

Redefining AFFORDABLE HOUSING

Culturally driven place-making is the new paradigm
for affordable housing in America today



why



how



where

A unique collaboration between local advocates,
architects and university students, who are working
a process that can serve as a blueprint for redefining
healthy housing and advocacy through resilient
design methods



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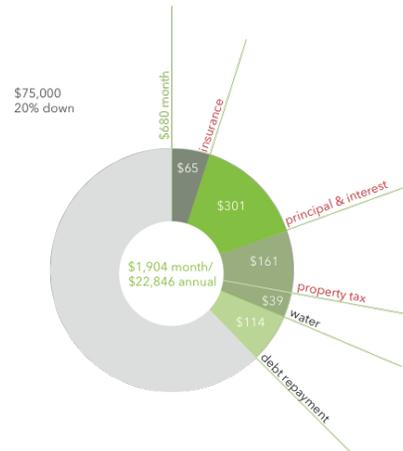
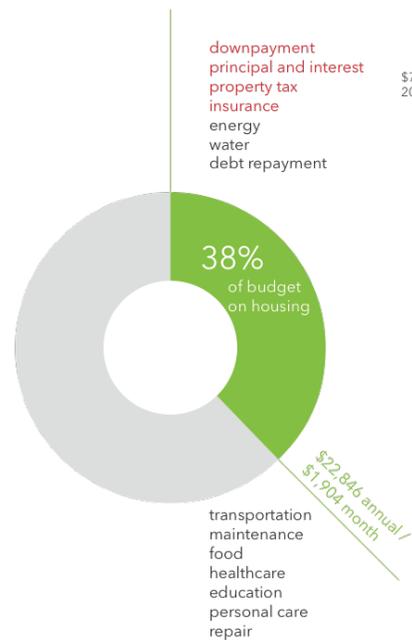
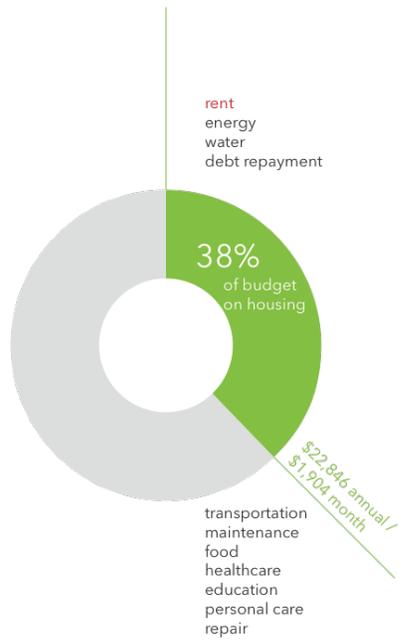
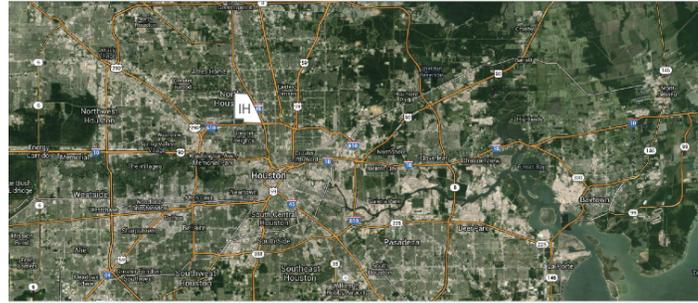
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AMI HOUSTON

\$63,900

80% AMI HOUSTON

60% AMI HOUSTON

MI SUPERNEIGHBORHOOD #13

\$22,848

38% of IH MI per month

\$680





Place-Based Solutions

- Climate
- Culture



Systems Thinking

- Parts Interconnected
- Feedback Loops / Dynamic v. Static



Ecological Urbanism

- Public Health Indicators / Environmental (air, water, daylight, nature, food, traffic, social)
- Responsible Resourcing (building materials, energy, regional disaster preparedness)



Stakeholder Voice

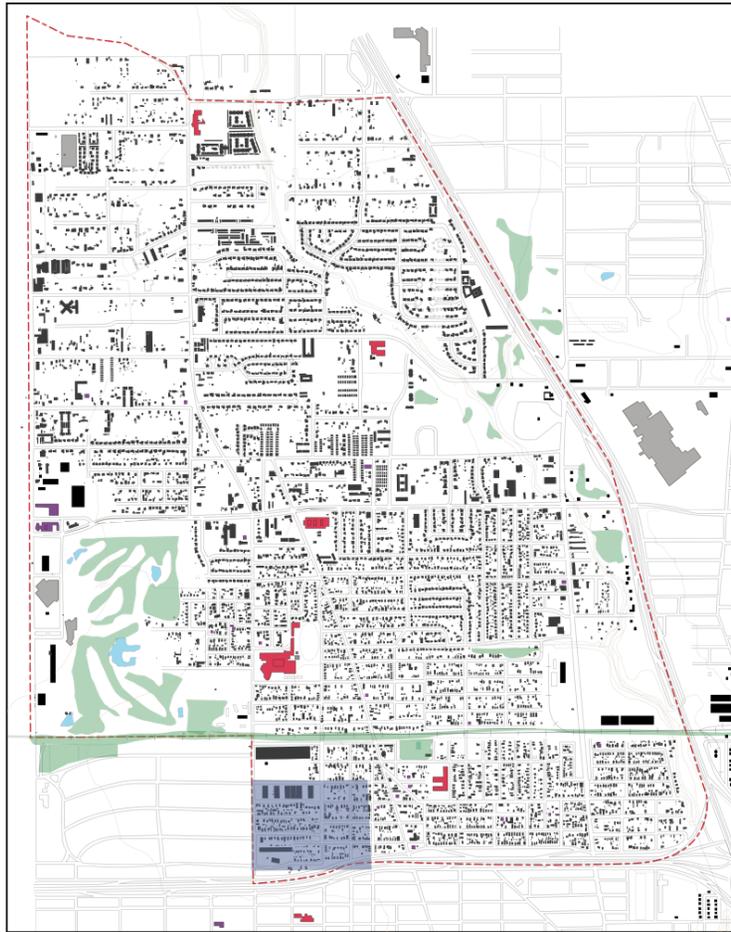
- Resident Engagement
- User-based best practices



Public Interest Design

- Ethical Design & Design Advocacy
- Programming / Place-making





Area: 3.390 square miles

Population: 13,404

Population density:

Independence Heights: 3,954 people per square mile
 Houston: 3,704 people per square mile

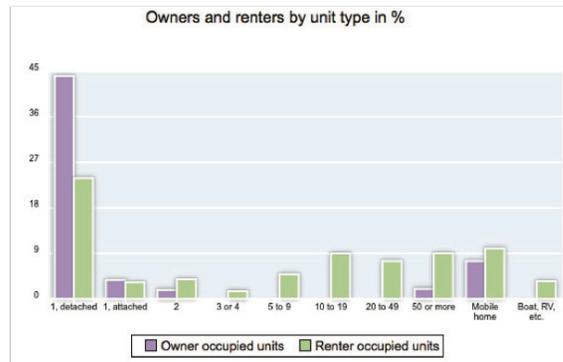
Housing prices:

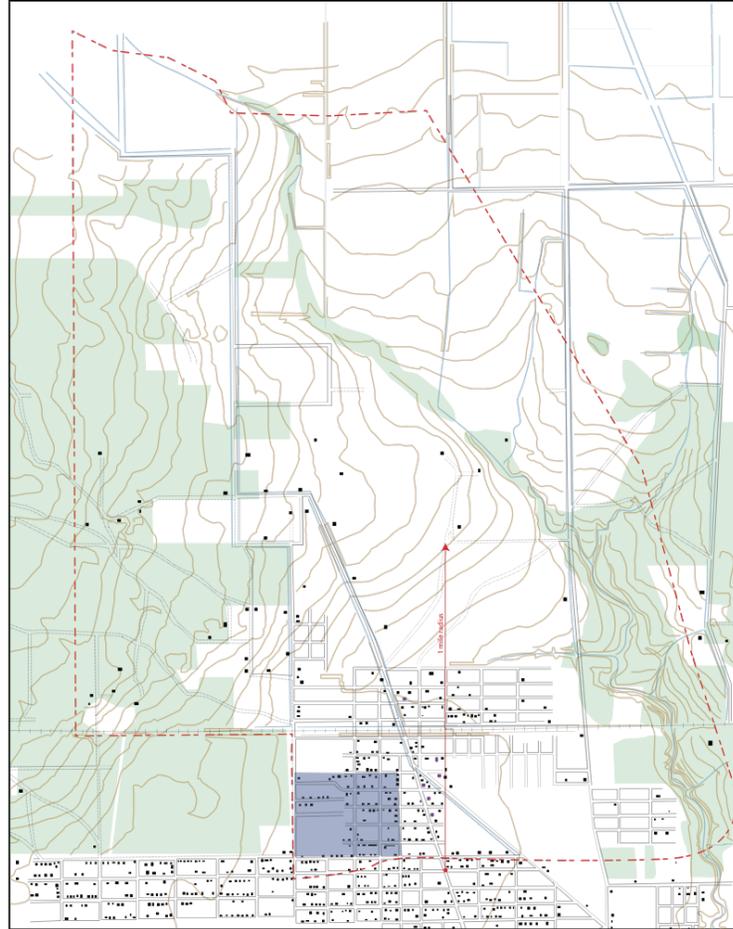
Average estimated value of detached houses in 2010 (65.8% of all units):

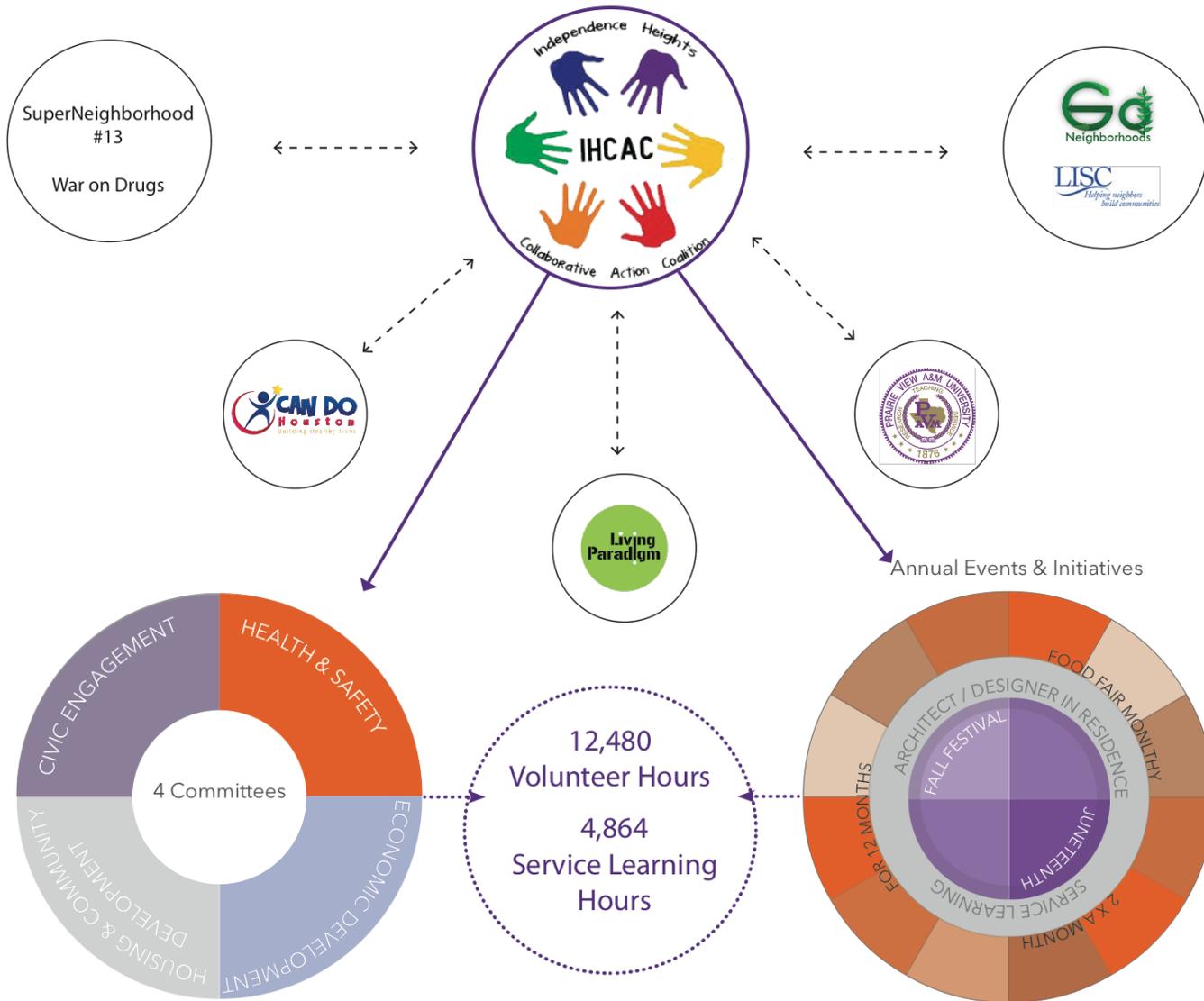
Independence Heights: \$90,776
 Houston: \$200,859

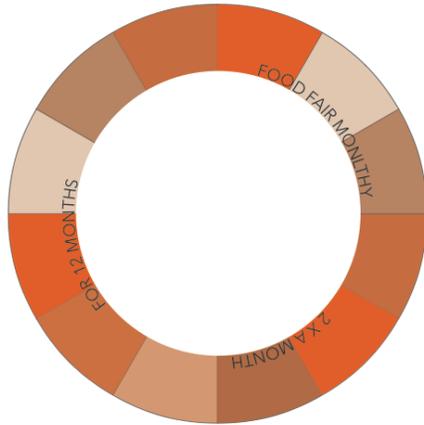
Average estimated value of townhouses or other attached units in 2010 (2.5% of all units):

This neighborhood: \$202,372
 city: \$194,437









FOOD FAIRS, HEALTHY EATING & GARDEN DEMONSTRATIONS



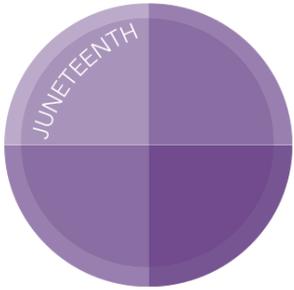


ANNUAL FALL FESTIVAL BLOCK CELEBRATION & LOT CLEAN UP



LOT CLEANUP





Committee #1: Economic Development



Free Financial Literacy Workshop

April is National Financial Literacy Month!
JOIN US for two important sessions focused on developing a mindset to change your financial future. Expect to receive valuable tips and tools that lead to wealth!

Yale Street Baptist Church
4315 Yale St
Houston, TX 77018

Friday, April 10, 2015: The Foundation
6:00pm - 8:00pm

How to Set Goals and Create a Spending Plan for You and Your Family
The Debt Trap! How to Get Out and Stay Out of Debt

Saturday, April 11, 2015: Building Financial House
4:00pm - 6:00pm

The Action Steps from Budgeting to Investing
What It Means to Leverage Your Resources to Build Wealth



Presented by Marquelle and Grace Sanders
832-656-7515

Committee #2: Housing & Comm Development



Affordability Framework: Income

80% Area Median Income

60% Area Median Income

Minimum Wage

alth



Affordability Framework: Costs

Upfront Home Cost

Down Payment

Interest

Property Taxes

Insurance

Furnishings

Utility Costs

Maintenance Cost

Transportation Cost

Food Cost

Daycare Cost

Health Cost

Disaster Recovery

alth



Affordability Framework: Strategies

Share Land/Pocket Neighborhoods (reduced land costs, property taxes)

Reduce House Size (reduced upfront, utility, cleaning, maintenance costs)

Share Extra Space (gathering spaces, entertainment rooms, guest rooms)

Share Resources (lawn equipment, cleaning equipment, laundry, transportation)

Build for Resilience/Passive Survivability (reduced shock from disruption, reduced insurance costs)

Design for Energy Independence (eliminate power costs)

Design for Water Independence (eliminate water utility costs)

Low-Impact Development (reduce flooding & associated costs)

Design for Walk/Bike-ability (reduced transportation, health care costs)

alth Design for Urban Farming (improve food for reduced cost, reduced health care costs)

Develop Community Support (reduced day care, support through everyday chores & disruptors)



Sustainability Framework

Phase One:

Sustainability as a Steady State of Equilibrium

- Assumes that we can stay within a sustainable threshold by balancing inputs and outputs. Focus is on having zero impact or being neutral.
- Example: Net Zero Energy Design
- Shortcomings: Equilibrium, or a steady state, is unachievable in a living world. Further fails to take into account the necessity of disruption, or disequilibrium, in living processes.

Phase Two:

Sustainability as Resilience

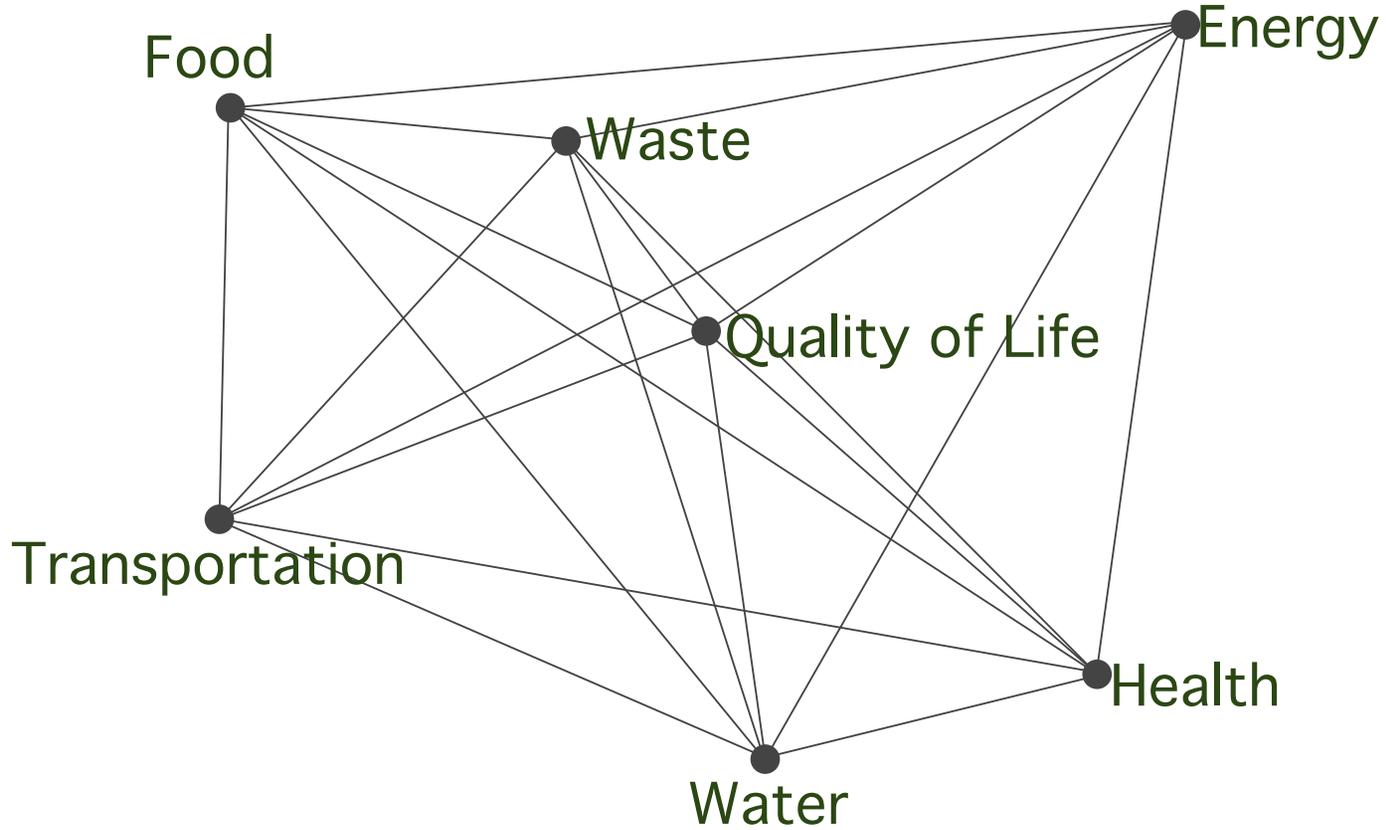
- Goal is to maintain the health of the system in the face of disruptions. Rather than focusing on a steady state, the mindset shifts to building the capacity for a multiplicity of responses to nonlinear change.
- Example: Power Grid Resilience
- Shortcomings: Arises out of a catastrophic mindset that can result in a game of avoidance and rapid recovery. This bunker mentality can inadvertently contribute to instability if the larger system is sacrificed to meet what are perceived to be more immediate local needs.

Phase Three:

Sustainability as Co-Evolution (Regenerative)

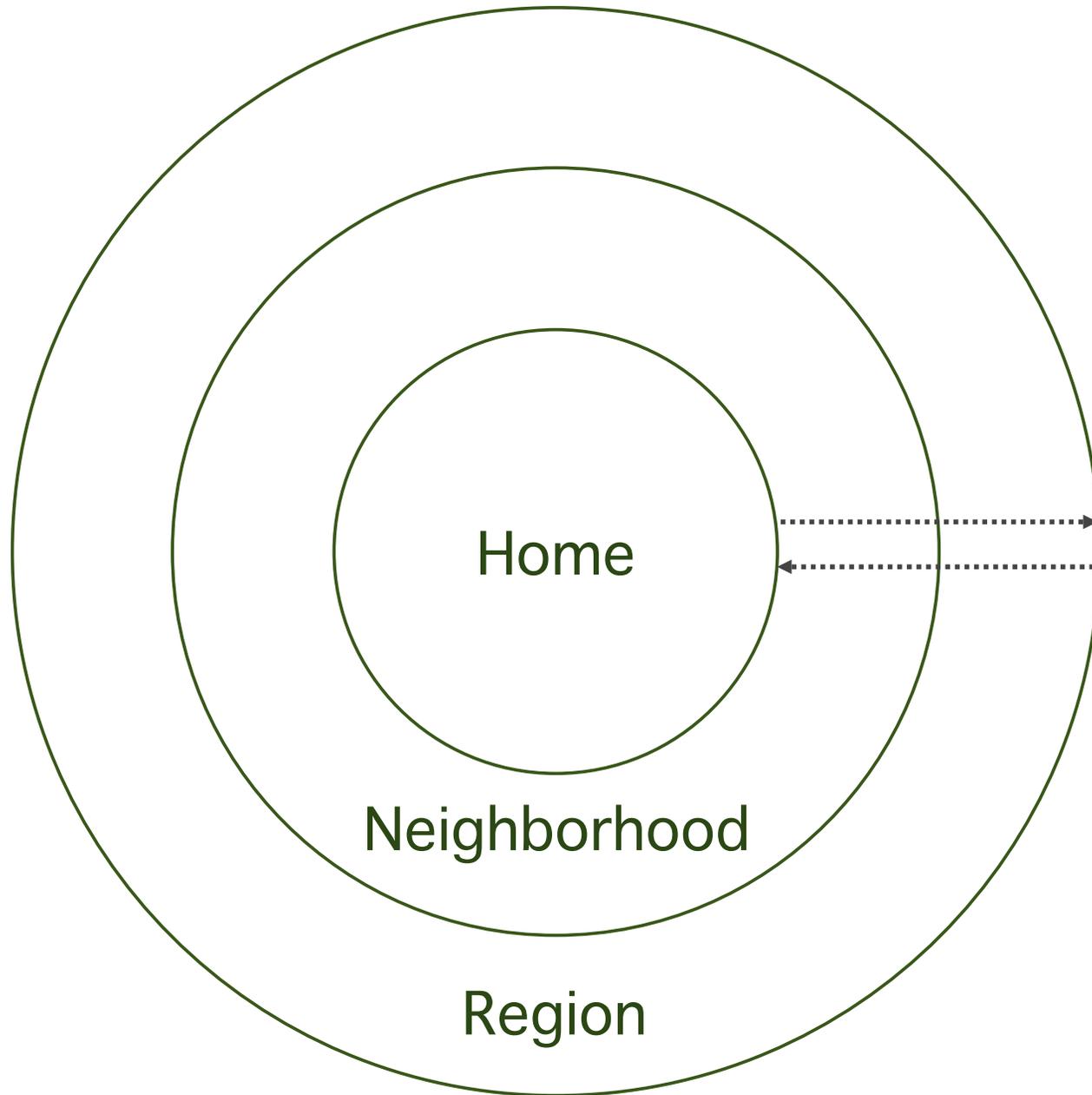
- Humans take an integral role as one of many players in the natural world. This represents a shift to an ecological worldview as opposed to man vs. nature. The role that we play is value-adding, rather than an attempt to be either neutral or adaptive.
- Example: Biodigester + Fuel Cell Energy System

Systems Framework



alth

Nested Wholes Framework



Post-Disaster Recovery

Water
Food
Sanitation

Houston Ike Stats

399,160 homes damaged

2,300 families requested assistance

only 25% qualified, and only half of those were assisted.

Housing

Different Outcome?

Same Outcome?



Pre-Disaster Preparation

Water
Food
Sanitation
Shelter

Energy
Health
Wellbeing
Transportation
Community

Ecology



Regenerative Community Development Community Engagement & Story of Place



Regenerative Community Development Community Engagement & Story of Place

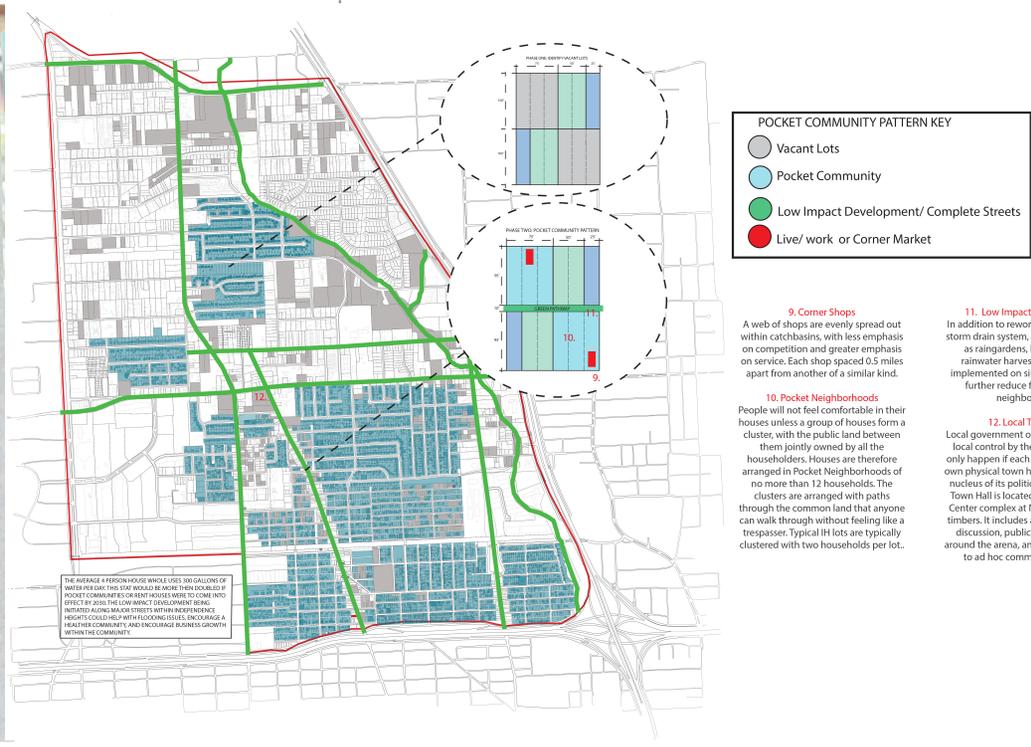


Jazmin: "As your driving around and you see different buildings that are falling apart, or you see buildings that are empty, how does that make you feel about your neighborhood?"

Billie: "It saddens me because this is my life, this has been my life, and for the buildings to go down, your tearing down my memories. They are all gone."

