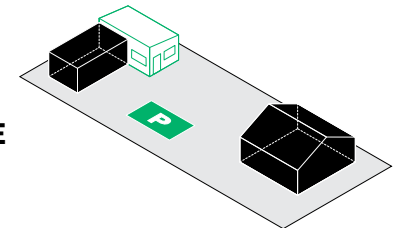
ADD AN ATTACHED UNIT TO YOUR HOME



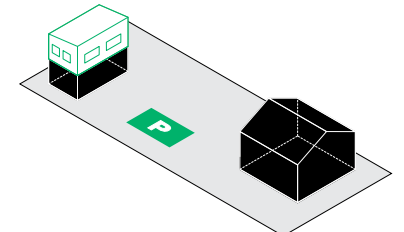
ADD A DETACHED UNIT TO YOUR LOT



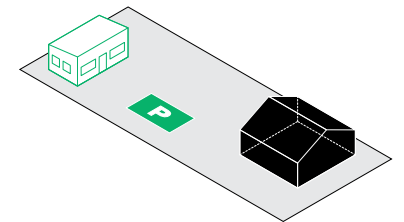
ADD AN ATTACHED UNIT TO YOUR GARAGE

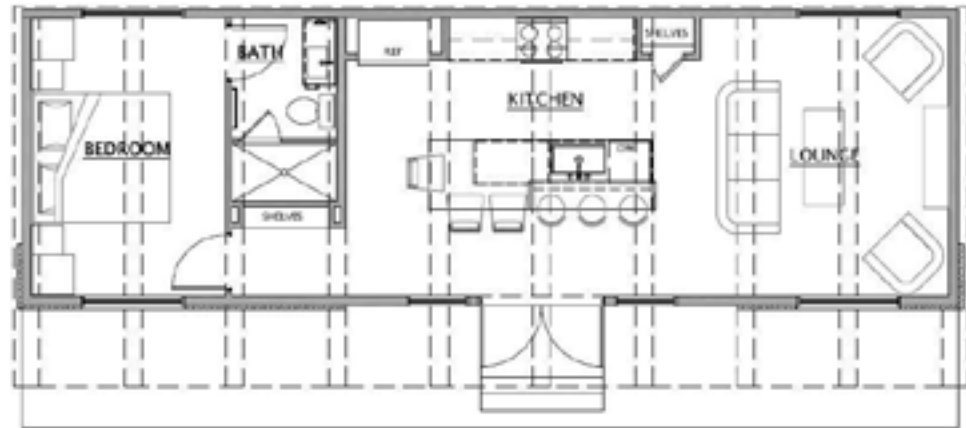


ADD AN ATTACHED UNIT ABOVE YOUR GARAGE



CONVERT YOUR BACKYARD GARAGE

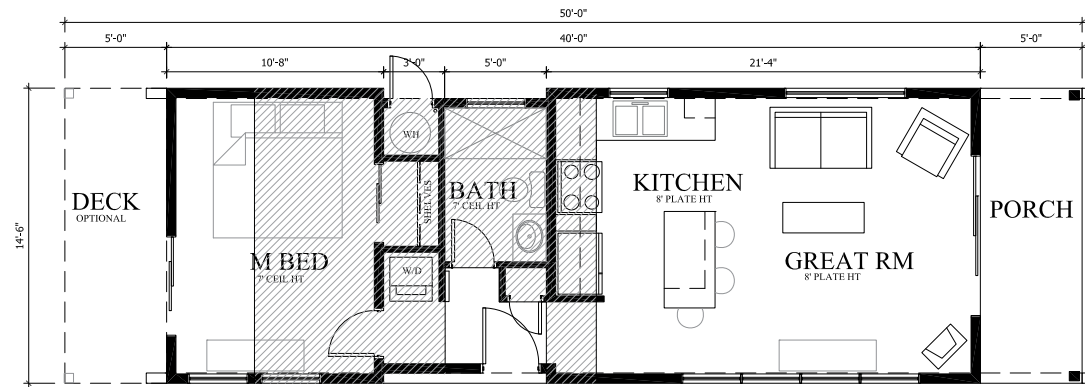
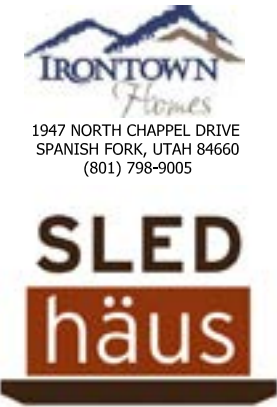




