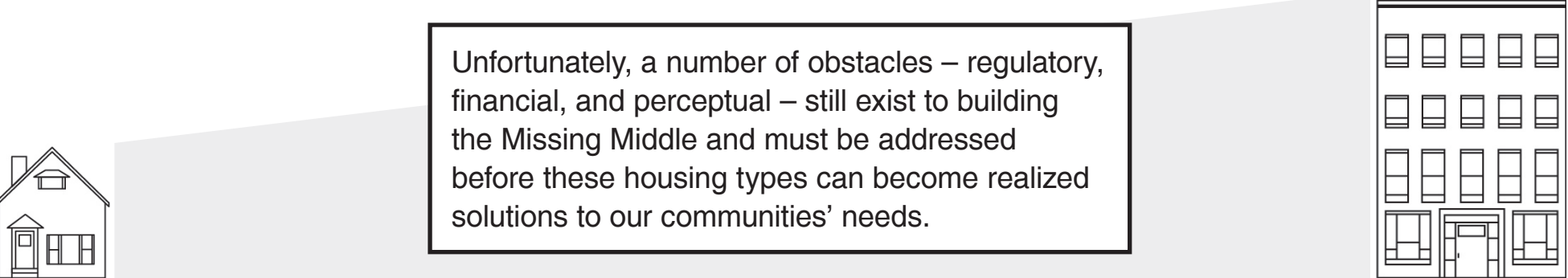


Mind the Gap

Missing Middle Design Competition 2015

Challenge

Like other urban areas around the country, Michigan communities face a shortage of Missing Middle Housing. These housing options fill the void between single-family homes and high-rise apartment buildings, offering affordable medium-density residential units, typically inserted into tight sites in previously developed areas and within walkable mixed-use environments. They offer sustainable living to a broad range of people, and the market for these housing options continues to grow.



| | Regulations | Financing | Perception |
|---------------------|--|--|--|
| WHAT'S THE PROBLEM | Conventional zoning | Financing mixed-use projects | Lack of information and perceived value in walkable urbanism development |
| WHY IT DOESN'T WORK | Missing Middle housing typologies and associated densities and building footprints do not fit the standards in typical single-family and multi-family residential zones; however, that very building diversity and blending of densities are inherent in neighborhoods where Missing Middle housing exists. Minimum parking requirements attached to land use zones lead to an oversupply of personal parking, making housing less affordable and encouraging car-culture instead of walkable urbanism. With a strong focus on land use, conventional zoning does not regulate or prioritize the public realm inherent to walkable, mixed-use neighborhoods. | Financing walkable mixed-use projects has typically been more difficult than financing single-use projects. Developers have often had to put financing together from multiple sources, and equity investors have limited their investments in these projects to the "patient capital" part of their portfolios. However, financing is getting easier, especially since it has been documented - particularly in Metro Detroit - that buyers and tenants are willing to pay a substantial price premium for residential and office space in walkable urban places. | Many developers still lack an understanding and appreciation for the value in urbanism and walkability. Because there is such a shortage of Missing Middle housing products, there is a lack of comparable projects for developers to base their anticipated return on investment. The development industry has resisted change, in part because a shift to building new housing types can be costly and difficult. This can be compounded by the perceived difficulty of retrofitting suburban areas and building compatible infill development. Other developers may still argue that Michigan homebuyers want luxury and space rather than walkability and transit, despite the trends of Baby Boomers and Millennials. |
| HOW IT CAN CHANGE | Form-Based Code is an effective alternative to conventional zoning, allowing a variety of housing types and promoting a high-quality public realm. Municipalities should work to reduce parking requirements - there are multiple strategies to do so - with the ultimate goal of reducing auto-dependency and getting the supply of parking closer in line with the true demand. | In the planning and entitlement phase, developers should consider seeking reduced (or no) parking requirements and liberalized height and floor-to-area (FAR) limits, which can help make a proposal financially feasible. A developer planning to include open space should seek to monetize that value and leverage it for reduced parking or added height or density. Economic development tools such as Tax Increment Financing and Special Assessment Districts can also be explored with the support of the public sector. | Documentation and case studies at the local and peer community level can provide fact-based evidence on the value of walkable urbanism. The development community in Michigan should work together to aggressively promote the "Missing Middle" in Michigan, sharing first-hand success stories and the impressive figures and reframing the conversation about housing. |

Opportunity

It makes good economic, social, and environmental sense to change the way we view and build housing and neighborhoods in Michigan.

Economically, there is pent-up market demand for walkable neighborhoods of which Missing Middle housing is essential. Simply put, it's what the people want: young singles and couples, traditional and nontraditional families, empty nesters and retirees, and multi-generational homes all contribute to the growing demand for a greater variety of housing choices in walkable communities. Missing Middle housing types offer a comfortable level of density, walkability, amenities, and choice in environments that can accommodate the changing needs of people of all ages and abilities over time.

Socially, Missing Middle housing types are readily adaptable to the needs of today's and tomorrow's changing social trends. By adapting classic design with innovative systems, Michigan communities have the opportunity to address changing demographics and housing needs with residences that emphasize efficient use of space for shared amenities, live-work lifestyles, and family-oriented features. Dense, walkable, mixed-use environments offer more choice – in housing, transportation, and cultural opportunities – that can be both well-designed and affordable, promoting a diverse, socially-inclusive community.

Environmentally, Missing Middle housing is a tool for improving and maximizing previously developed areas, utilizing existing infrastructure and resources, building on existing assets, and providing the opportunity to retrofit the built environment in our communities with more efficient systems.



The Neighborhood Main Street Node Approach

MIND THE GAP illustrates an approach to building Missing Middle housing in a Neighborhood Main Street Node within a mixed-use district in a large-sized city along a commercial corridor. The district consists of varied, mostly traditional and historic structures with heights ranging from one to four stories. This Neighborhood Main Street Node is in need of revitalization and reinvestment, including services within walking distance that provide day-to-day amenities and small local businesses. MIND THE GAP shows how medium-density housing can be appropriately integrated into this context.