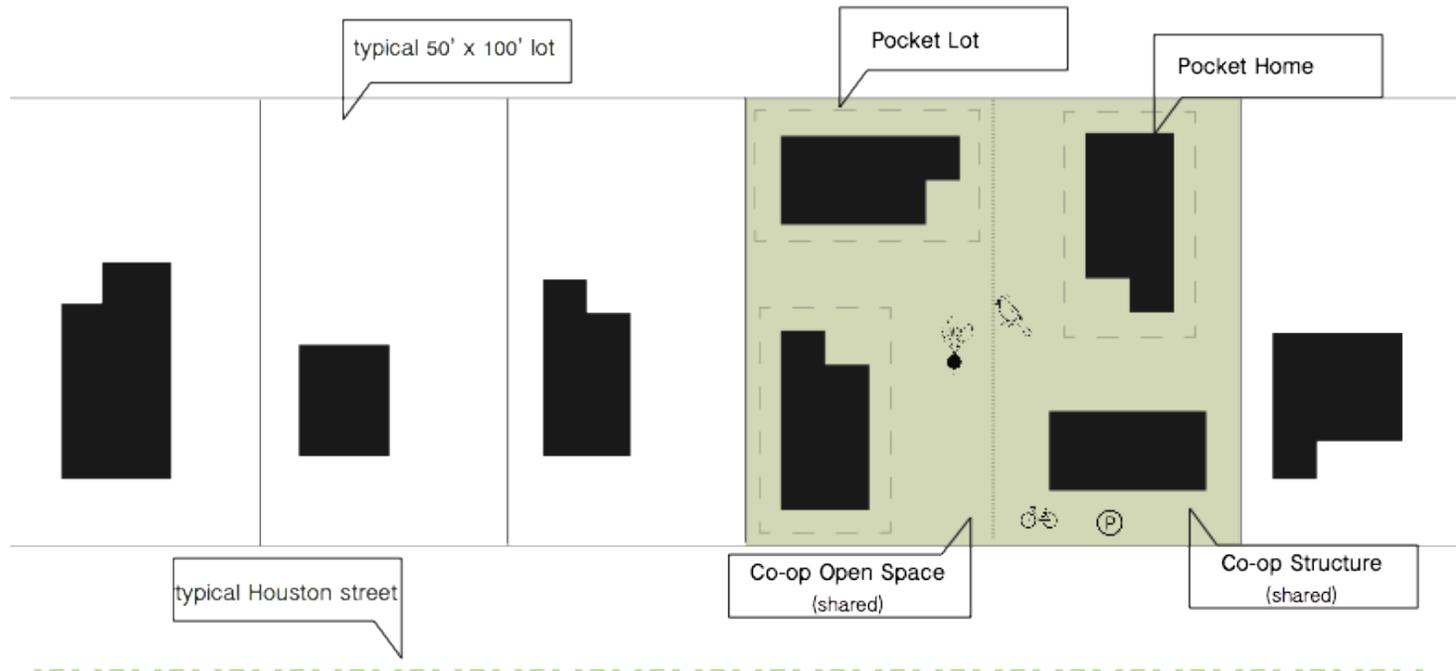


Regenerative Community Development Community Engagement & Story of Place



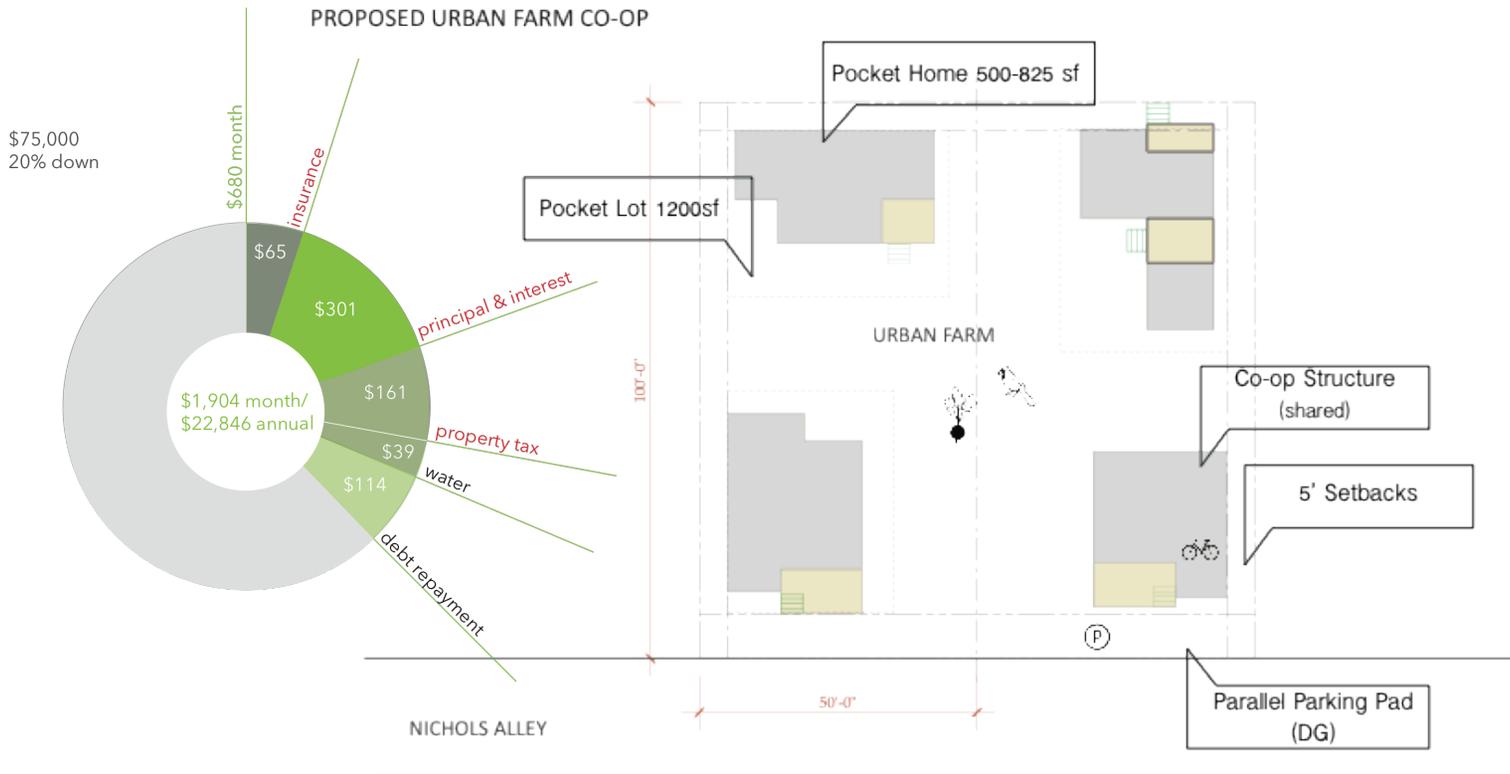
Pocket Communities

2015 LOT ANALYSIS | Tiny / Micro Pocket Homes and Communities



Pocket Communities

Houston Hope Precedent



Pocket Communities

Historic Precedent

EXISTING



Pocket Communities



-  SINGLE FAMILY HOME
-  COMMUNITY BUILDING



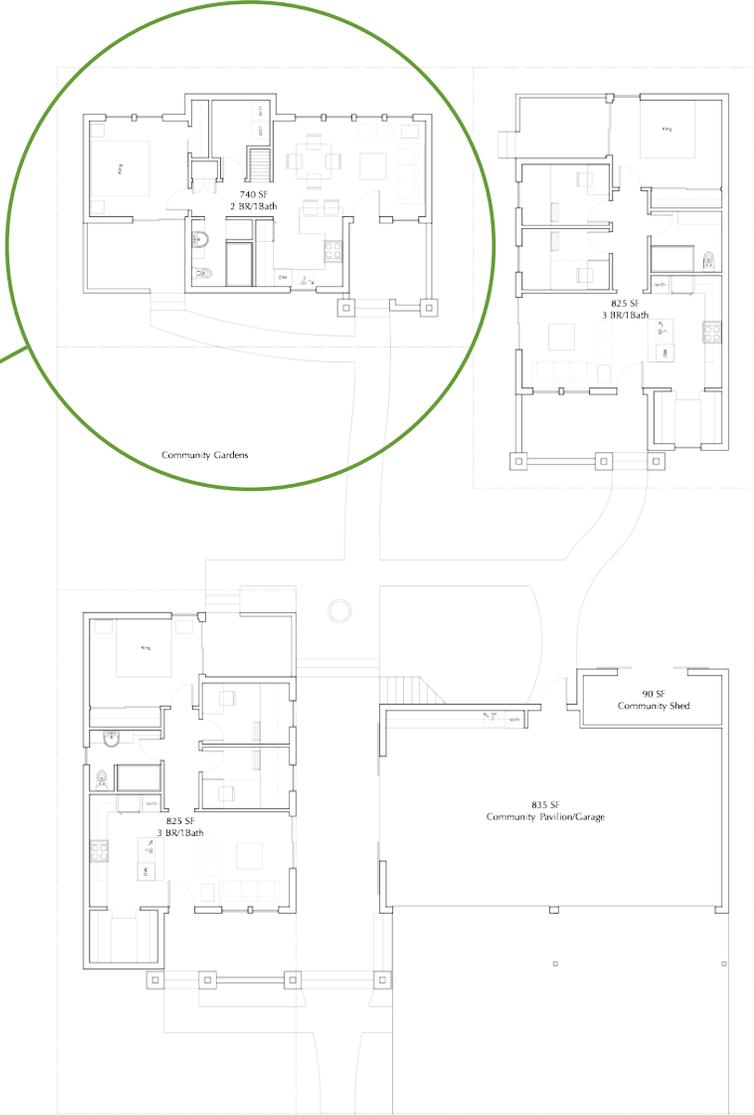
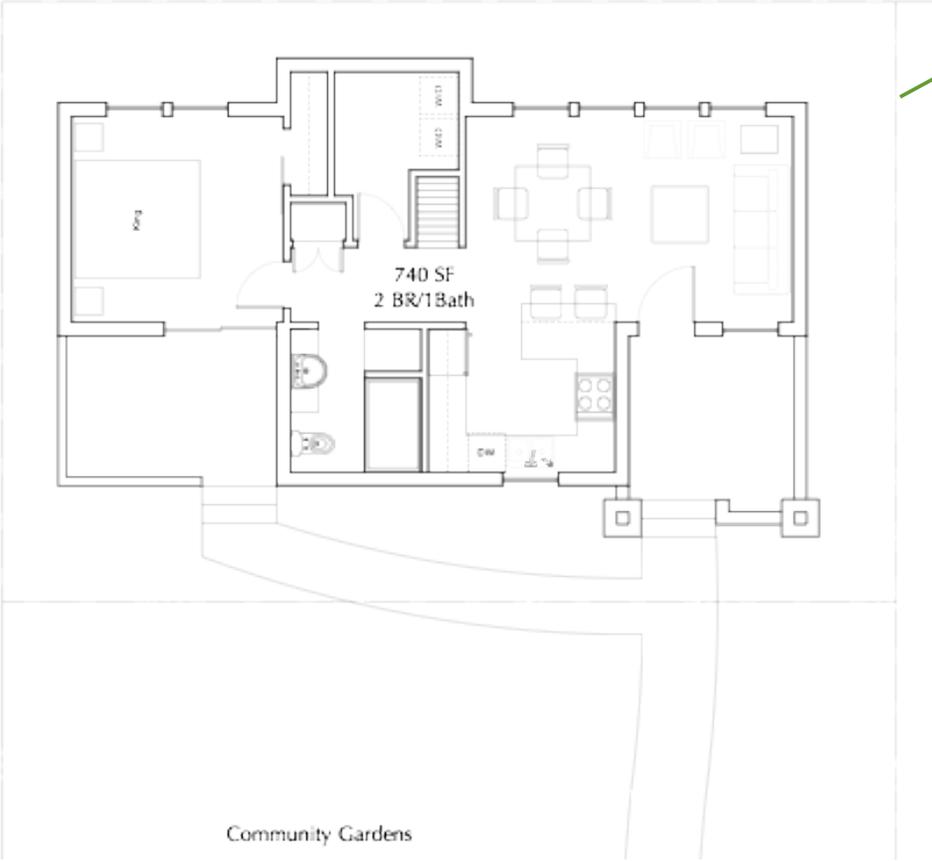
Small Homes



architend



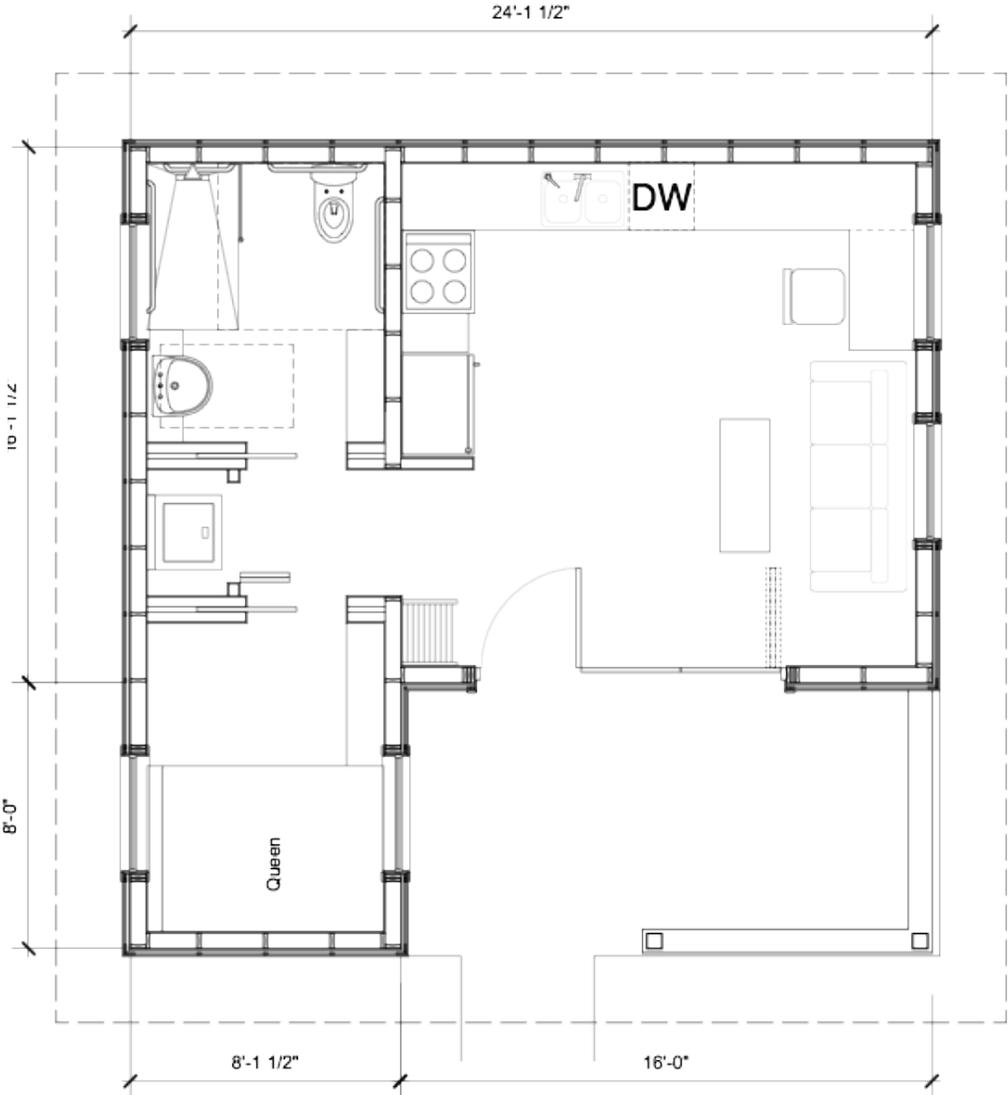
Small Homes



architend



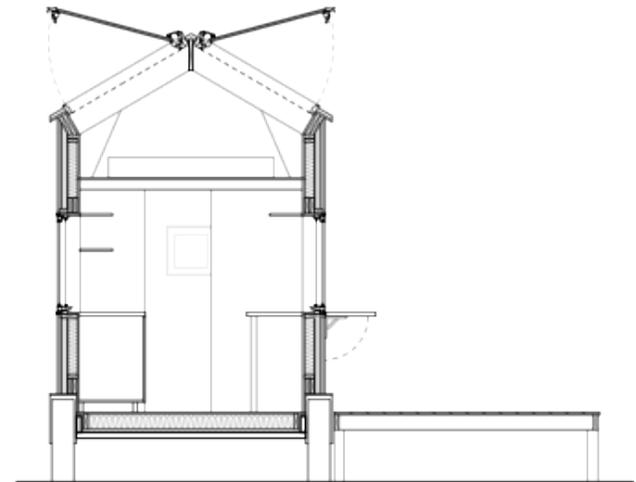
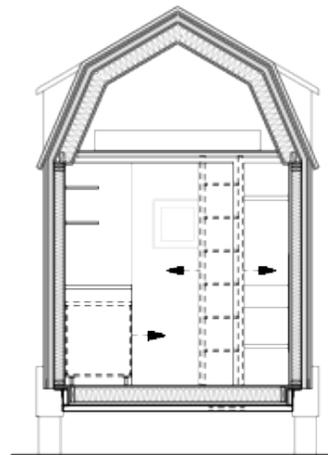
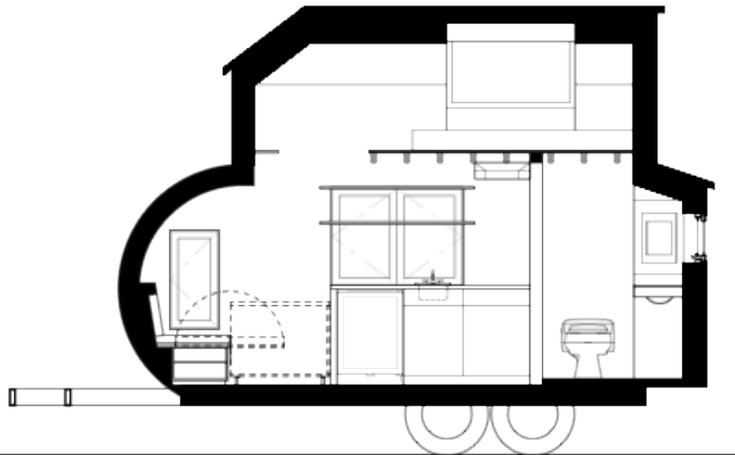
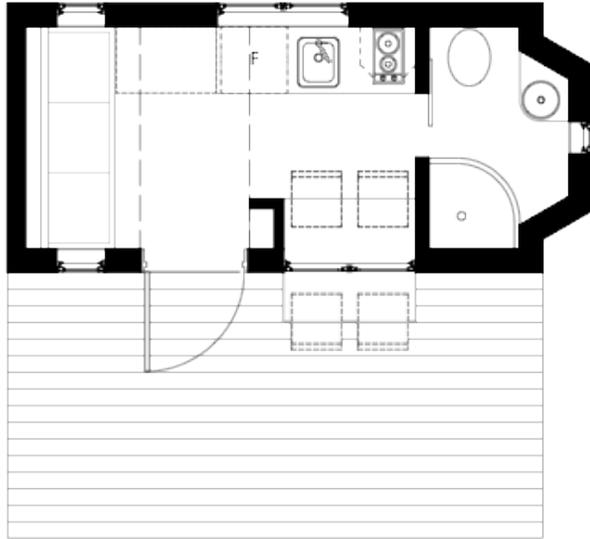
Small Homes



FLOOR PLAN
PROTOTYPICAL 500SF HOUSE

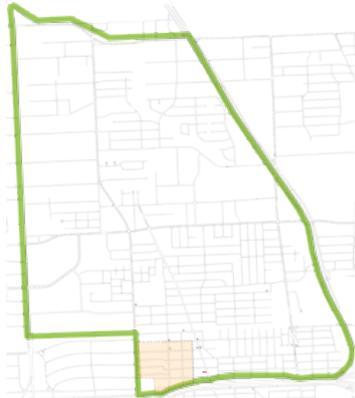


Small Homes



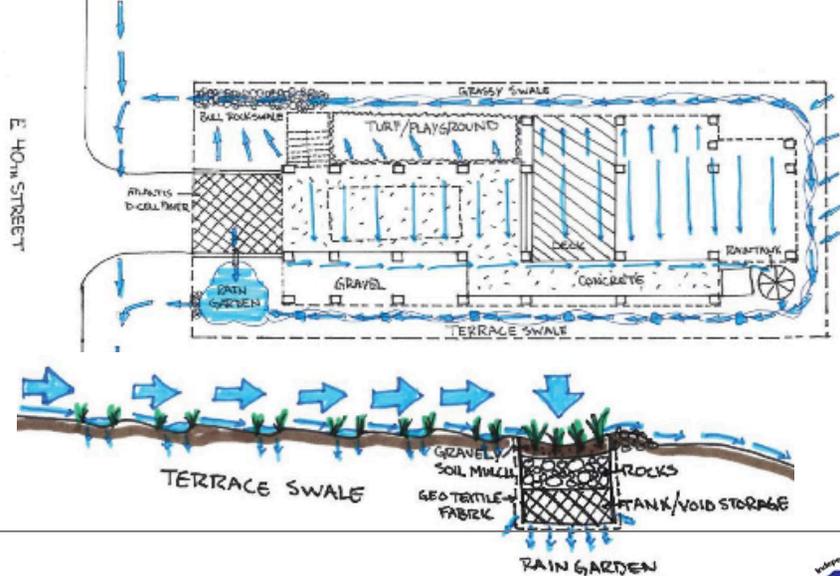
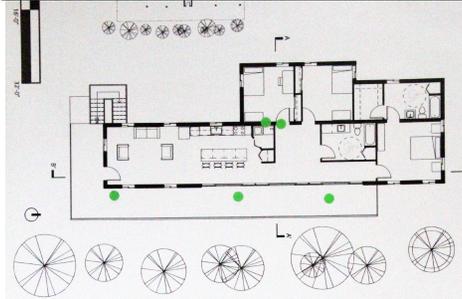


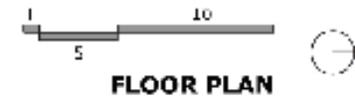
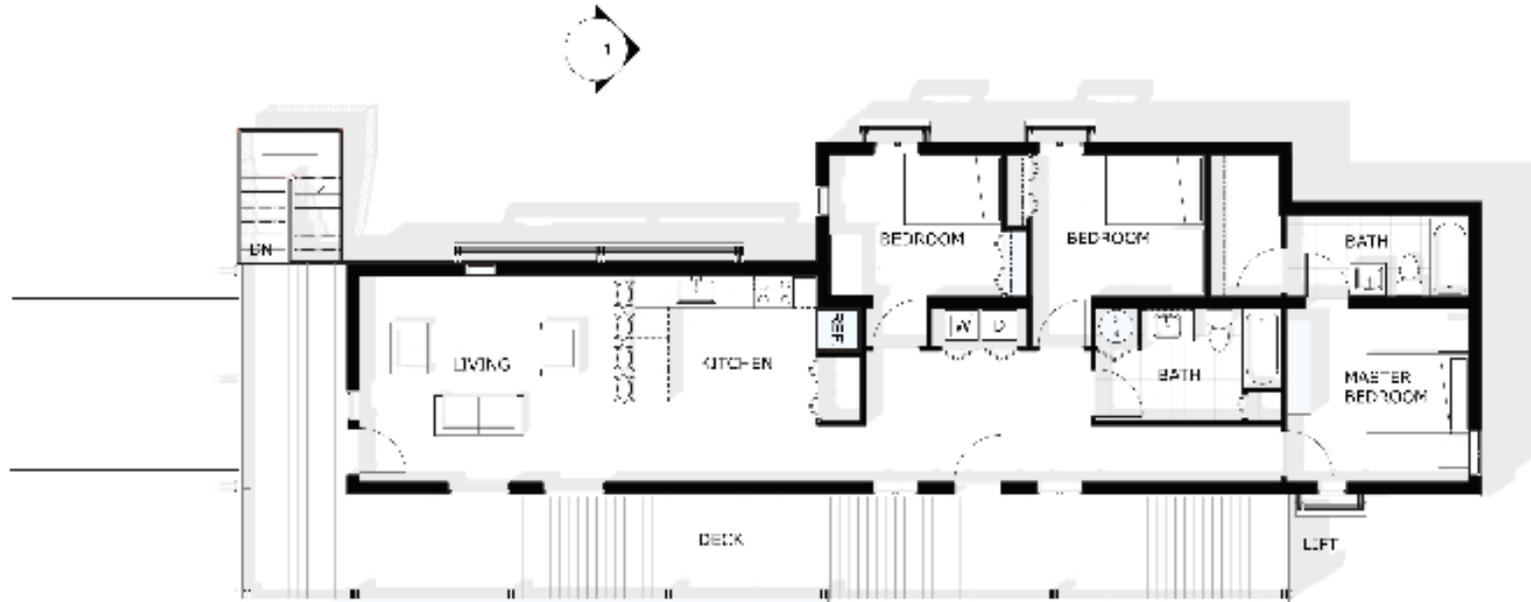
DOE Race to Net Zero Competition Independence Heights NZ Home



Black:	53%
Hispanic:	43%
Median Household Income:	\$35,270
Population Below Poverty Line:	41.6%
Population Over 55:	26%
Owner Occupied Households:	52%
Renter Occupied Households:	48%

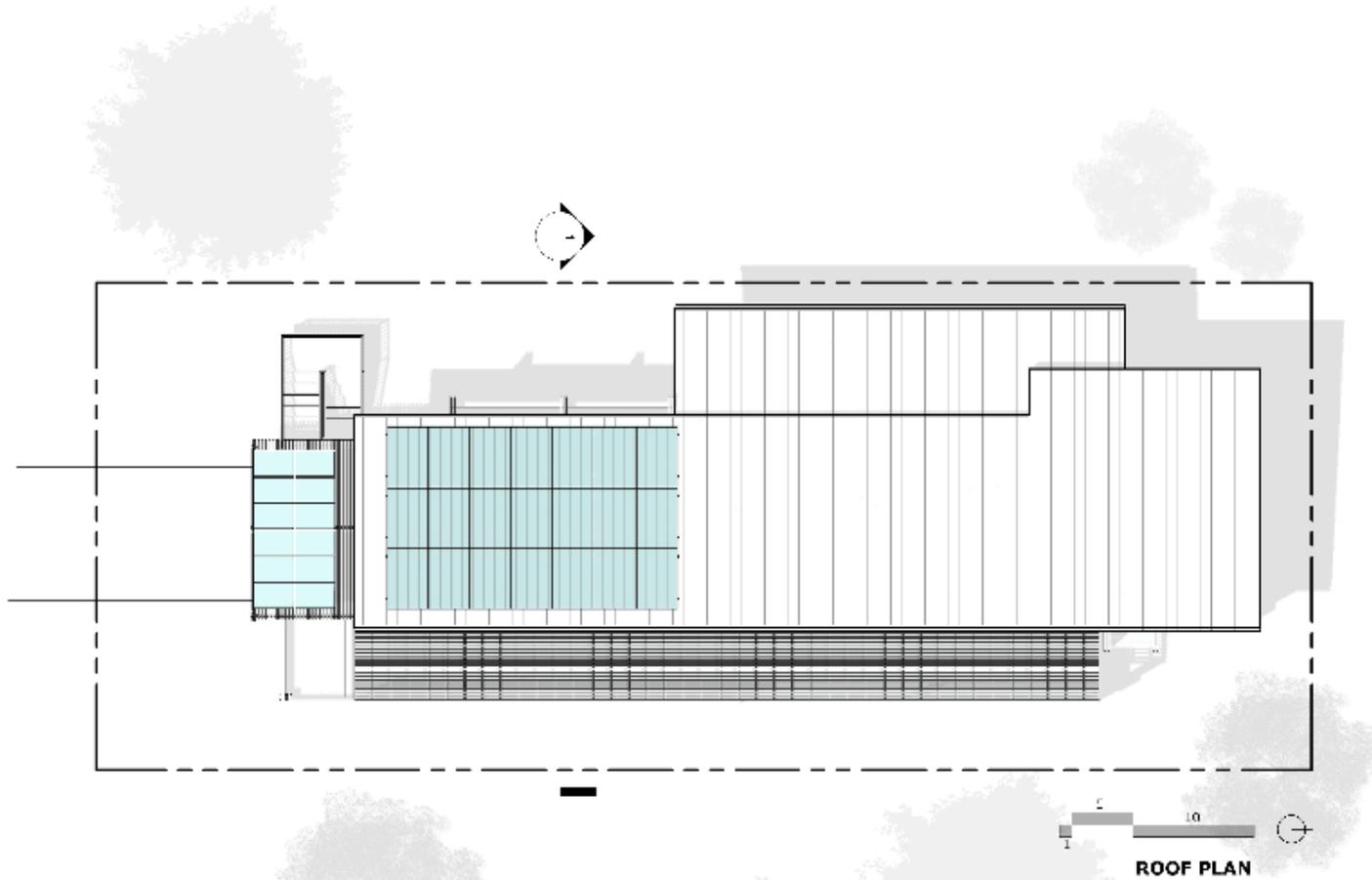






FLOOR PLAN







Roof Ridge
22' - 2"

Level 1
8' - 0"

Ground Level
0' - 0"



SOUTH ELEVATION



Roof Ridge
22' - 2"

Level 1
8' - 0"

Ground Level
0' - 0"



EAST ELEVATION



NORTH ELEVATION



Roof Ridge
22' - 2"

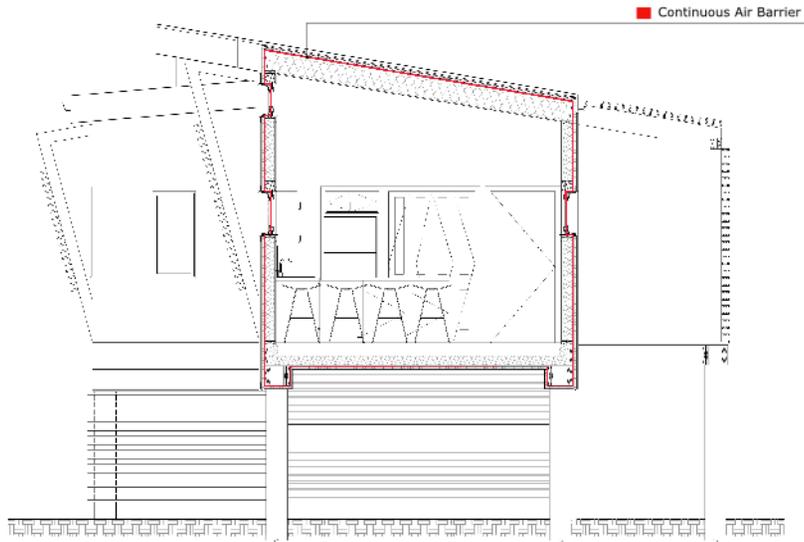
Level 1
8' - 0"

Ground Level
0' - 0"