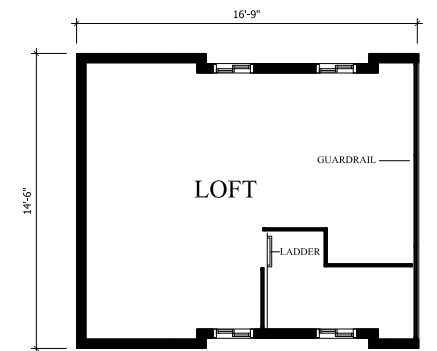
Impresa Modular



Zip Kit Homes

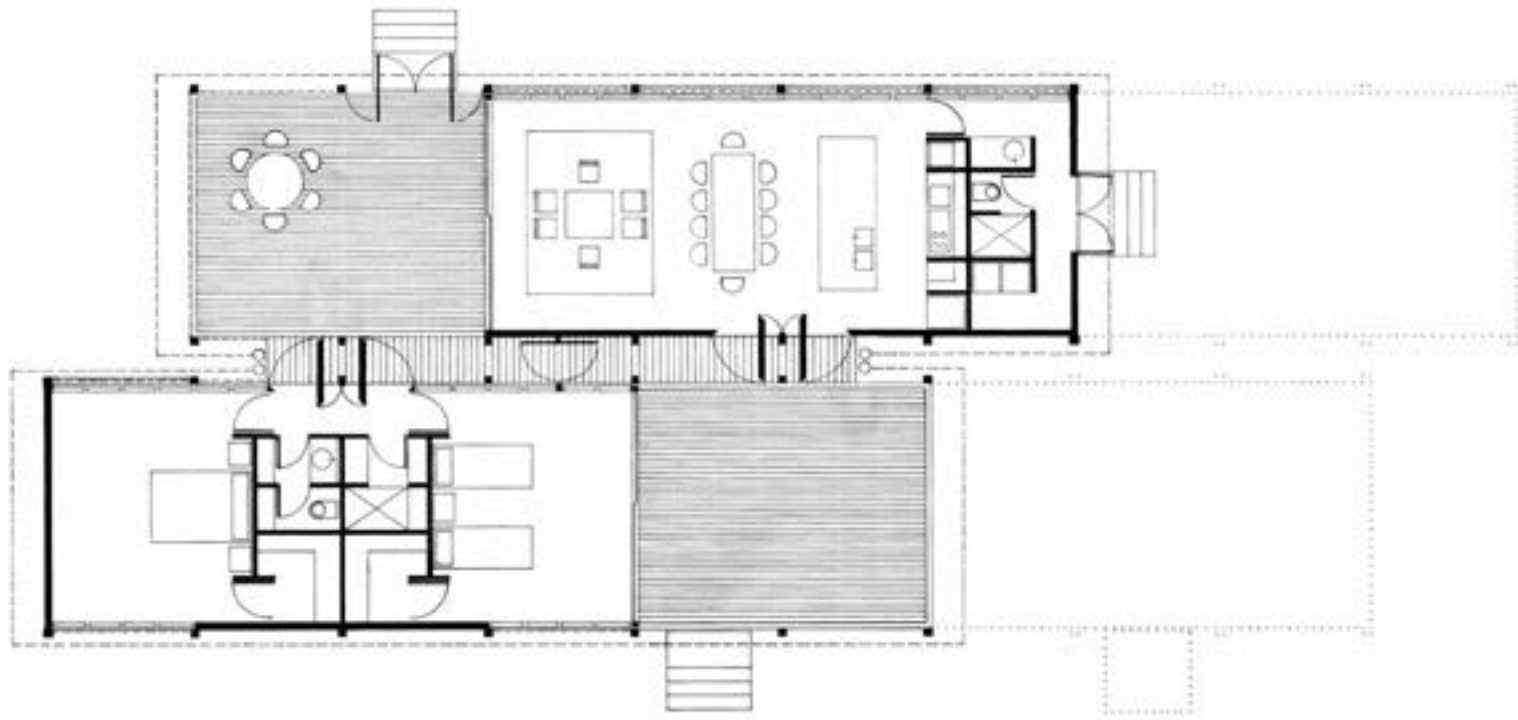


FLOOR PLAN
572 SQ FT

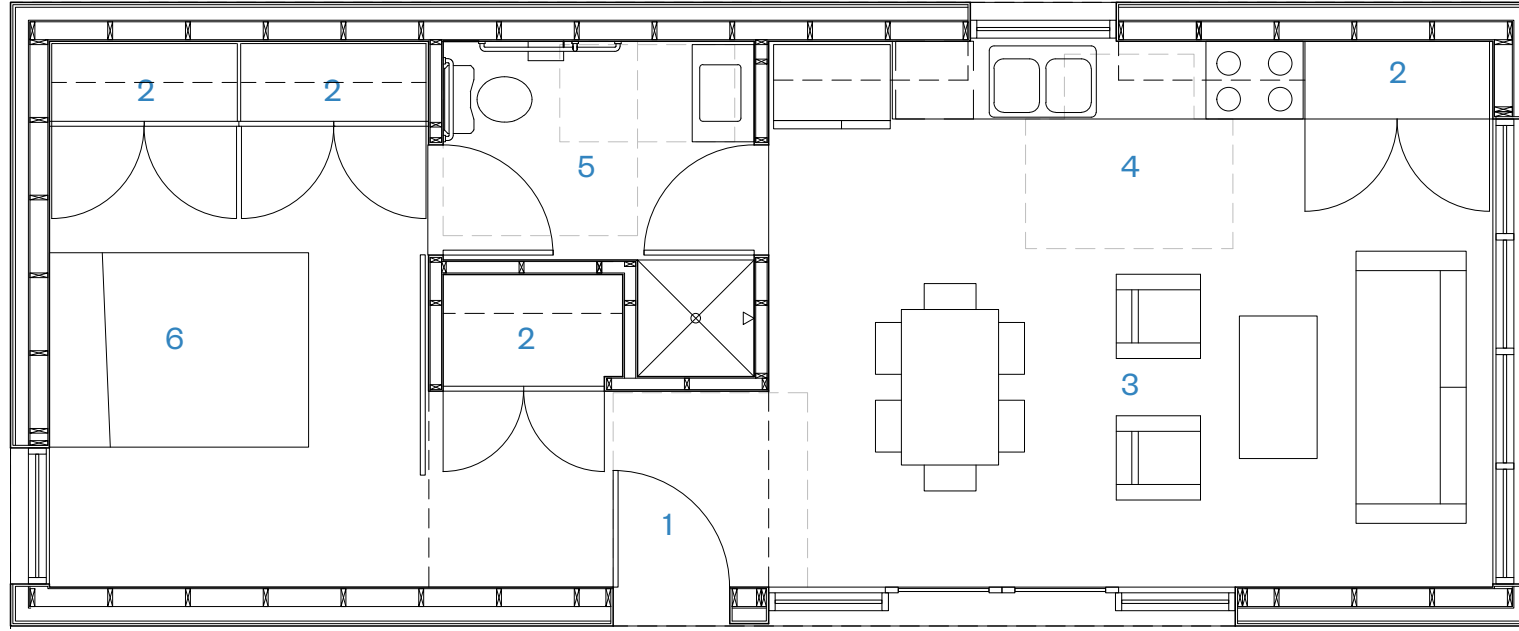


LOFT PLAN
222 SQ FT

Irontown Homes



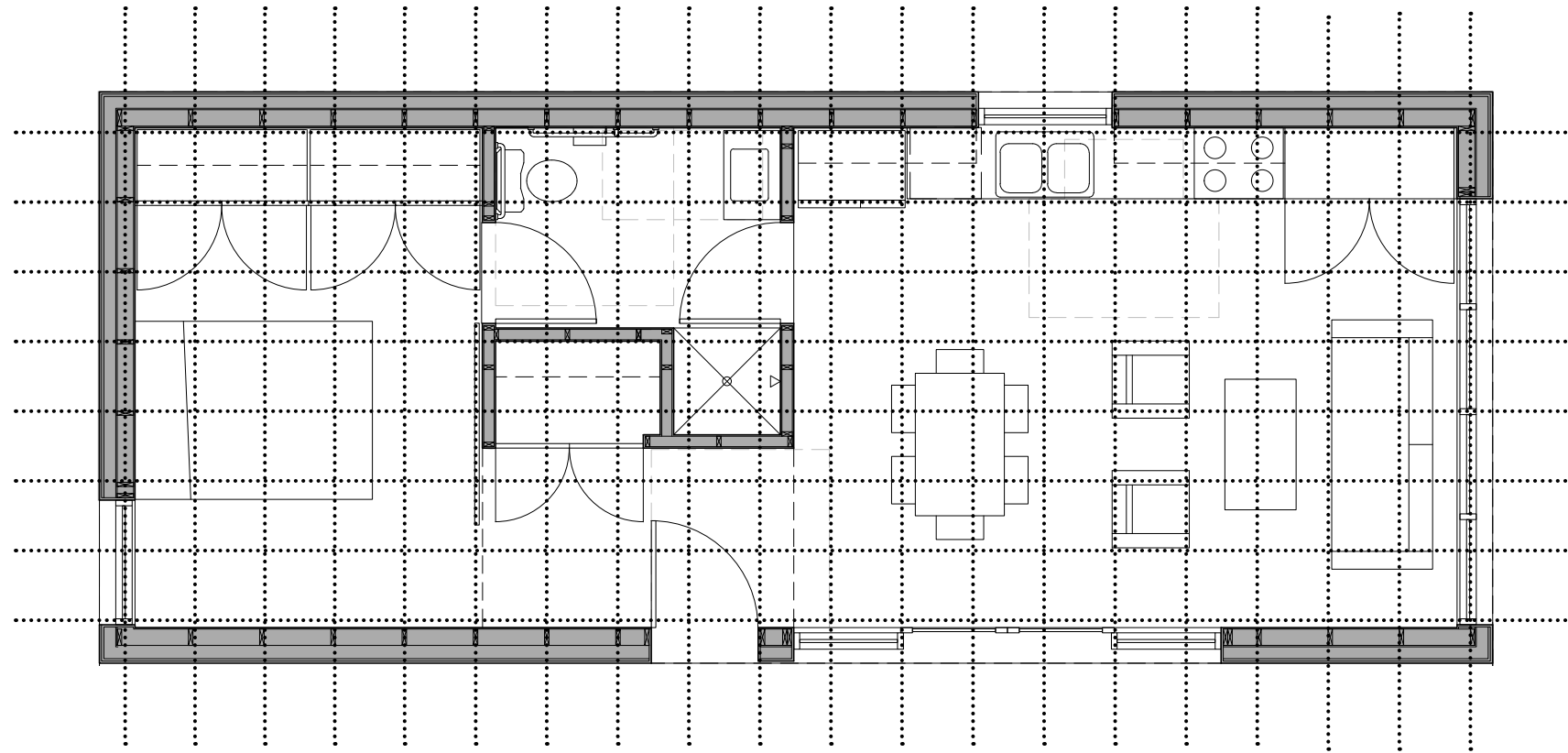
Marie Short House, Glenn Murcutt



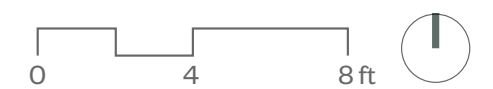
- 1 entry
- 2 storage
- 3 living
- 4 cooking
- 5 bathroom
- 6 sleeping



