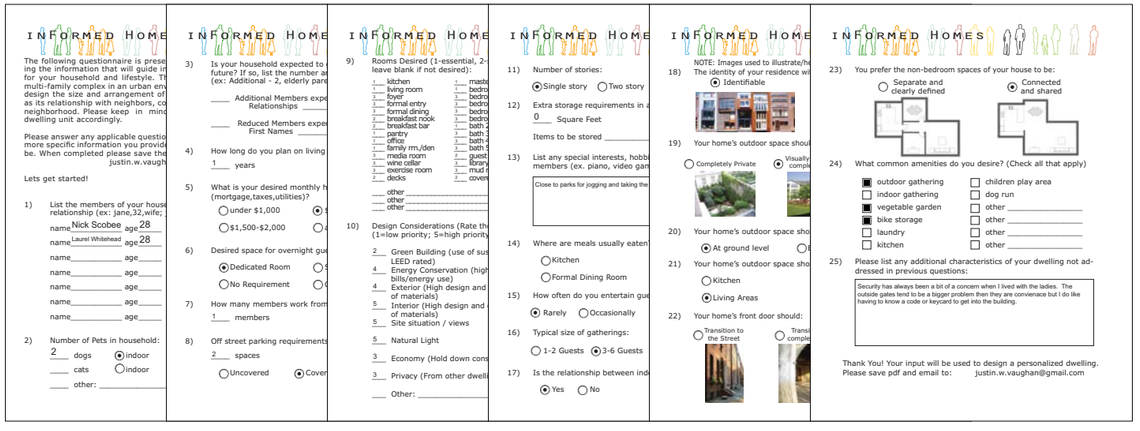
Cohousing Dallas

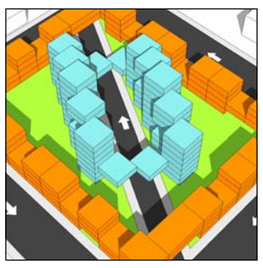
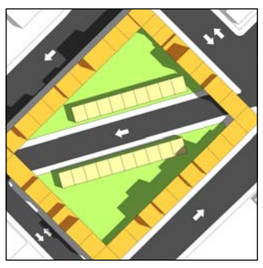
Farmers Market District, Dallas, Texas

Justin Vaughan Spring 2010
Illinois Institute of Technology: College of Architecture
Master's Project Professor Dirk Denison

20 Households participated in the process of creating this Cohousing proposal. Cohousing is a type of collaborative housing in which residents actively participate in the design and operation of their own neighborhoods. The interactions with the participants included conversations and questionnaires aimed at bringing forth desired qualities of a residence and a larger community. The design proposal of this project attempts to reflect the individualities and shared qualities of its future cohabitants.

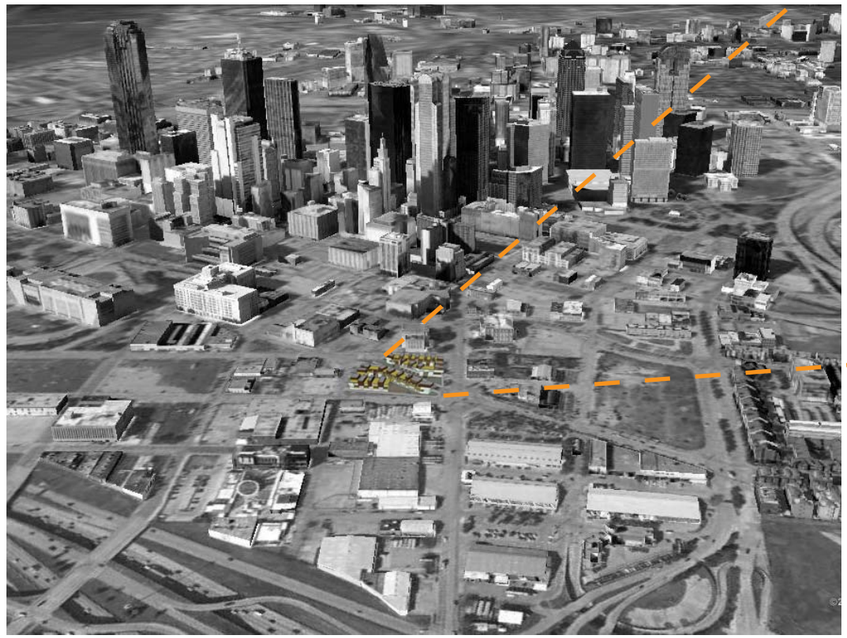





The Site

Adjacent triangular lots connected by a one way street, Marilla, for a total of 1.5 acres. Located in an underused previous light industrial area on the edge of downtown Dallas. City's largest Farmers Market is adjacent to the site and successful new residential development is 2 blocks east on Marilla St. The site strategy is to reinforce Marilla as a slow traffic and pedestrian corridor while creating inner open spaces for the residents. Partial basement parking garages provide 130 parking spaces.



Site Plan
Scale: 1/64" = 1'-0"