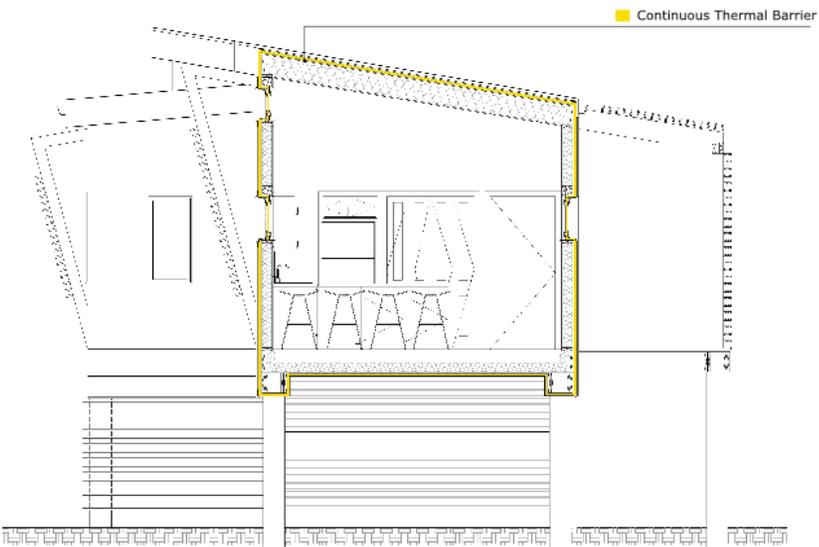


WEST ELEVATION

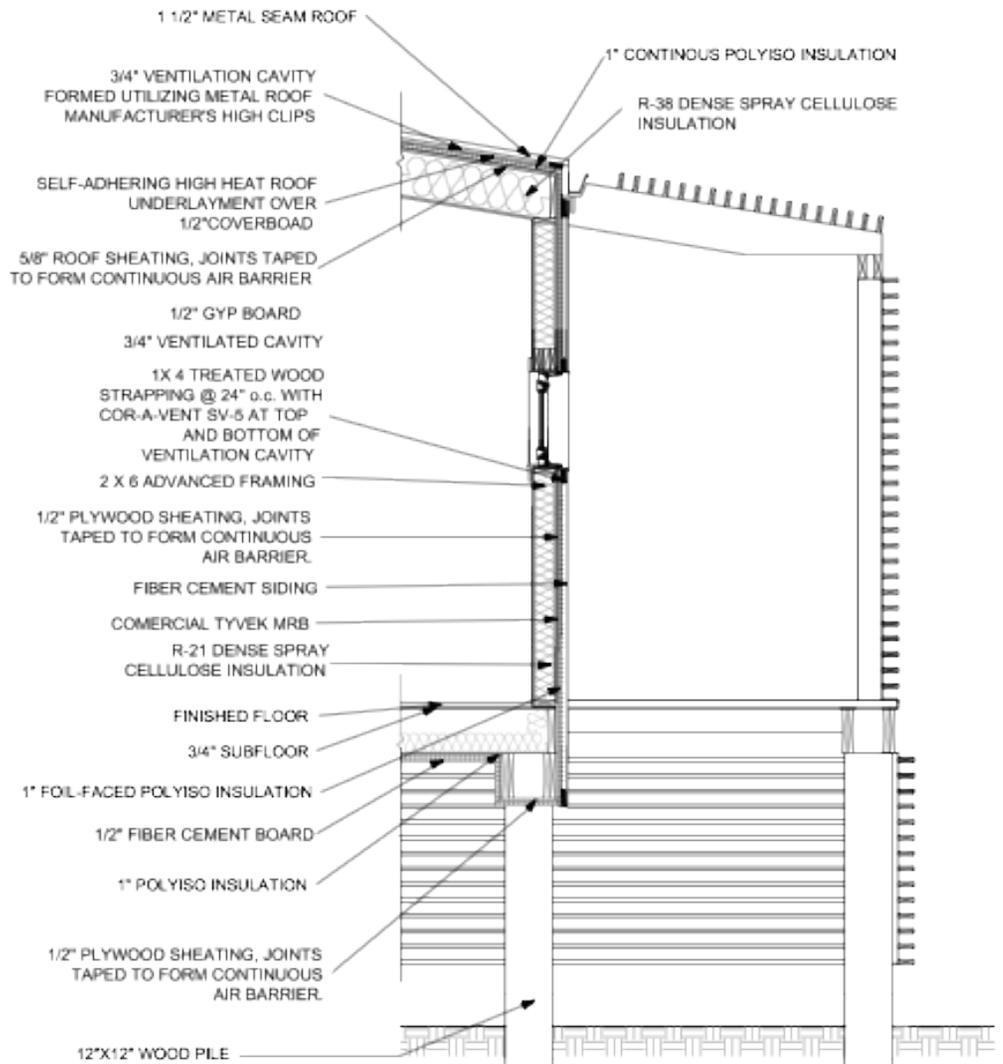




BUILDING SECTION

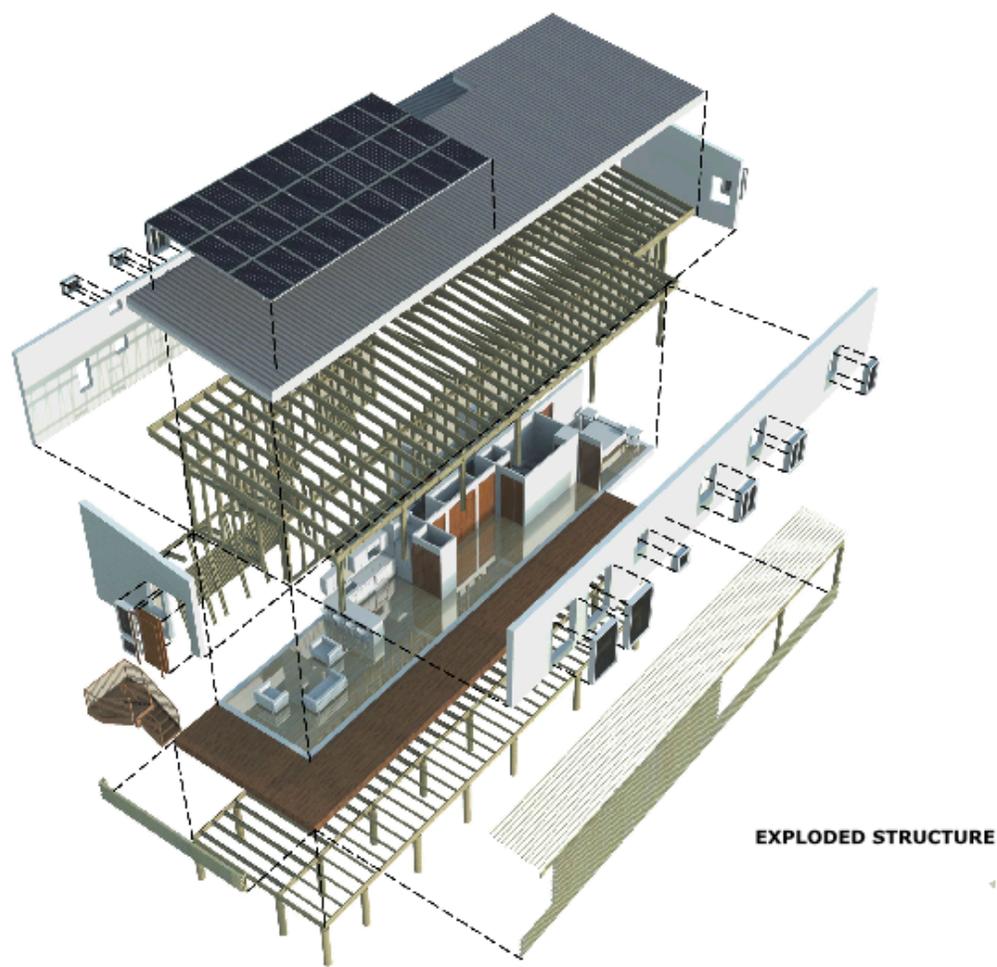
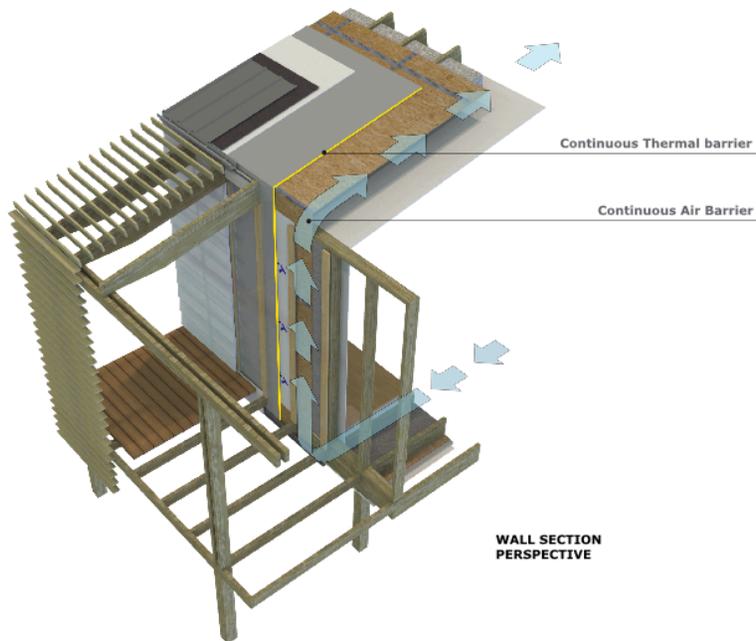


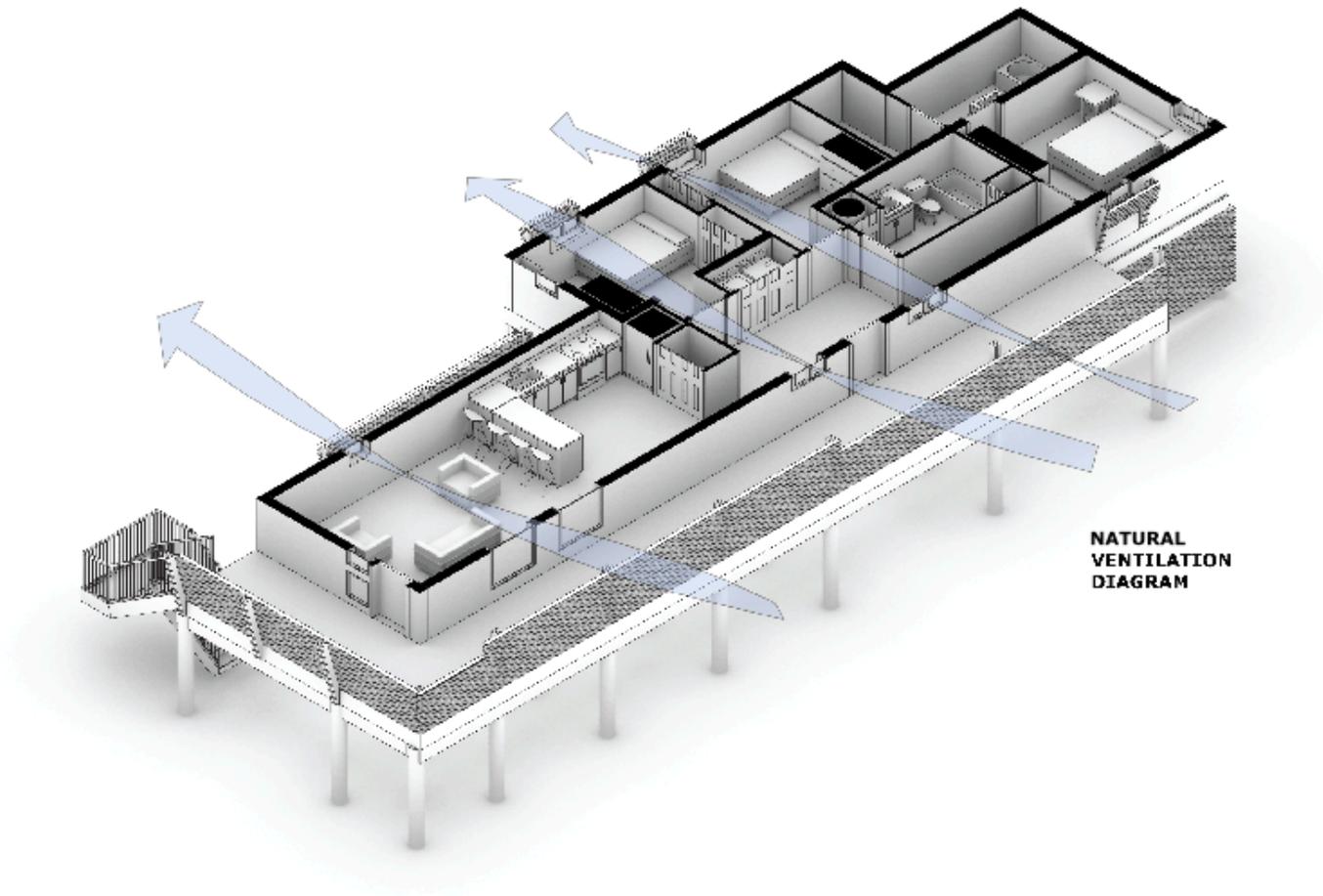
BUILDING SECTION



WALL SECTION

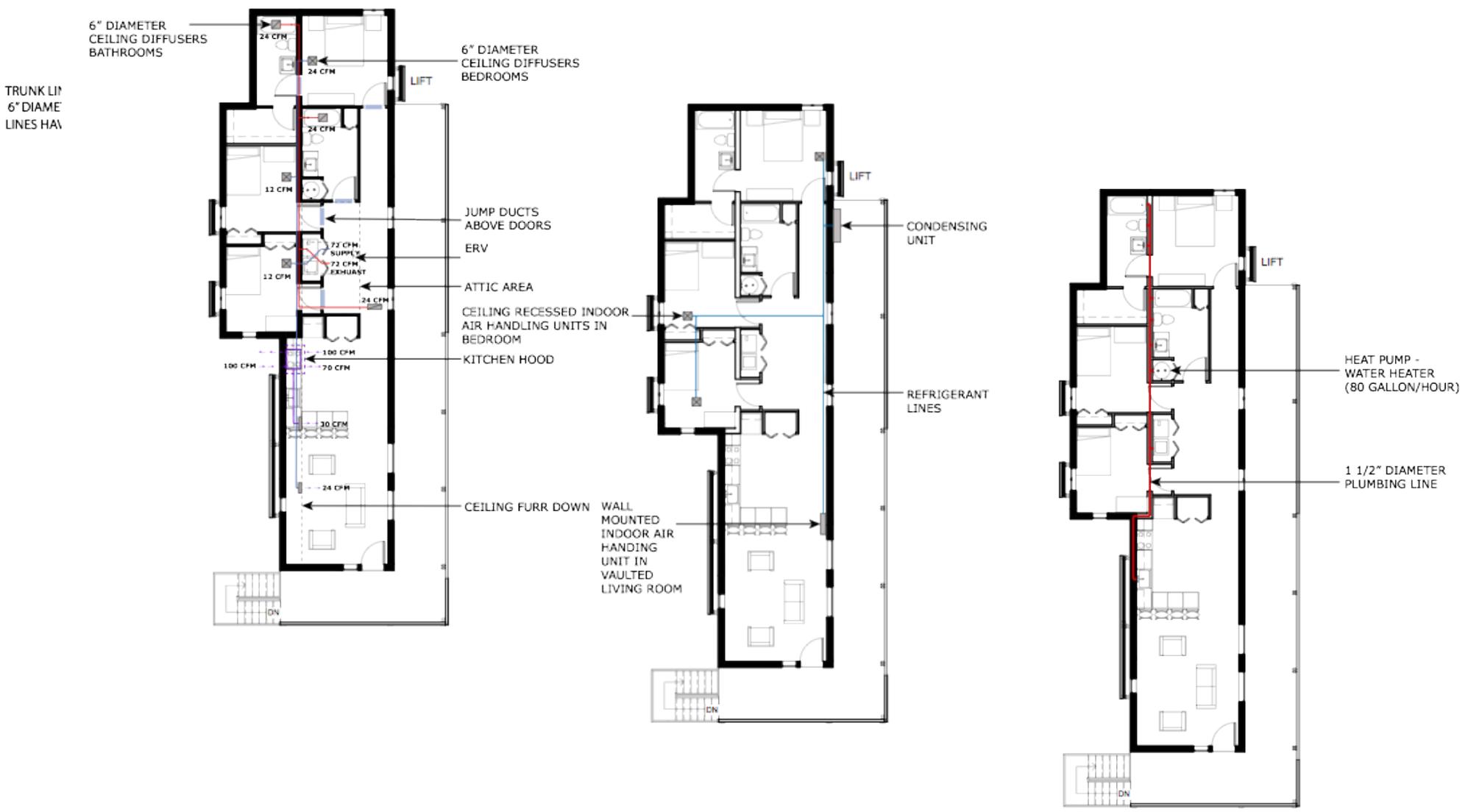




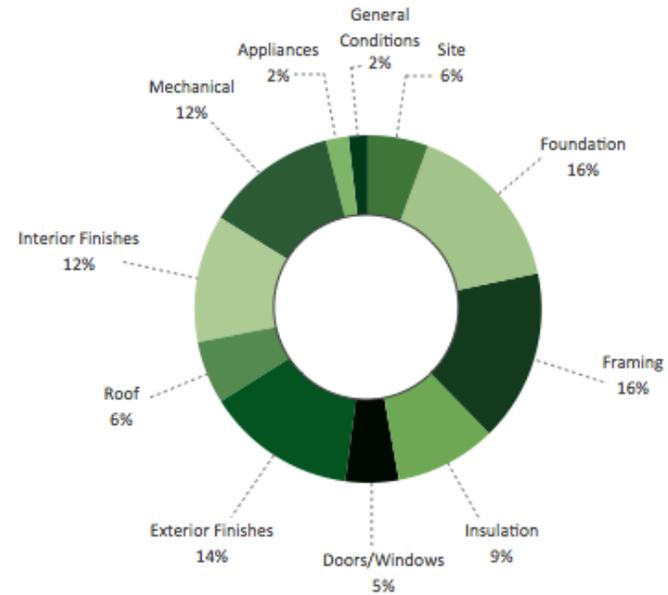


**NATURAL
VENTILATION
DIAGRAM**





	BEopt Base	Prairie View Design	Notes
House Type	3 Bedroom	3 Bedroom	
House Size	2,080 SF	1,200 SF	We designed a smaller footprint home in order to meet affordability objectives. Note that this smaller footprint works against us in meeting Passive House criteria.
Wall Insulation	R-13 cavity + R-12 c.i.	R-21 cavity + R-6 c.i.	We utilized advanced framing and added a ventilated rainscreen w/ a radiant barrier.
Roof Insulation	R-49 @ ceiling	R-38 cavity + R-6 c.i.	We moved the thermal plane to the roof to bring the attic into the conditioned space.
Roof Finish	Composite Shingles, medium color	Standing Seam Metal, galvalume finish	We selected a standing seam metal roof for durability. We are holding the roof 3/4" off of the underlayment with high clips to provide a ventilation cavity and radiant barrier.
Floor Insulation	None- slab on grade	R-21 cavity + R-6 c.i.	We raised the floor on piles to address being in the 100 yr. flood plain.
Windows	15%; Double Pane, Low-E, Insul. Frame	15%, Triple Pane, SHGC-0.26, U-0.15	We selected Passive House certified windows for our climate.
Window Shading	2 ft overhangs	7 ft porch; trellises	We have provided fixed shading horizontal and vertical devices to completely shade all windows. The full effect of this is not accounted for in the energy models.
Airtightness	0.60 ACH50	0.60 ACH50	Although PHIUS+2015 requirements are not as tight, we elected to comply with the old standard.
Ventilation	Exhaust	Balanced- ERV	We selected a Passive House certified ERV, but have isolated the kitchen exhaust.
Space Conditioning	SEER 27 Mini-Split	SEER 17.5 Mini-Split	A lower SEER mini-split was selected as an affordability measure.
Water Heater	80 gal Heat Pump	80 gal Heat Pump	
Hot Water Distribution	R-2, Trunk Branch	R-2, Trunk Branch	The delivery system is designed such that no more than 0.5 gallons of hot water will remain in any line.
Lighting	767 kWh	241 kWh	80% of Fixtures are Energy Star qualified.
Appliances	Energy Star, Electric	Energy Star, Electric	We selected a high performance ventless clothes dryer.
Annual Energy Cost	\$1,788	\$801	We believe the BEopt cost includes a 2kW PV system, whereas ours is prior to inclusion of a 6kW PV system that zeros out energy costs.



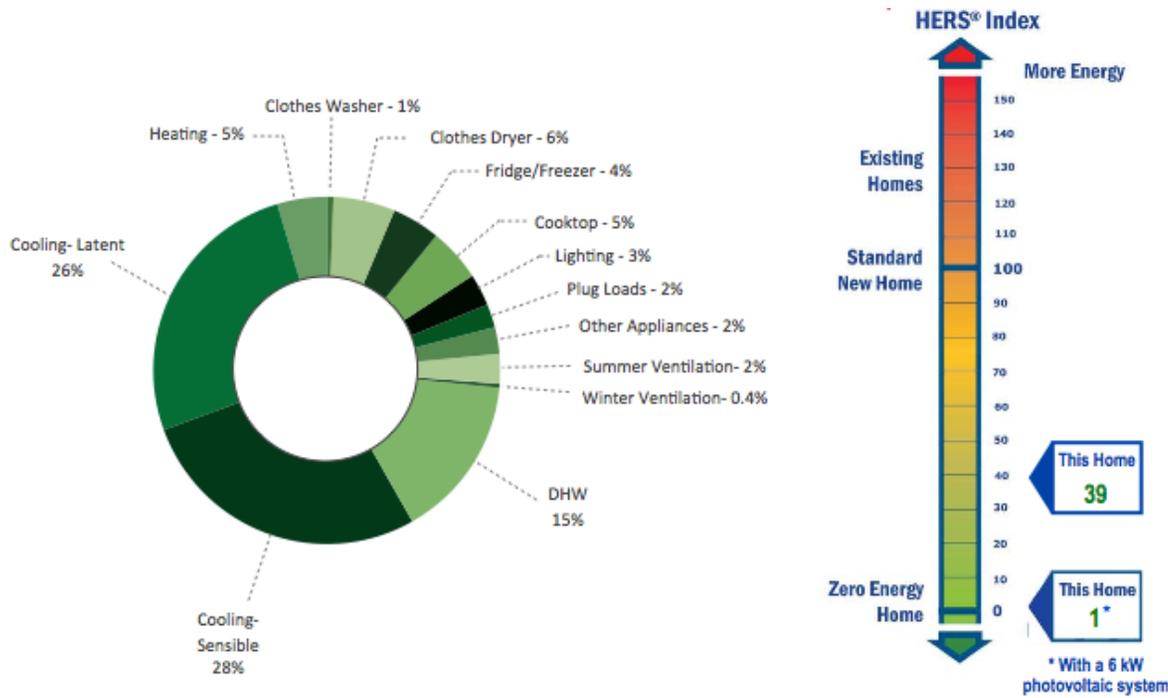
Market Rate Delivery: \$ 159K; \$ 120/SF

Low Income Delivery: \$ 127K; \$ 95/SF

Percentage of males in construction, extraction, and maintenance occupations:



WUFI-Passive Energy Modeling Results	PHIUS+ European Certification Criteria	PHIUS+ European, Base Design	PHIUS + European Optimized Design ¹	PHIUS+ 2015, Certification Criteria	PHIUS+ 2015, Base Design ²	PHIUS+ 2015 Optimized Design ³
Heating Demand	4.75 kBTU/ft ² yr	3.2 kBTU/ft ² yr	2 kBTU/ft ² yr	1.9 kBTU/ft ² yr	2.5 kBTU/ft ² yr	1.2 kBTU/ft ² yr
Cooling Demand	4.75 kBTU/ft ² yr	12.6 kBTU/ft ² yr	11.5 kBTU/ft ² yr	13.3 kBTU/ft ² yr	14.6 kBTU/ft ² yr	13.8 kBTU/ft ² yr
Heating Load	3.17 BTU/hr ft ²	4.1 BTU/hr ft ²	3.2 BTU/hr ft ²	3.4 BTU/hr ft ²	4.6 BTU/hr ft ²	3.1 BTU/hr ft ²
Cooling Load	2.54 BTU/hr ft ²	3 BTU/hr ft ²	2.5 BTU/hr ft ²	5.8 BTU/hr ft ²	3.4 BTU/hr ft ²	2.9 BTU/hr ft ²
Primary Energy	38 kBTU/ft ² yr	35.8 kBTU/ft ² yr	34.2 kBTU/ft ² yr	67.56 kBTU/ft ² yr	51.6 kBTU/ft ² yr	49.8 kBTU/ft ² yr
Notes	<p>1. An extra 3" of polyiso insulation is added to the walls and an extra 1" is added to the roof and floor.</p> <p>2. Although the new airtightness standard allows 1.19 ACH50, we cannot exceed 0.60 ACH50 to meet the criteria.</p> <p>3. Although the new airtightness standard allows 1.19 ACH50, we cannot exceed 0.60 ACH50 to meet the criteria. An extra 3" of polyiso insulation is added to the walls and an extra 1" is added to the roof and floor.</p>					





FEMA
499



Student Team

- Nichole Thomas
- Jonathon Ortega
- Christopher Brown
- Ismeal Kabre
- Tzivan Vasquez



GreeNexus Consulting



Committees 3 & 4: Health & Safety Civic Engagement



Easier Said than Done...

Economic Status

Education

Race and Ethnicity

Community

Health

Work

Housing

Income

Early Life Experience

Existing Factors

- Food desert
- Poverty
- Fragmented community
- Poor communication
- Limited ability for resources to enter community



Community Engagement

- Authentic
- Starts Where the People Are
- Focuses on Community
 - Empowerment
 - Capacity Building



Community Engagement

- National Night Out
- Food Fairs
- Quarterly Events
 - ✓ MLK Service Day
 - ✓ Annual Juneteenth Celebration
 - ✓ Annual Fall Harvest Festival
- Walking Campaign



National Night Out!

When: October 7, 2014
6:00pm – 8:00pm

Where: At the corner of 41st St.
& 8200 N. Main
Houston TX, 77022



"America's Night Out Against Crime" promotes involvement in crime prevention activities, police-community partnerships, and neighborhood involvement. This unified act sends a message to criminals letting them know that neighborhoods are organized and fighting back!

Come out for a night of **FOOD, FUN, AND MUCH MORE!**



For more information please contact IHCAC:

Email: ihcachouston@gmail.com Phone: (832) 819-1915

Food Fairs

- 1st & 3rd Mondays
- Yale Street Baptist Church
- Over 300 families every month
- Growing community participation (volunteers)



Quarterly Events

- MLK Service Day
- Juneteenth Celebration
- Fall Community Harvest Festival

Independence Heights Community Harvest

A Festival of Thanksgiving



Join the Independence Heights Collaborative Action Coalition (IHCAC) for a weekend of celebration!

Friday, November 14, 2014

- **Time:** 8:00 am - 11:00 am
- **Event:** Lot Clean-Up (locations TBA)
- **Location:** Meet at the intersection of N. Main & 41st St.

Saturday November 15, 2014

- **Time:** 2:00 pm - 6:00 pm
- **Event:** Community Block Party
- **Location:** N. Main between 41st & 42nd St.

Monday November 17, 2014

- **Time:** 9:00 am - 11:00 am
- **Event:** Food Fair
- **Location:** Yale Street Baptist Church (4315 Yale St.)

Please contact us with any questions or if you are interested in volunteering on any day of the event!