APPROPRIATE BUILDING TYPES

In a Neighborhood Main Street Node, a number of building types may be successful and well-received.



LOCAL CONTEXT ANALYSIS

While there may be a number of appropriate building types, the optimal housing solution for a particular site will take into consideration the unique policy, site, and community attributes.

When all three essential contexts are considered, we gain the ability for housing to respond to the needs - both vital and colloquial - of the people it serves.

Policy + Planning

Understand local regulatory and planning conditions – what's allowed, required, and encouraged. Work to remove obstacles that impede Missing Middle housing and mixed-use neighborhood development.

- PLANNING AND POLICY TOOLS:
- Form-Based Code
 - High-quality public realm
 - High level of transit service
 - Reduced parking requirements calibrated to community needs (parking maximums, on-street spaces)
 - Developer-provided mobility, such as car share, secure bike parking, and transit passes

Architecture + Site

Understand the unique qualities of the site and its surroundings to create context-sensitive architecture and site design.

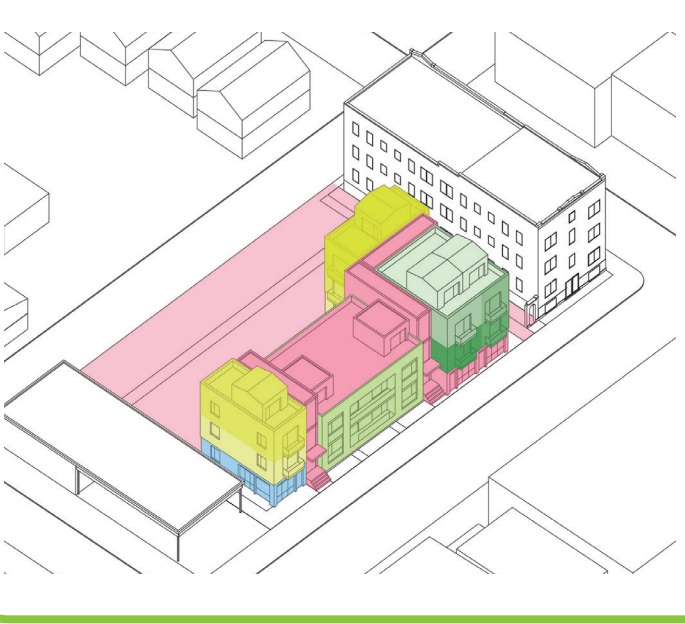
- ARCHITECTURE AND SITE CONSIDERATIONS:
- Adjacent buildings
 - Right-of-way composition
 - Sidewalk and streetscape amenities
 - Transit availability
 - Bike lanes
 - On-street parking
 - Traffic lanes
 - Topography
 - Ecology

Community

Understand how to preserve and enhance local character in the form and character of new development. Calibrate design solutions to reflect the local context, demographics, culture, and traditions.

- COMMUNITY DESIGN CONSIDERATIONS:
- Building types and unit sizes
 - Shared indoor spaces
 - Shared outdoor spaces
 - Shared resources, such as transportation, energy, and storage
 - Neighborhood retail and service amenities

HOUSING DESIGN



MIND THE GAP arrives at a “hybrid” design which tests several small-scale housing types in one building and creates the possibility for a range of shared spaces and resources. This model is flexible and adaptable to a community's needs.

ADJACENCIES - REAR

Behind the site, off the commercial corridor, is predominantly single-family residential homes.

ALLEY

While it may require mitigation, the rear alley is a significant asset to be utilized and enhanced. It is essential to providing vehicular access to the buildings and to maintaining a quality pedestrian-oriented environment on the street. The alley can also provide functional and attractive pedestrian pathways, green infrastructure, and front doors to garages and carriage homes.