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View of Marilla Street

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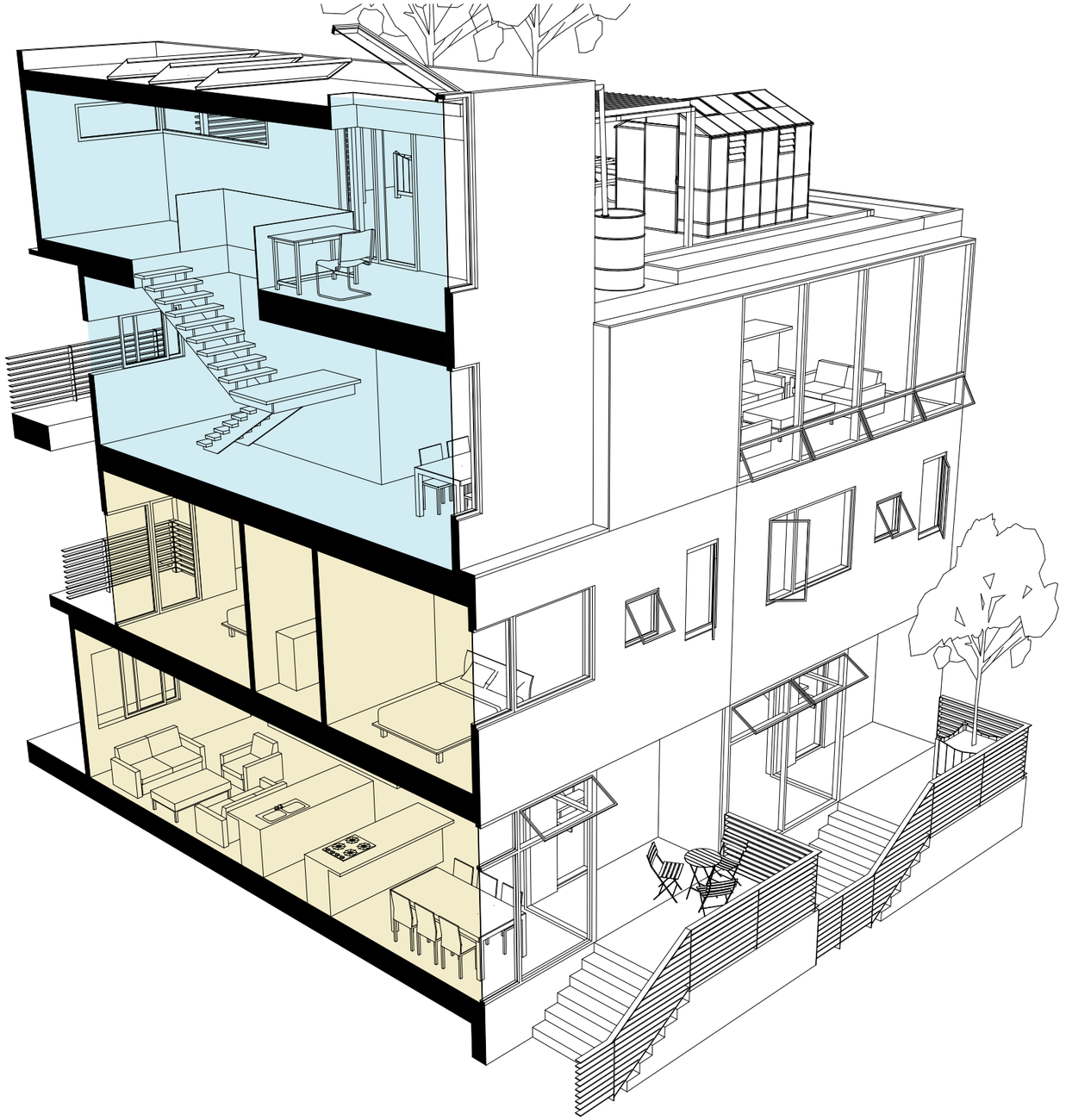
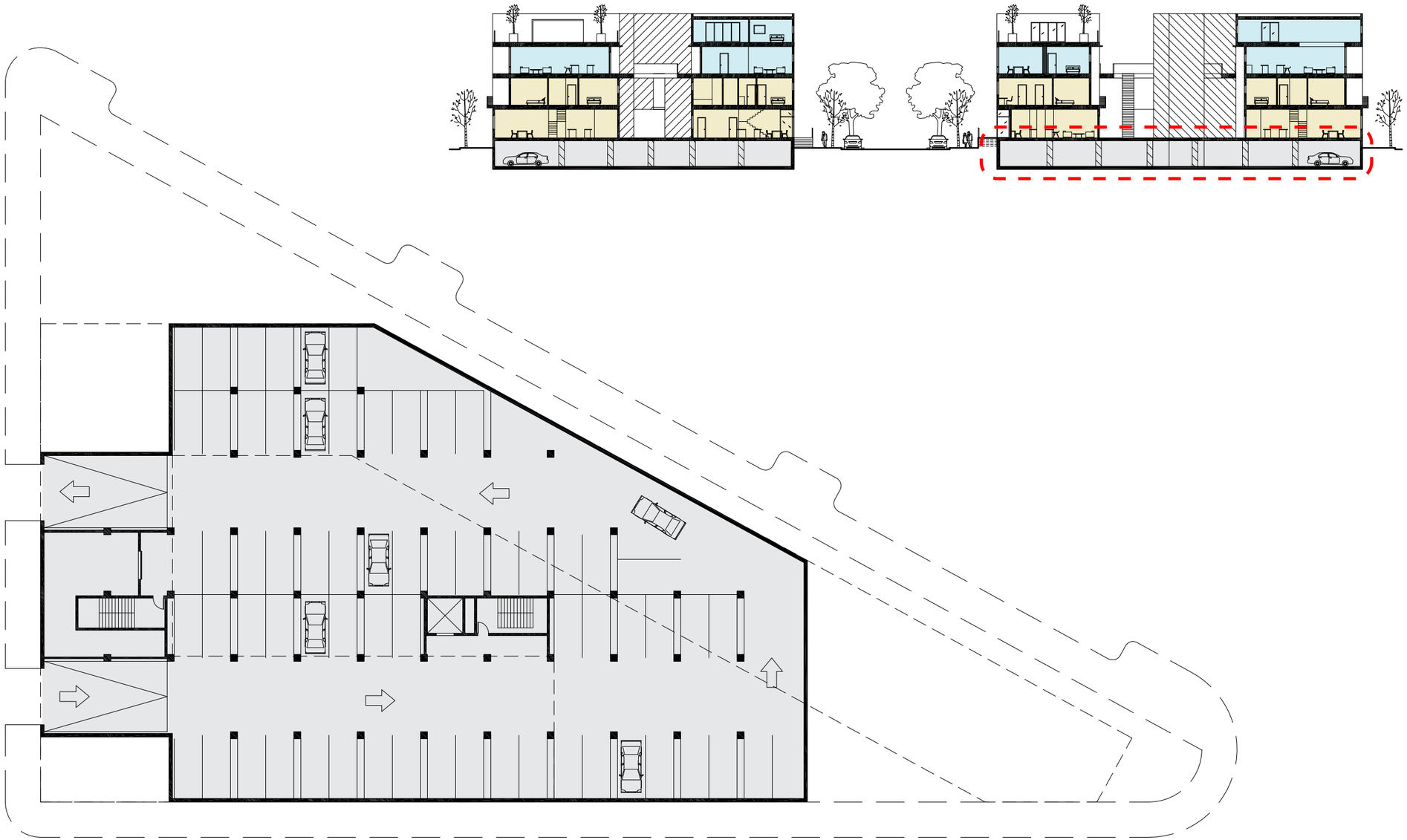
The Homes

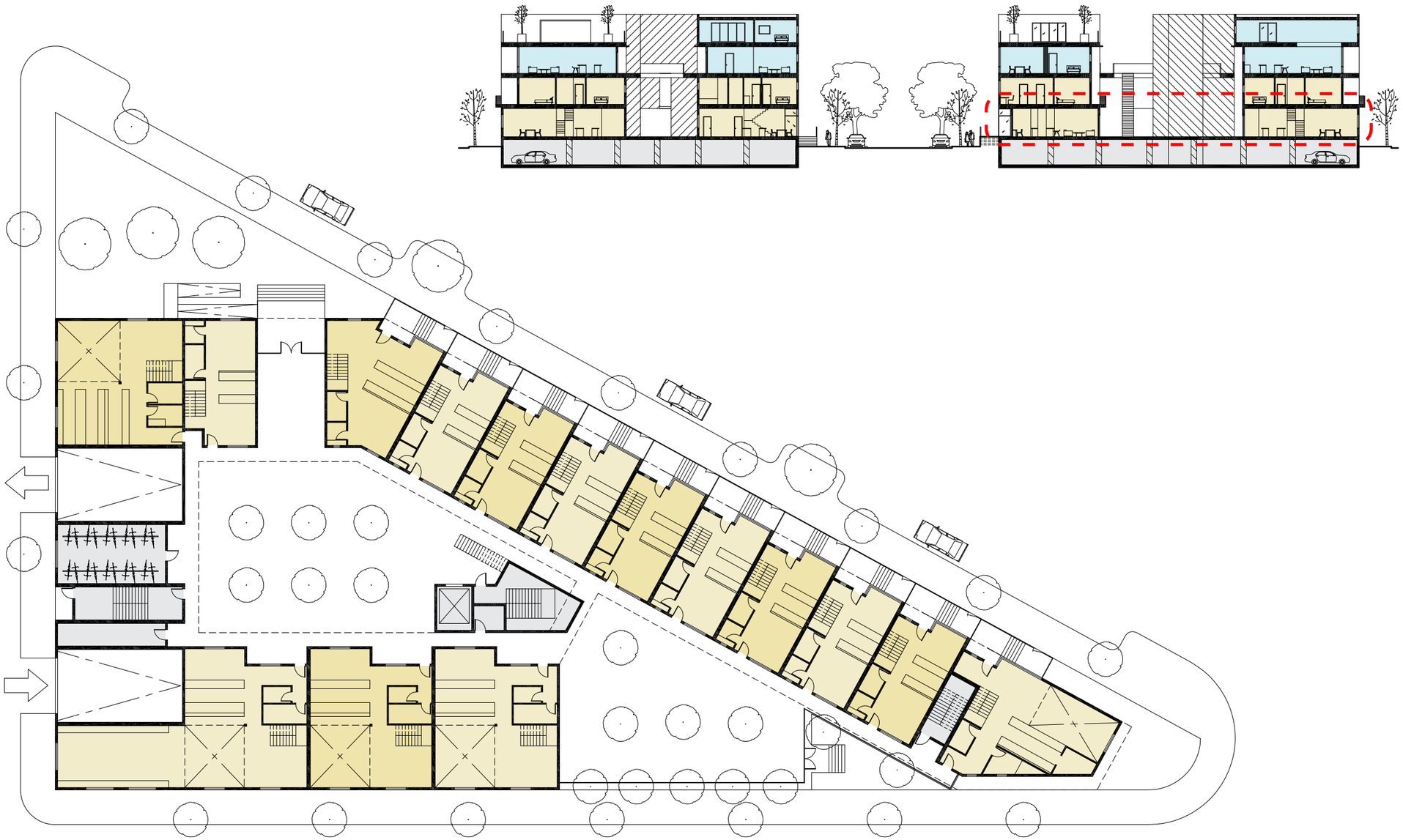
The two buildings contain 4 levels of dwellings for a total of 60 Units. The dwellings range in size from 1,200 - 2,200 square feet and provide private outdoor spaces in the form of patios, balconies, and roof decks. Passive energy strategies include extensive cross and stack ventilation and solar shading with overhangs and recessed spaces. As well all the residences are configured for photovoltaic arrays, solar hot water panels, and rainwater harvesting for irrigation. The building is a light gauge metal framed structure clad in fiber cement and wood rainscreens over a reinforced concrete basement.





