Housing Sites of Opportunity

POLK COUNTY HOUSING TRUST FUND

WELLS FARGO

CAPITAL CROSSROADS
A VISION FORWARD

CONFLUENCE

Acknowledgments

A special thank you to all the stakeholders that participated in the Polk County Housing Trust Fund's Housing Sites of Opportunity Project. The input received help guide many of the recommendations and estimations provided within this document.

Do you have a site in mind that would be a perfect fit for a Missing Middle Housing Infill Project?

Contact Polk County Housing Trust Fund at

515.282.3233 or info@pchtf.org

Table of Contents

Section 1: Executive Summary 4

Section 2: Methodology + Approach 8

Faith-Based Infill Development, Greenspace 18

Faith-Based Infill Development, Parking Lot 20

Undeveloped Publicly Owned Land 22

Standalone or Excess Parking Infill Redevelopment 24

Aging Commercial or Retail, Medium 26

Aging Commercial or Retail, Large 28

Chronically Vacant Office Buildings 30

Chronically Vacant Office Parks 32

Undeveloped Flagpole Lots 34

Greenfield Land Assembly Opportunities 36

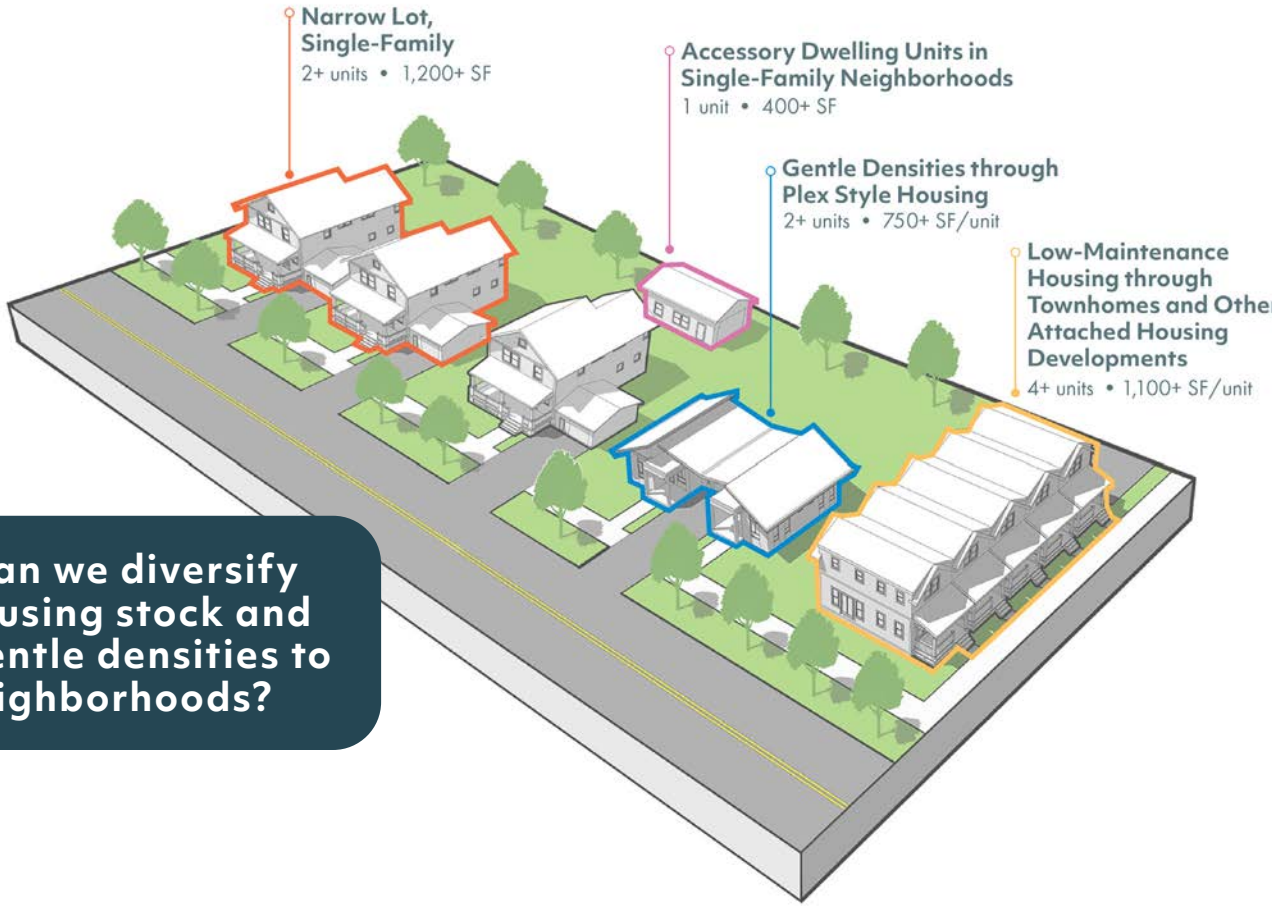
Section 3: Strategies to Consider for Implementation 38

Appendix: Tables and Findings 44

Section 1: Executive Summary

Background

The Des Moines metro remains one of the fastest growing metropolitan areas in the Midwest. Communities and organizations within the metro need to work together to ensure housing development matches pace with housing demand to properly respond to projected growth patterns in the region. Rising infrastructure, construction, and maintenance costs are placing a strain on cities and the county, making it difficult to fiscally sustain new growth. This leads to an opportunity to increase our housing stock through infill residential development in the form of moderate or "gentle" densities within our communities. Taking advantage of existing infrastructure, infill development can create compact development that is more fiscally viable and sustainable. Gentle densities are best represented through Missing Middle Housing types. Missing Middle Housing includes all densities of housing outside of single-family, detached units and apartment complexes. Examples of these unit types include cottage courts, duplexes, triplexes, townhomes and rowhouses, live-work units, and garden apartments.