- ❖ Turkey Giveaway
- ❖ Healthy Cooking Demonstrations
- ❖ Food Sampling
- ❖ Raffles & Prizes
- ❖ Entertainment, Music, & Fun

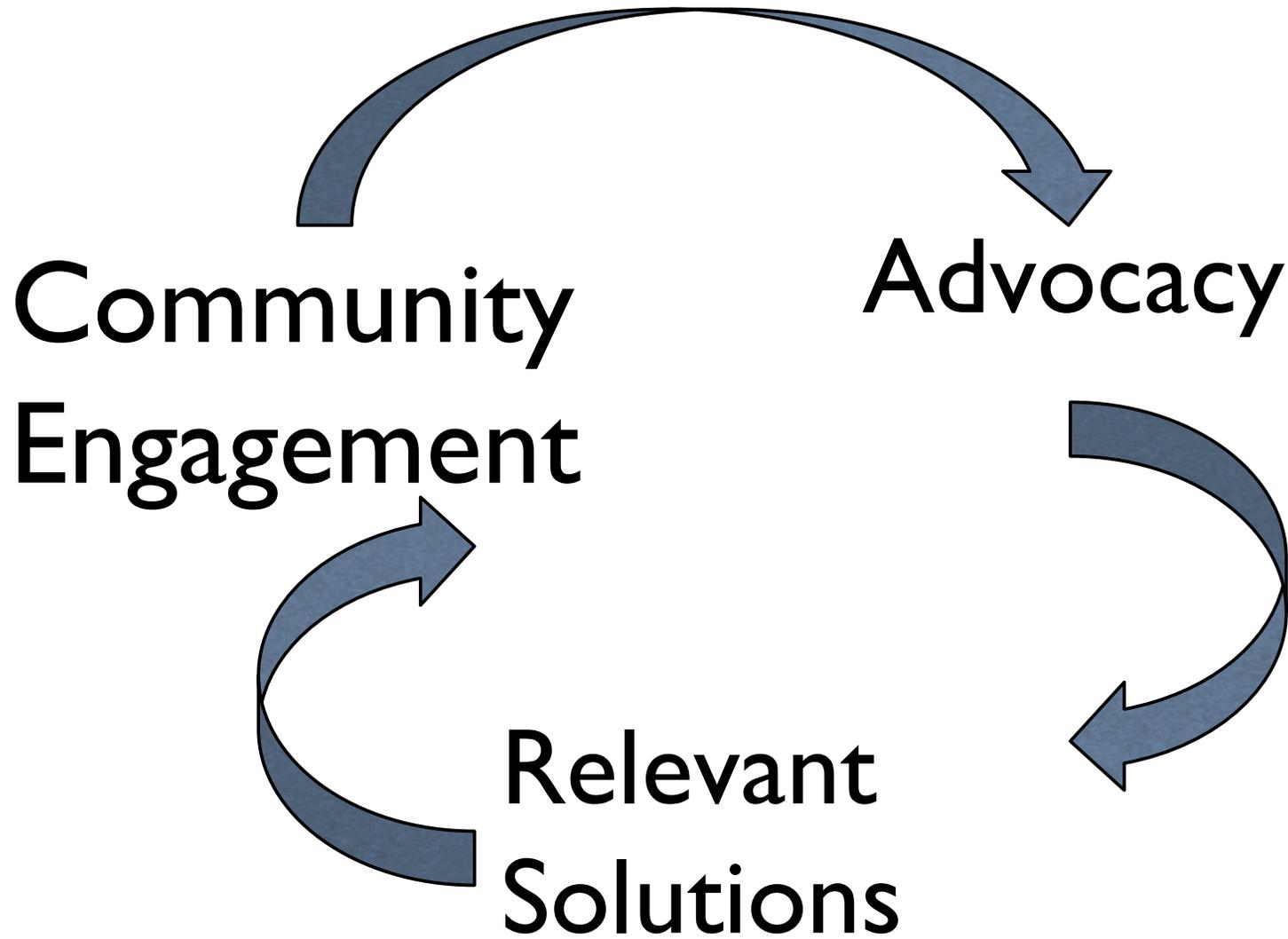
IHCAC Contact Information:
Phone: 832-819-1915
E-mail: ihcachouston@gmail.com



Health through Access

- *Let's Move* in Independence Heights
- Food Fairs (Expansion)
 - Cooking demonstrations, sampling, & nutrition education
- Community & School Gardens
- Local Market





Community-Driven Advocacy



Community-Driven Advocacy



Professional Development

- Prairie View A&M University
- The University of Houston
- Rice University



Impact through Collaboration



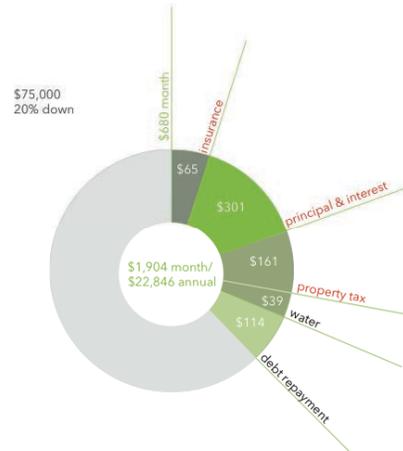
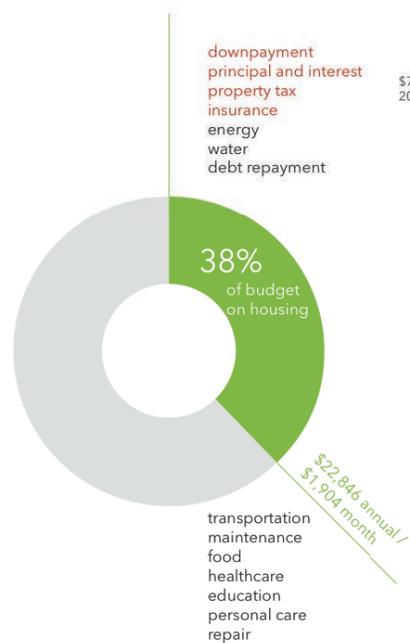
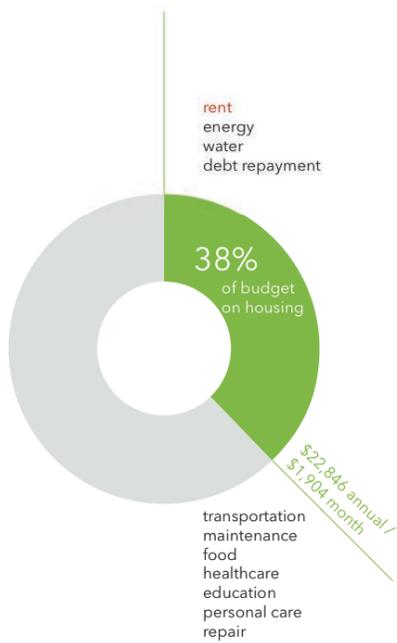
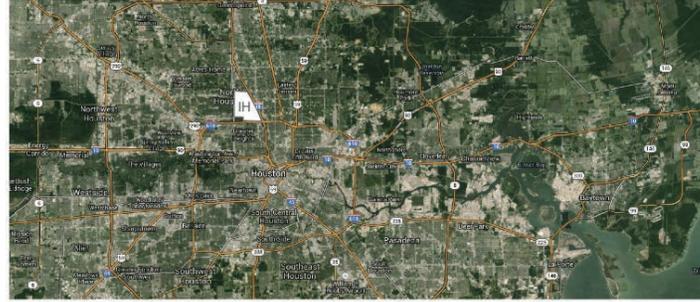
**WAR ON
DRUGS**

INDEPENDENCE
HEIGHTS
SUPER
NEIGHBORHOOD #13



T. Leon Preston, II
Senior Pastor





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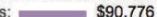
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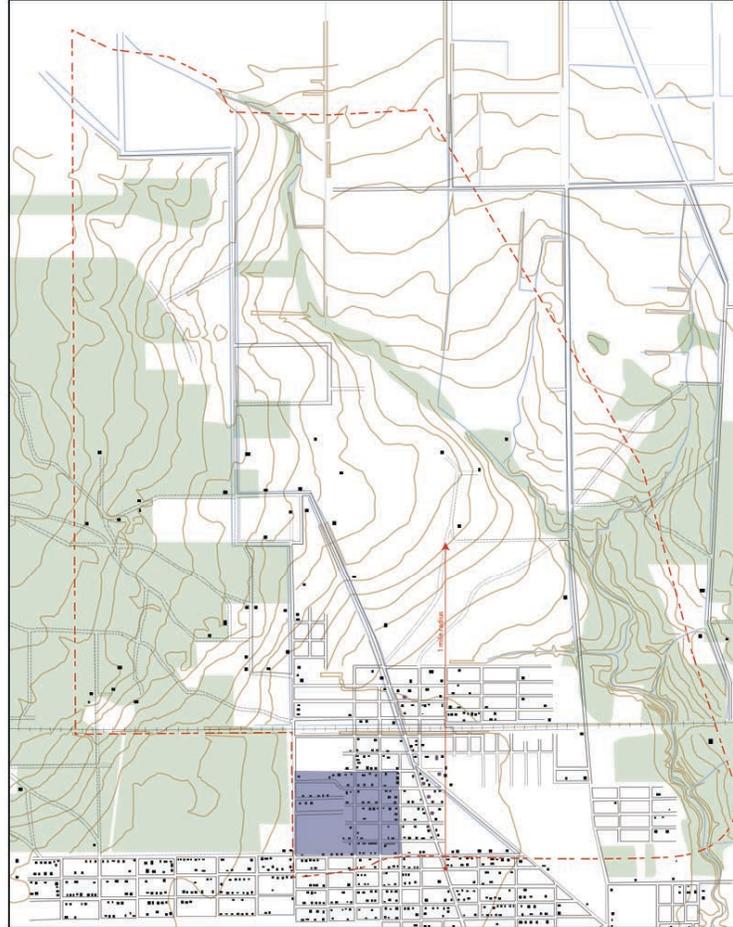
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Owners and renters by unit type in %



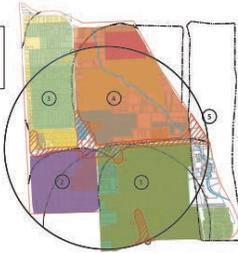


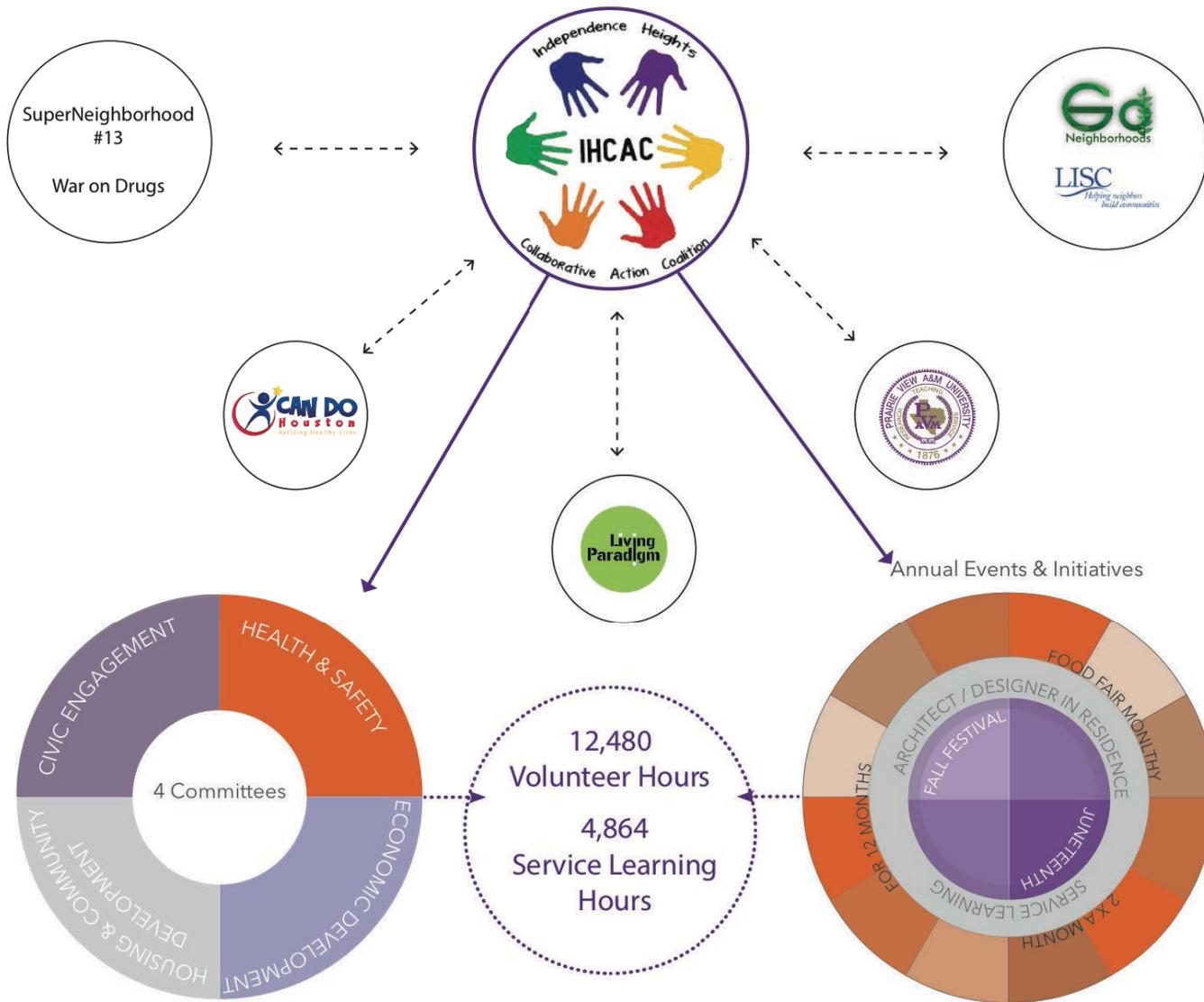


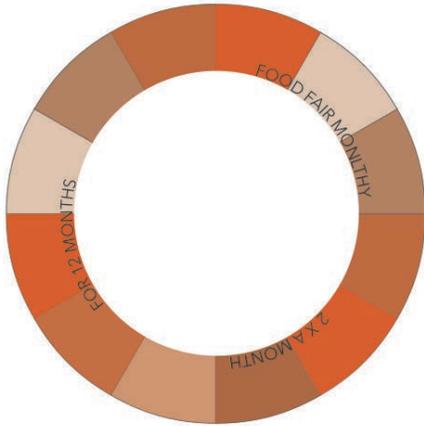
STORY OF PLACE

- ① Access to Transportation Rights
- ② Self-Determination and Individuality
- ③ Access to Quality Education
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- ⑤ Community and Economic Resilience

STORY OF PLACE: A narrative that describes the history, culture, and identity of a community. It is a collection of stories that shape the way we see the world and the way we live our lives. It is a story that is constantly being rewritten and reshaped by the people who live in the community. It is a story that is shared and passed on from one generation to the next. It is a story that is a source of pride and a source of strength. It is a story that is a reflection of who we are and who we want to be.

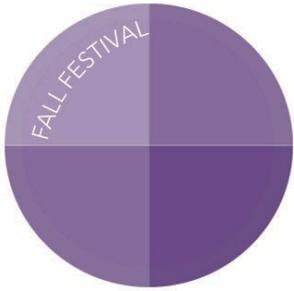






FOOD FAIRS, HEALTHY EATING & GARDEN DEMONSTRATIONS



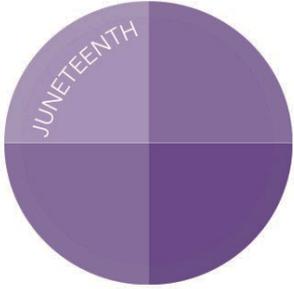


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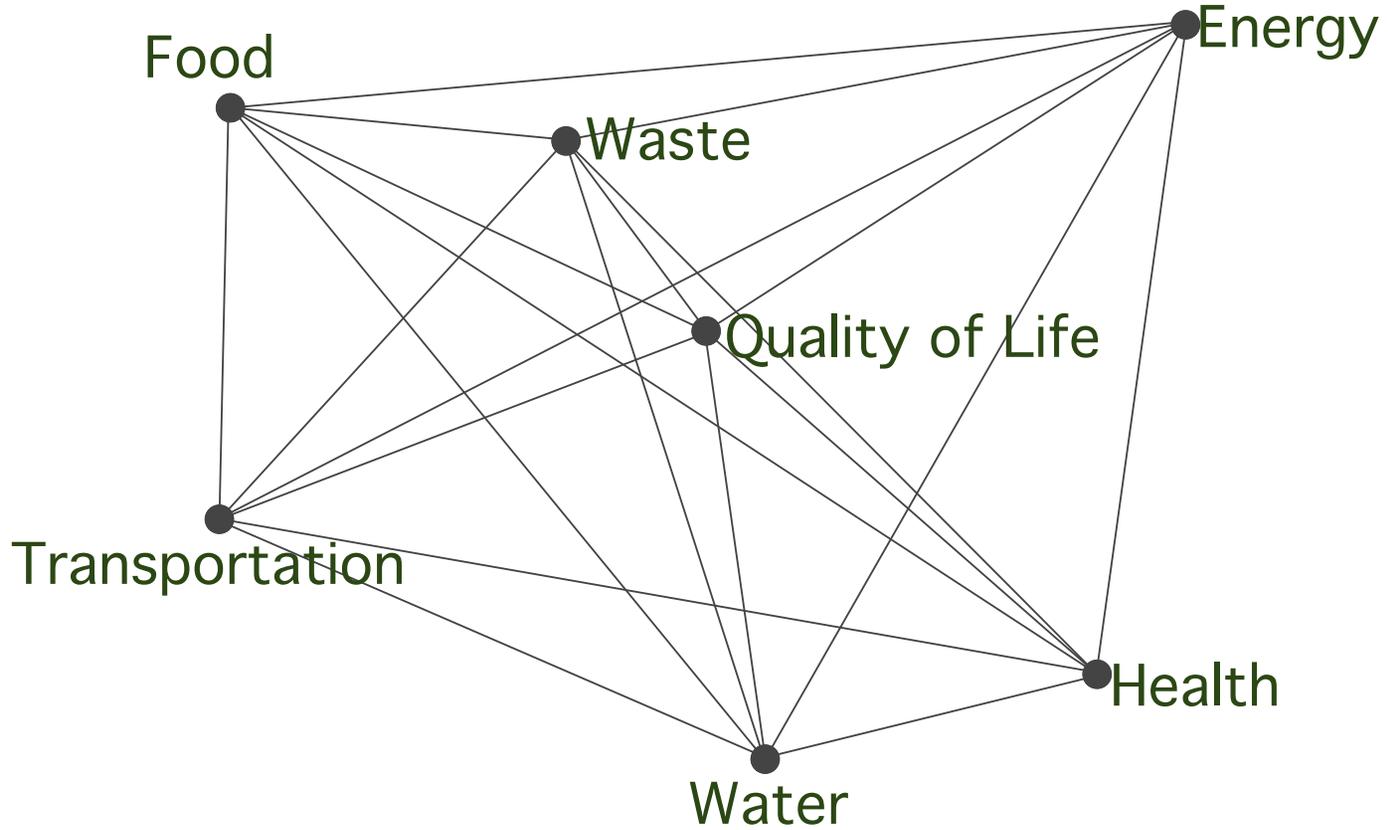
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Regenerative Community Development Community Engagement & Story of Place



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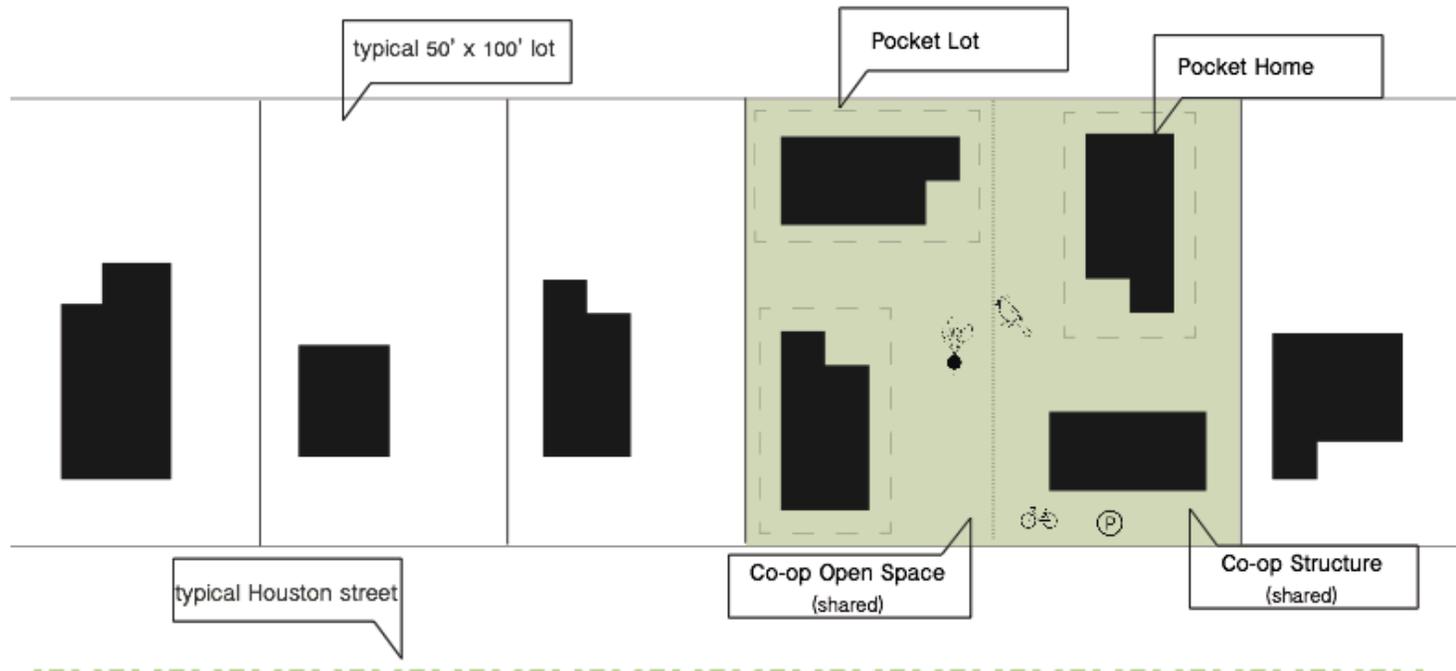
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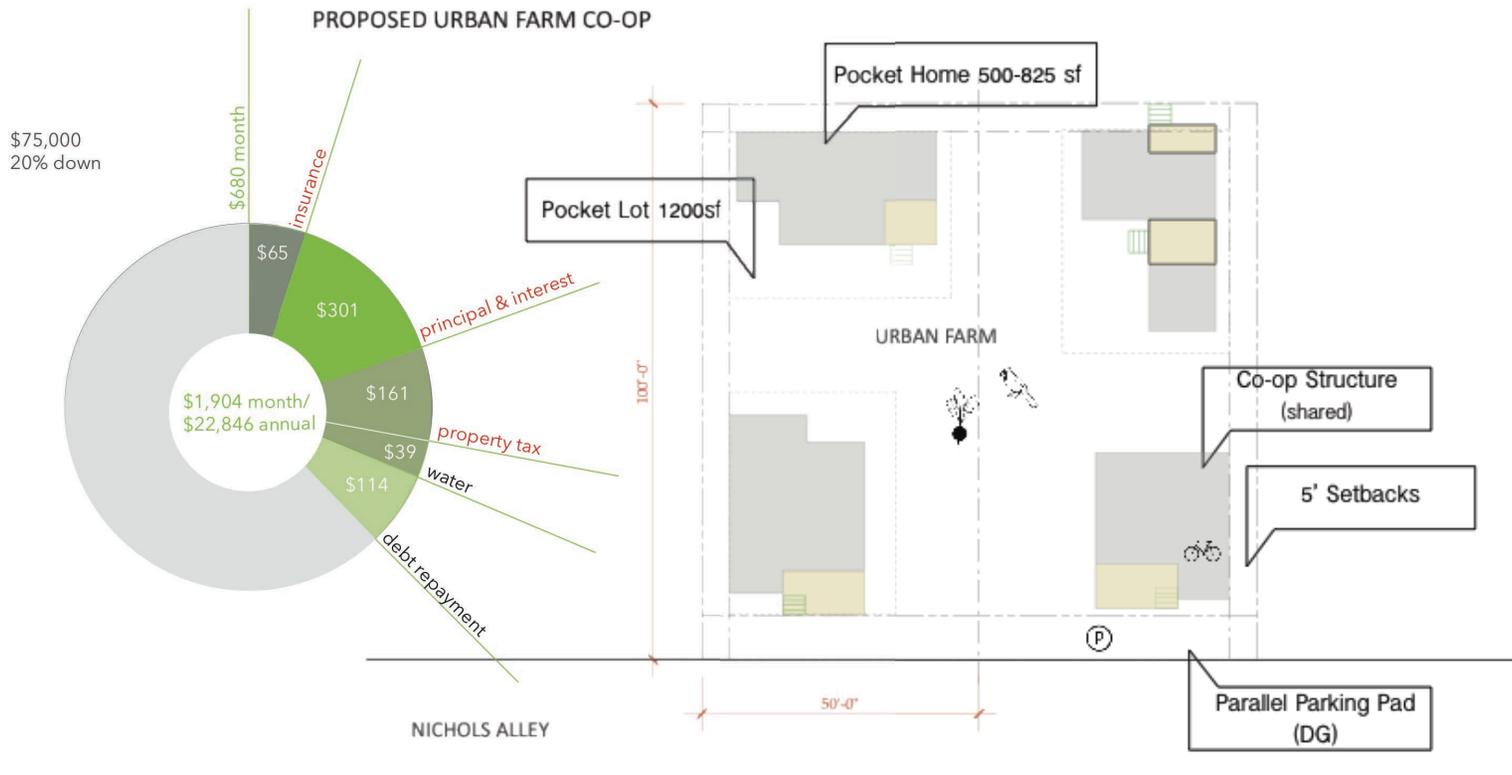
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2015 LOT ANALYSIS | Tiny / Micro Pocket Homes and Communities



Pocket Communities

Houston Hope Precedent



Pocket Communities

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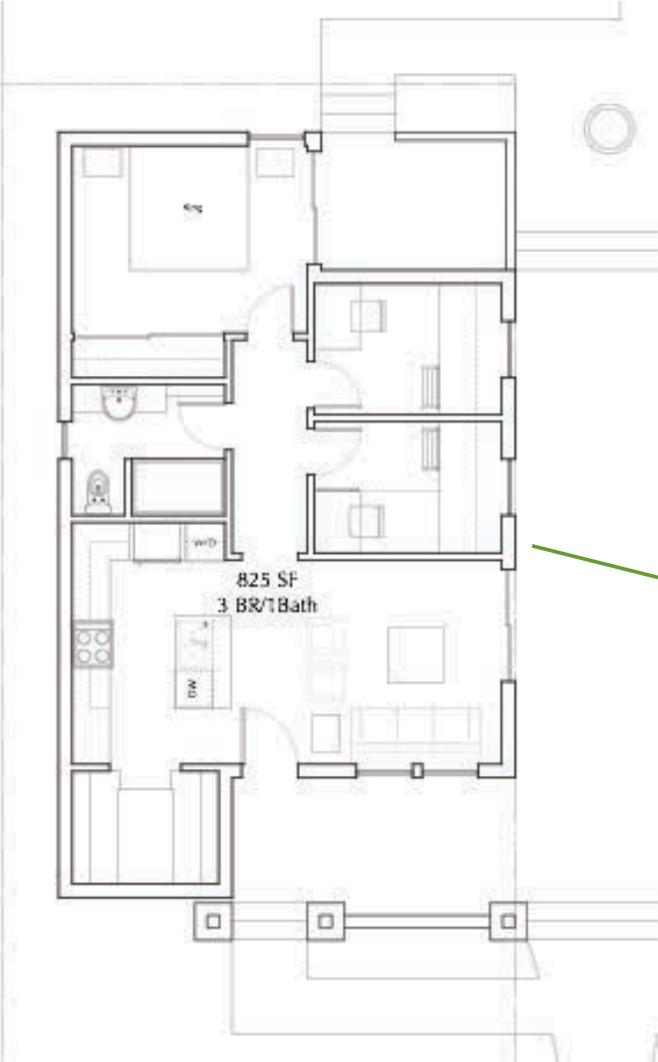
Pocket Communities