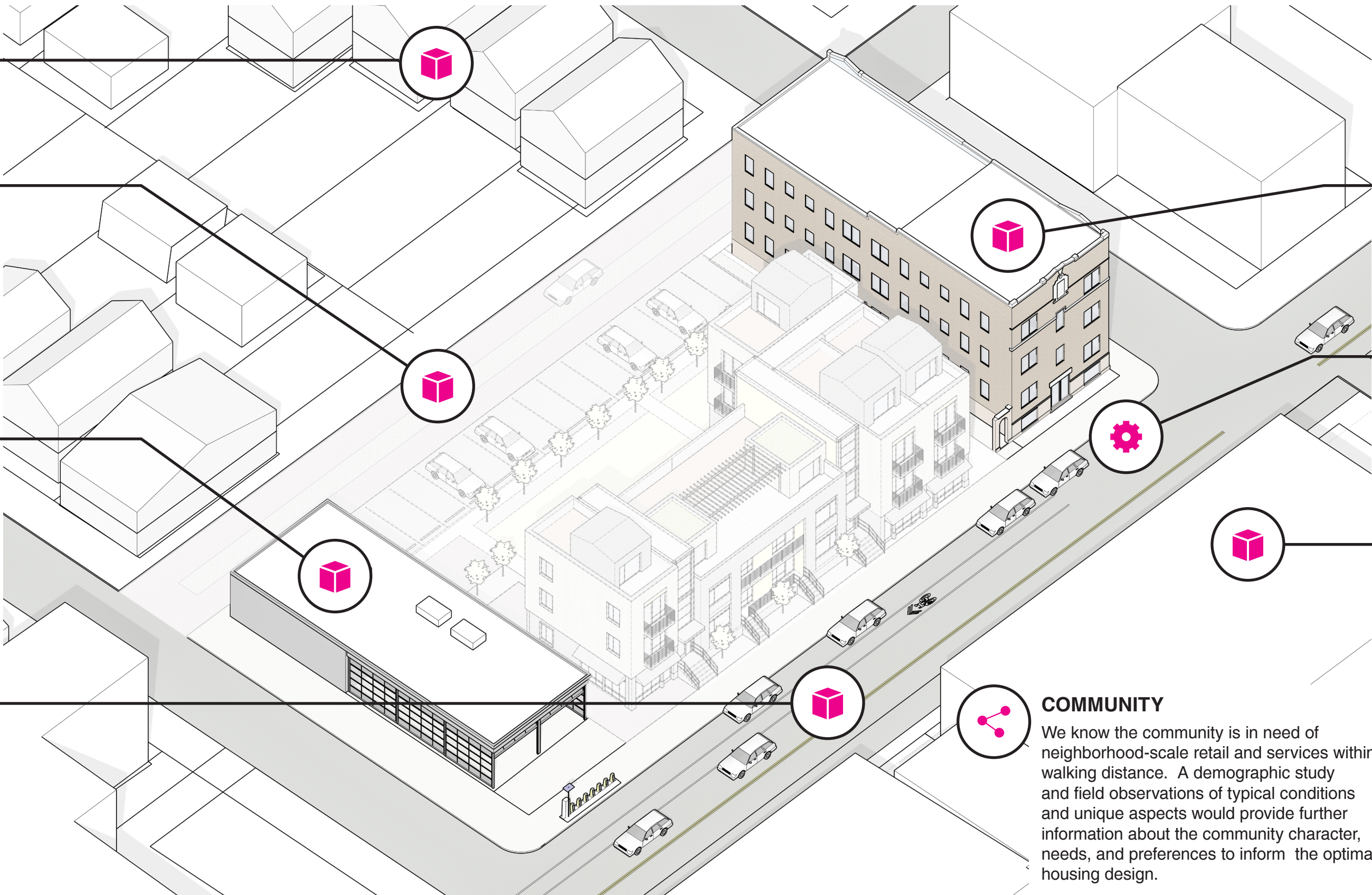
ADJACENCIES - SIDE

The site sits between two existing, vacant buildings. One is a one-story auto-oriented commercial building. Architecturally, it is of little value but has interesting re-use potential if converted for more active commercial use that maximizes the corner. The buildings establish the build-to lines for the new development.

PUBLIC REALM

The existing streetscape is pedestrian-friendly and inviting, with buildings and spaces design at a human scale. The existing right-of-way includes, on each side, 10-foot sidewalks, on-street parking, dedicated bike lanes, and one travel lane in each direction. The block is served by local bus transportation.

The illustration below is an initial glance at how the local context analysis is applied to a particular site.



ADJACENCIES - SIDE

The site sits between two existing, vacant buildings. One is a four-story, multi-family residential building with windows and an arched walkway adjacent to the infill site. It is of historic character and has high potential for renovation.

PARKING REGULATIONS

Progressive parking regulations allow on-street parking to be counted toward the minimum requirements for a development. Coupled with New Urbanism parking standards and quality transit service, the proposed development can minimize parking and prioritize pedestrian-oriented features.

ADJACENCIES - FRONT

Buildings across the street include retail and restaurant uses consisting of one- and two-story structures, also built to the lot line.

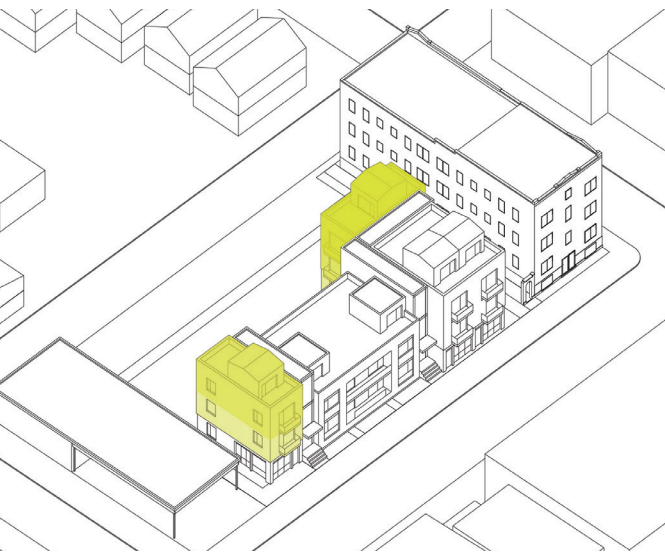
POLICY + PLANNING

It will be important to understand the intentions and limitations of local standards and guidelines. A proposed development should strive to meet New Urbanism principles of design while balancing zoning requirements.

COMMUNITY

We know the community is in need of neighborhood-scale retail and services within walking distance. A demographic study and field observations of typical conditions and unique aspects would provide further information about the community character, needs, and preferences to inform the optimal housing design.

Development Typologies

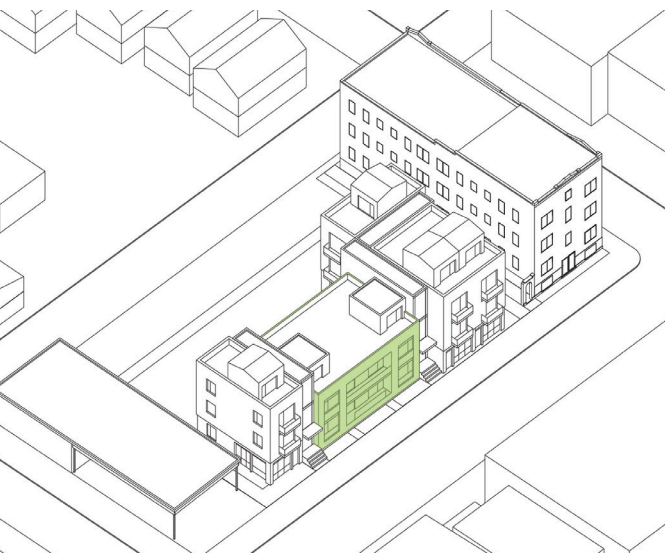


Private Townhouse

One bedrooms

These one bedrooms can be offered as rentals or condos. Each unit has access to the **shared spaces** throughout the development, but the units do not share communal spaces from within the private units. Two of the five units include a roof deck. **This typology reflects a traditional residential development.**

The existing building east of the site could be renovated to reflect a similar typology.