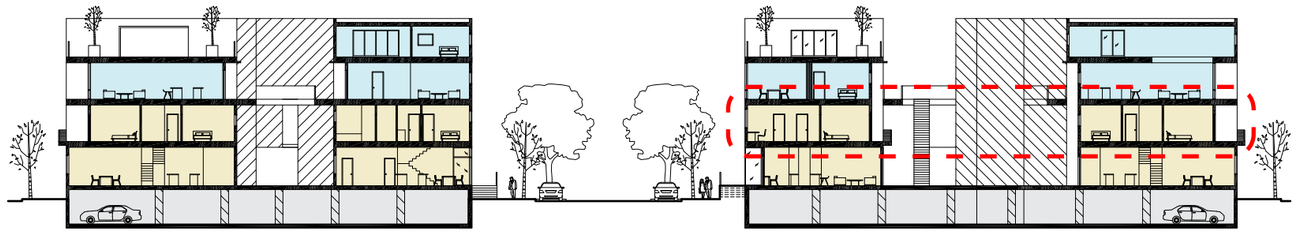
Basement Level

Scale: 1/32” = 1’-0”



First Level

Scale: 1/32” = 1’-0”



Second Level

Scale: 1/32” = 1’-0”

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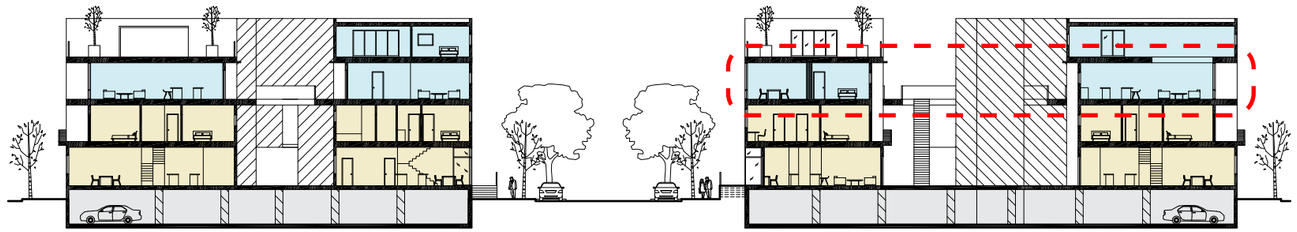
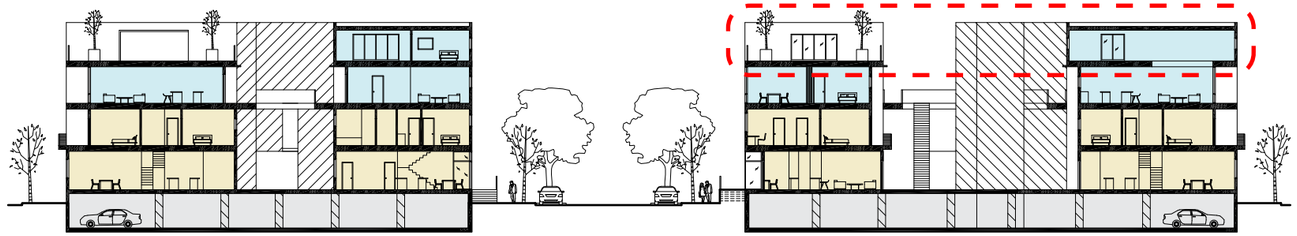


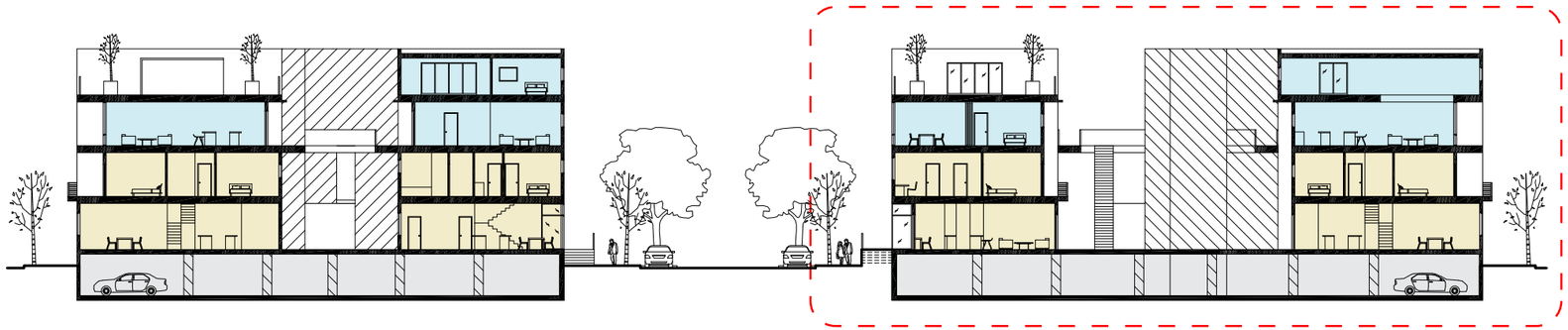
Third Level

Scale: 1/32” = 1’-0”