-  SINGLE FAMILY HOME
-  COMMUNITY BUILDING



Small Homes



architend



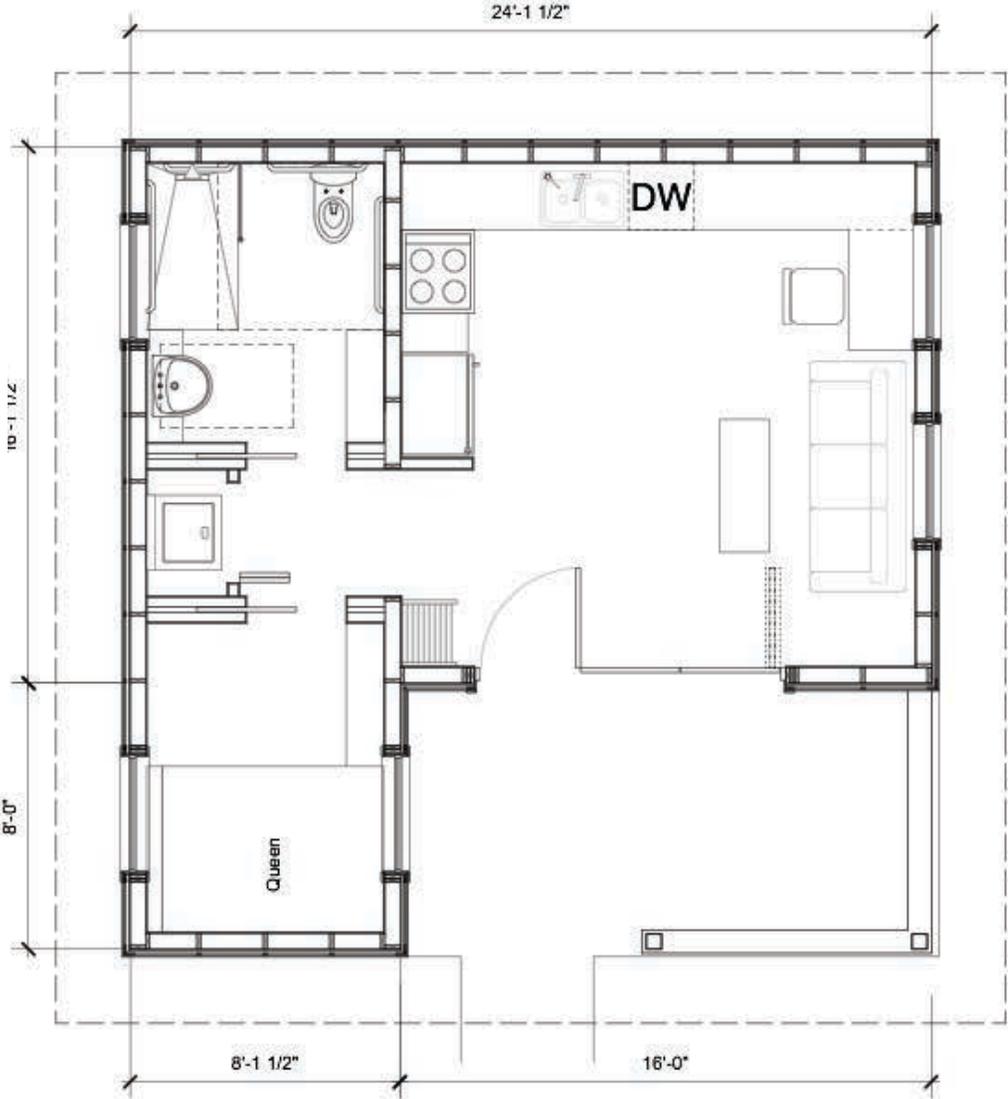
Small Homes



architend



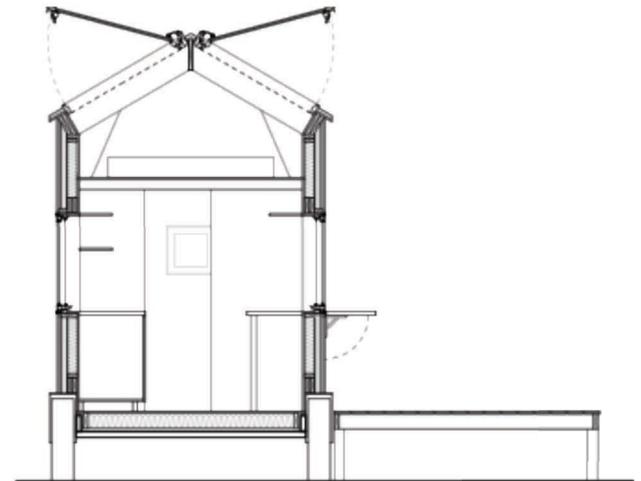
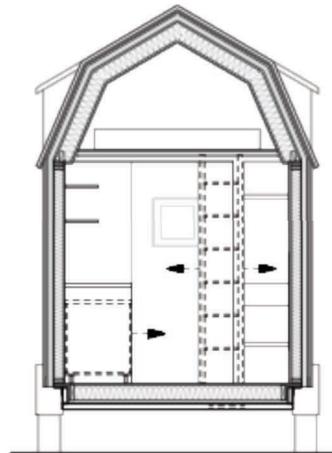
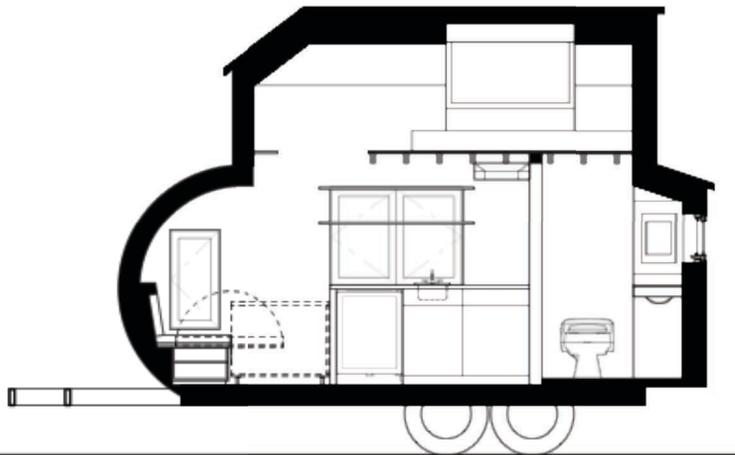
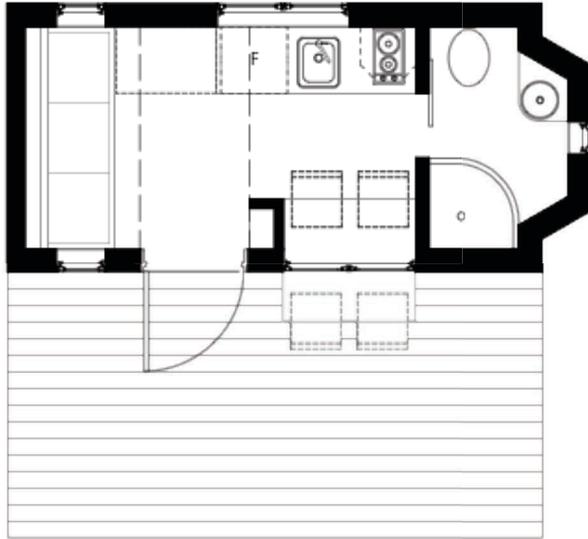
Small Homes



FLOOR PLAN
PROTOTYPICAL 500SF HOUSE



Small Homes



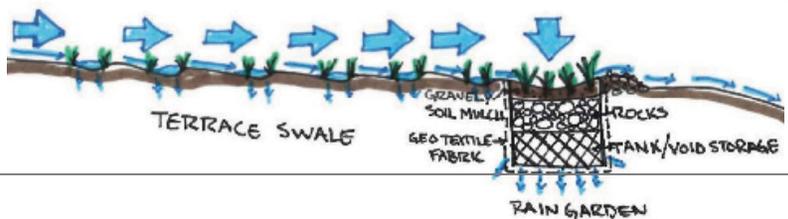
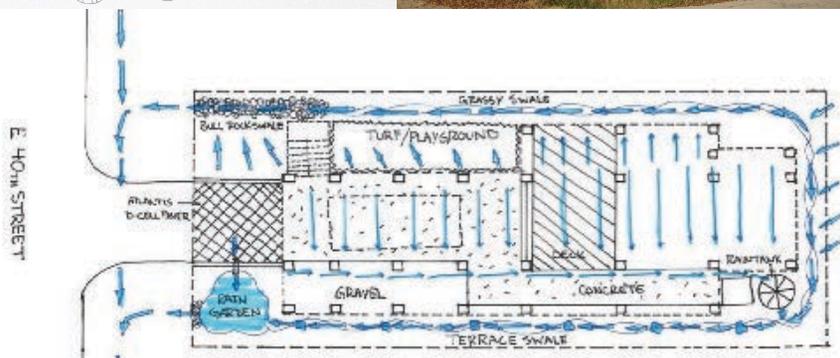
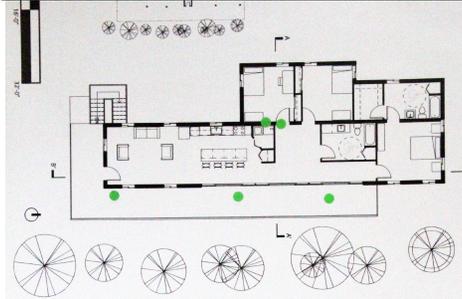


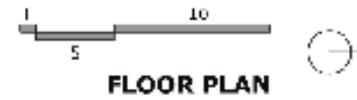
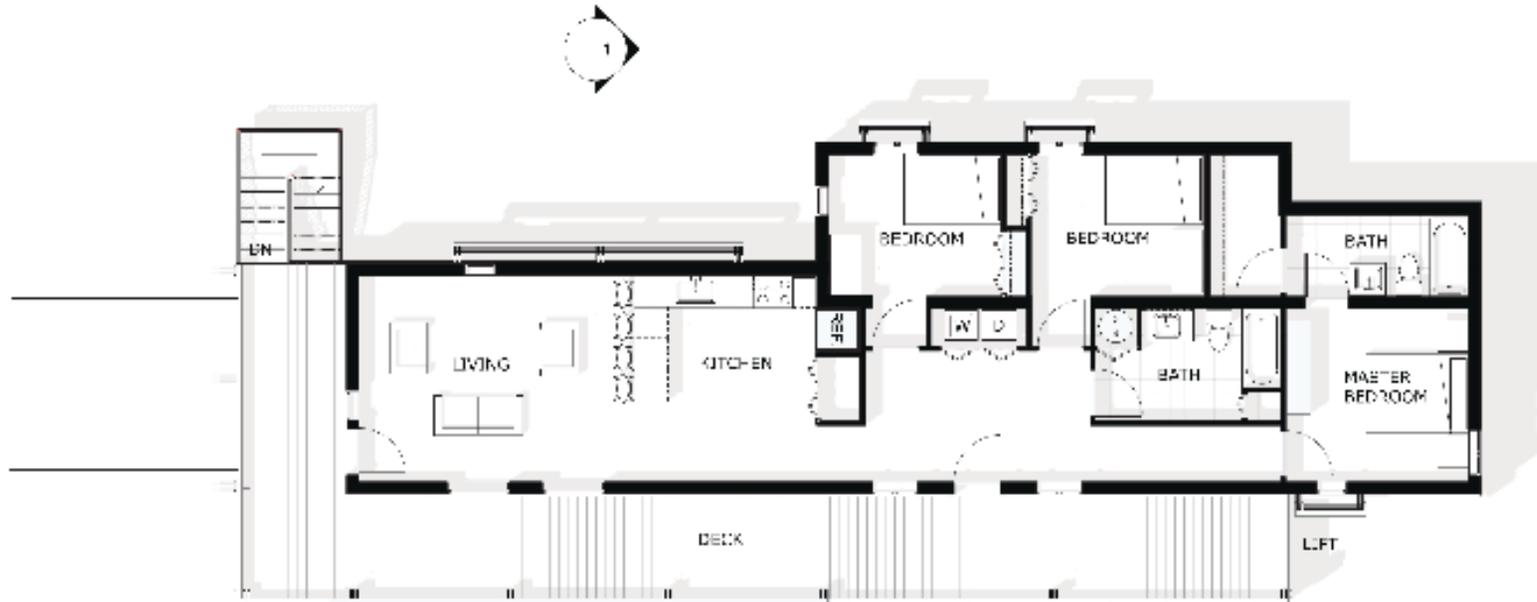
DOE Race to Net Zero Competition Independence Heights NZ Home



Black:	53%
Hispanic:	43%
Median Household Income:	\$35,270
Population Below Poverty Line:	41.6%
Population Over 55:	26%
Owner Occupied Households:	52%
Renter Occupied Households:	48%

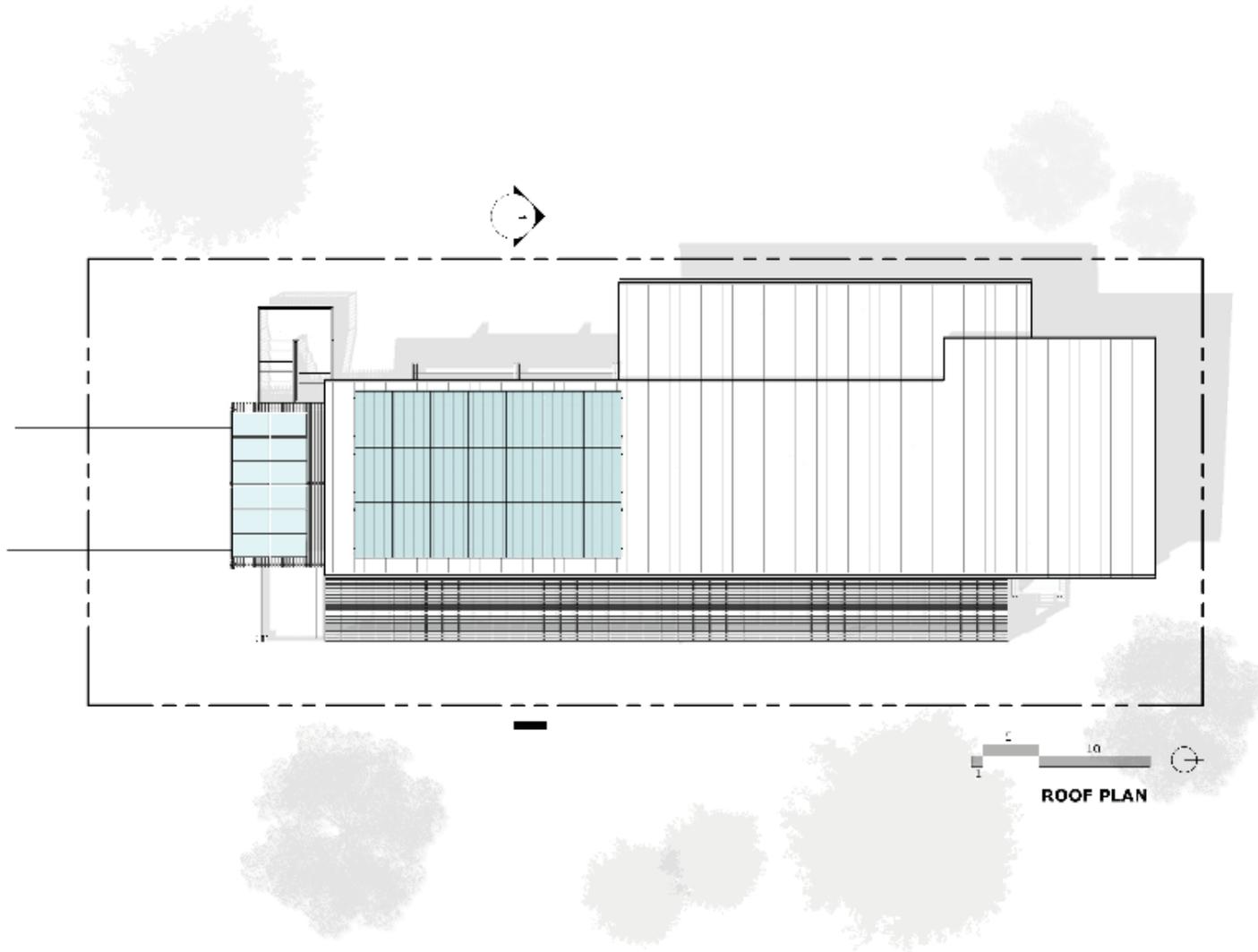






FLOOR PLAN







Roof Ridge
22' - 2"

Level 1
0' - 0"

Ground Level
0' - 0"



SOUTH ELEVATION



Roof Ridge
22' - 2"

Level 1
8' - 0"

Ground Level
0' - 0"



EAST ELEVATION



NORTH ELEVATION



Roof Ridge
22' - 2"

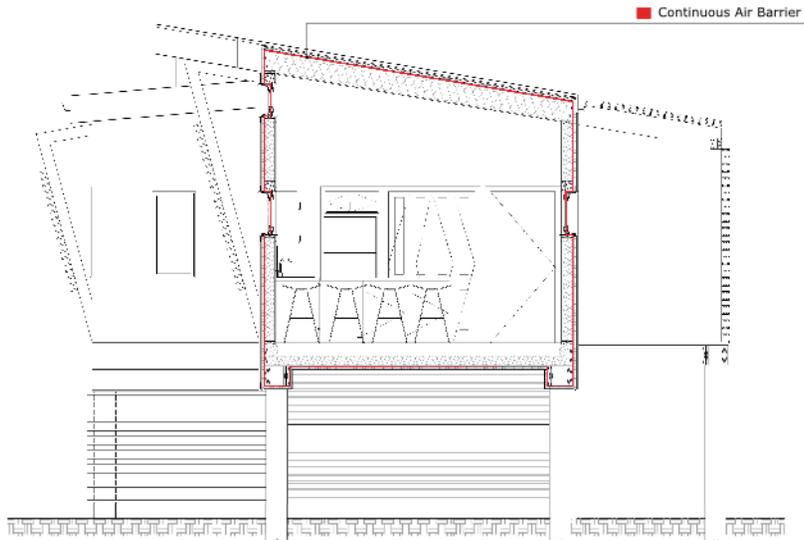
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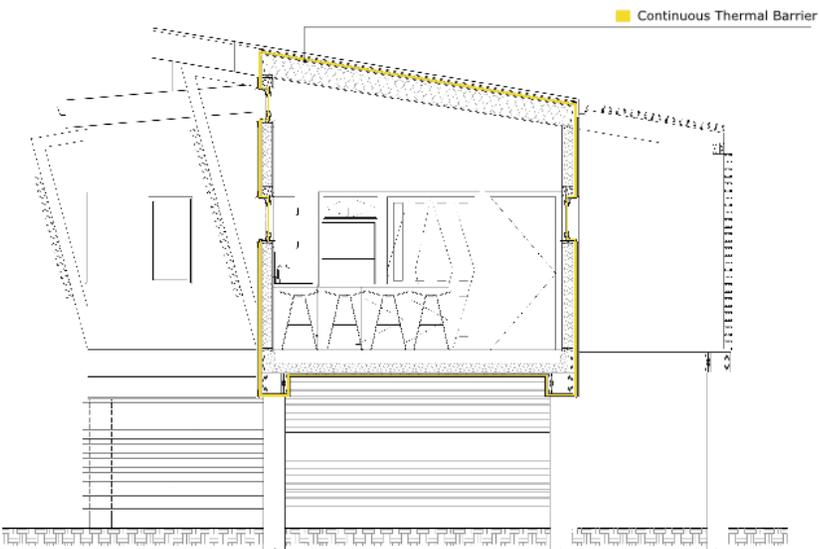


WEST ELEVATION

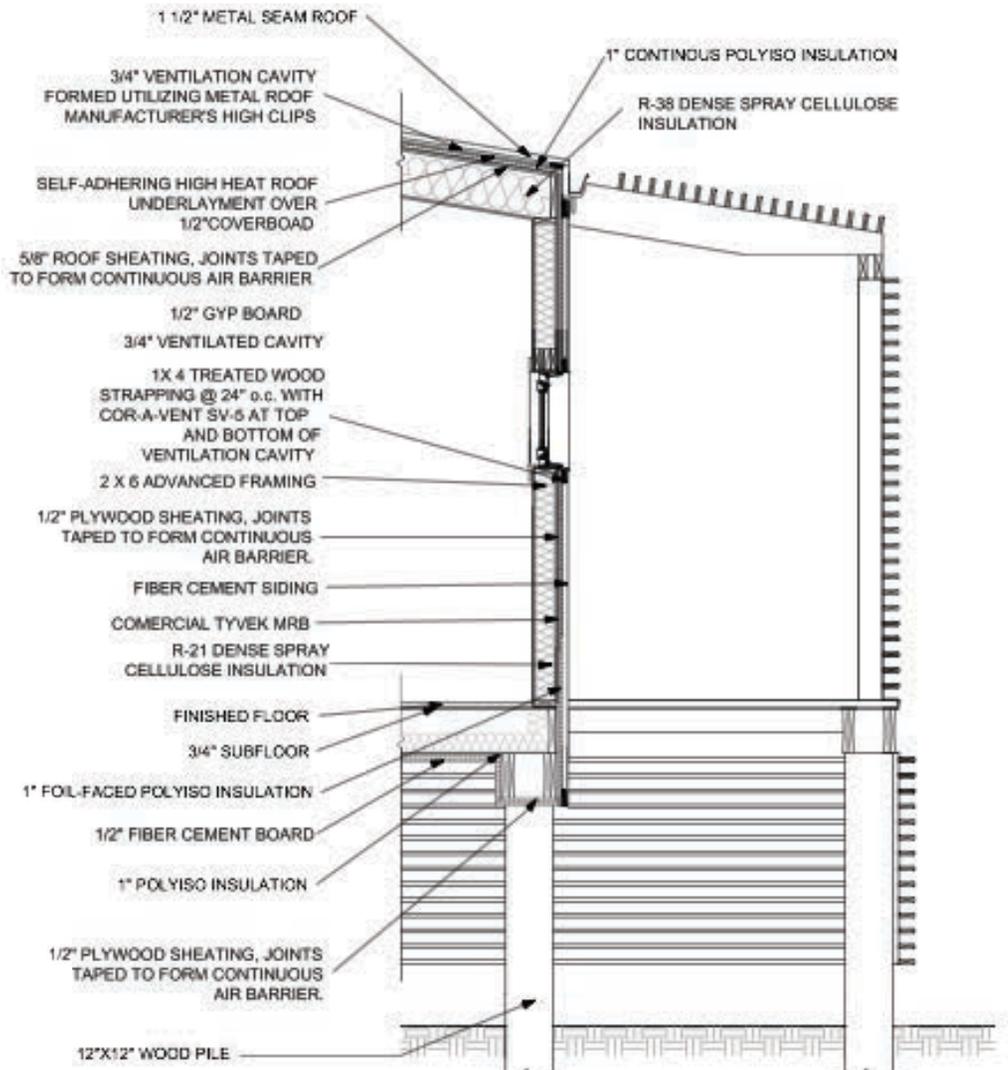




BUILDING SECTION

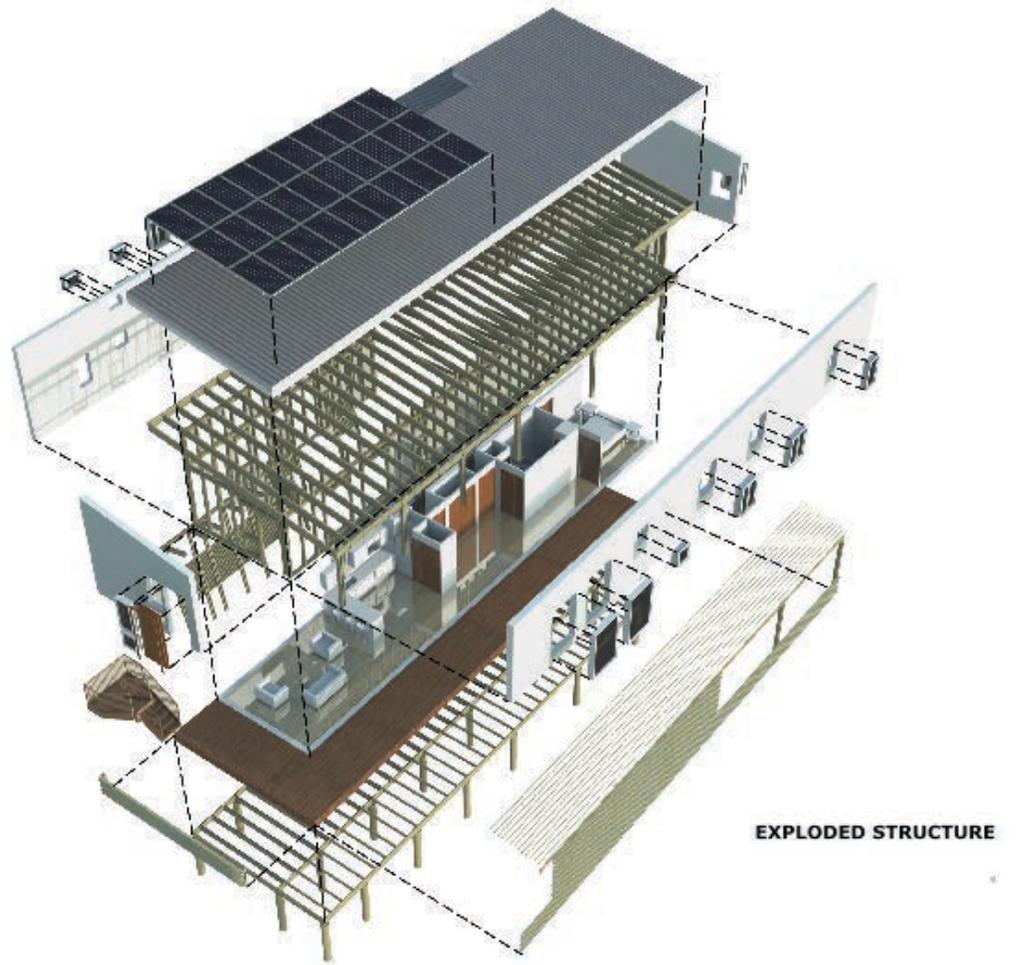
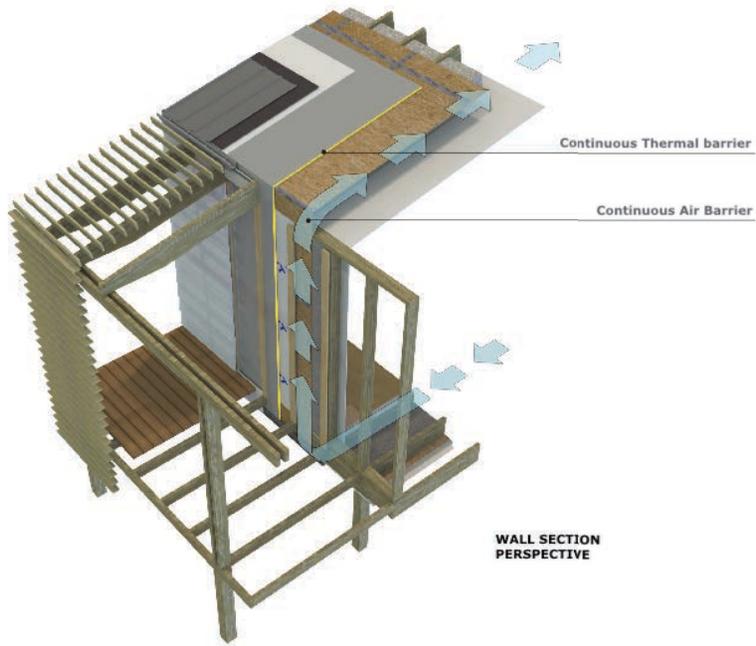