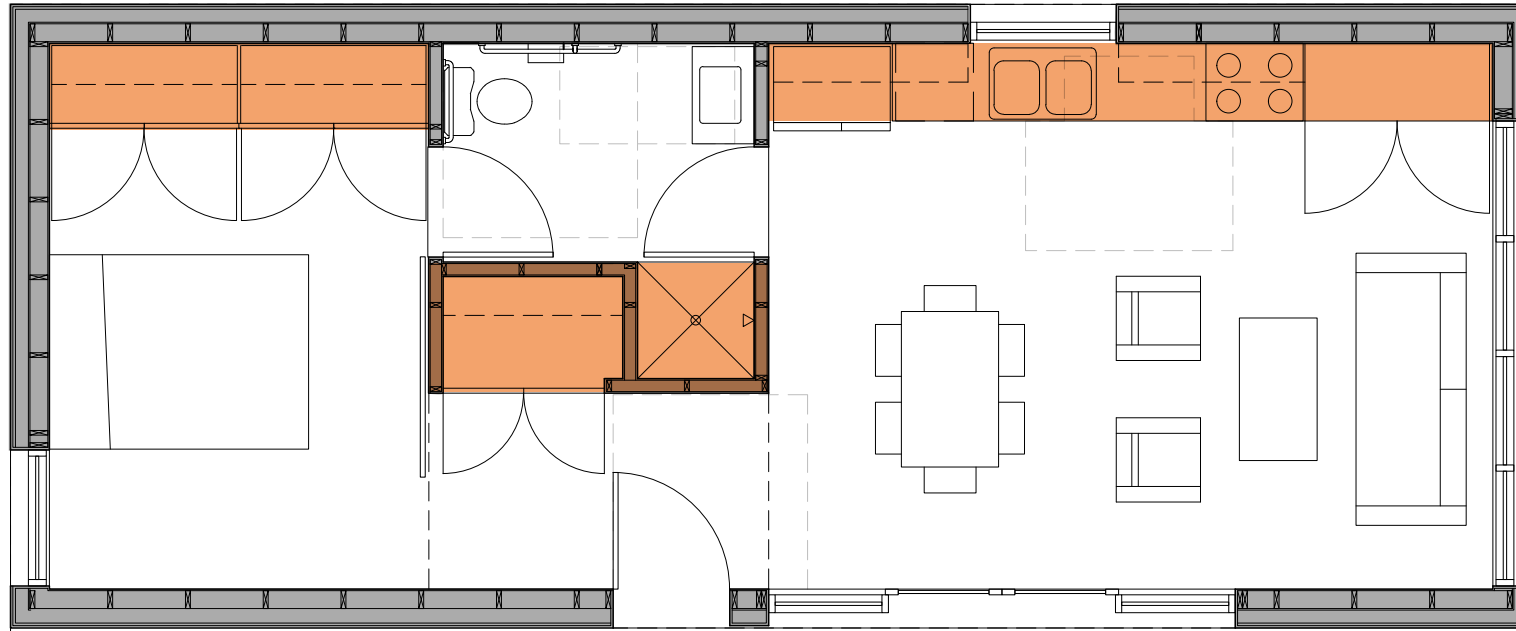
modular construction



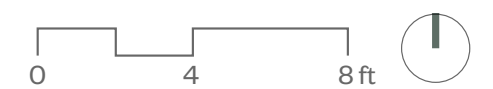
- 1 entry
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- 3 living
- 4 cooking
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- 6 sleeping



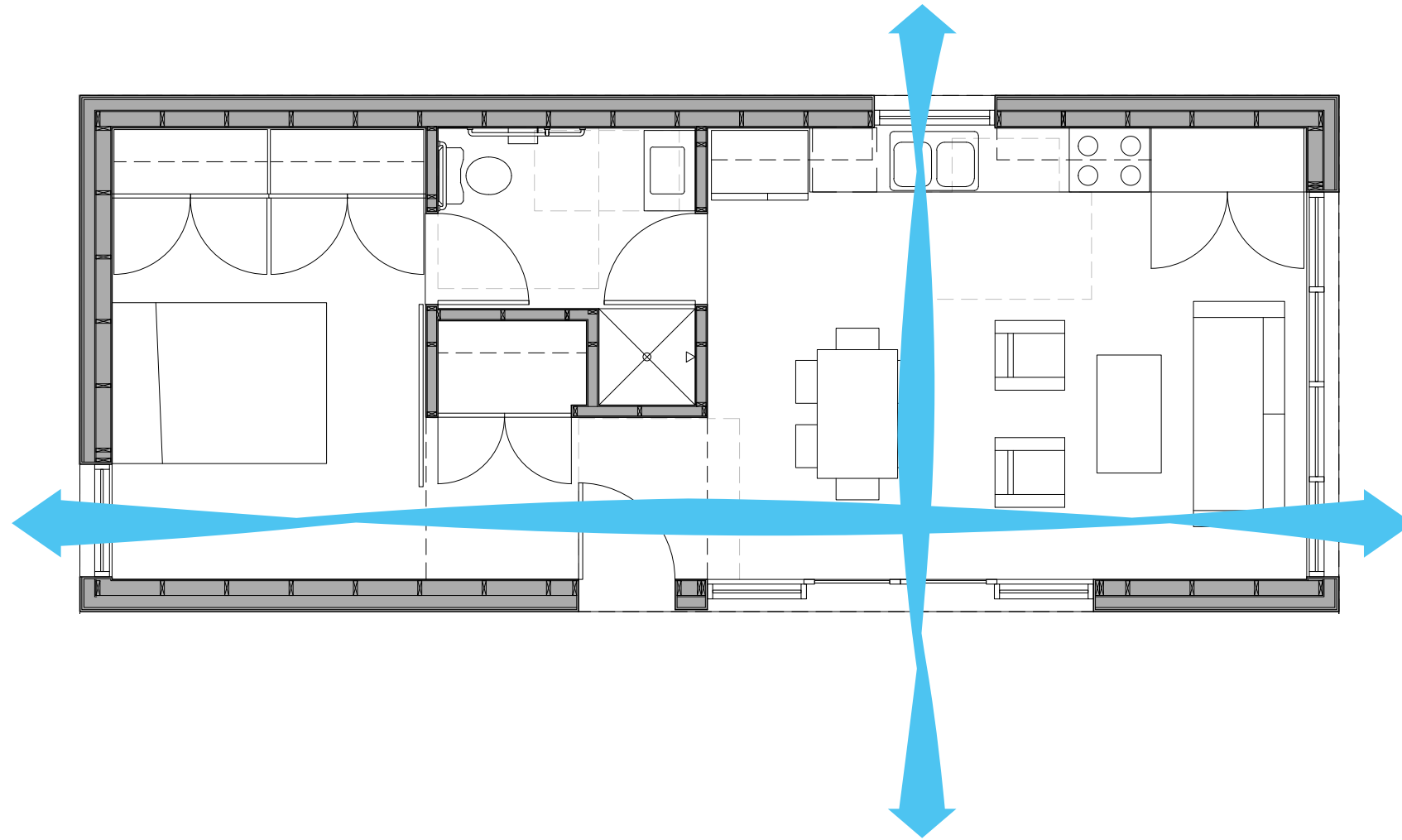
integrated storage



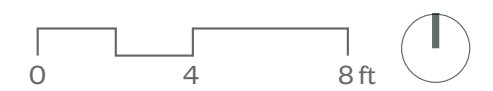
- 1 entry
- 2 storage
- 3 living
- 4 cooking
- 5 bathroom
- 6 sleeping