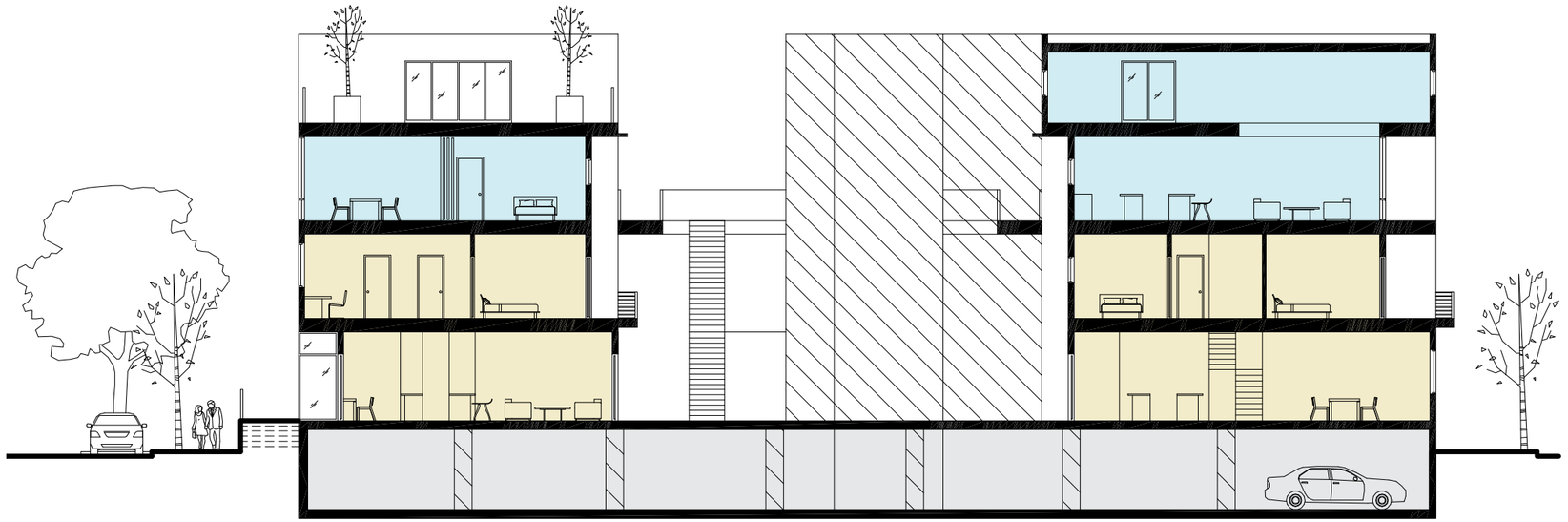


Fourth Level

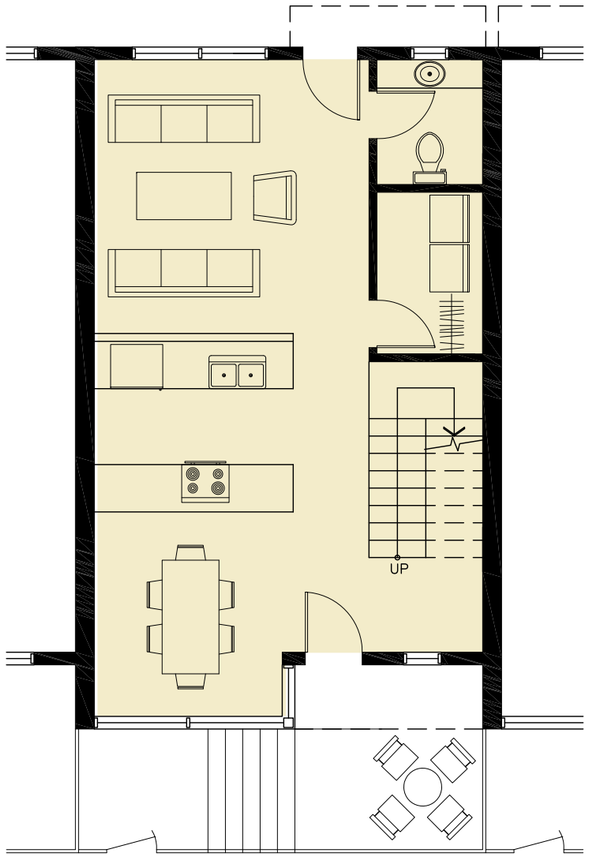
Scale: 1/32” = 1’-0”

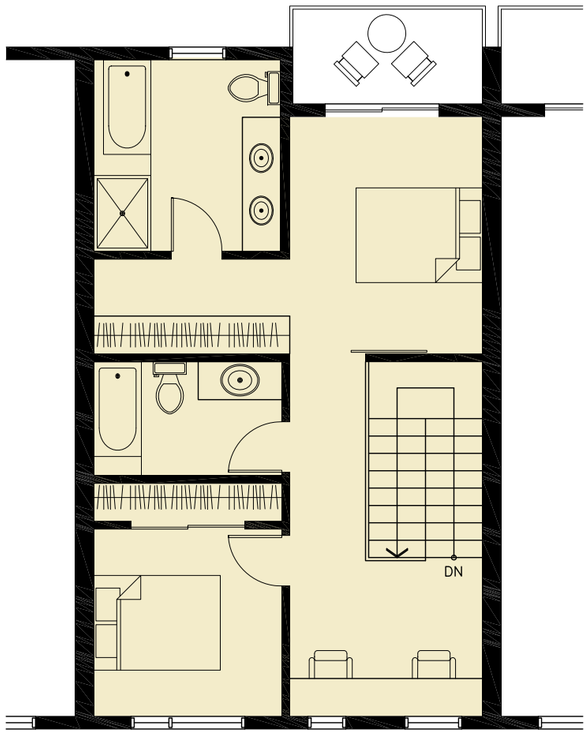


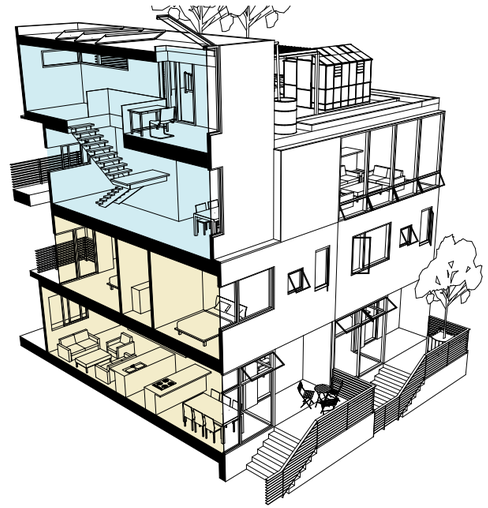
Overall Section
Scale: 1/32” = 1’-0”



Building Section
Scale: 1/16” = 1’-0”



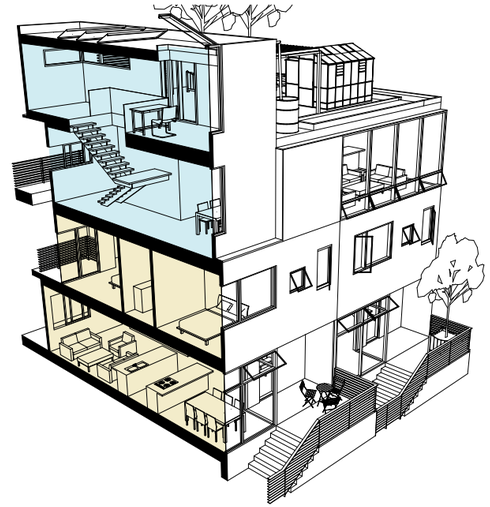




First Level

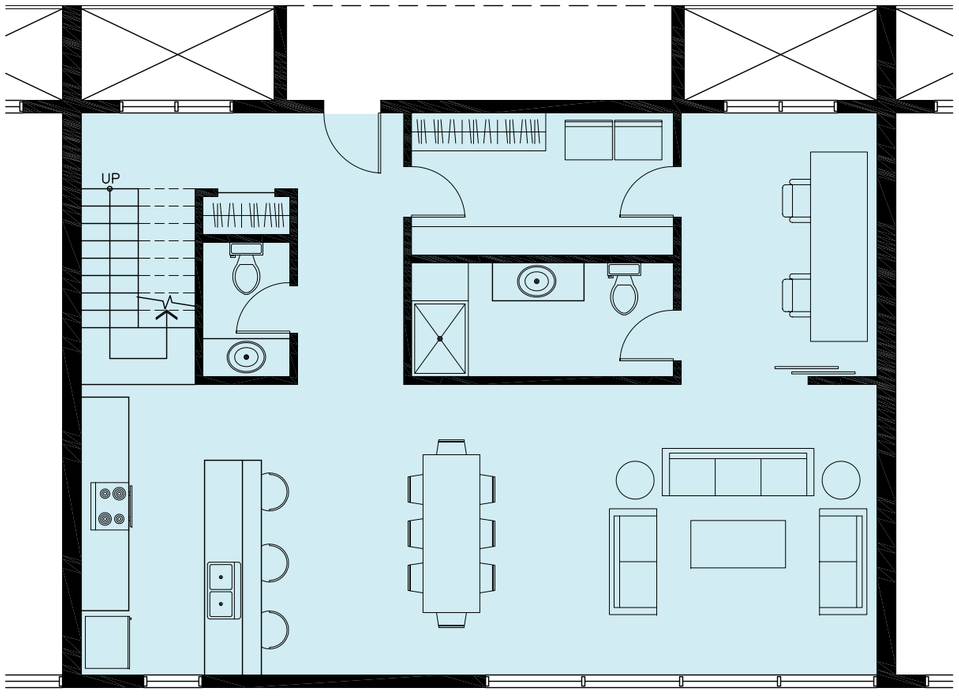
Scale: 1/8” = 1’-0”