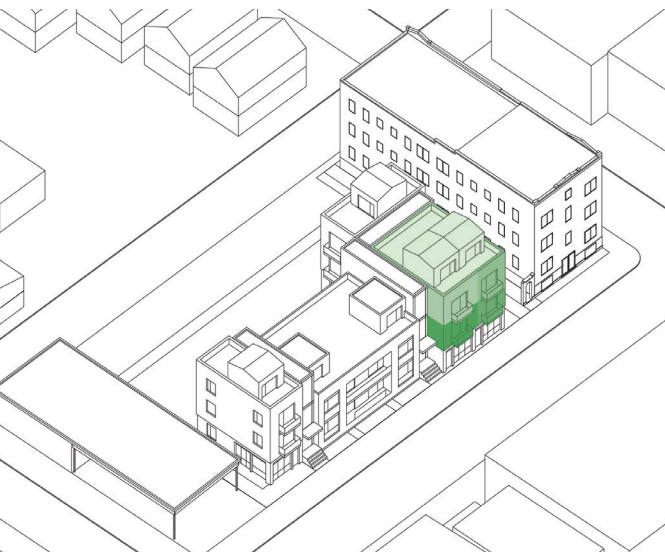
Duplex with Common Room

Two bedrooms

Four two-bedroom units can be offered as duplex rentals or condos. Two private units share a communal room and balcony. This typology was designed to fulfill the needs of multi-generational families and other non-traditional living arrangements who need privacy, but also private, shared spaces.

While each unit has a kitchen and dining space, the larger, shared space is ideal for social gatherings and for families in the units to share childcare and other resources.

These units have access to the **shared spaces** throughout the development, but the individual shared spaces are only accessible to the duplex residents. **This typology offers a flexible solution beyond the nuclear family arrangement.**

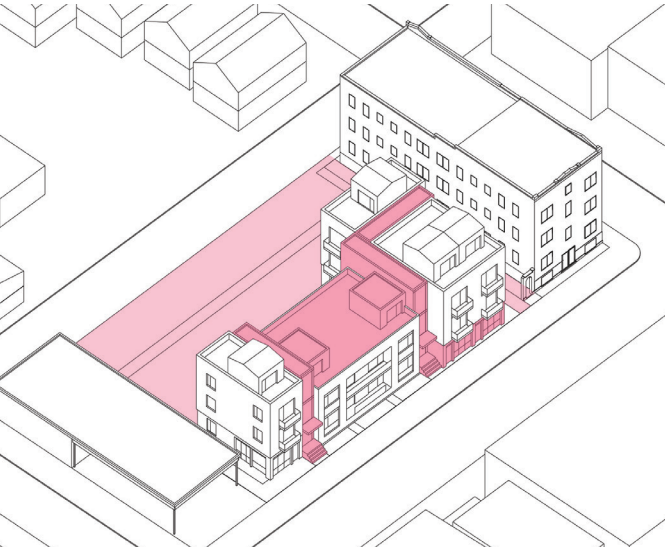


Studios with Common Space

One bedrooms + studios

These four units can be configured as one bedrooms or studios for rent. Two units have small in-unit efficiency kitchens, while all four units have access to a larger shared kitchen. Two units have access to a shared rooftop. These units are ideal for students, seniors, and young professionals who do not need as much private living space as larger households.

These units have access to the **shared spaces** throughout the development, but the shared kitchen space is only accessible to each paired unit. **This typology offers a flexible solution for individuals, couples, and roommates.**

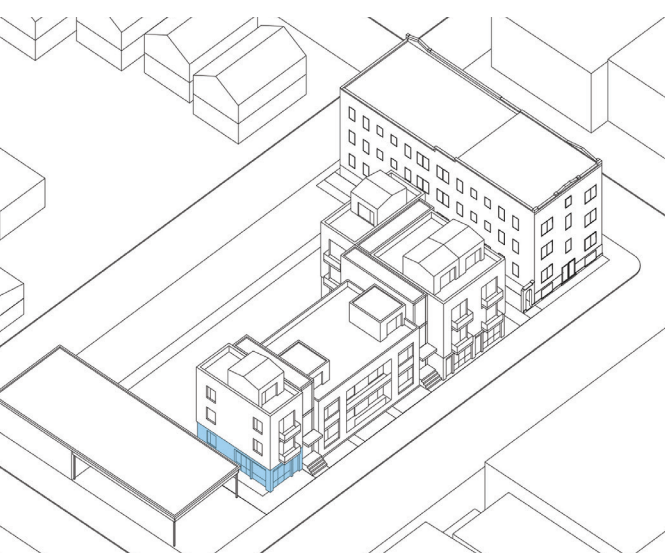


Shared Residential Spaces

Rooftops, entryways + co-working space

There are many shared spaces within the building and site to facilitate a sense of community and share resources. These include outdoor spaces including a rooftop patio, backyard garden, parking area, green alley, and pedestrian mews. Residents also share a ground floor residential flex space which includes wi-fi, desks, bike storage, a tool library, and casual gathering space.

This typology fills the need for public/private gathering spaces within residential communities.