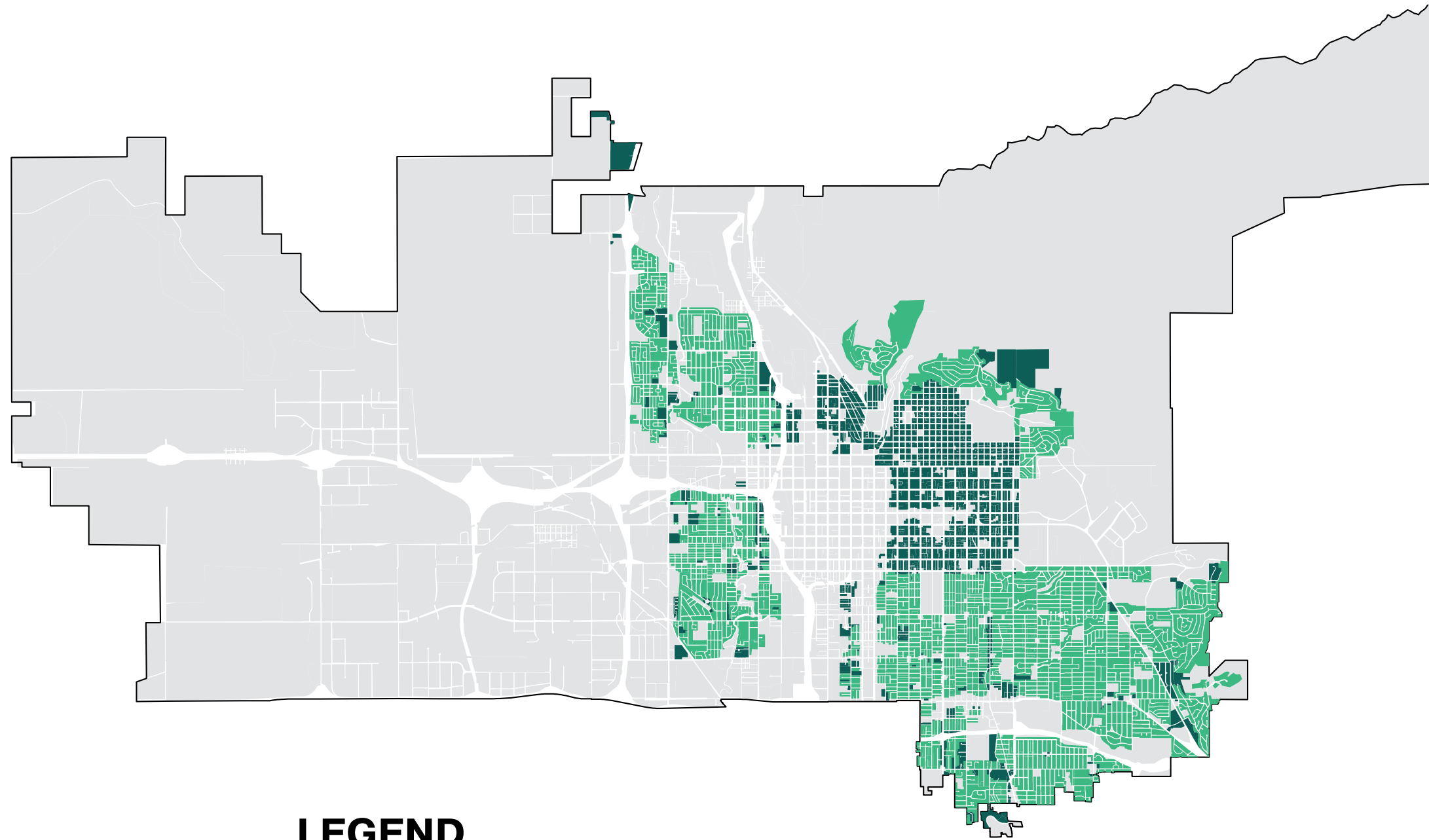


cross ventilation





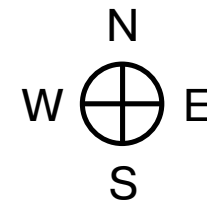
- 1 entry
- 2 storage
- 3 living
- 4 cooking
- 5 bathroom
- 6 sleeping