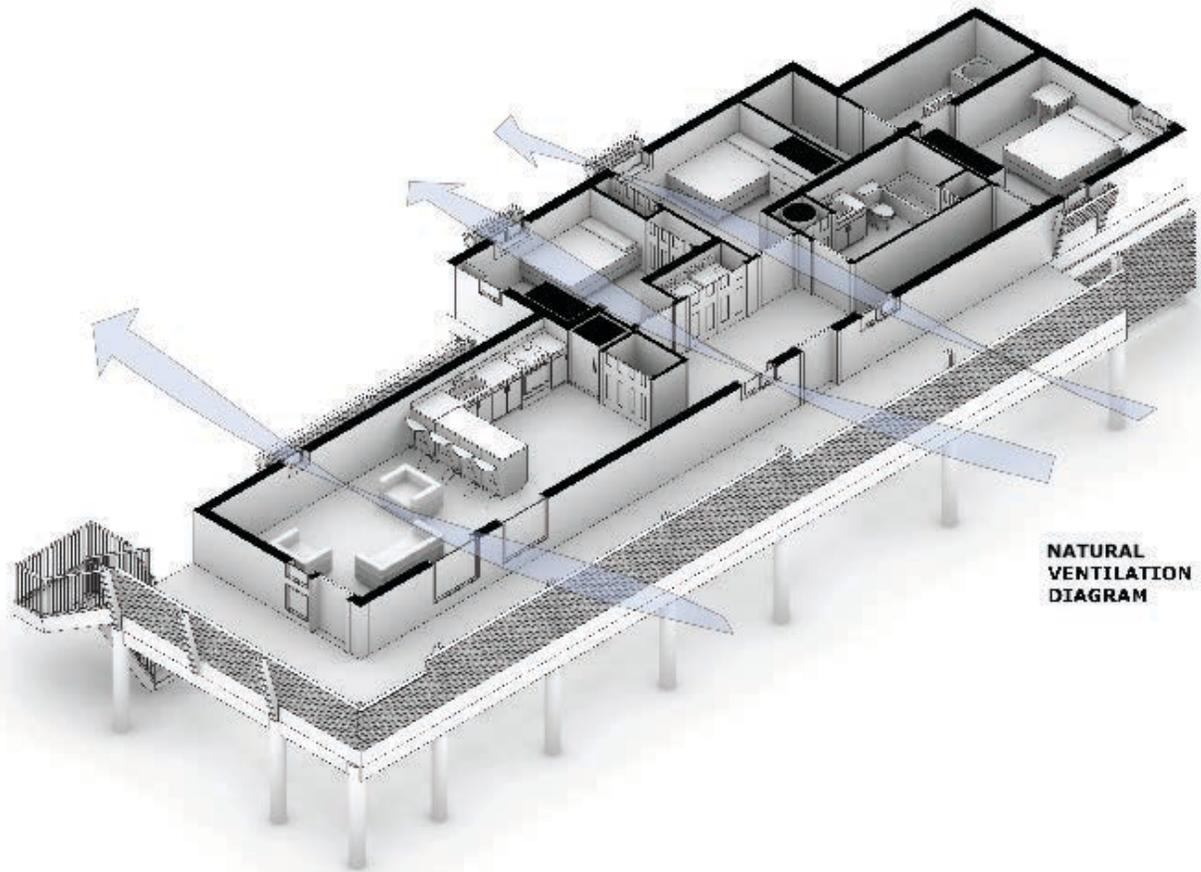
BUILDING SECTION



WALL SECTION



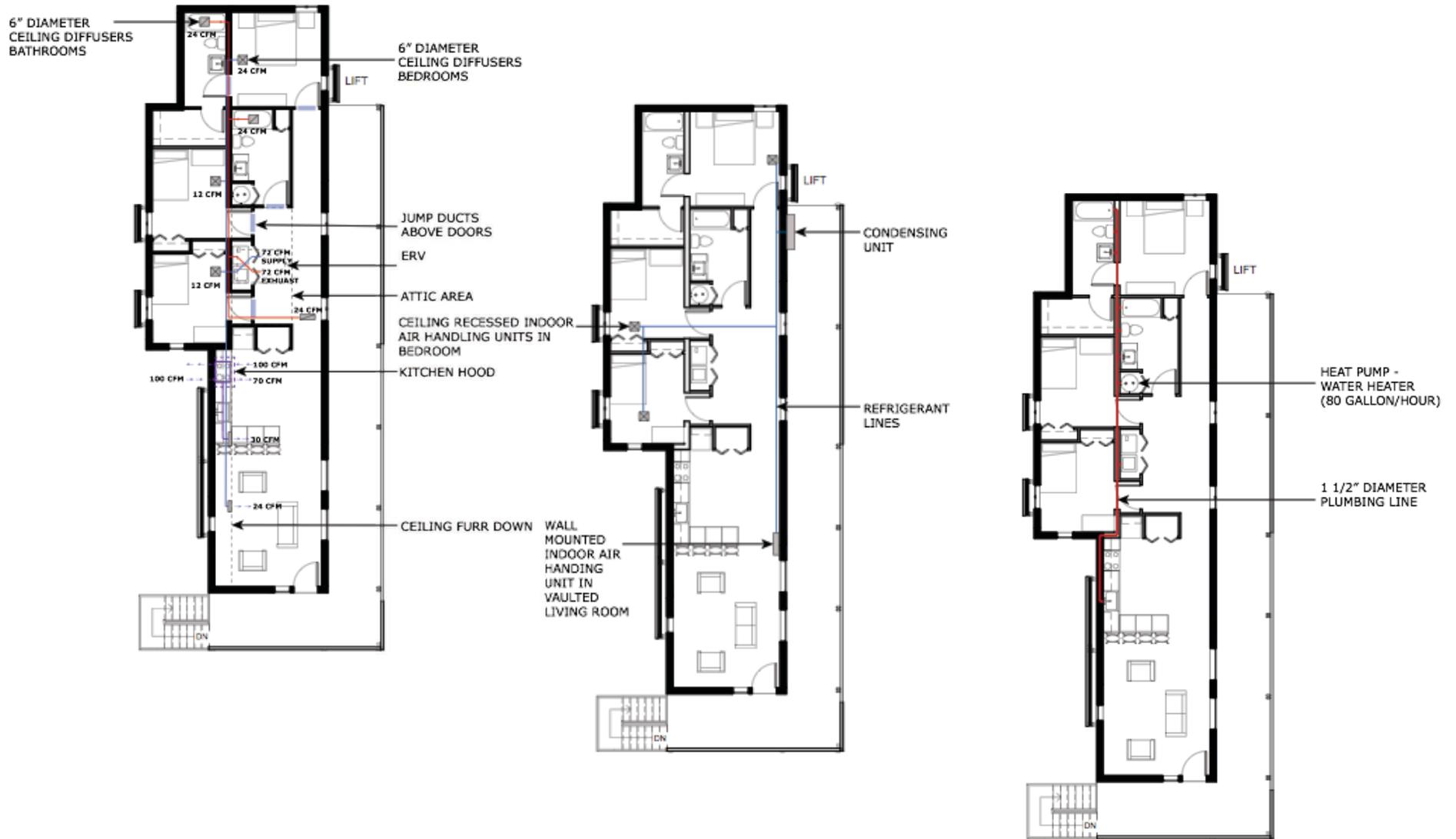




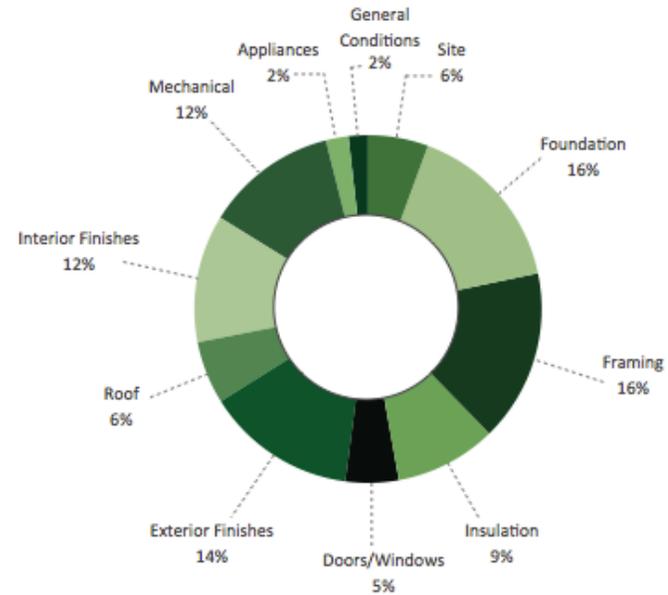
**NATURAL
VENTILATION
DIAGRAM**



TRUNK LIP
6" DIAM
LINES HA



House Type	BEopt Base	Prairie View Design	Notes
House Type	3 Bedroom	3 Bedroom	
House Size	2,080 SF	1,200 SF	We designed a smaller footprint home in order to meet affordability objectives. Note that this smaller footprint works against us in meeting Passive House criteria.
Wall Insulation	R-13 cavity + R-12 c.i.	R-21 cavity + R-6 c.i.	We utilized advanced framing and added a ventilated rainscreen w/ a radiant barrier.
Roof Insulation	R-49 @ ceiling	R-38 cavity + R-6 c.i.	We moved the thermal plane to the roof to bring the attic into the conditioned space.
Roof Finish	Composite Shingles, medium color	Standing Seam Metal, galvalume finish	We selected a standing seam metal roof for durability. We are holding the roof 3/4" off of the underlayment with high clips to provide a ventilation cavity and radiant barrier.
Floor Insulation	None- slab on grade	R-21 cavity + R-6 c.i.	We raised the floor on piles to address being in the 100 yr. flood plain.
Windows	15%; Double Pane, Low-E, Insul. Frame	15%, Triple Pane, SHGC-0.26, U-0.15	We selected Passive House certified windows for our climate.
Window Shading	2 ft overhangs	7 ft porch; trellises	We have provided fixed shading horizontal and vertical devices to completely shade all windows. The full effect of this is not accounted for in the energy models.
Airtightness	0.60 ACH50	0.60 ACH50	Although PHIUS+2015 requirements are not as tight, we elected to comply with the old standard.
Ventilation	Exhaust	Balanced- ERV	We selected a Passive House certified ERV, but have isolated the kitchen exhaust.
Space Conditioning	SEER 27 Mini-Split	SEER 17.5 Mini-Split	A lower SEER mini-split was selected as an affordability measure.
Water Heater	80 gal Heat Pump	80 gal Heat Pump	
Hot Water Distribution	R-2, Trunk Branch	R-2, Trunk Branch	The delivery system is designed such that no more than 0.5 gallons of hot water will remain in any line.
Lighting	767 kWh	241 kWh	80% of Fixtures are Energy Star qualified.
Appliances	Energy Star, Electric	Energy Star, Electric	We selected a high performance ventless clothes dryer.
Annual Energy Cost	\$1,788	\$801	We believe the BEopt cost includes a 2kW PV system, whereas ours is prior to inclusion of a 6kW PV system that zeros out energy costs.



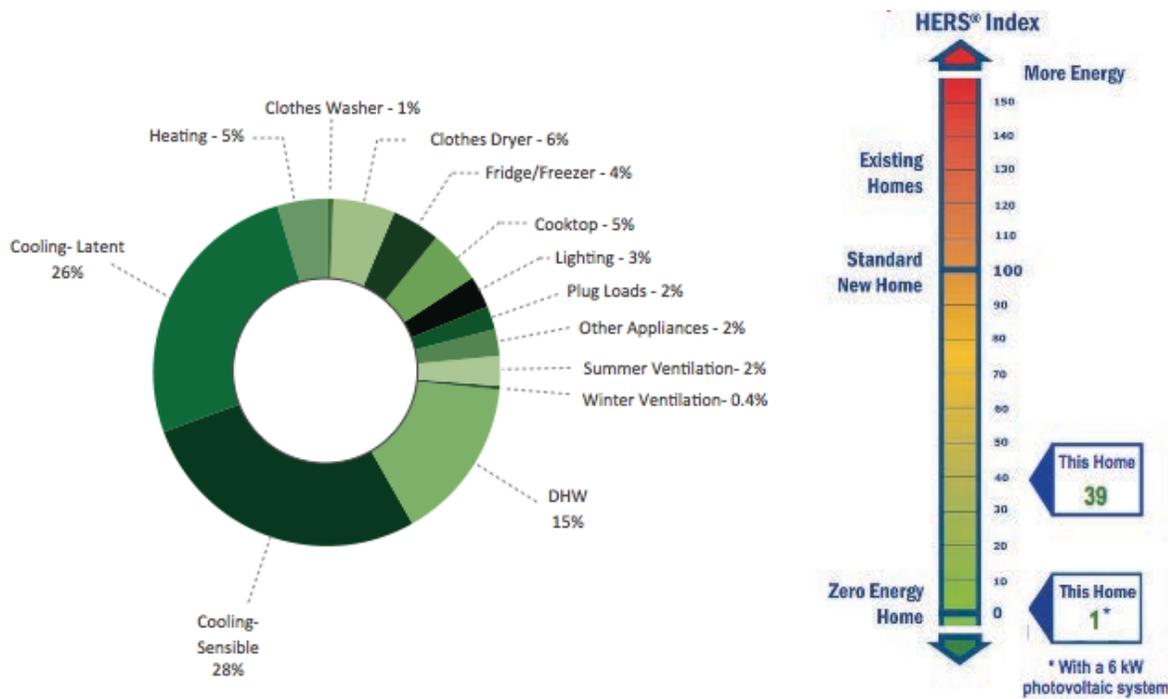
Market Rate Delivery: \$ 159K; \$ 120/SF

Low Income Delivery: \$ 127K; \$ 95/SF

Percentage of males in construction, extraction, and maintenance occupations:



WUFI-Passive Energy Modeling Results	PHIUS+ European Certification Criteria	PHIUS+ European, Base Design	PHIUS + European Optimized Design ¹	PHIUS+ 2015, Certification Criteria	PHIUS+ 2015, Base Design ²	PHIUS+ 2015 Optimized Design ³
Heating Demand	4.75 kBTU/ft ² yr	3.2 kBTU/ft ² yr	2 kBTU/ft ² yr	1.9 kBTU/ft ² yr	2.5 kBTU/ft ² yr	1.2 kBTU/ft ² yr
Cooling Demand	4.75 kBTU/ft ² yr	12.6 kBTU/ft ² yr	11.5 kBTU/ft ² yr	13.3 kBTU/ft ² yr	14.6 kBTU/ft ² yr	13.8 kBTU/ft ² yr
Heating Load	3.17 BTU/hr ft ²	4.1 BTU/hr ft ²	3.2 BTU/hr ft ²	3.4 BTU/hr ft ²	4.6 BTU/hr ft ²	3.1 BTU/hr ft ²
Cooling Load	2.54 BTU/hr ft ²	3 BTU/hr ft ²	2.5 BTU/hr ft ²	5.8 BTU/hr ft ²	3.4 BTU/hr ft ²	2.9 BTU/hr ft ²
Primary Energy	38 kBTU/ft ² yr	35.8 kBTU/ft ² yr	34.2 kBTU/ft ² yr	67.56 kBTU/ft ² yr	51.6 kBTU/ft ² yr	49.8 kBTU/ft ² yr
Notes	<p>1. An extra 3" of polyiso insulation is added to the walls and an extra 1" is added to the roof and floor.</p> <p>2. Although the new airtightness standard allows 1.19 ACH50, we cannot exceed 0.60 ACH50 to meet the criteria.</p> <p>3. Although the new airtightness standard allows 1.19 ACH50, we cannot exceed 0.60 ACH50 to meet the criteria. An extra 3" of polyiso insulation is added to the walls and an extra 1" is added to the roof and floor.</p>					





FEMA
499



Student Team

- Nichole Thomas
- Jonathon Ortega
- Christopher Brown
- Ismeal Kabre
- Tzivan Vasquez



GreeNexus Consulting



Easier Said than Done...

Economic Status

Education

Race and Ethnicity

Community

Health

Work

Housing

Income

Early Life Experience

National Night Out!

When: October 7, 2014
6:00pm – 8:00pm

Where: At the corner of 41st St.
& 8200 N. Main
Houston TX, 77022



“America’s Night Out Against Crime” promotes involvement in crime prevention activities, police-community partnerships, and neighborhood involvement. This unified act sends a message to criminals letting them know that neighborhoods are organized and fighting back!

Come out for a night of **FOOD, FUN, AND MUCH MORE!**



For more information please contact IHCAC:

Email: ihcachouston@gmail.com Phone: (832) 819-1915

Quarterly Events

- MLK Service Day
- Juneteenth Celebration
- Fall Community Harvest Festival

Independence Heights Community Harvest

A Festival of Thanksgiving



Join the Independence Heights Collaborative Action Coalition (IHCAC) for a weekend of celebration!

Friday, November 14, 2014

- **Time:** 8:00 am - 11:00 am
- **Event:** Lot Clean-Up (locations TBA)
- **Location:** Meet at the intersection of N. Main & 41st St.

Saturday November 15, 2014

- **Time:** 2:00 pm - 6:00 pm
- **Event:** Community Block Party
- **Location:** N. Main between 41st & 42nd St.

Monday November 17, 2014

- **Time:** 9:00 am - 11:00 am
- **Event:** Food Fair
- **Location:** Yale Street Baptist Church (4315 Yale St.)

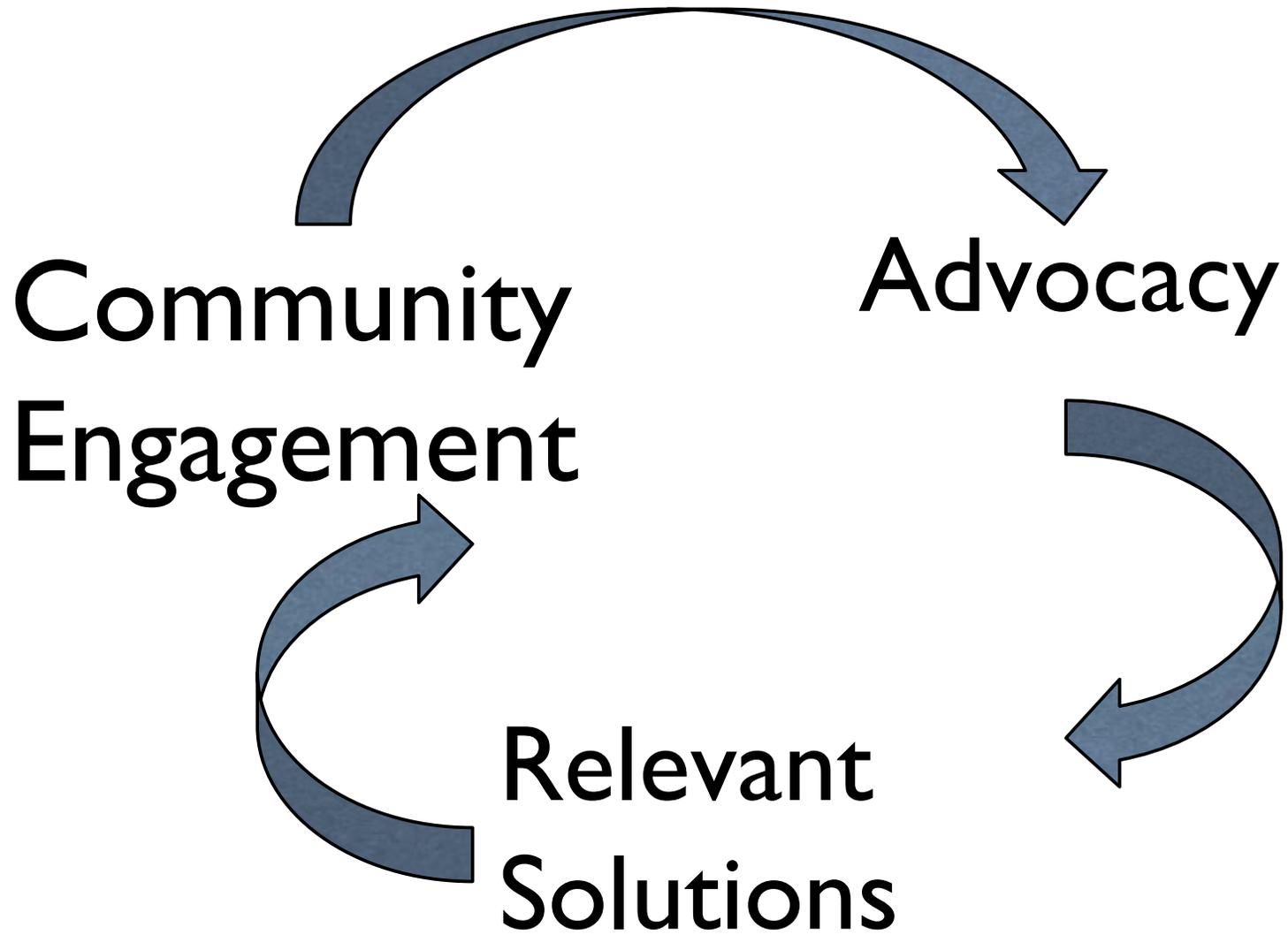
Please contact us with any questions or if you are interested in volunteering on any day of the event!

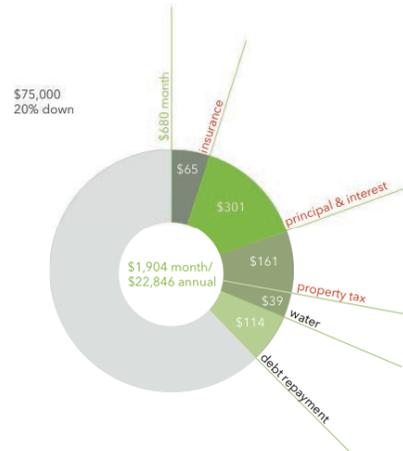
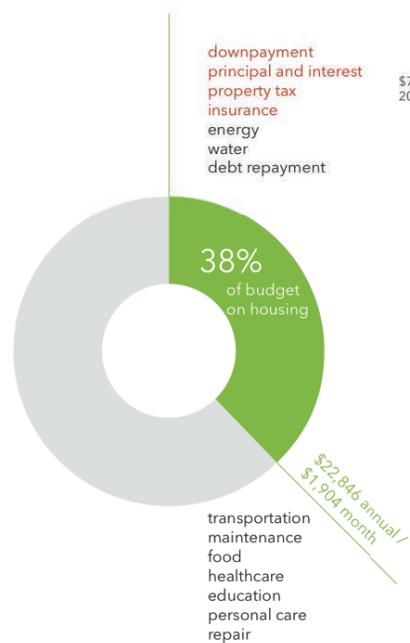
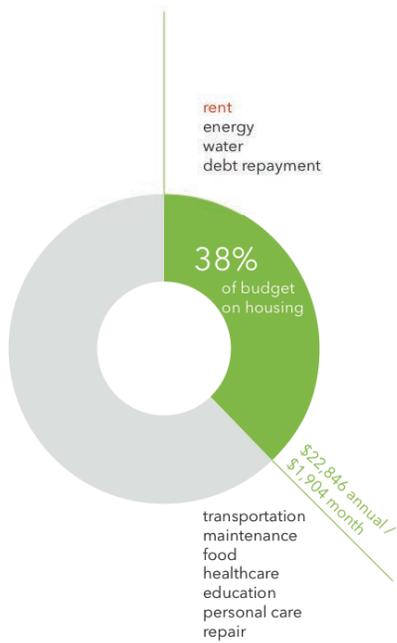
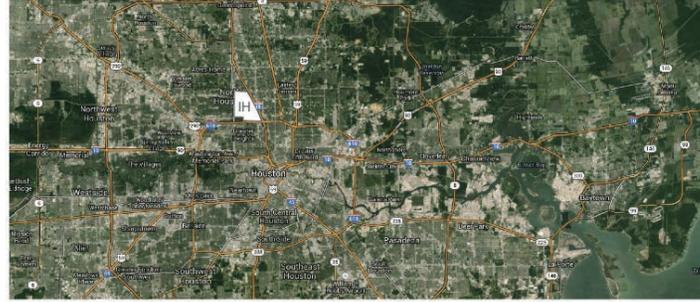


- ❖ Turkey Giveaway
- ❖ Healthy Cooking Demonstrations
- ❖ Food Sampling
- ❖ Raffles & Prizes
- ❖ Entertainment, Music, & Fun

IHCAC Contact Information:
Phone: 832-819-1915
E-mail: ihcachouston@gmail.com







AMI HOUSTON

\$63,900

80% AMI HOUSTON

60% AMI HOUSTON

MI SUPERNEIGHBORHOOD #13

\$22,848

38% of IH MI per month

\$680





Place-Based Solutions

- Climate
- Culture



Systems Thinking

- Parts Interconnected
- Feedback Loops / Dynamic v. Static



Ecological Urbanism

- Public Health Indicators / Environmental (air, water, daylight, nature, food, traffic, social)
- Responsible Resourcing (building materials, energy, regional disaster preparedness)



Stakeholder Voice

- Resident Engagement
- User-based best practices



Public Interest Design

- Ethical Design & Design Advocacy
- Programming / Place-making





Area: 3.390 square miles

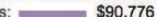
Population: 13,404

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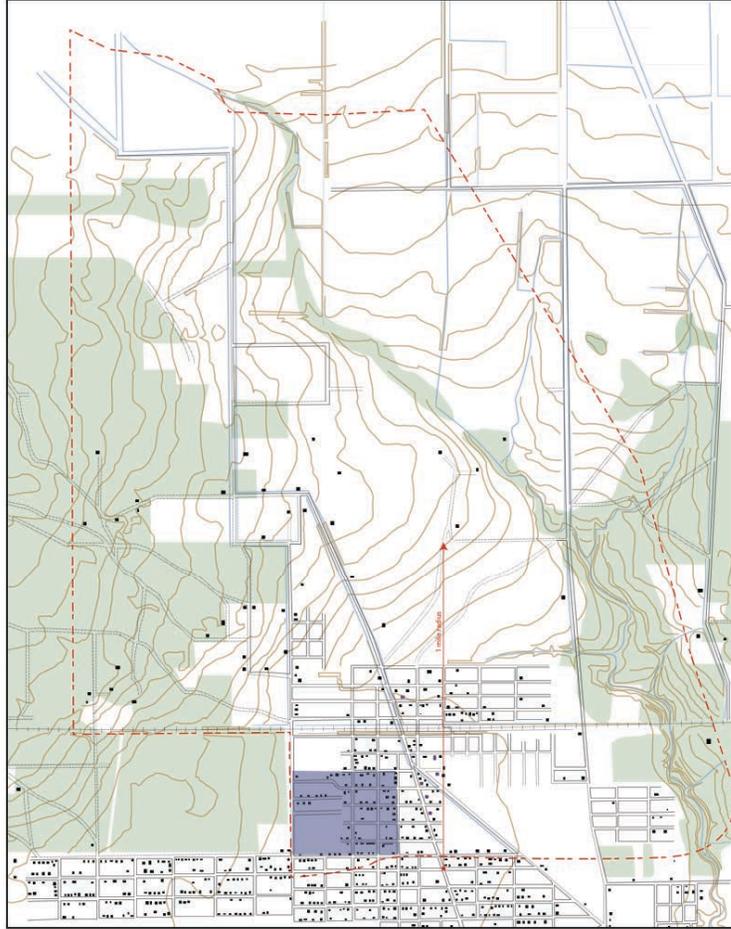
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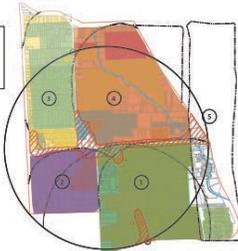


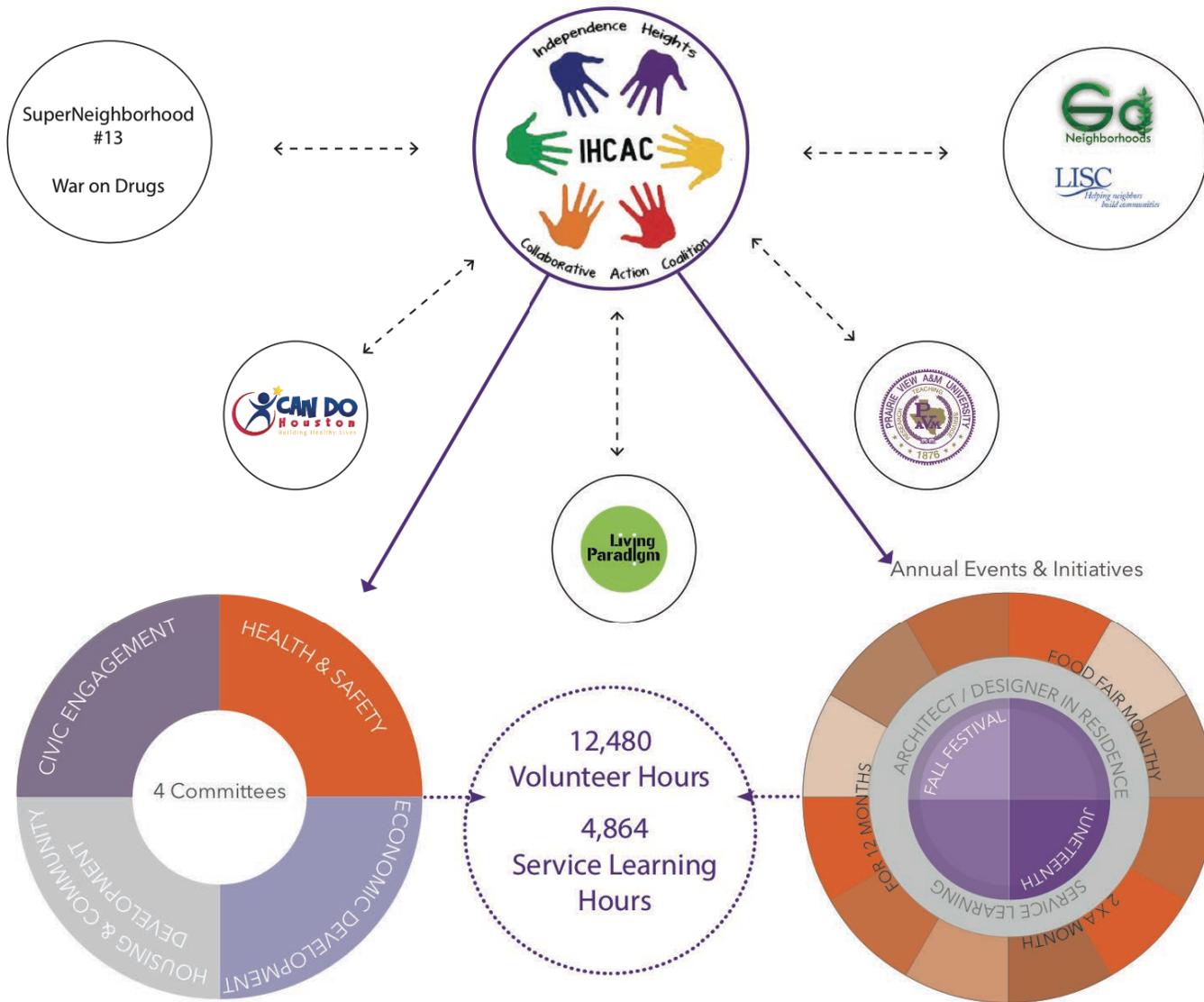


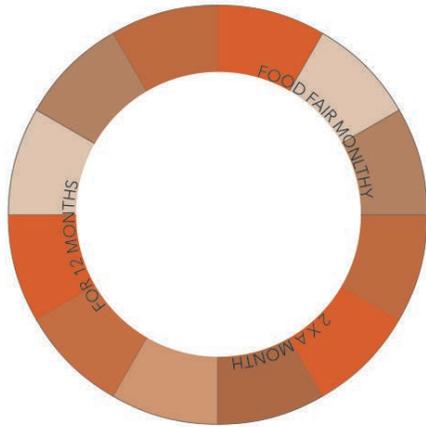
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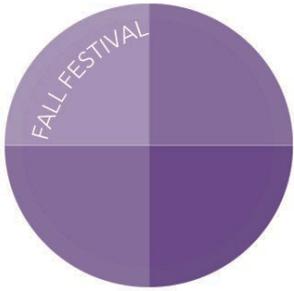






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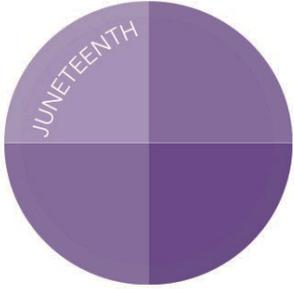