Second Level

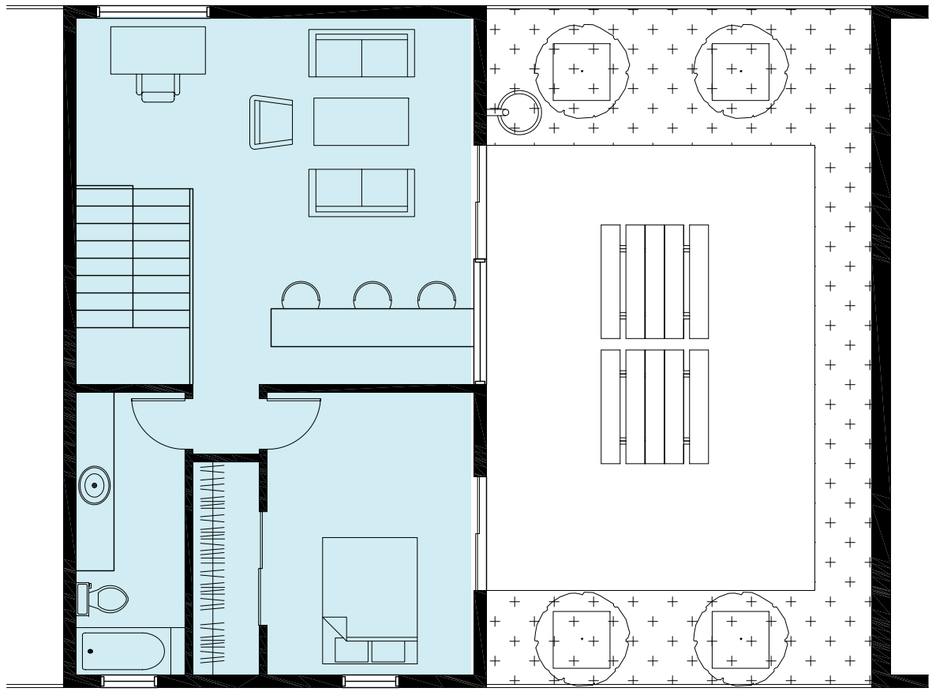


Third Level

Scale: 1/8” = 1’-0”



Fourth Level



View of Courtyard

View of Backyard

INFORMED HOMES

The following questionnaire is presented to you with the goal of gathering the information that will guide in the design of a dwelling specialized for your household and lifestyle. This dwelling will be located within a multi-family complex in an urban environment. The results will be used to design the size and arrangement of a personalized dwelling unit as well as its relationship with neighbors, common spaces, the outdoors, and the neighborhood. Please keep in mind all choices effect the budget of the dwelling unit accordingly.

Please answer any applicable questions to the best of your knowledge, the more specific information you provide the greater informed the design will be. When completed please save the file and email to:

justin.w.vaughan@gmail.com

Lets get started!

1) List the members of your household, include first name,age,and relationship (ex: jane,32,wife; john,24,roomate):

name john age 61 relationship self

name_____ age_____ relationship _____

name_____ age_____ relationship _____

name_____ age_____ relationship _____

name_____ age_____ relationship _____

name_____ age_____ relationship _____

name_____ age_____ relationship _____

name_____ age_____ relationship _____

2) Number of Pets in household:

1 dogs ◯ indoor ◯ outdoor ◉ both

____ cats ◯ indoor ◯ outdoor ◯ both

____ other: _____

Questionnaire

INFORMED HOMES

3) Is your household expected to grow or be reduced in the near future? If so, list the number and relationship/name (ex: Additional - 2, elderly parents; Reduced - 1, William):

____ Additional Members expected
Relationships _____

____ Reduced Members expected
First Names _____

4) How long do you plan on living at this residence?

20 years

5) What is your desired monthly housing budget range (mortgage,taxes,utilities)?

◯ under $1,000 ◯ $1,000-$1,500

◯ $1,500-$2,000 ◉ above $2,000

6) Desired space for overnight guests:

◉ Dedicated Room ◯ Shared Space

◯ No Requirement ◯ Other: _____

7) How many members work from home or plan to?

1 members

8) Off street parking requirements (assume all types secured):

2 spaces

◯ Uncovered ◉ Covered ◯ Fully Enclosed

INFORMED HOMES

9) Rooms Desired (1-essential, 2-secondary,3-if budget allows, leave blank if not desired):

1	kitchen	1	master bedroom	1	master bath		
1	living room	1	bedroom 2	1	attached bath		
1	foyer		bedroom 3		attached bath		
3	formal entry		bedroom 4		attached bath		
1	formal dining		bedroom 5		attached bath		
1	breakfast nook		bedroom 6		attached bath		
	breakfast bar		bath 2	full	3/4	half	
3	pantry		bath 3	full	3/4	half	
2	office		bath 4	full	3/4	half	
2	family rm./den		bath 5	full	3/4	half	
2	media room	2	guest suite		wet bar		
	wine cellar	3	library	1	laundry room		
2	exercise room		mud room		rec. room		
	decks		covered porch		out. kitchen		

___ other _____
___ other _____
___ other _____

10) Design Considerations (Rate the following in terms of priority (1=low priority; 5=high priority):

5 Green Building (use of sustainable materials and methods, LEED rated)
5 Energy Conservation (higher up front cost, lower utility bills/energy use)
5 Exterior (High design and detailing with premium palette of materials)
5 Interior (High design and detailing with premium palette of materials)
4 Site situation / views
4 Natural Light
4 Economy (Hold down construction and maintenance costs)
5 Privacy (From other dwellings and the street)
5 Other: Security

Questionnaire

INFORMED HOMES

11) Number of stories:

◯ Single story ◉ Two story ◯ Multi story ◯ Split Level

12) Extra storage requirements in addition to standard:

_____ Square Feet

Items to be stored _____

13) List any special interests, hobbies, and activities for household members (ex. piano, video games, cooking, reading):

Piano
Reading

14) Where are meals usually eaten?

◯ Kitchen ◉ Informal Dining nook
◯ Formal Dining Room ◯ Living Room

15) How often do you entertain guests:

◯ Rarely ◉ Occasionally ◯ Frequently

16) Typical size of gatherings:

◯ 1-2 Guests ◉ 3-6 Guests ◯ 6-10 Guests ◯ 10+ Guests

17) Is the relationship between indoor and outdoor important?