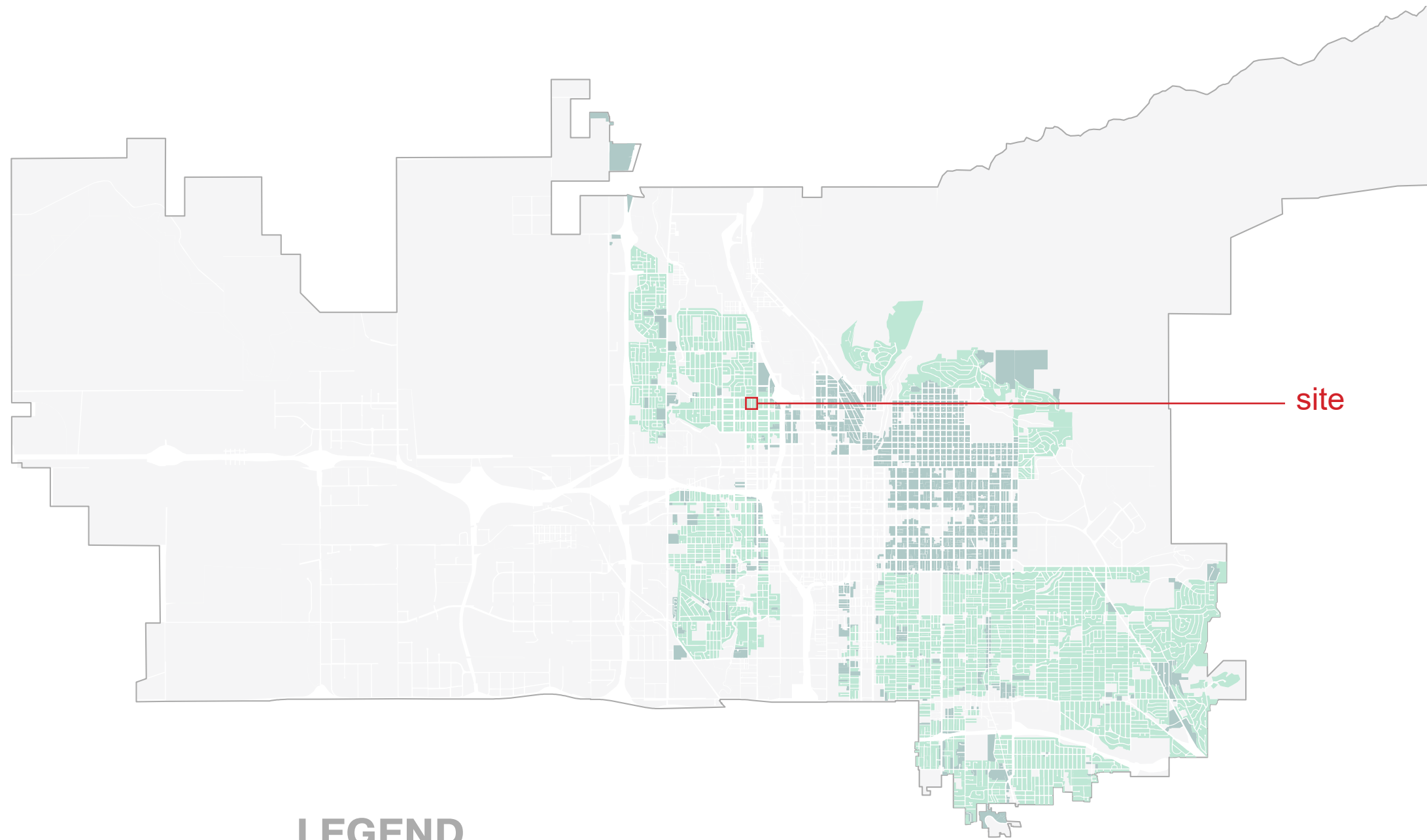




LEGEND

-  PERMITTED USE
-  CONDITIONAL USE





LEGEND

- PERMITTED USE
- CONDITIONAL USE



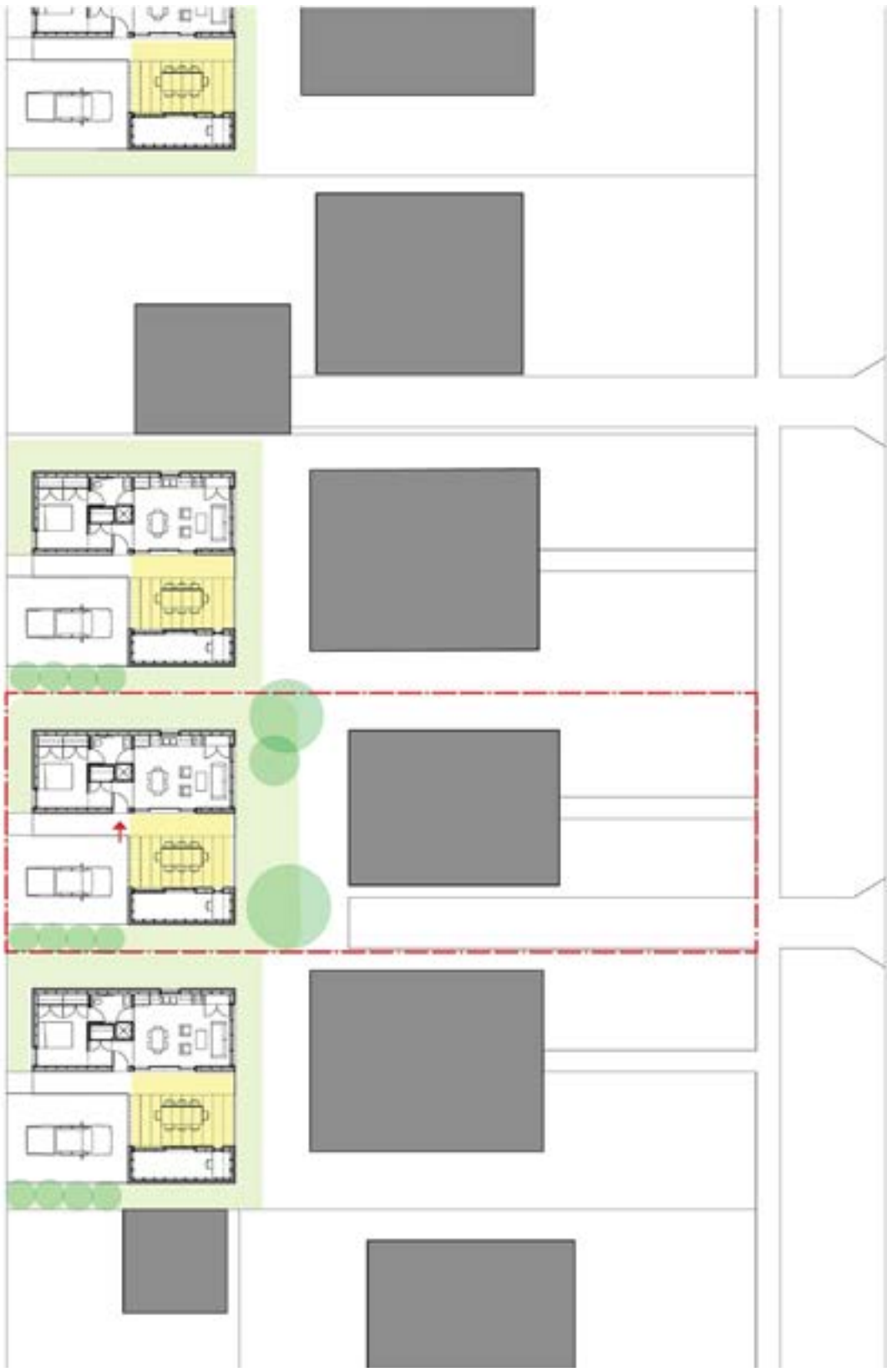




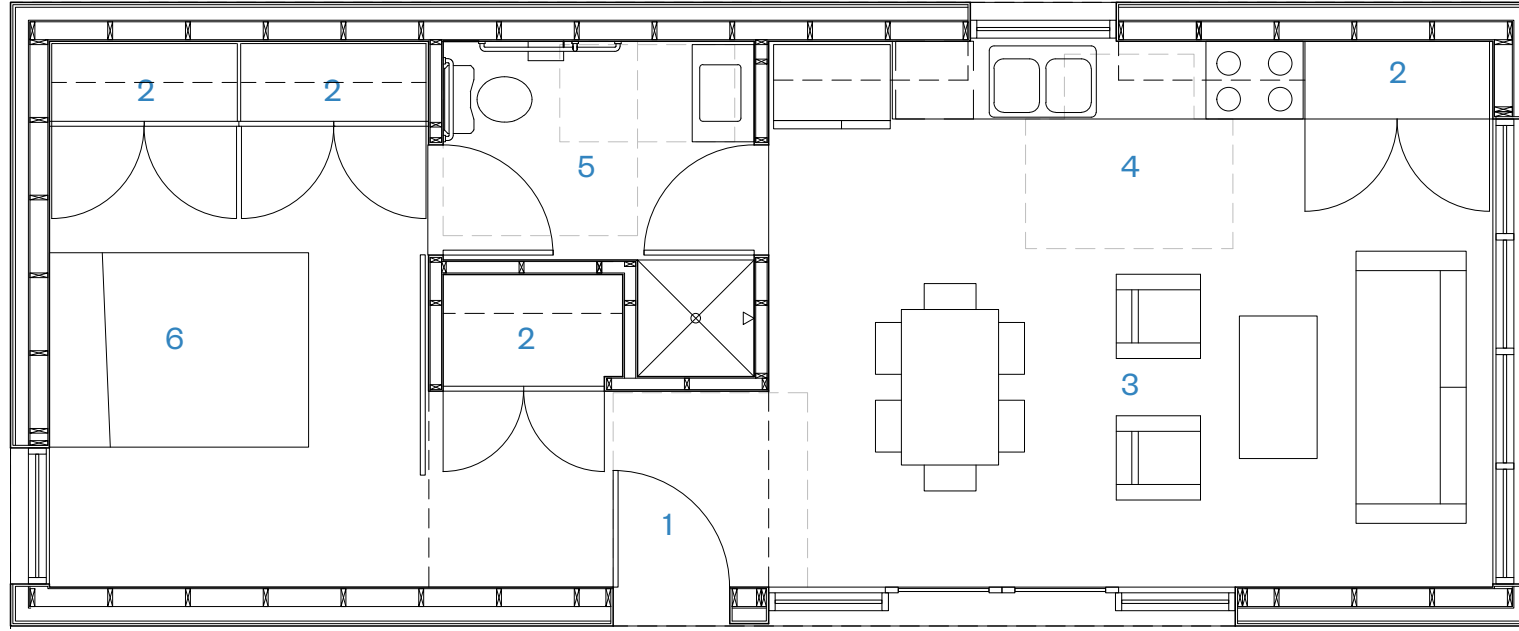
street



alley

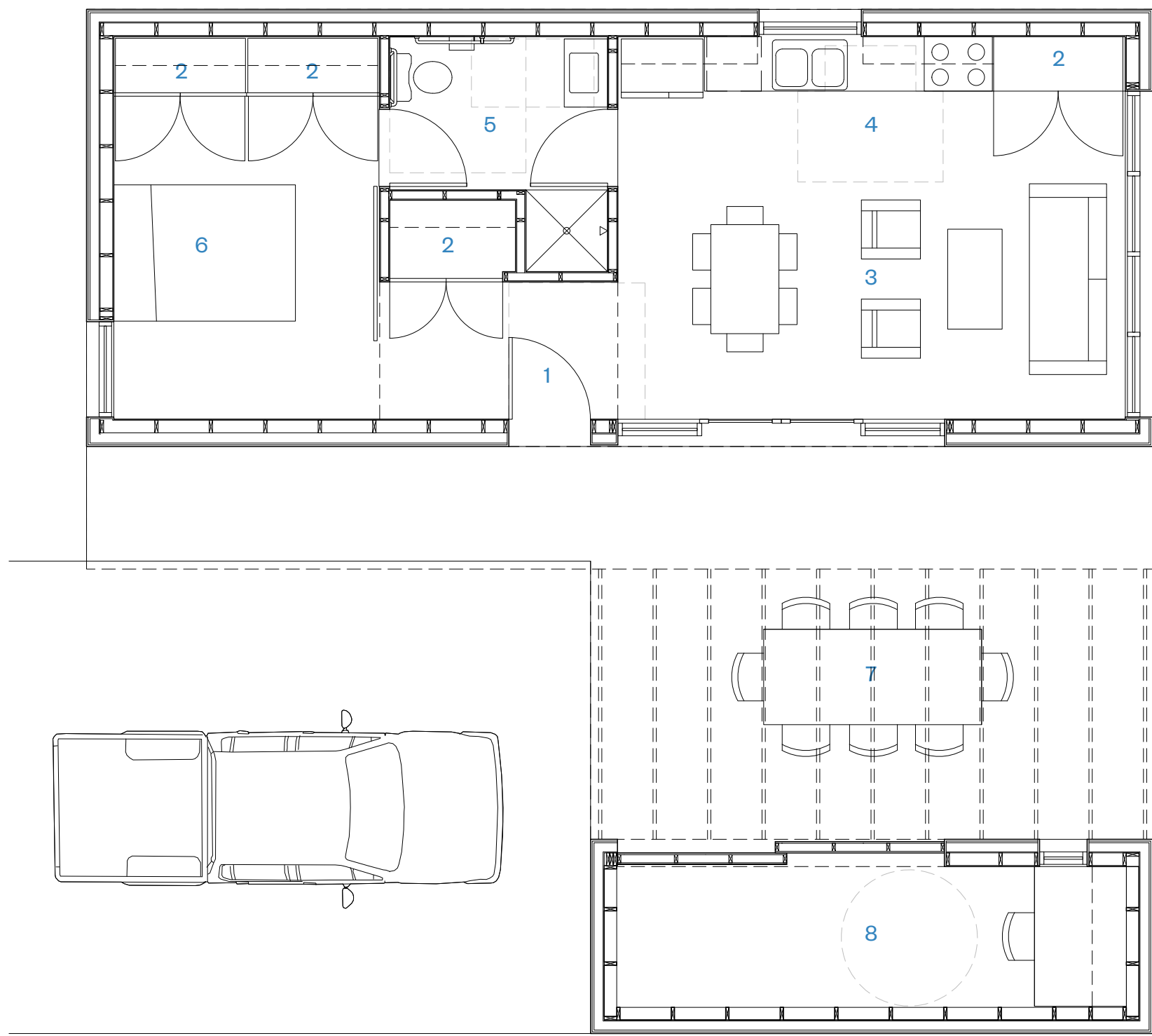