Neighborhood Retail

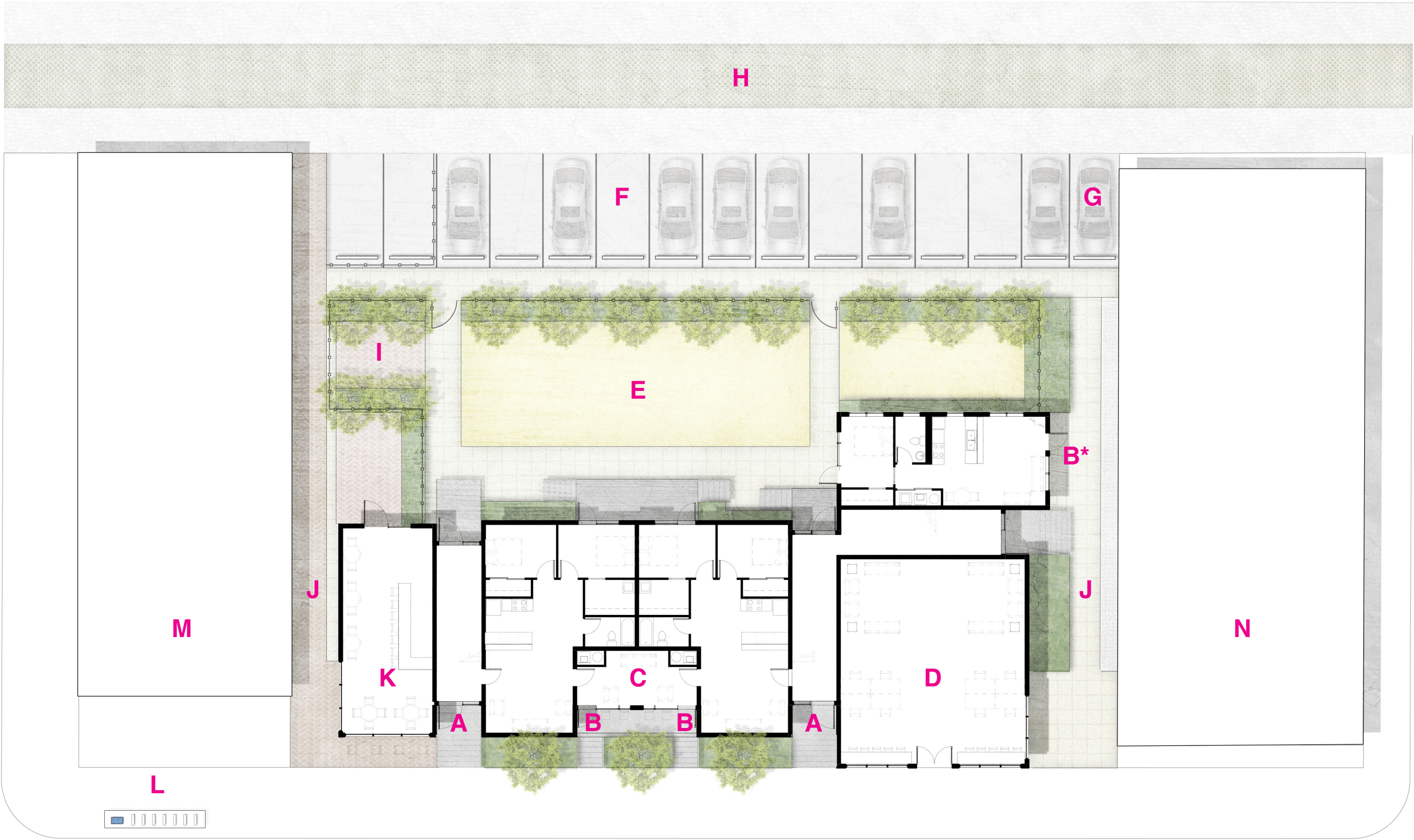
Retail + service

The development includes a retail space to engage the street and broader context of the site on a commercial main street. The existing west building on the site could be renovated into a restaurant or other adaptive re-use, anchoring the block and residential units. This mixed-use element is key to create attractive density with walkable amenities that increase the property value of this development and others along the main street.

This typology anchors the development within the neighborhood.

Site Plan

- | | | | | | |
|---|----------------------------------|---|--------------------|---|--------------------------------|
| A | SHARED ENTRIES | F | PARKING AREA | K | NEIGHBORHOOD RETAIL |
| B | WALK-UPS (*ADA ACCESSIBLE) | G | RESIDENT CAR SHARE | L | PUBLIC BIKE SHARE |
| C | SHARED ROOFTOP PATIO | H | GREEN ALLEY | M | ADAPTIVE RE-USE, ACTIVE RETAIL |
| D | GROUND FLOOR RESIDENT FLEX SPACE | I | COMPOSTING | N | MULTI-FAMILY RENOVATION |
| E | SHARED GREEN SPACE | J | PEDESTRIAN MEWS | | |