◉ Yes ◯ No

NOTE: Images used to illustrate/help explain specific questions only-

18) The identity of your residence within the larger complex should be:

(•) Identifiable ( ) Anonymous

19) Your home's outdoor space should be:

(•) Completely Private ( ) Visually connected to complex commons ( ) Visually connected to the street

20) Your home's outdoor space should be:

( ) At ground level (•) Elevated above ground level

21) Your home's outdoor space should be connected to:

( ) Kitchen ( ) Master Bedroom

(•) Living Areas ( ) Other: _____

22) Your home's front door should:

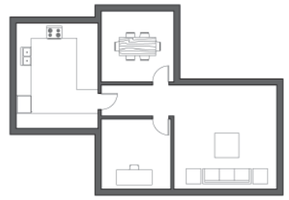
(•) Transition to the Street ( ) Transition to the complex commons ( ) Transition to a shared corridor

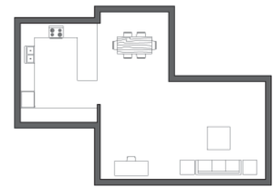
Questionnaire

INFORMED HOMES

23) You prefer the non-bedroom spaces of your house to be:

( ) Separate and clearly defined (•) Connected and shared





24) What common amenities do you desire? (Check all that apply)

- [ ] outdoor gathering
- [ ] indoor gathering
- [x] vegetable garden
- [x] bike storage
- [ ] laundry
- [ ] kitchen
- [ ] children play area
- [x] dog run
- [ ] other _____
- [ ] other _____
- [ ] other _____

25) Please list any additional characteristics of your dwelling not addressed in previous questions:

Thank You! Your input will be used to design a personalized dwelling.
Please save pdf and email to: justin.w.vaughan@gmail.com

Title: Housing Collaborative: A homeowner driven multi-family development

Elevator Statement: A multi-family housing project developed through a collaborative process with the future homeowners

Case Statement: Current multi-family housing is created through a speculative process where the development team examines what is currently successful in the market and reproduces it where they determine a demand. While this is a sound and successful method of providing multi-family projects the results are by definition generic and do not directly address the homeowners during the design process. A homeowner driven multi-family development will engage the future homeowners during the conceptual design phase of the project. Information gathered during this process will lead to a design that reflects the specific needs and desires of its inhabitants leading to a richer architecture.

Process Description: This project will define a procedure of homeowner driven multi-family design and test this procedure through a proposed project. Interested participants have been engaged to act as future homeowners in the design process. An urban site in Dallas, Texas has been selected as the location for the design. The project will consist of a 20 unit multi-family development including commercial and open space. The interaction with the participants will include digital questionnaires and workshops throughout the conceptual design phase of the project. This will help determine qualitative properties for the design as well as clarify quantitative assumptions.

Stakeholders:

LEADERSHIP	STAKEHOLDERS	
Development Team: Developer & Future Homeowners	DIRECT:	Development Team; Homeowners; Commercial Tenants
	INDIRECT:	Architect; Design Consultants; Construction & Mortgage Lender; City of Dallas Planning & Building Departments; Construction Manager
	GENERAL:	Famers Market District; City of Dallas; Environment

Goals: The key goal for my solution to illustrate is the value of engaging future residents in the planning and design of urban multi-family residential developments.

Guiding Principles:

Homeowner driven design process

The conceptual design process of the project should heavily engage participants acting as future homeowners. The resulting design should reflect this input in the architecture.

Community

The project should reflect the future homeowner's desires regarding connections to the surrounding neighborhood

Efficiency

The project should aim at reducing cost and maintaining a small ecological footprint, leveraging possible benefits of density though shared infrastructure and facilities

Affordability

The project should consider the desired housing budget information collected from the future homeowners

Program Document

Latitude: 32.90 Longitude: 97.03

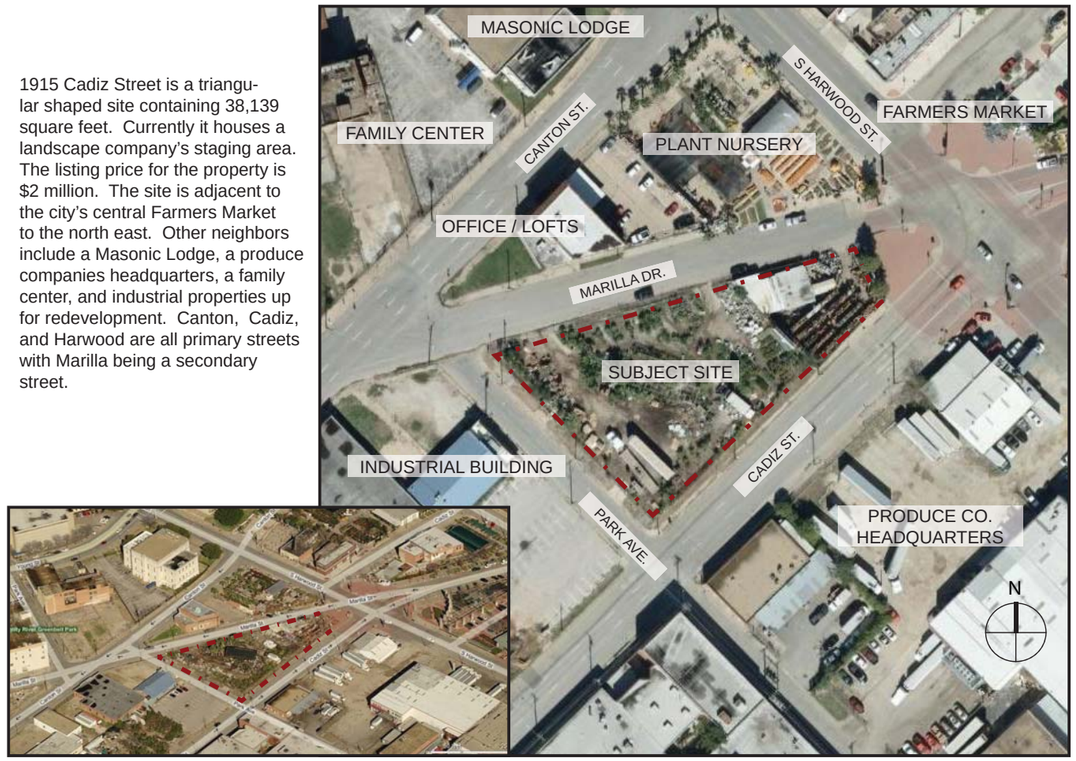
Dallas, Texas is the eighth largest city in the United States. It has the fastest growing population in the country. It is among the nations most ethnically diverse communities. The city's primary economic engines are banking, commerce, telecommunications, computer technology, energy, and transportation. It is a geographically flat area with a humid subtropical climate. The downtown area is experiencing an urban revival with new housing, public transportation, and cultural institutions. The project's site is located in downtown in the Farmers Market District.

Project Location: 1915 Cadiz Street Dallas, Texas 75201

The project is specifically located in the Farmers Market area of the city, which has been designated as an area of cultural importance and significance by the city. It is directly adjacent to the Farmers Market, a vibrant area to get local produce and experience community special events. Downtown is only blocks away as well as access to the light rail and the freeway. This area is in need of revitalization with empty industrial buildings and surface parking lots, and a good opportunity for new residential development.

Program Document

1915 Cadiz Street is a triangular shaped site containing 38,139 square feet. Currently it houses a landscape company's staging area. The listing price for the property is $2 million. The site is adjacent to the city's central Farmers Market to the north east. Other neighbors include a Masonic Lodge, a produce companies headquarters, a family center, and industrial properties up for redevelopment. Canton, Cadiz, and Harwood are all primary streets with Marilla being a secondary street.



Base Zoning: PD 357 - Farmers Market Special Purpose District
From the Zoning Ordinance:

Purpose: This article provides standards specifically tailored to meet the needs of the Farmers Market area of the city, which is hereby designated as an area of cultural importance and significance to the citizens of the city. The general objectives of these standards are to promote and protect the health, safety, welfare, convenience, and enjoyment of the public, and, in part, to achieve the following:
(1) To achieve buildings more urban in form.
(2) To promote and protect an attractive street level pedestrian environment by encouraging the development of structures along entire blockfaces with continuous activities.
(3) To promote development appropriate to the character of nearby neighborhood uses by imposing standards sensitive to scale and adjacency issues.
(4) To use existing zoned development densities as a base from which to plan, while providing bonuses to encourage residential development in commercial areas.
(5) To encourage and protect the quantity and quality of residential uses.
(6) To promote landscape/streetscape quality and appearance.
(7) To aid the environment's ecological balance by contributing to the processes of air purification, oxygen regeneration, groundwater recharge, and storm water runoff retardation, while at the same time aiding in noise, glare, and heat abatement.
(8) To provide visual buffering and enhance the beautification of the city.
(9) To safeguard and enhance property values and to protect public and private investment.