street



- 1 entry
- 2 storage
- 3 living
- 4 cooking
- 5 bathroom
- 6 sleeping

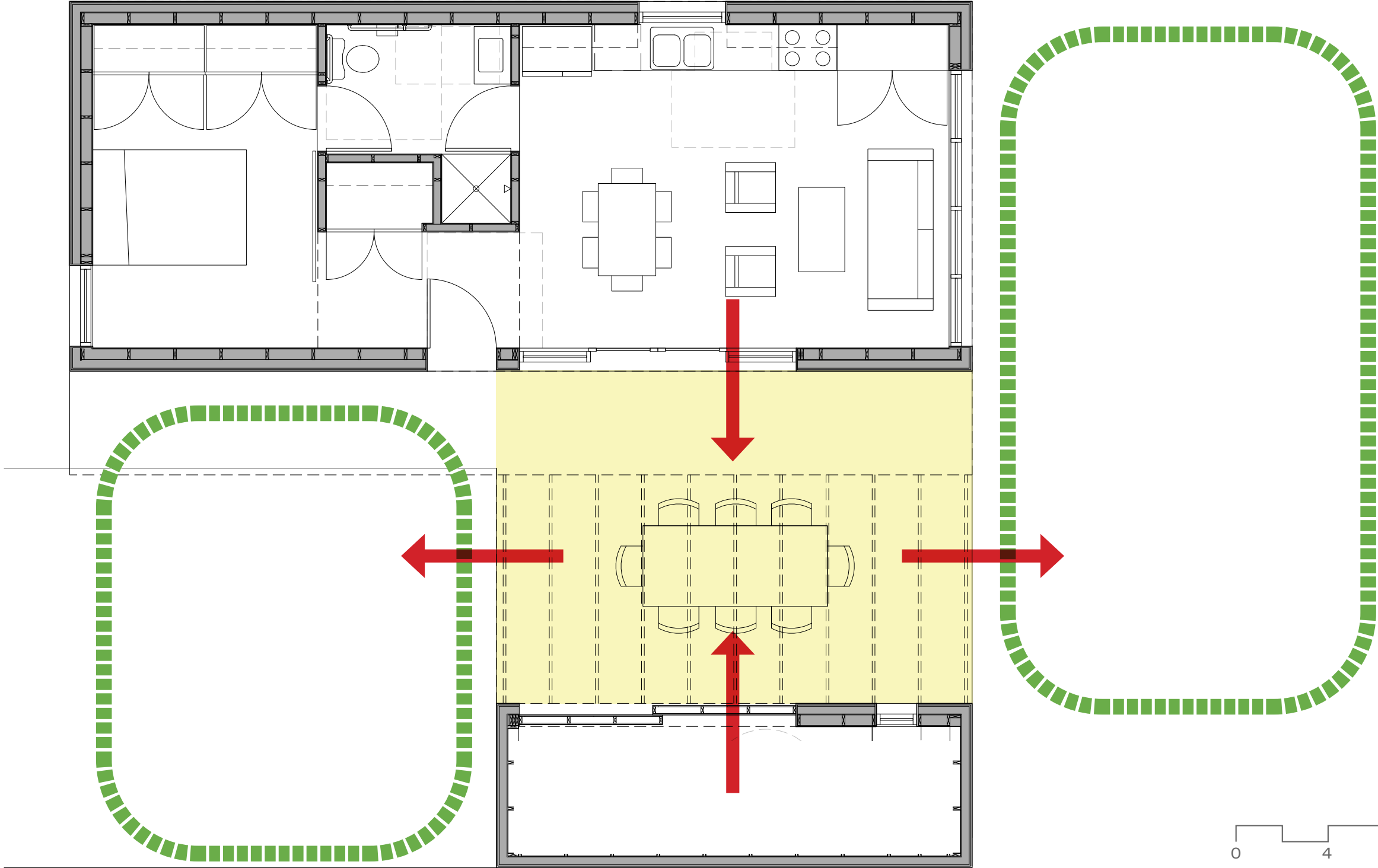




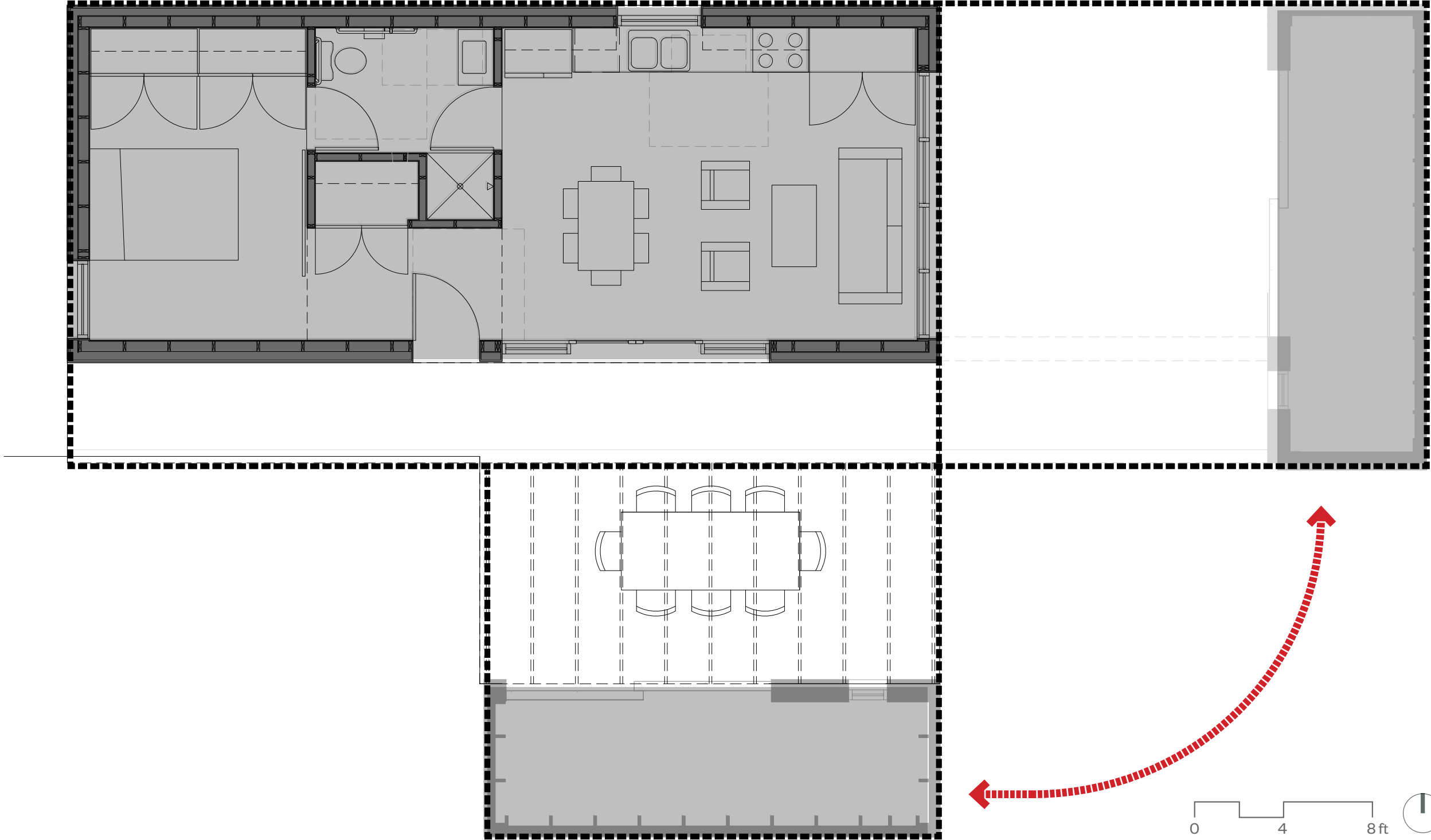
- 1 entry
- 2 storage
- 3 living
- 4 cooking
- 5 bathroom
- 6 sleeping
- 7 birch
- 8 shed/workspace