East Facade

Elevations



Front Elevation



East Elevation



Rear Elevation



West Elevation



Alley and Backyard



West Facade

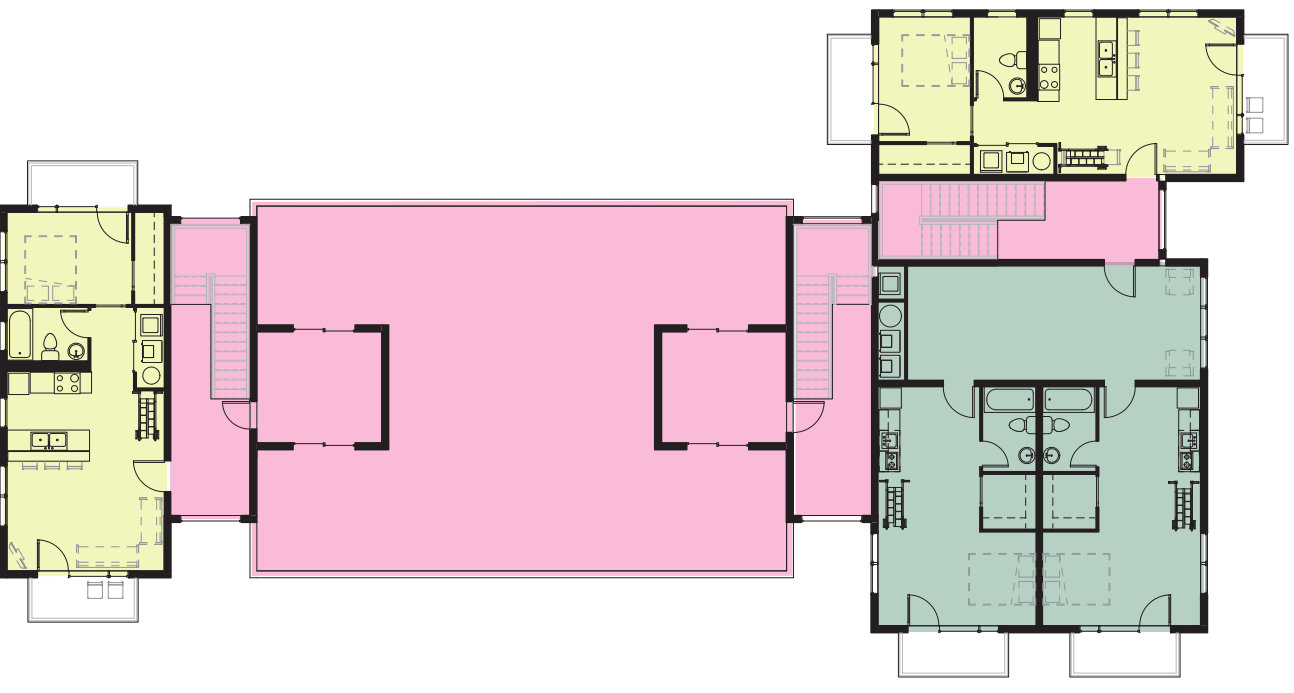
Floor Plans



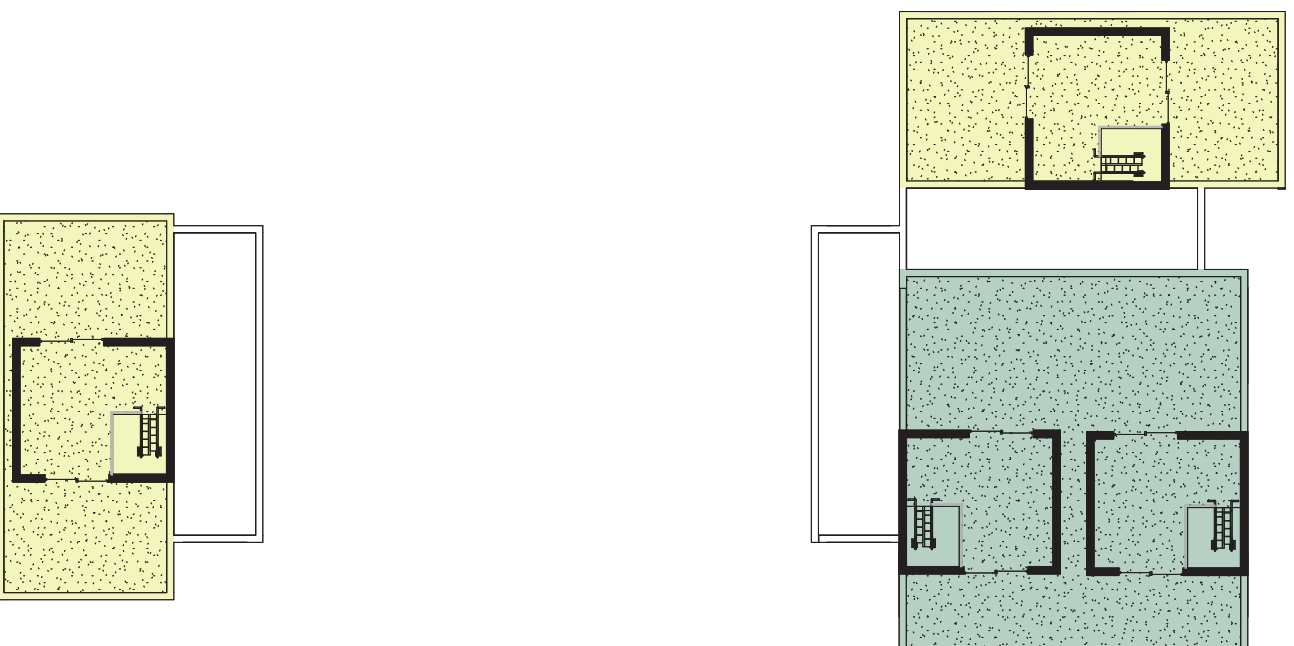
Level 1 (Ground Floor)