Excerpts from Zoning Ordinance

Permitted Uses:
-Residential uses including Multi-family
-Commercial and business services
-Institutional and community services
-Office
-Recreation
-Retail and personal services

Setbacks
-Front Yard - None
-Side Yard - None
-Rear Yard - None

Maximum F.A.R. - 20.0

No maximum height

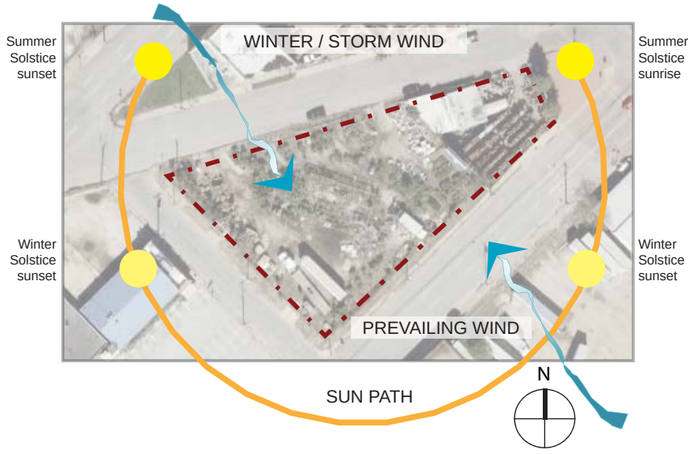
Maximum Lot Coverage - 85%

Parking Requirements
One space for each 2,000 square feet of floor area

Program Document

Dallas, Texas
Humid Subtropical Climate

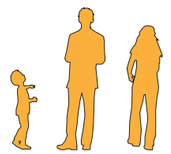
Hot, humid summers with temperatures hovering around 100 degrees; Mild winters with temperatures rarely dropping below freezing; the average annual precipitation is 36 inches. There is a severe lack of infiltration areas for storm water in this area. There are mostly impervious surfaces with drainage going to stormwater sewer. Mechanical heating and cooling will be required in all interior spaces.



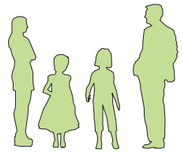
Sustainable Design Opportunities:

-Photovoltaic panels
-Solar hot water panels
-Shaded outdoor areas
-Cross Ventilation
-Xeriscaping
-Rainwater collection
-Daylight availability
-Breezeways
-Reflective roofing
-High performance envelope and windows
-Composting
-Permeable paving
-Storm water infiltration areas
-High efficiency fixtures and appliances
-Vegetable garden
-East West Massing

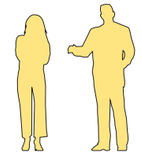
Future Homeowner Participants (20 Total Households):

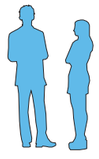

Ron, 34, Engineer; Marie, 32, Teacher; Aaron, 6, Student


John, 52, Set Designer


Tom, 38, Salesman; Danielle, 34, Dance Instructor; Lisa 9, Student; Ann, 8, Student

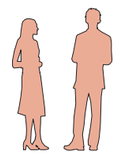

Tony, 29, Photographer; Julie, 28, Furniture Designer

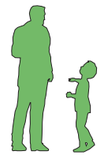

Ryan, 31, Graphic Designer; Emily, 33, Film Editor


Jason, 27, Programmer; Rebecca, 25, Retailer


Danny, 31, Restaurant Owner

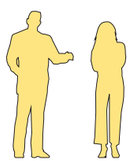

Marley, 29, Musician; Dana, 27, Journalist


Andrew, 29, Manager; Becca, 28, Interior Designer

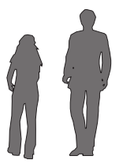

Oscar, 31, Shop Owner; Luis, 9, Student

Program Document

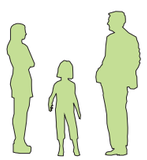
Future Homeowner Participants (20 Total Households):



Dan, 30, General Contractor; Courtney, 26, Yoga Instructor

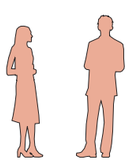


Nick, 29, Investor; Lauren, 28, Advertisor



Jordan, 32, Club Owner; Jennifer 33, Accountant; Sandra 8, Student

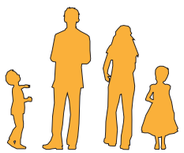
David, 49, Security



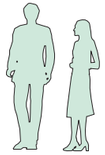
Brent, 27, Manager; Jen, 27, Administrator

Cameron, 63, Artist

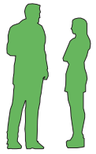
Greg, 46, Business Owner



Andy, 35, Manager; Lindsay, 33, Therapist; Austin, 7, Student; Delilah, 6, Student



Matt, 38, Lawyer; Jessica, 37, Store Manager



Miguel, 32, Realtor; Michelle, 28, Instructor

Qualitative Parameters: Qualitative Parameters will be determined during the engagement phase with the future homeowners through questionnaires and workshops

Options for various spaces include:

Individual privacy	Connection to common space	Open plan
Common privacy	Engagement outwards	Compartmentalized space
Quietness	Vibrancy	Formal
Casual	Brightness	Refined
Exposed	Intimate	Reflecting
Sheltering	Secret	Heavy
Light	Efficiency	Announced
Restrained	Stage	Screened

Quantitative Parameters: 20 Dwelling units - mix of one, two, & three bedroom units depending on homeowner family size, desire, and budget. Units are approximately 525, 825, and 1200 square feet.

Commercial space 2,000 square feet
2 shells for office or retail use

Common open space 2,500 square feet
Gathering area, vegetable garden, landscape

Common mechanical space 1,000 square feet
central mechanical, electrical, and plumbing equipment

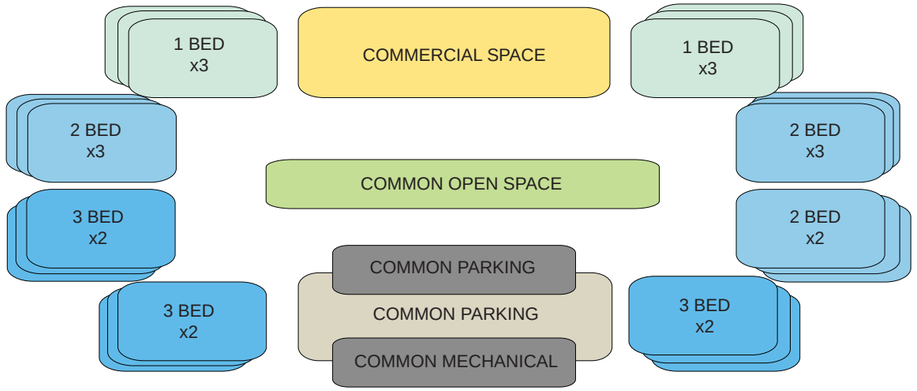
Common Facilities 750 square feet
bike storage, storage

Common Parking 8,000 square feet
30 spaces

Financial Parameters: Initial Assumption: Total housing costs should be 25% of median annual household income approx. $1,100 monthly, This should be determined by participant input