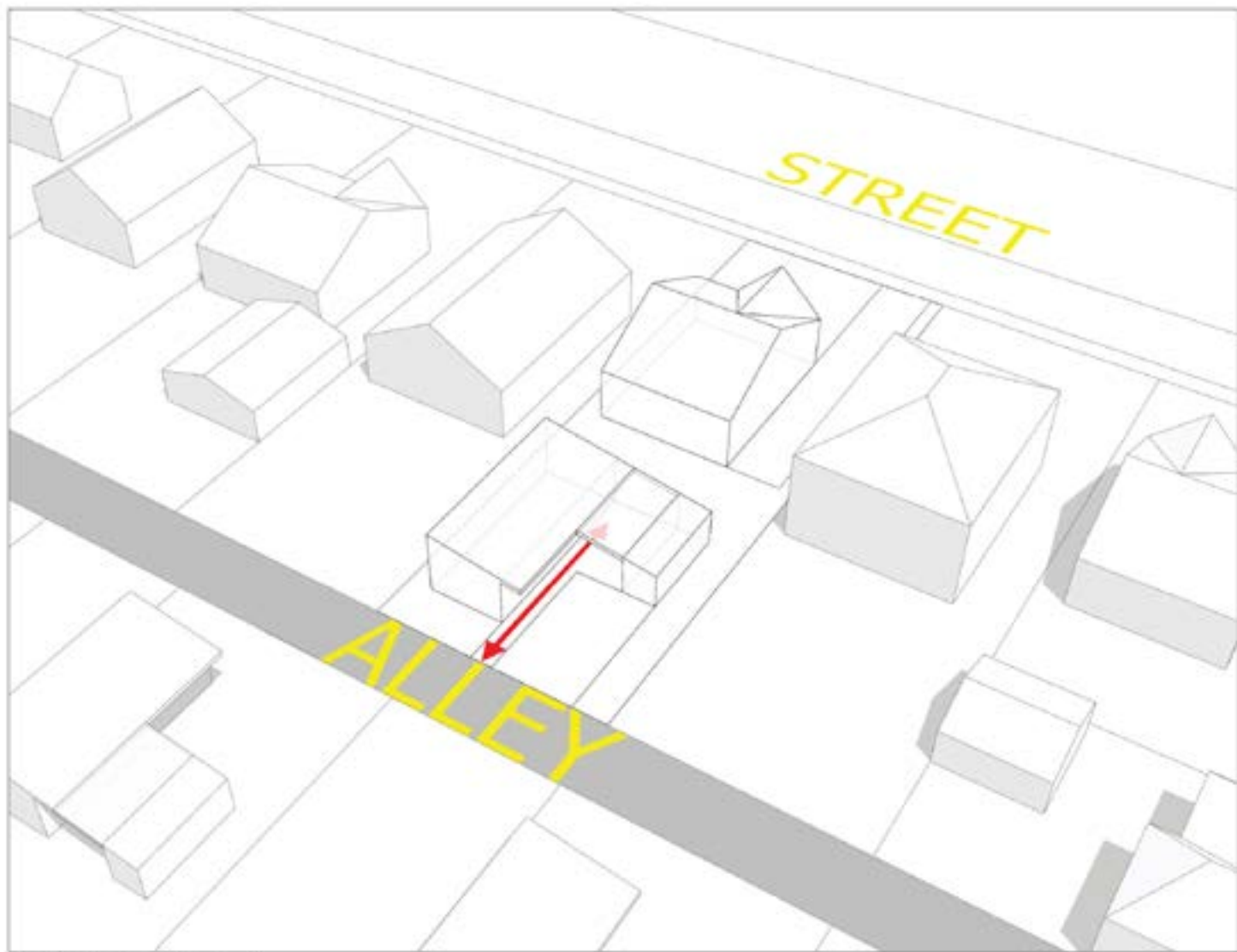


bi-directional connections



site flexibility

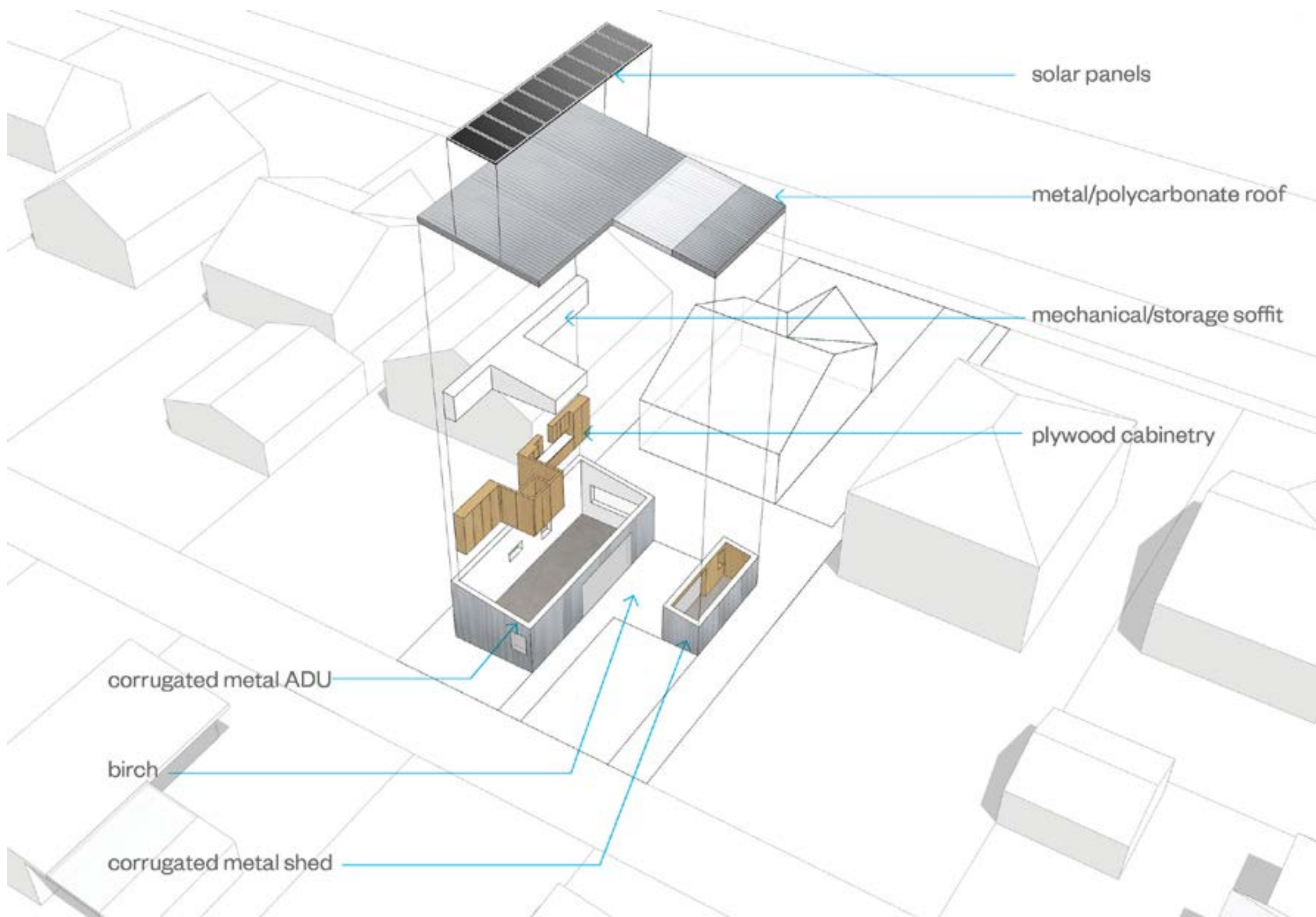




frontage engagement



shared lot and individual domains



solar panels

metal/polycarbonate roof

mechanical/storage soffit

plywood cabinetry

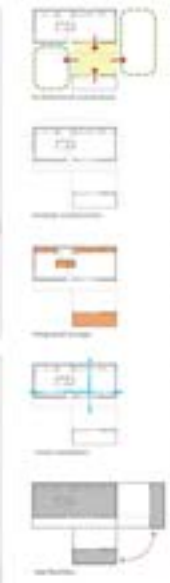
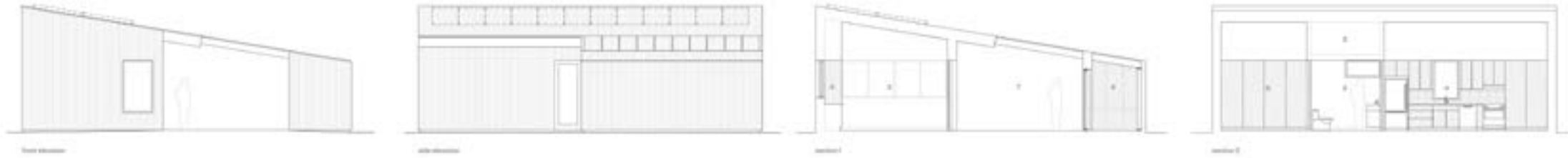
corrugated metal ADU

birch

corrugated metal shed



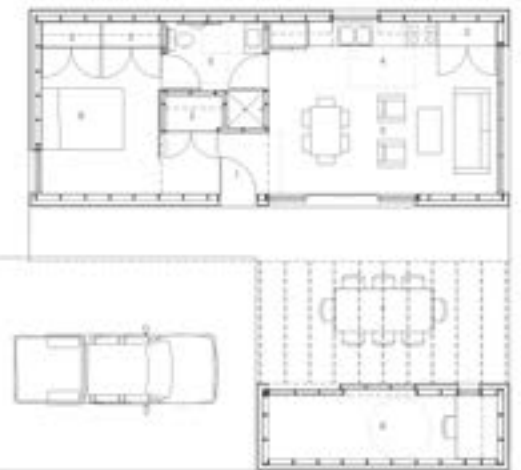




Birch is an innovative, affordable Accessory Dwelling Unit that is adaptable to any site but is tailored to take advantage of the rear lot access of residential alley sites within Salt Lake City. It maximizes the potential for new types of urban living within these traditionally under-utilized backyard spaces, creating density and an affordable housing option within existing neighborhoods while maintaining the existing housing stock and character of the street frontages.

In our current pandemic context of spending drastically increased time where we live and often blurring the boundaries between home, office, and school it is particularly timely to rethink the idea of "home". The design of the Birch ADU is affordable, flexible, sustainable, and accessible, all in the service of enhancing and supporting flexible, long-term livability for its occupants.