Level 2

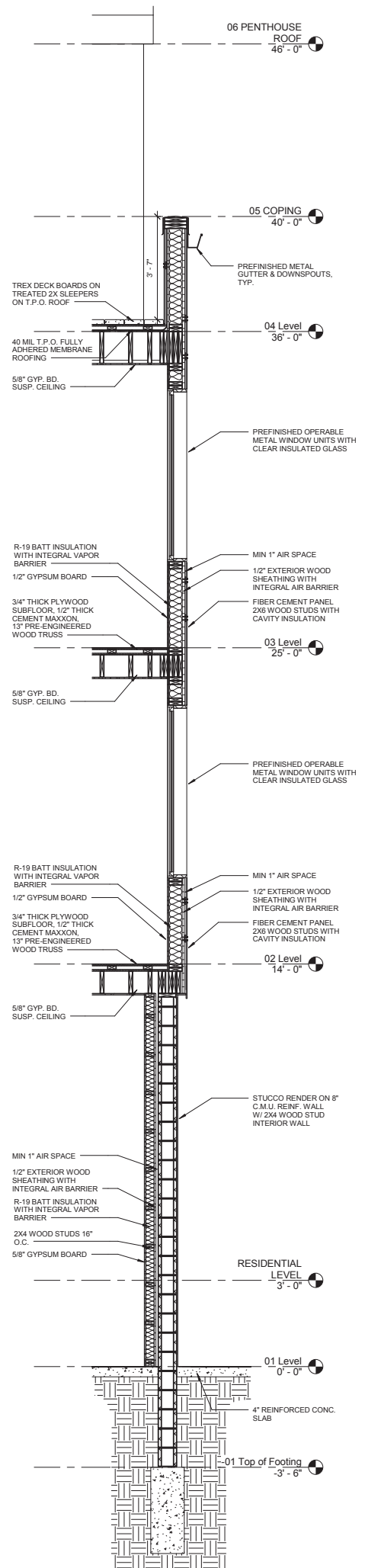


Level 3

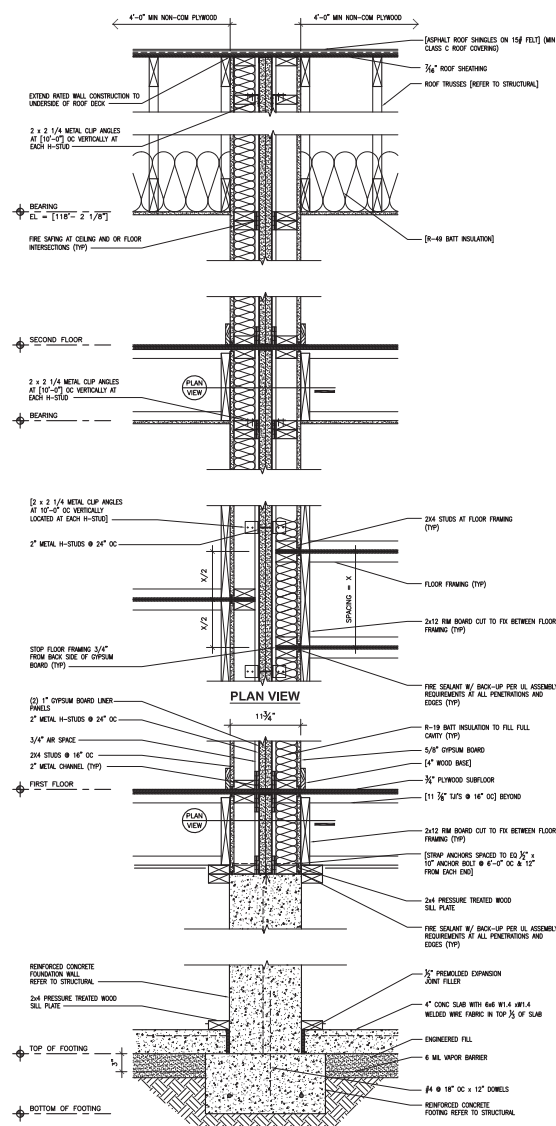


Level 4

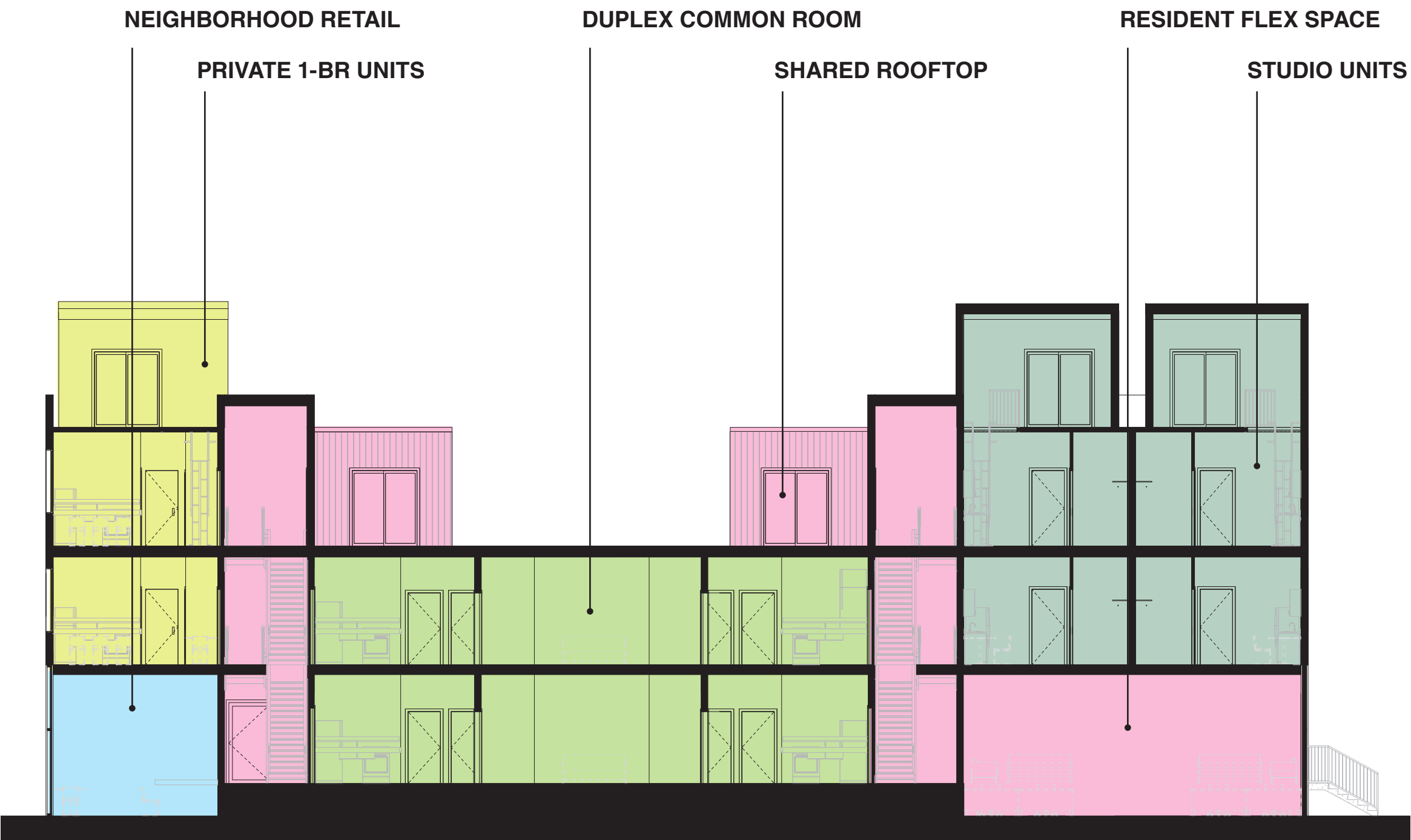
Sections



Exterior Wall Section



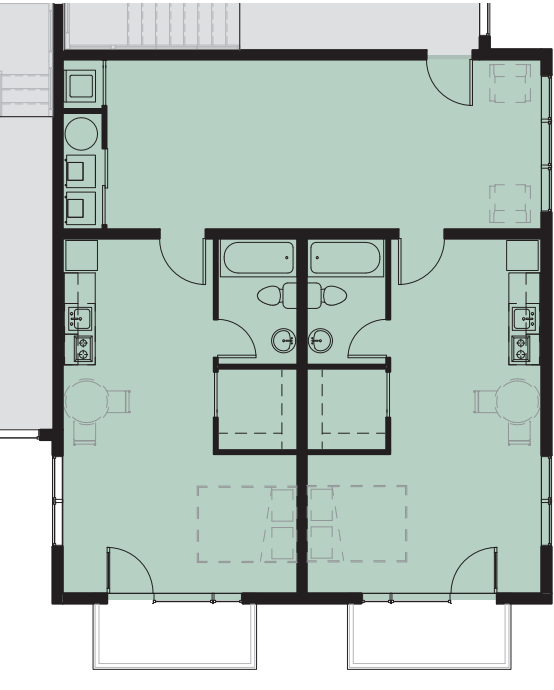
Party Wall



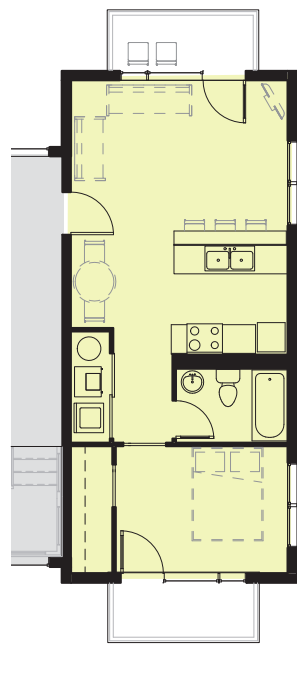
Unit Floor Plans



Duplex, typ.



Studios + Common Space, typ.



Private Townhouse / 1-Br, typ.

Cost Opinion

*Cost Opinion based on current construction industry values; however, should be used for conceptual purposes only.

| Preliminary Opinion of Construction Costs | | |
|---|--|------------|
| Description | | Total |
| DIV. | | |
| 2 | Site Improvements | |
| 2 | Utility allowance parking area | \$ 30,000 |
| 2 | Earthwork / Finished Grading (Not environmental earthwork) | \$ 20,000 |
| 2 | Decorative Paving | \$ 36,340 |
| 2 | Pedestrian Concrete | \$ 7,030 |
| 2 | Curb and Gutter | \$ 2,700 |
| 2 | Alley | \$ 99,828 |
| 2 | Bike loops | \$ 7,500 |
| 2 | Seeded lawn (includes 4" of topsoil) | \$ 2,563 |
| 2 | Shrubs and grasses (includes planting soil and mulch) | \$ 5,685 |
| 2 | Irrigation, (shrubs and grasses) | \$ 72,000 |
| 2 | Irrigation, (lawn) | \$ 45,000 |