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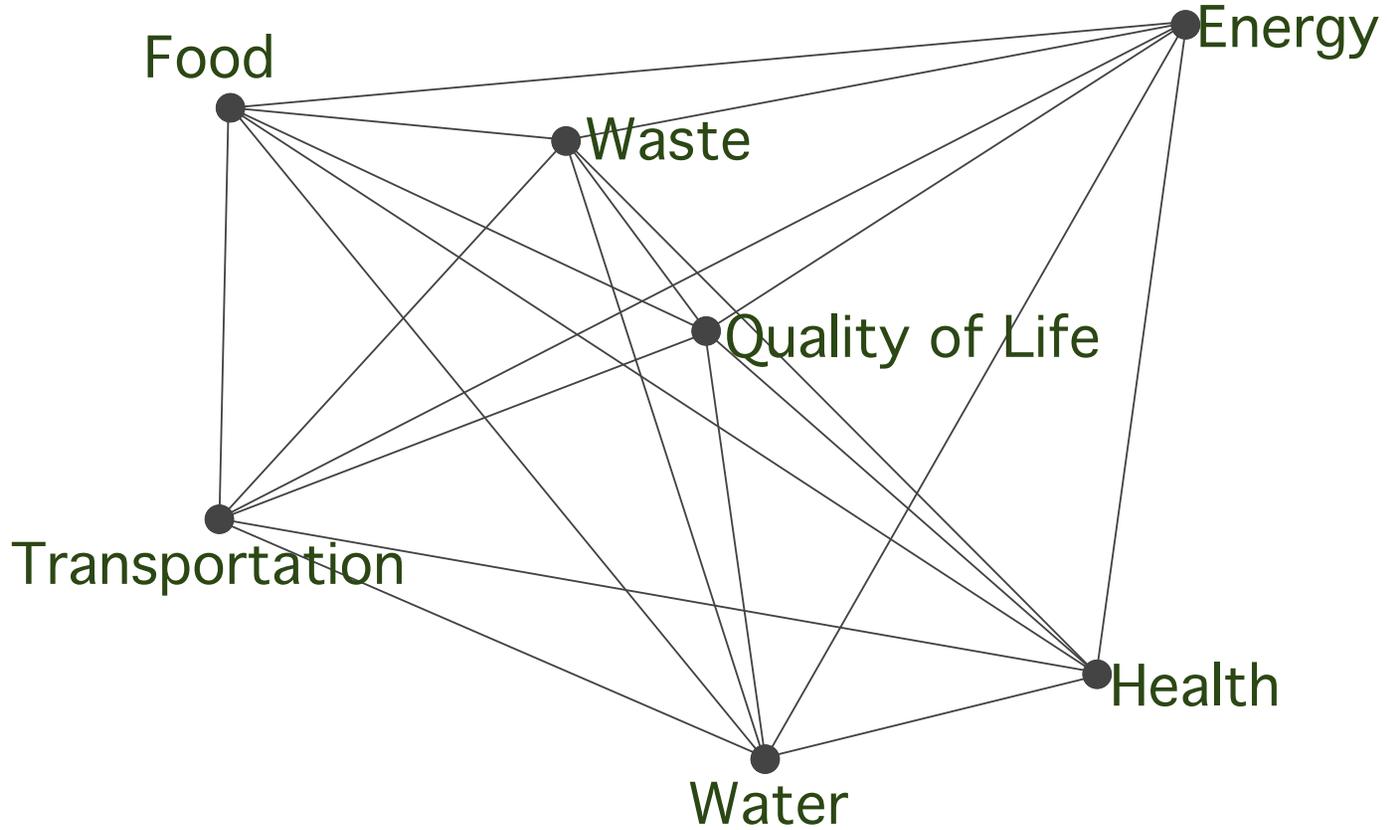
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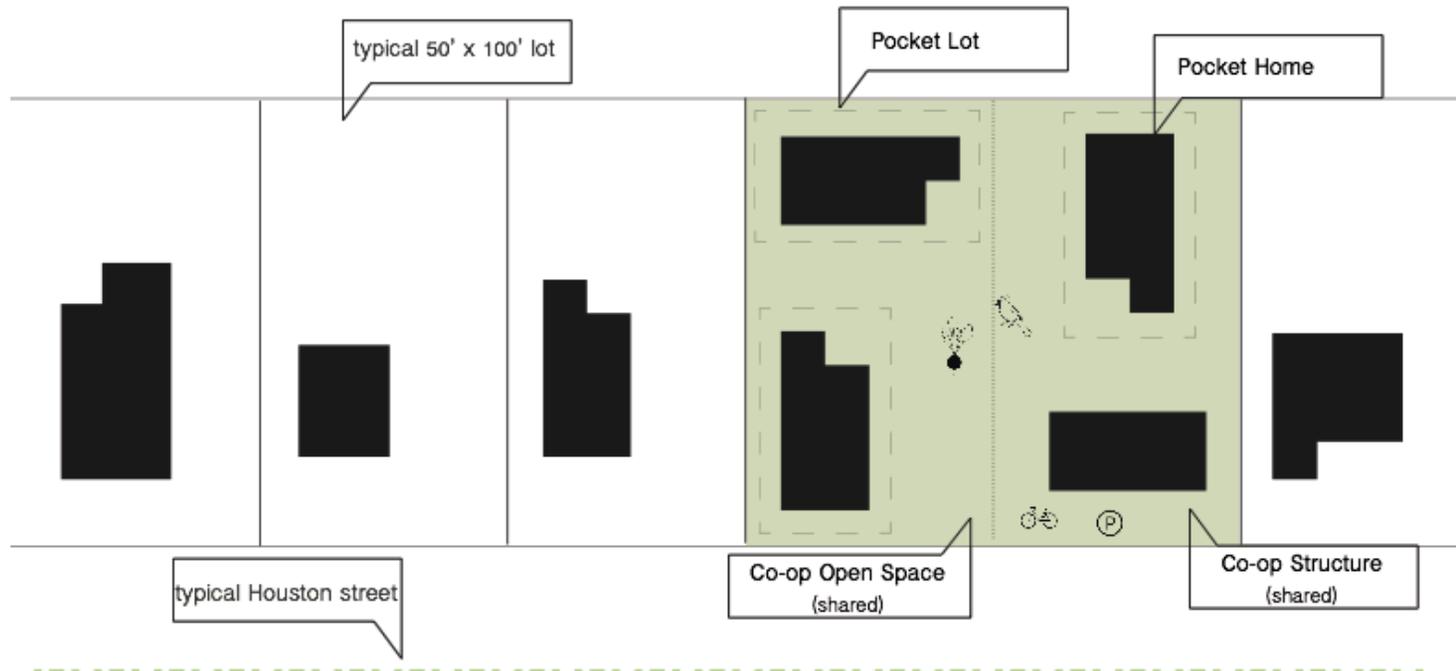
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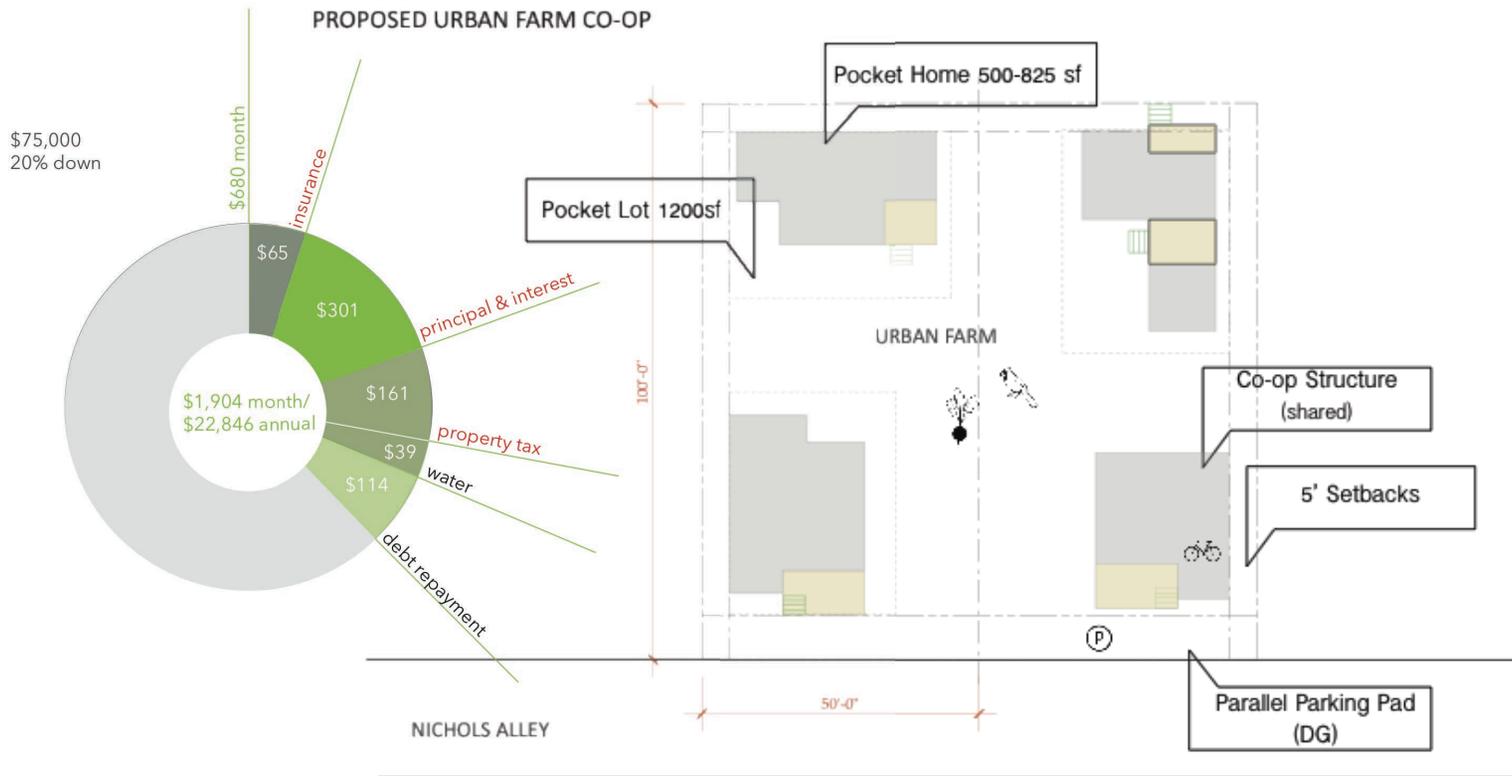
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2015 LOT ANALYSIS | Tiny / Micro Pocket Homes and Communities



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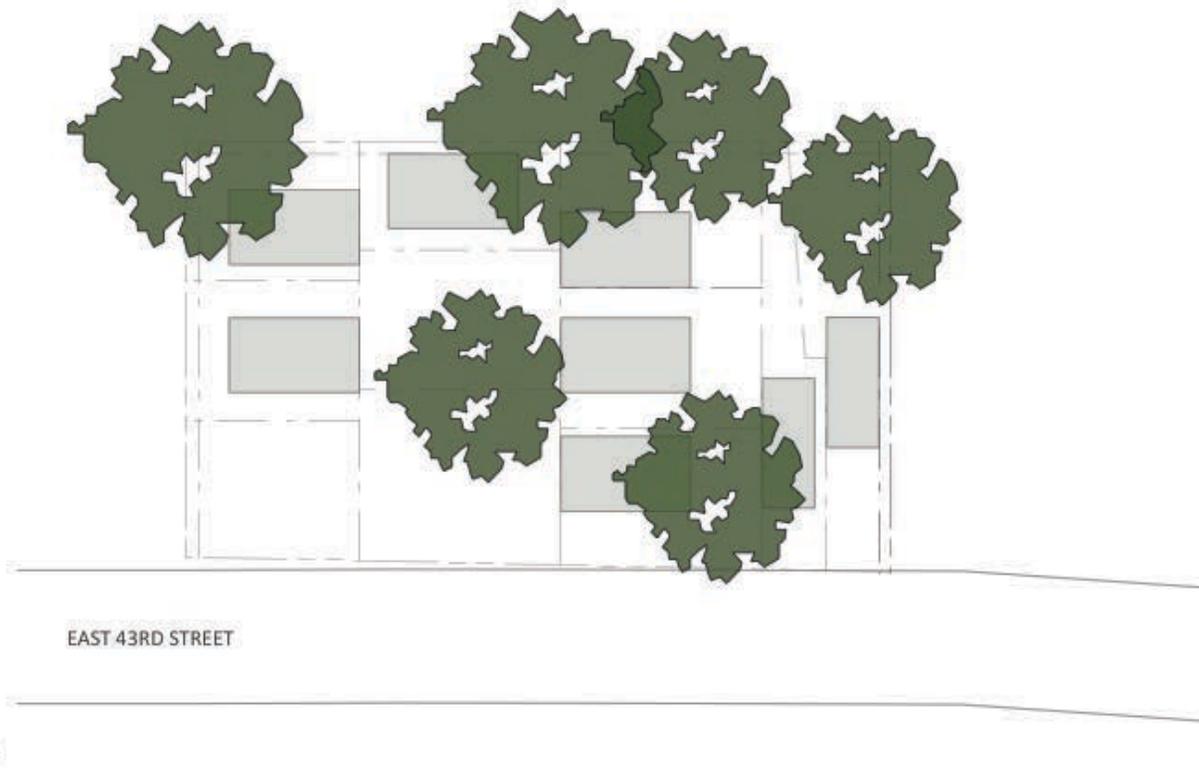
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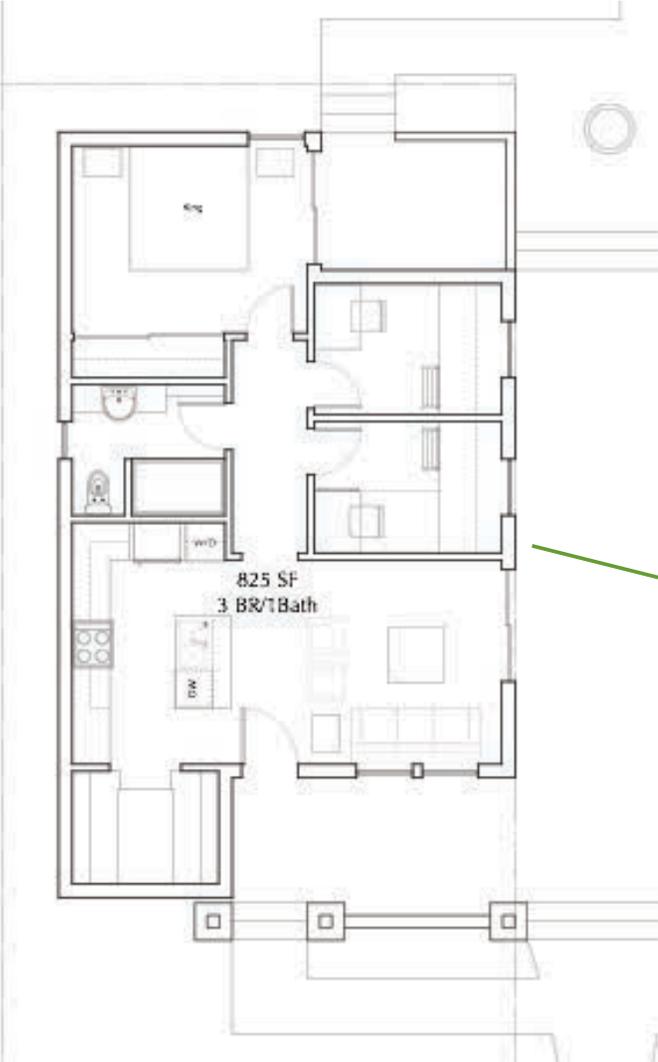
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-  COMMUNITY BUILDING



Small Homes



architend



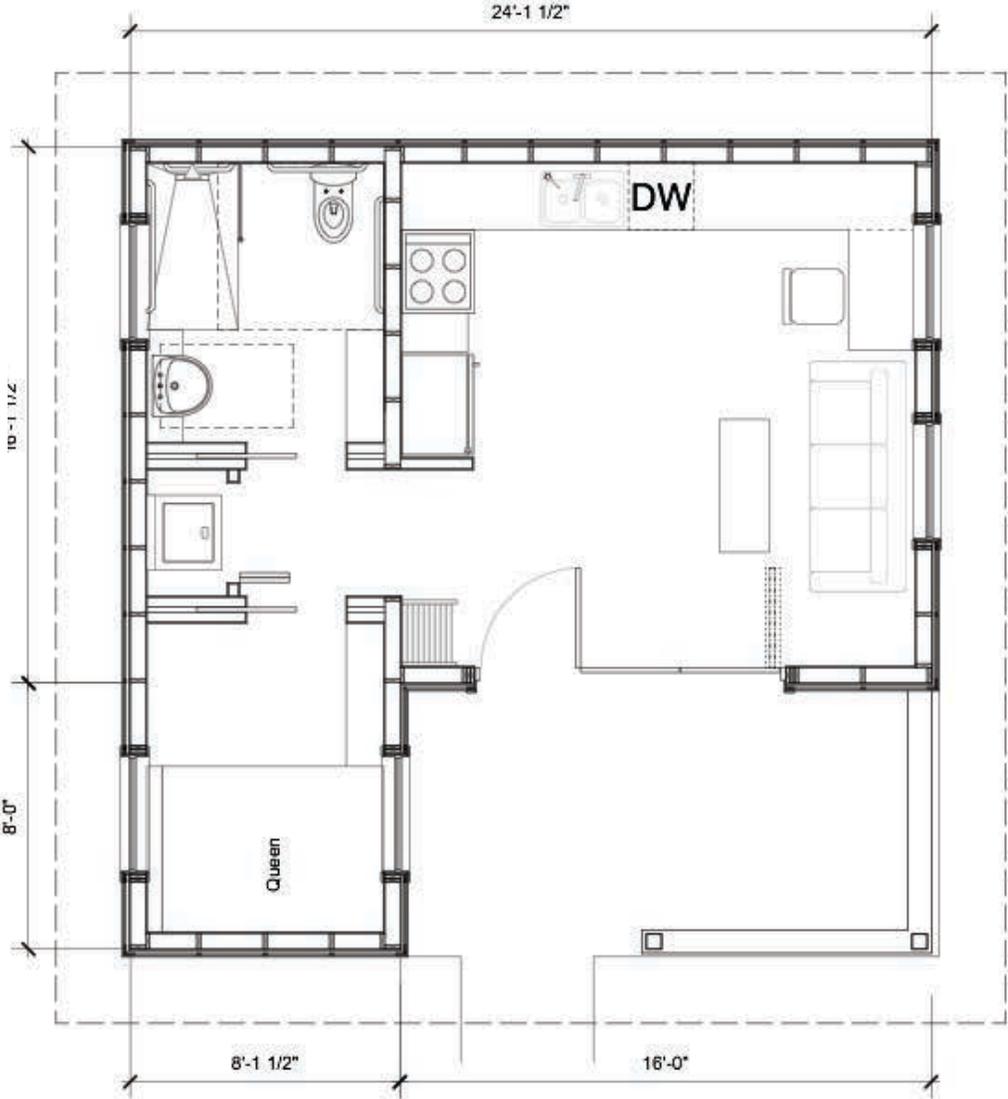
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architend



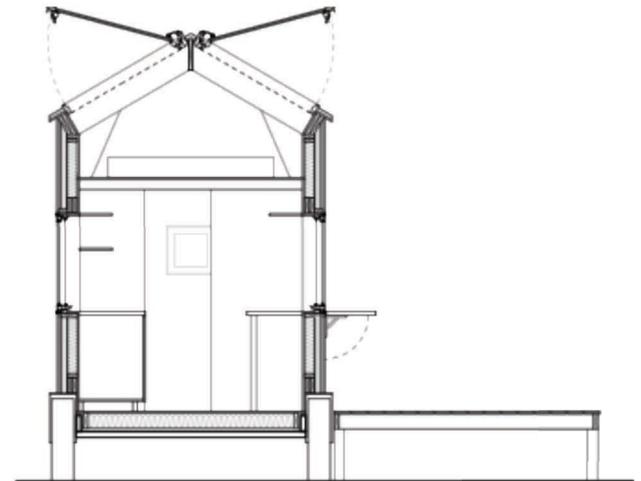
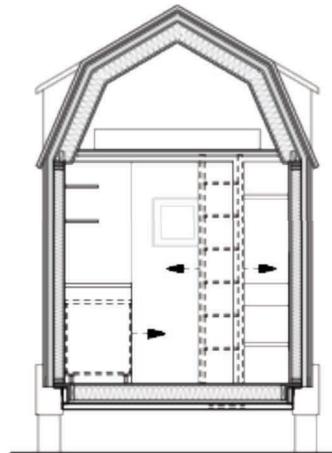
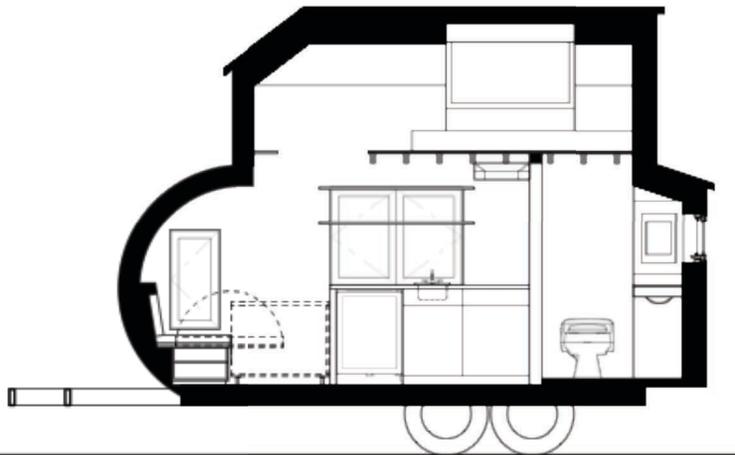
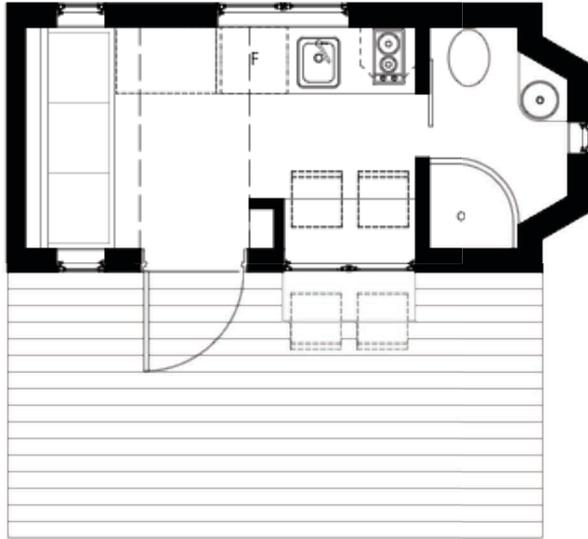
Small Homes



FLOOR PLAN
PROTOTYPICAL 500SF HOUSE



Small Homes



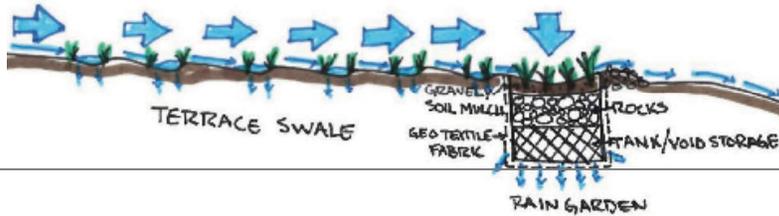
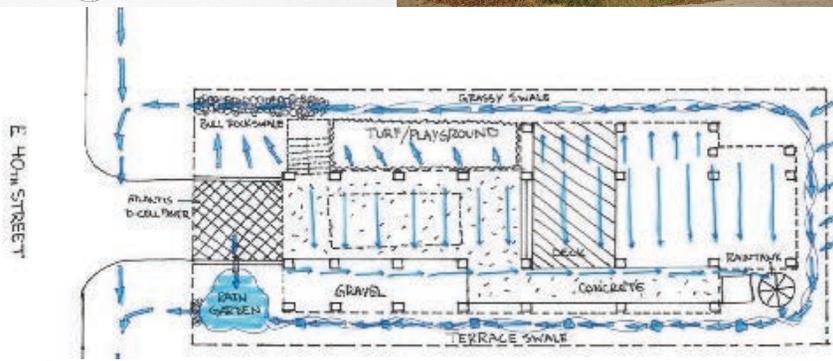
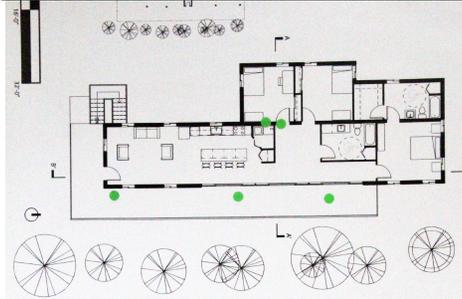


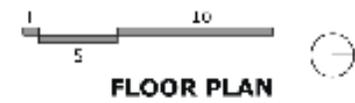
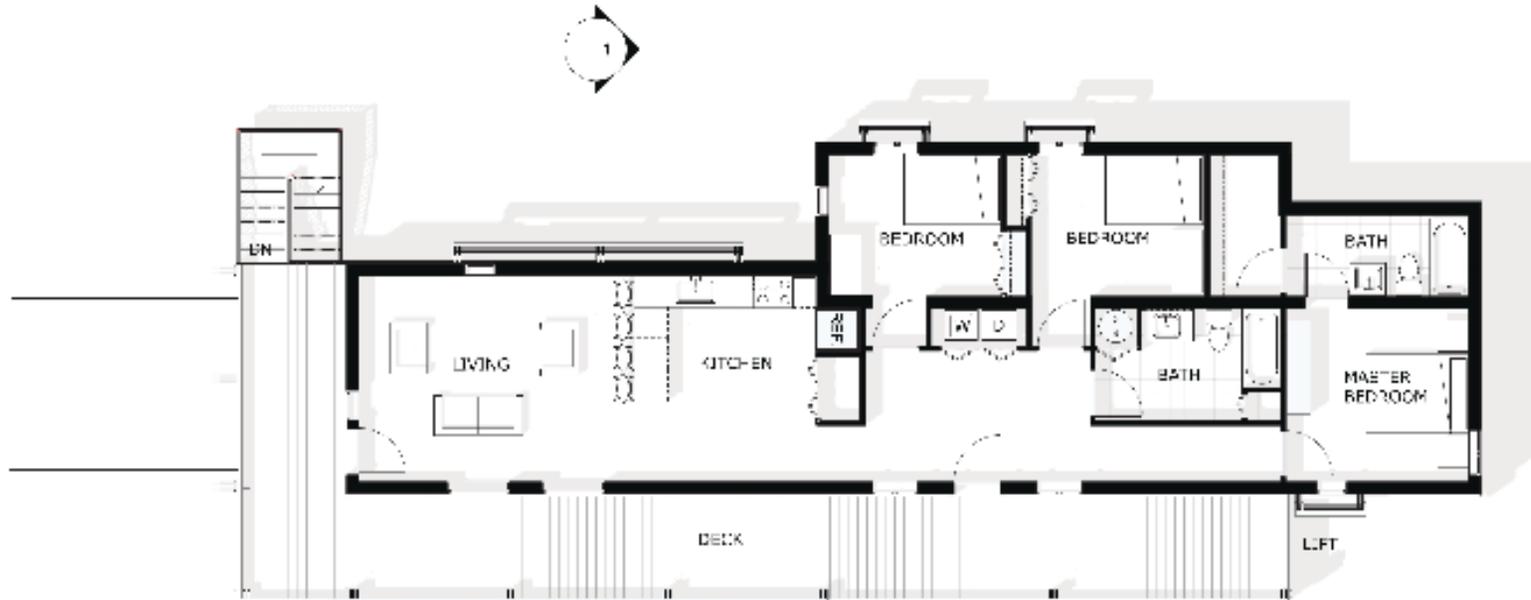
DOE Race to Net Zero Competition Independence Heights NZ Home

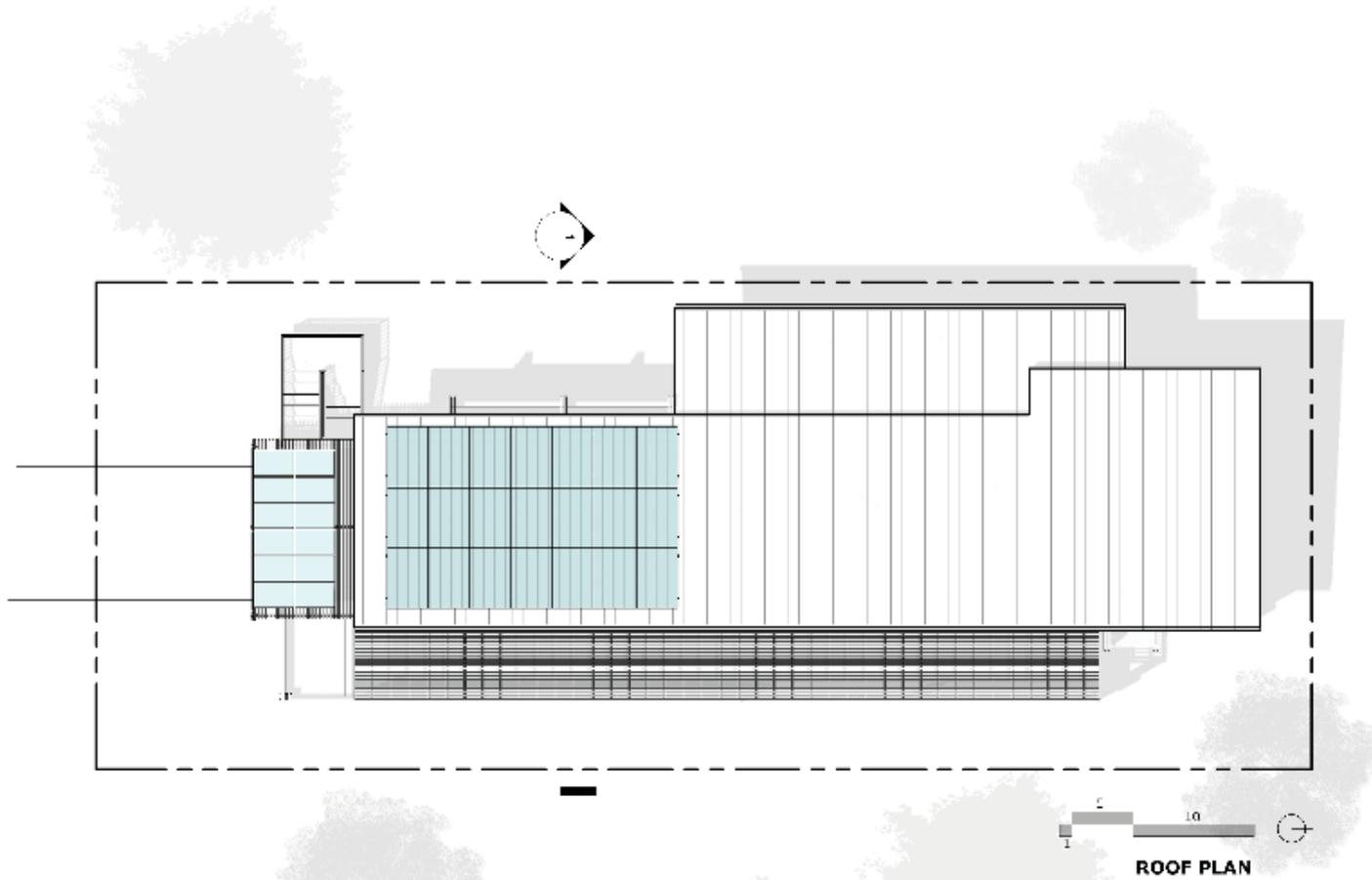


Black:	53%
Hispanic:	43%
Median Household Income:	\$35,270
Population Below Poverty Line:	41.6%
Population Over 55:	26%
Owner Occupied Households:	52%
Renter Occupied Households:	48%