To address the potential of various sites, our proposed design is a limited "kit of parts" including a structure for living, an exterior storage shed, and a covered outdoor space in-between. This covered space, the "birch" (3D-directional porch), forms the heart of the design by creating a flexible covered outdoor space that extends the living space and is both sheltered and connected. When thoughtfully sited and configured to the unique characteristics of its site, the "kit of parts" can adapt to and engage its specific context, both built and natural, and work to create community inside and out.



birch Alley Infill ADU Empowered Living Competition Salt Lake City

questions

Design Development Cost Projection

Scope of Work:	Room Area
Building Area	
Conditioned	650
Unconditioned (garage/storage)	150
Building Total:	800 sf

	cost	/sf
DIRECT CONSTRUCTION COSTS:		
DIVISION 01 - GENERAL CONDITIONS	\$ 6,577	\$ 8
DIVISION 02 - EXISTING CONDITIONS	\$ -	\$ -
DIVISION 03 - CONCRETE	\$ 9,133	\$ 11
DIVISION 05 - METALS	\$ 7,108	\$ 9
DIVISION 06 - WOOD, PLASTICS AND COMPOSITES	\$ 33,930	\$ 42
DIVISION 07 - THERMAL AND MOISTURE PROTECTION	\$ 21,728	\$ 27
DIVISION 08 - OPENINGS	\$ 12,960	\$ 16
DIVISION 09 - FINISHES	\$ 18,648	\$ 23
DIVISION 10 - SPECIALTIES	\$ -	\$ -
DIVISION 11 - EQUIPMENT	\$ 3,700	\$ 5
DIVISION 12 - FURNISHINGS	\$ 2,240	\$ 3
DIVISION 13 - SPECIAL CONSTRUCTION	\$ 10,900	\$ 14
DIVISION 22 - PLUMBING	\$ 7,600	\$ 10
DIVISION 23 - HVAC	\$ 4,550	\$ 6
DIVISION 26 - ELECTRICAL	\$ 3,250	\$ 4
DIVISION 31 - EARTHWORK	\$ 3,500	
DIVISION 32 - EXTERIOR SITE IMPROVEMENTS	\$ -	
SUBTOTAL - DIRECT CONSTRUCTION COST	\$ 145,825	\$182
MARGINS AND ADJUSTMENTS		
Insurance	2%	\$ 4,177
Construction Contingency (includes market volatility)	2%	\$ 2,917
Design Contingency	1%	\$ 1,458
Estimating Contingency	0%	\$ -
Escalation Spring 2022	2%	\$ 2,917
SUBTOTAL	7%	\$ 11,469
TOTAL CONSTRUCTION COST	\$ 157,294	\$197
OWNER'S SOFT COSTS		
Permit Fees	2%	\$ 3,146
Architectural Service Fees		\$ -
Owner Contingency	0%	\$ -
Owner Soft Costs		\$ 3,146
OVERALL TOTAL PROJECT COST	\$ 160,440	

Birch ADU

Gross Sq Ft	624			
Net Sq Ft	624			
Units	1			
Boxes	1			
Description of Activity	Cost	Price Per Ft.	Per Box	Notes
Factory Set Up	\$500	\$1	\$500	
Framing Boxes	\$30,654	\$49	\$30,654	
Labor	\$8,735	\$14		
Materials	\$13,728	\$22		
Sigs	\$8,190	\$10	819	
Electrical	\$13,728	\$22	\$13,728	Labor and rough-in materials
Electrical Fixtures	\$2,335	\$2	\$2,175	Lighting package, ceiling fans
Plumbing	\$14,976	\$24	\$14,575	Fixtures included, figuring electric water heater
Plumbing Fixtures		\$0	\$0	Included in number above
HVAC	\$9,500	\$3	\$9,500	Assuming (2) mini splits and HRV system ducted through mechanical space as necessary, may want to put HRV in crawl space for conditioning.
Low-Voltage/Data	\$500	\$1	\$500	TV, Phone, Data only
Sprinklers	\$0	\$0	\$0	No pumps or storage tanks, R13 System
Insulation	\$4,992	\$8	\$4,992	Code compliant R-22 blown in walls, R-25 ceiling of mods, R-30 in Floors for 21" from exterior, R-11 sound batt at marriage lines
Drywall	\$9,360	\$15	\$9,500	5/8" smooth wall, primed
Paint	\$7,488	\$12	\$2,800	Prime all walls and wood work, final paint onsite
Exterior Door	\$11,850	\$4	\$1,850	Therma Tru entry door, Multi slide door at opening TBD
Windows	\$7,700	\$12	\$7,700	Alpen Fiberglass windows
Window Install	\$1,350		\$225	Sigs Flashing and tapes
WRB	\$2,496	\$4	\$2,496	Sigs WRB and tapes
Exterior Insulation	\$3,360	\$3	1,120	4" of rigid ext. Insulation
Furring Strips	\$2,800	\$3	\$2,800	3/4"x1 1/2" PT @ 15" O.C. with galvanized nails
Siding			\$0	No siding Provided
Interior Finish	\$27,900	\$45	\$27,500	
Cabinetry	\$21,000		\$5,500	Plywood box construction, simple design
Kitchen	\$12,000			
Bathroom	\$2,100			
Bedroom	\$0			
Entry	\$0			
Trim and Doors	\$5,400	\$10	\$2,800	1x3 case at bath door solid core door.
Accessories	\$500			
Tile Shower	\$9,500	\$15	\$9,500	
Tile	\$9,500		\$1,600	Allowance for shower and back splash, and bathroom floor for curbless shower
Countertops	\$7,300	\$12	\$7,300	Pebble Caesrstone 3cm undermount sinks
Kitchen	\$5,500		\$3,500	

Gross Sq Ft	624			
Net Sq Ft	624			
Units	1			
Boxes	1			
Bathroom	\$1,800			
Back Splash	\$0	\$0	\$0	
Kitchen	\$0		\$500	Tile
Bathroom	\$0		\$0	Tile
Appliances	\$9,748	\$15	\$2,500	See Appliance Tab for Model Numbers. Need specifications
Appliance Install	\$500			
Sub-Total	\$177,685	\$285	\$177,685	
Project Management	\$6,219		\$5,215	
Shop Space	\$9,828		\$9,828	
Weather protection	\$1,750		\$1,750	Shrink wrap boxes
Mobilize and Storage	\$0			
Tools/Equipment	\$312		\$312	
Profit/Overhead/Insurance	\$26,653		\$25,533	
Total	\$222,447	\$355	\$222,447	
Cot Tax	\$1,268		\$1,268	
Contingency 5%	\$11,122		\$11,122	
Transportation/Set/Crane	\$9,750		\$9,750	Allowance, need to confirm if we can ship 2 boxes on one truck still
Total Budget	\$244,567	\$362	\$244,567	
			\$0	

AREA MEDIAN INCOME

SALT LAKE CITY

< 30% AMI **Extremely Low-Income Seniors and People with Disabilities**
AT OR BELOW \$17,400 PER YEAR, POVERTY LEVEL, FOR AN INDIVIDUAL
People 65 years and older, people with disabilities, people who live on fixed income such as social security
Affordable Rent + Utilities: Less than \$578/mo

30% - 50% AMI **Low-Wage Workers**
\$17,400 - \$28,950 PER YEAR FOR AN INDIVIDUAL
Childcare Providers, Construction Worker, Ski Patrol, EMT, Fast Food Cook, Cashier, Visual Artist, Custodian, Hotel Clerk
Affordable Rent + Utilities: \$775/mo

50% - 80% AMI **Low-Income Families**
\$41,350 - \$66,150 PER YEAR FOR FAMILY OF 4
Teacher, Accounting Clerk, Legal Secretary, Physical Therapy Assistant, Truck Driver, Flight Attendant, Automotive Mechanic
Affordable Rent + Utilities: \$1,440/mo
Affordable Home: \$250,000

80% - 100% AMI **Moderate-Income Families**
\$66,150 - \$82,700 PER YEAR FOR FAMILY OF 4
Special Education Teacher, Architect, Electrician, Sales Representative, Chef, Chiropractor, Social Worker
Affordable Rent + Utilities: \$1,440 + /mo
Affordable Home: \$332,500

120% - 150% AMI **High-Income Families**
\$99,240 + PER YEAR FOR FAMILY OF 4
Real Estate Development Manager, Chemist, Electrical Engineer, Human Resource Manager, Nurse Practitioner, Software Developer
Affordable Rent + Utilities: \$2,000 + /mo
Affordable Home: \$415,000



birch Alley Infill ADU

thank you