| 2 | Shade trees | \$ 8,250 |
| 2 | Lights (pole, fixture and foundation) | \$ 12,600 |
| | Site Subtotal | \$ 349,496 |

| DIV. | | |
|------|--|--------------|
| 3 | Building | |
| 3 | Concrete | \$ 20,361 |
| 4 | Masonry | \$ 68,904 |
| 5 | Metals | \$ 188,800 |
| 6 | Rough Carpentry | \$ 225,000 |
| 6 | Finish Carpentry | \$ 52,500 |
| 7 | Insulation | \$ 17,230 |
| 7 | Roofing | \$ 17,220 |
| 7 | Sheet Metal | \$ 51,683 |
| 8 | Doors | \$ 116,935 |
| 8 | Windows | \$ 88,585 |
| 8 | Glass | \$ 17,848 |
| 9 | Drywall | \$ 135,000 |
| 9 | Tile Work | \$ 6,240 |
| 9 | Wood Flooring | \$ 65,520 |
| 9 | Painting and Decorating | \$ 48,250 |
| 10 | Specialties | \$ 28,720 |
| 11 | Cabinets | \$ 103,360 |
| 11 | Appliances | \$ 38,765 |
| 12 | Blinds, Shades | \$ 13,568 |
| 12 | Carpets | \$ 12,000 |
| 13 | Special Construction | \$ 24,581 |
| 15 | Plumbing and Hot Water | \$ 103,360 |
| 15 | HVAC | \$ 86,144 |
| 16 | Electrical | \$ 103,360 |
| | Building Subtotal | \$ 1,633,932 |
| | Combined Site + Building Subtotal | \$ 1,983,428 |
| | Mobilization and General Conditions 5% | \$ 99,171 |
| | Contingency 25% | \$ 495,857 |

TOTAL \$2,578,456.27