Roof Ridge
22' - 2"

Level 1
0' - 0"

Ground Level
0' - 0"



SOUTH ELEVATION



Roof Ridge
22' - 2"

Level 1
8' - 0"

Ground Level
0' - 0"



EAST ELEVATION



NORTH ELEVATION



Roof Ridge
22' - 2"

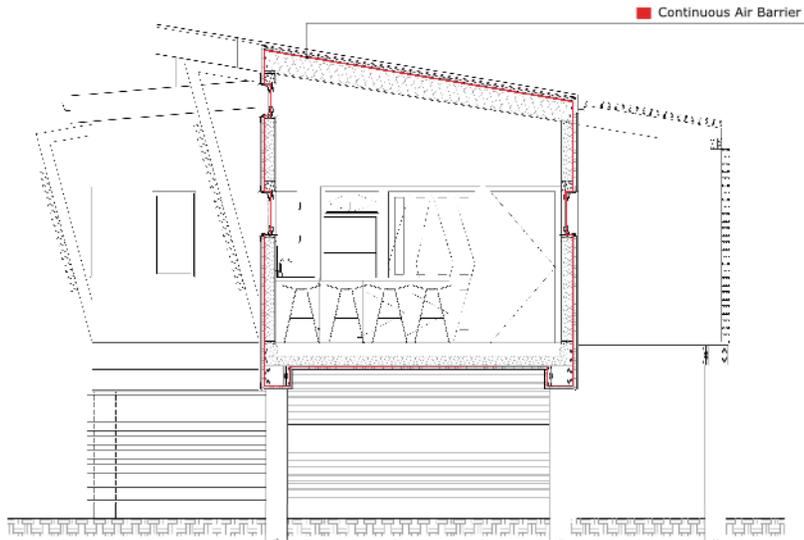
Level 1
8' - 0"

Ground Level
0' - 0"

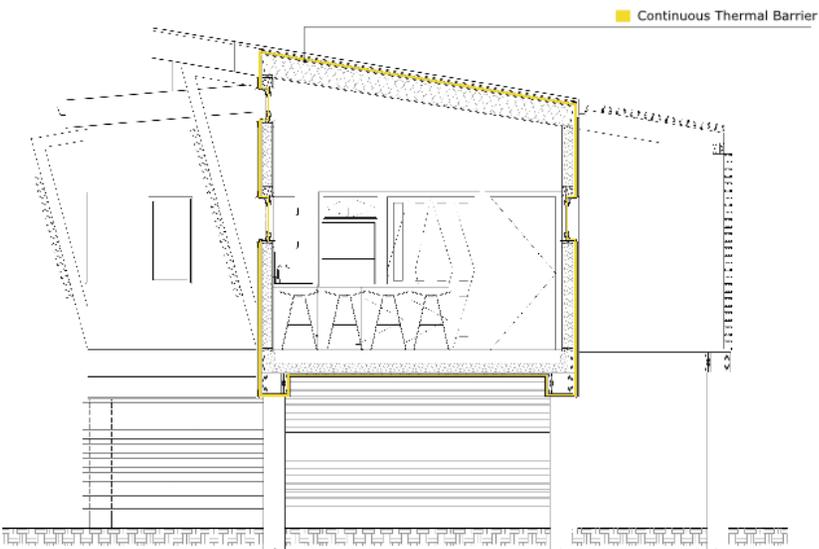


WEST ELEVATION

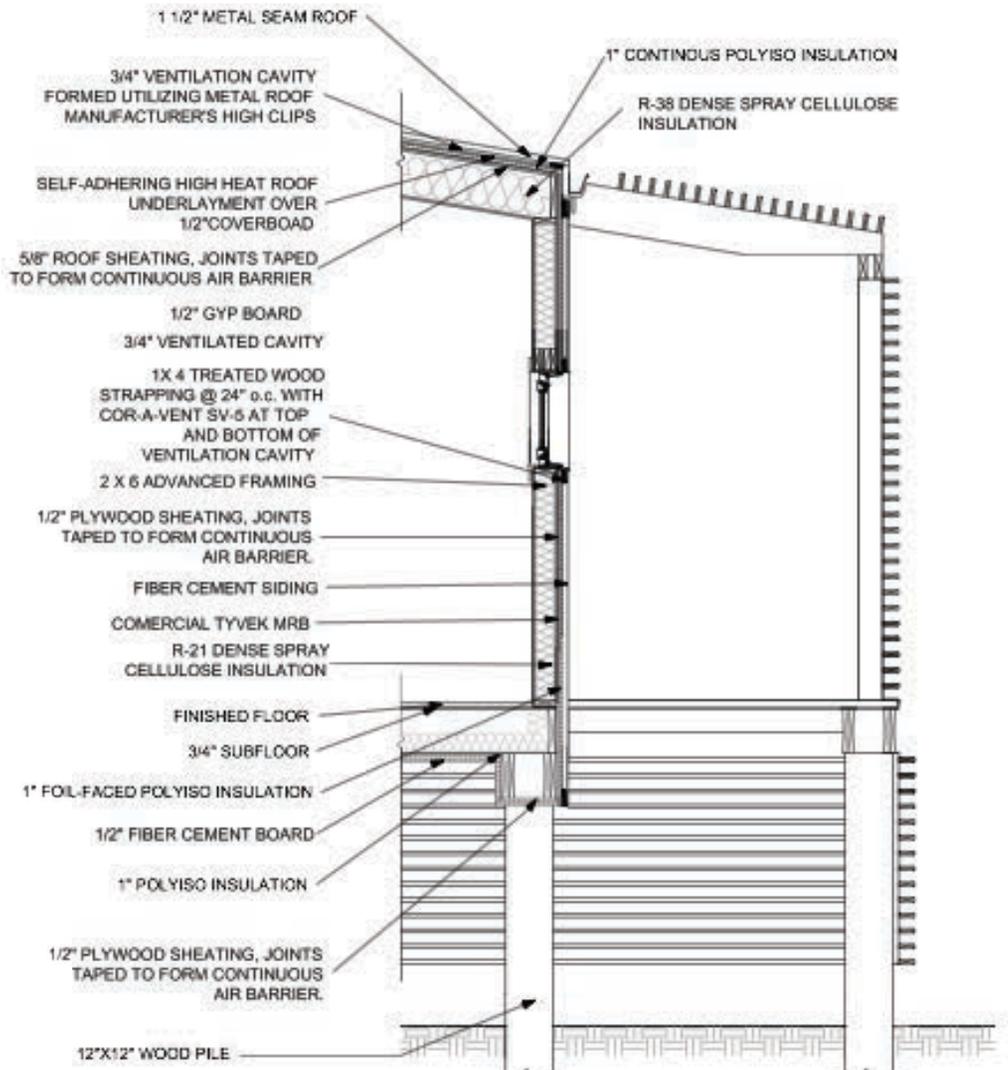




BUILDING SECTION

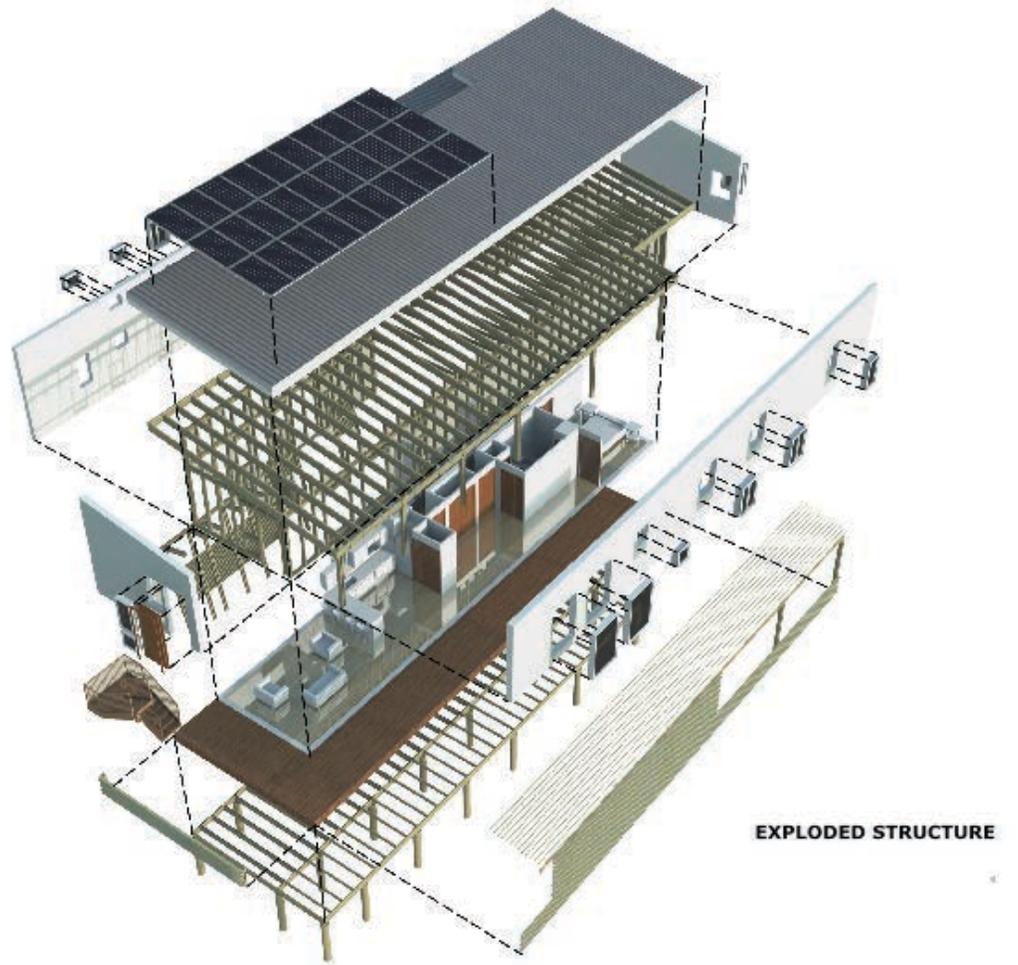
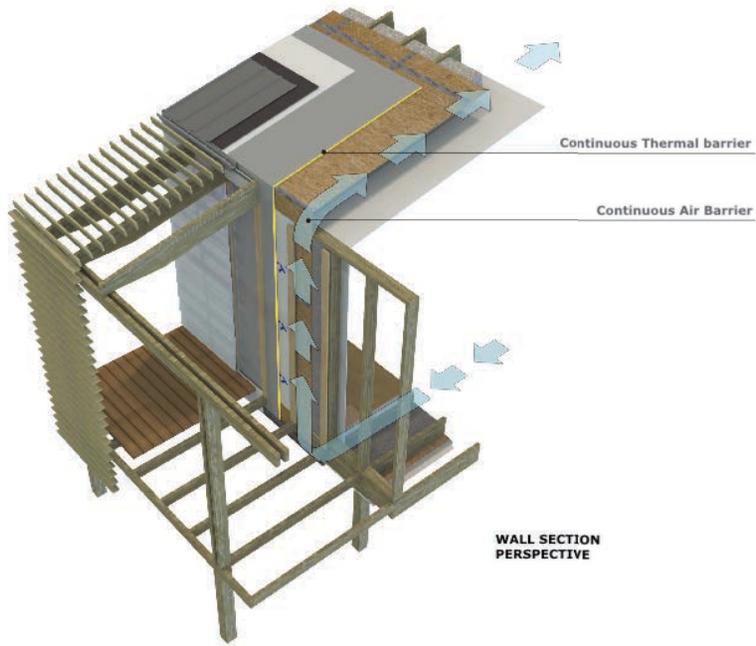


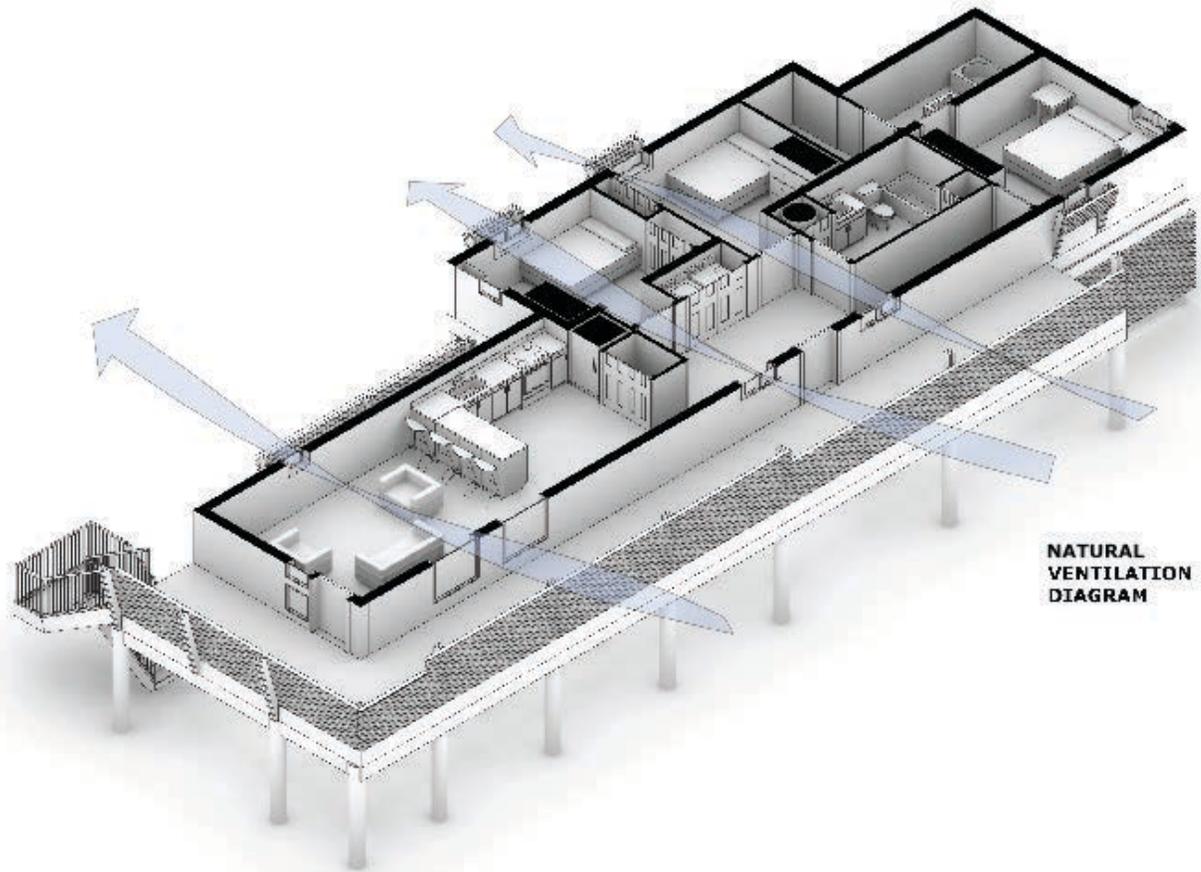
BUILDING SECTION



WALL SECTION



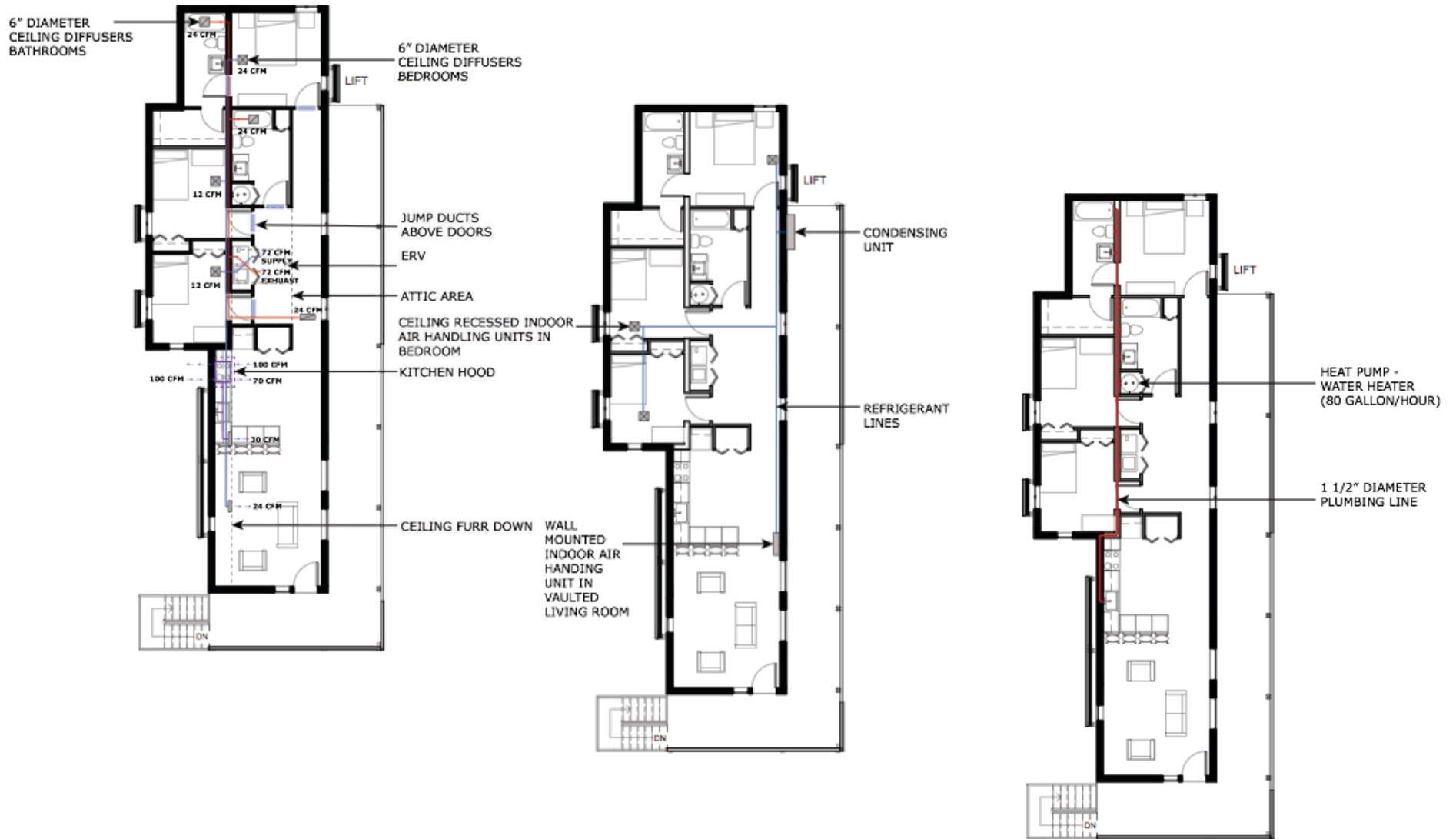




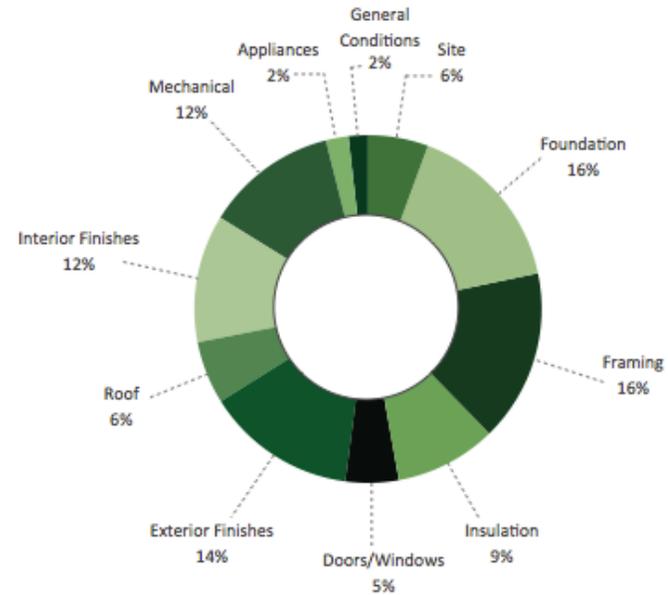
**NATURAL
VENTILATION
DIAGRAM**



TRUNK LIP
6" DIAM
LINES HA



House Type	BEopt Base	Prairie View Design	Notes
House Type	3 Bedroom	3 Bedroom	
House Size	2,080 SF	1,200 SF	We designed a smaller footprint home in order to meet affordability objectives. Note that this smaller footprint works against us in meeting Passive House criteria.
Wall Insulation	R-13 cavity + R-12 c.i.	R-21 cavity + R-6 c.i.	We utilized advanced framing and added a ventilated rainscreen w/ a radiant barrier.
Roof Insulation	R-49 @ ceiling	R-38 cavity + R-6 c.i.	We moved the thermal plane to the roof to bring the attic into the conditioned space.
Roof Finish	Composite Shingles, medium color	Standing Seam Metal, galvalume finish	We selected a standing seam metal roof for durability. We are holding the roof 3/4" off of the underlayment with high clips to provide a ventilation cavity and radiant barrier.
Floor Insulation	None- slab on grade	R-21 cavity + R-6 c.i.	We raised the floor on piles to address being in the 100 yr. flood plain.
Windows	15%; Double Pane, Low-E, Insul. Frame	15%, Triple Pane, SHGC-0.26, U-0.15	We selected Passive House certified windows for our climate.
Window Shading	2 ft overhangs	7 ft porch; trellises	We have provided fixed shading horizontal and vertical devices to completely shade all windows. The full effect of this is not accounted for in the energy models.
Airtightness	0.60 ACH50	0.60 ACH50	Although PHIUS+2015 requirements are not as tight, we elected to comply with the old standard.
Ventilation	Exhaust	Balanced- ERV	We selected a Passive House certified ERV, but have isolated the kitchen exhaust.
Space Conditioning	SEER 27 Mini-Split	SEER 17.5 Mini-Split	A lower SEER mini-split was selected as an affordability measure.
Water Heater	80 gal Heat Pump	80 gal Heat Pump	
Hot Water Distribution	R-2, Trunk Branch	R-2, Trunk Branch	The delivery system is designed such that no more than 0.5 gallons of hot water will remain in any line.
Lighting	767 kWh	241 kWh	80% of Fixtures are Energy Star qualified.
Appliances	Energy Star, Electric	Energy Star, Electric	We selected a high performance ventless clothes dryer.
Annual Energy Cost	\$1,788	\$801	We believe the BEopt cost includes a 2kW PV system, whereas ours is prior to inclusion of a 6kW PV system that zeros out energy costs.



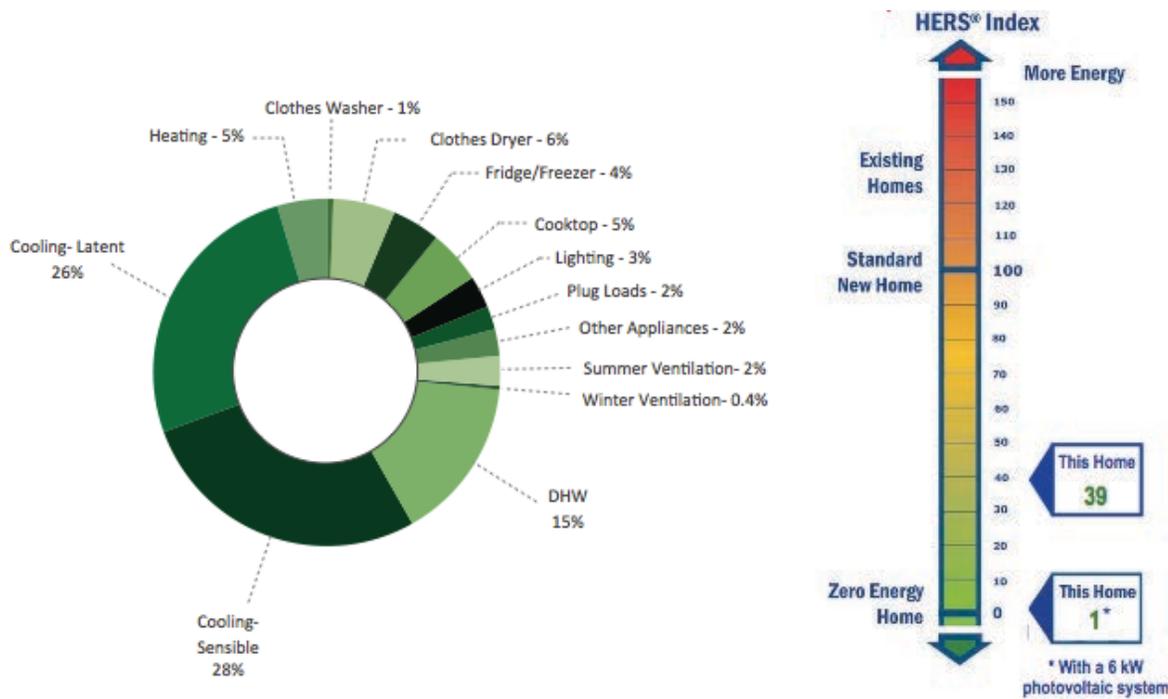
Market Rate Delivery: \$ 159K; \$ 120/SF

Low Income Delivery: \$ 127K; \$ 95/SF

Percentage of males in construction, extraction, and maintenance occupations:



WUFI-Passive Energy Modeling Results	PHIUS+ European Certification Criteria	PHIUS+ European, Base Design	PHIUS + European Optimized Design ¹	PHIUS+ 2015, Certification Criteria	PHIUS+ 2015, Base Design ²	PHIUS+ 2015 Optimized Design ³
Heating Demand	4.75 kBTU/ft ² yr	3.2 kBTU/ft ² yr	2 kBTU/ft ² yr	1.9 kBTU/ft ² yr	2.5 kBTU/ft ² yr	1.2 kBTU/ft ² yr
Cooling Demand	4.75 kBTU/ft ² yr	12.6 kBTU/ft ² yr	11.5 kBTU/ft ² yr	13.3 kBTU/ft ² yr	14.6 kBTU/ft ² yr	13.8 kBTU/ft ² yr
Heating Load	3.17 BTU/hr ft ²	4.1 BTU/hr ft ²	3.2 BTU/hr ft ²	3.4 BTU/hr ft ²	4.6 BTU/hr ft ²	3.1 BTU/hr ft ²
Cooling Load	2.54 BTU/hr ft ²	3 BTU/hr ft ²	2.5 BTU/hr ft ²	5.8 BTU/hr ft ²	3.4 BTU/hr ft ²	2.9 BTU/hr ft ²
Primary Energy	38 kBTU/ft ² yr	35.8 kBTU/ft ² yr	34.2 kBTU/ft ² yr	67.56 kBTU/ft ² yr	51.6 kBTU/ft ² yr	49.8 kBTU/ft ² yr
Notes	<p>1. An extra 3" of polyiso insulation is added to the walls and an extra 1" is added to the roof and floor.</p> <p>2. Although the new airtightness standard allows 1.19 ACH50, we cannot exceed 0.60 ACH50 to meet the criteria.</p> <p>3. Although the new airtightness standard allows 1.19 ACH50, we cannot exceed 0.60 ACH50 to meet the criteria. An extra 3" of polyiso insulation is added to the walls and an extra 1" is added to the roof and floor.</p>					





FEMA
499



Student Team

Nichole Thomas
Jonathon Ortega
Christopher Brown
Ismeal Kabre
Tzivan Vasquez

archi**tend**

TegrityHomes
BUILDING YOUR FUTURE

GreeNexus Consulting



Easier Said than Done...

Economic Status

Education

Race and Ethnicity

Community

Health

Work

Housing

Income

Early Life Experience

National Night Out!

When: October 7, 2014
6:00pm – 8:00pm

Where: At the corner of 41st St.
& 8200 N. Main
Houston TX, 77022



“America’s Night Out Against Crime” promotes involvement in crime prevention activities, police-community partnerships, and neighborhood involvement. This unified act sends a message to criminals letting them know that neighborhoods are organized and fighting back!

Come out for a night of **FOOD, FUN, AND MUCH MORE!**



For more information please contact IHCAC:

Email: ihcachouston@gmail.com Phone: (832) 819-1915

Quarterly Events

- MLK Service Day
- Juneteenth Celebration
- Fall Community Harvest Festival

Independence Heights Community Harvest

A Festival of Thanksgiving



Join the Independence Heights Collaborative Action Coalition (IHCAC) for a weekend of celebration!

Friday, November 14, 2014

- **Time:** 8:00 am - 11:00 am
- **Event:** Lot Clean-Up (locations TBA)
- **Location:** Meet at the intersection of N. Main & 41st St.

Saturday November 15, 2014

- **Time:** 2:00 pm - 6:00 pm
- **Event:** Community Block Party
- **Location:** N. Main between 41st & 42nd St.

Monday November 17, 2014

- **Time:** 9:00 am - 11:00 am
- **Event:** Food Fair
- **Location:** Yale Street Baptist Church (4315 Yale St.)

Please contact us with any questions or if you are interested in volunteering on any day of the event!



- ❖ Turkey Giveaway
- ❖ Healthy Cooking Demonstrations
- ❖ Food Sampling
- ❖ Raffles & Prizes
- ❖ Entertainment, Music, & Fun

IHCAC Contact Information:
Phone: 832-819-1915
E-mail: ihcachouston@gmail.com