Program Document

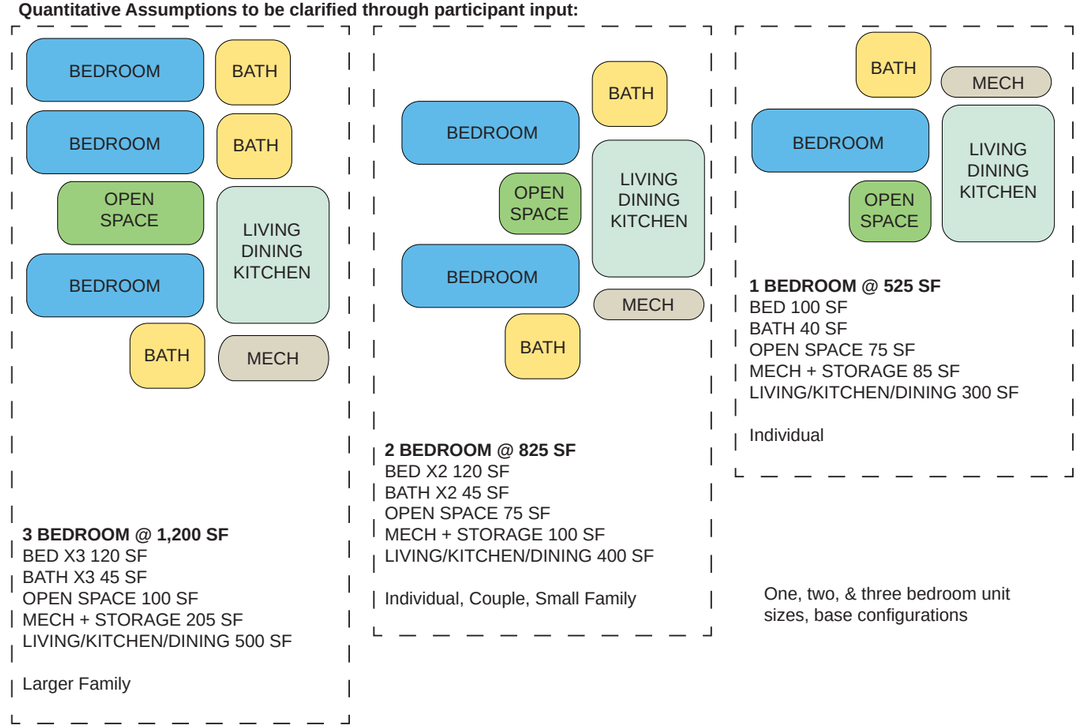
Quantitative Assumptions to be clarified through participant input:



OVERALL PROGRAM	NET AREA:
6 X ONE BEDROOM UNITS @ 525 SF	3,150 SF
8 X TWO BEDROOM UNITS @ 825 SF	6,600 SF
6 X THREE BEDROOM UNITS @ 1200 SF	7,200 SF
COMMERCIAL SPACE	2,000 SF
COMMON OPEN SPACE	2,500 SF
COMMON MECHANICAL	1,000 SF
COMMON FACILITIES	750 SF
COMMON PARKING 12 SPACES	8,000 SF

19,700 NET ENCLOSED SF **23,640 GROSS SF** **9,000 SEMI ENCLOSED SF** **2,500 SF COMMON OPEN SPACE**

Quantitative Assumptions to be clarified through participant input:



3 BEDROOM @ 1,200 SF
BED X3 120 SF
BATH X3 45 SF
OPEN SPACE 100 SF
MECH + STORAGE 205 SF
LIVING/KITCHEN/DINING 500 SF

Larger Family

2 BEDROOM @ 825 SF
BED X2 120 SF
BATH X2 45 SF
OPEN SPACE 75 SF
MECH + STORAGE 100 SF
LIVING/KITCHEN/DINING 400 SF

Individual, Couple, Small Family

1 BEDROOM @ 525 SF
BED 100 SF
BATH 40 SF
OPEN SPACE 75 SF
MECH + STORAGE 85 SF
LIVING/KITCHEN/DINING 300 SF

Individual

One, two, & three bedroom unit sizes, base configurations

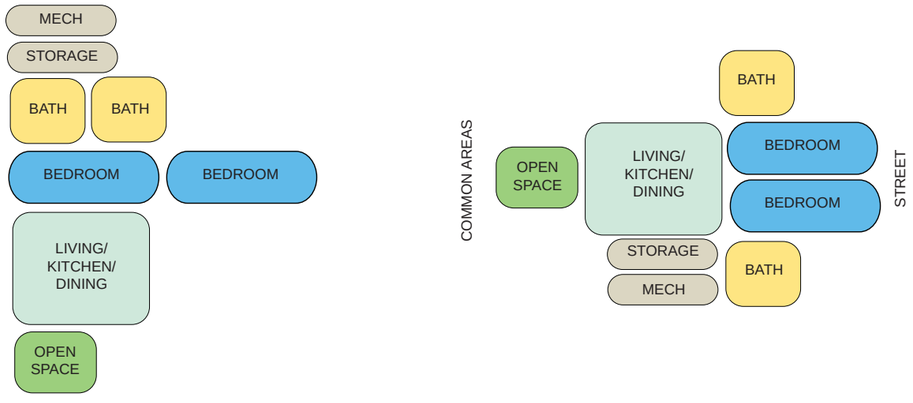
Program Document

Case study of questionnaire results:

Future homeowner Julie
from household Tony, 29, Photographer; Julie, 28, Furniture Designer

Summary: Household expected to grow; Expect to live here 2-5 years; 2 members work from home; $1,500-$2,000 monthly housing budget; Unit connected to common open space; Unit private from the street; Connected living, dining, kitchen areas; Pet dog requires secure outdoor space and washing area; No guest bedroom required; One off street parking space

Proposal: 2 bedroom, 1 study, 2 bathroom unit; 1,200 square feet; open plan living areas; fenced unit open space adjacent to common open space; entry off common open space



Precedents

The Cohousing Movement as described by the Cohousing Association of America

What are the 6 Defining Characteristics of Cohousing?

1. Participatory process. Future residents participate in the design of the community so that it meets their needs. Some cohousing communities are initiated or driven by a developer. In those cases, if the developer brings the future resident group into the process late in the planning, the residents will have less input into the design. A well-designed, pedestrian-oriented community without significant resident participation in the planning may be “cohousing-inspired,” but it is not a cohousing community.
2. Neighborhood design. The physical layout and orientation of the buildings (the site plan) encourage a sense of community. For example, the private residences are clustered on the site, leaving more shared open space. The dwellings typically face each other across a pedestrian street or courtyard, with cars parked on the periphery. Often, the front doorway of every home affords a view of the common house. What far outweighs any specifics, however, is the intention to create a strong sense of community, with design as one of the facilitators.
3. Common facilities. Common facilities are designed for daily use, are an integral part of the community, and are always supplemental to the private residences. The common house typically includes a common kitchen, dining area, sitting area, children’s playroom and laundry, and also may contain a workshop, library, exercise room, crafts room and/or one or two guest rooms. Except on very tight urban sites, cohousing communities often have playground equipment, lawns and gardens as well. Since the buildings are clustered, larger sites may retain several or many acres of undeveloped shared open space.
4. Resident management. Residents manage their own cohousing communities, and also perform much of the work required to maintain the property. They participate in the preparation of common meals, and meet regularly to solve problems and develop policies for the community.
5. Non-hierarchical structure and decision-making. Leadership roles naturally exist in cohousing communities, however no one person (or persons) has authority over others. Most groups start with one or two “burning souls.” As people join the group, each person takes on one or more roles consistent with his or her skills, abilities or interests. Most cohousing groups make all of their decisions by consensus, and, although many groups have a policy for voting if the group cannot reach consensus after a number of attempts, it is rarely or never necessary to resort to voting.
6. No shared community economy. The community is not a source of income for its members. Occasionally, a cohousing community will pay one of its residents to do a specific (usually time-limited) task, but more typically the work will be considered that member’s contribution to the shared responsibilities.

Other precedents include Los Angeles small lot subdivisions, intentional communities, eco villages, communes, student co-ops, and urban housing cooperatives

Program Document