How can we diversify our housing stock and add gentle densities to our neighborhoods?

Benefits of Missing Middle Housing

Source: Dane County Regional Housing Strategy

Increased Housing Choice
Missing Middle Housing provides a broader mix of housing unit types that reflect the needs of various stages of life. For example, Missing Middle Housing can be more accessible to seniors looking to downsize but remain in their community. Many Missing Middle Housing types are well-suited for young professionals, families, single parents, and others to secure less expensive housing with fewer maintenance requirements that cater to their lifestyles. Overall, Missing Middle Housing creates more opportunities for the varying needs of residents in a community.

Sustainable Development Practices
Through the lens of both fiscal and land sustainability, Missing Middle Housing offers opportunities to reduce operations and maintenance costs related to infrastructure and development. When comparing the development of a single-family subdivision to a development with a mix of townhomes and garden apartments, the total number of driveways, alleys, curb and gutter, and sidewalks needed to support the development are likely to be greatly reduced with the more dense option. Furthermore, the greater the density of the development, the less land consumption taking place and strain on utility services.

Variety of Price Points
The development of Missing Middle Housing introduces varied price points to the market. This is achieved through the development of higher number of units sharing land and development costs and naturally lowering the purchase price. More units provides more opportunities for developers to spread the needed return on investment among a higher share of units. Additionally, there are many programs and incentives in the marketplace today that support the development of Missing Middle Housing that serve as gap financing options for achieving desired price points.

Infill Residential Development
Infill residential development refers to the construction of units on land in or adjacent to residential areas that are either vacant, underutilized, or have dilapidated structures that could be opportunities for new housing development. Infill development practices further support the case for efficiency and sustainability long-term tied to Missing Middle Housing. By developing Missing Middle Housing types, a greater number of units are introduced to the market, infrastructure is efficiently integrated, and there is an overall reduction in sprawl.

Why is it Missing?

Neighborhoods developed before the 1950s show that Missing Middle Housing types were a long-standing practice in our communities and not a new or unknown concept. Before cars and highway/interstate development became a priority in urban development, many neighborhoods were densely developed with a mix of housing types. On any given block there could be single-family units next to garden apartments or quadplexes. Modern development practices and zoning codes often prohibit the comingling of densities like Missing Middle Housing types, which has led to a dramatic decline in these housing types throughout newer developed neighborhoods.

Project Summary

The **Housing Sites of Opportunity Project**, completed in collaboration with Polk County Housing Trust Fund and Capital Crossroads with support from Wells Fargo, identifies potential infill opportunity sites throughout Polk County where Missing Middle Housing development could be constructed. Infill development provides additional opportunities to reduce sprawl, leverage existing infrastructure, and allow for **creative development projects to increase available housing units in Polk County.**

To identify these potential infill sites, a land assessment was conducted to determine where public, vacant, commercial or office, and faith-based parcels were located throughout the county that could support infill Missing Middle Housing development. Further queries were completed to exclude parcels located in close proximity of the floodplain and floodway, singular parcels located away from the urban core, and parcels with low viability for development.

The **outcome of this analysis produced ten opportunity site typologies** from a grouping of roughly 720 parcels following the land assessment. These typologies included:

- Faith-Based Infill Development, Greenspace
- Faith-Based Infill Development, Parking Lot
- Undeveloped Publicly Owned Land
- Standalone or Excess Parking Infill Redevelopment
- Aging Commercial or Retail, Medium
- Aging Commercial or Retail, Large
- Chronically Vacant Office Buildings
- Chronically Vacant Office Parks
- Undeveloped Flagpole Lots
- Greenfield Land Assembly Opportunities

Missing Middle Housing developments are intended to (1) respond to housing demand throughout the county **(2)** increase gentle densities through the construction of Missing Middle Housing types and **(3)** be priced for residents at or below 80% median family income (MFI). These three goals will help expand the housing stock to support affordable housing solutions county-wide.

The ten typologies listed are outlined throughout this document to highlight and visualize the opportunities available in Polk County to pursue Missing Middle Housing development. This document concludes with a series of high-level considerations for next steps to help guide the future of Missing Middle Housing discussions and development in the Polk County region.

*AI generated image.

2025 HUD % Median Family Income (MFI) for Polk County		
% MFI	1-Person	4-Person
30%	$24,060	$34,350
50%	$40,100	$57,250
60%	$48,120	$68,700
80%	**$64,160**	**$91,600**
100%	$80,200	$114,500

80% Median Family Income

The goal of this project is to support housing that could be priced for households earning 80% of the median family income (MFI) or below. The table to the left highlights a scale of these price points for 1-person and 4-person households. This is to ensure there are units available below market rate and provide flexibility within the county's housing stock for housing attainability.

Ten Typologies Developed for the Housing Sites of Opportunity Project

1. Faith-Based Infill Development, Greenspace
2. Faith-Based Infill Development, Parking Lot
3. Undeveloped Publicly Owned Land
4. Standalone or Excess Parking Infill Redevelopment
5. Aging Commercial or Retail, Medium
6. Aging Commercial or Retail, Large
7. Chronically Vacant Office Buildings
8. Chronically Vacant Office Parks
9. Undeveloped Flagpole Lots
10. Greenfield Land Assembly Opportunities

Section 2: Methodology + Approach

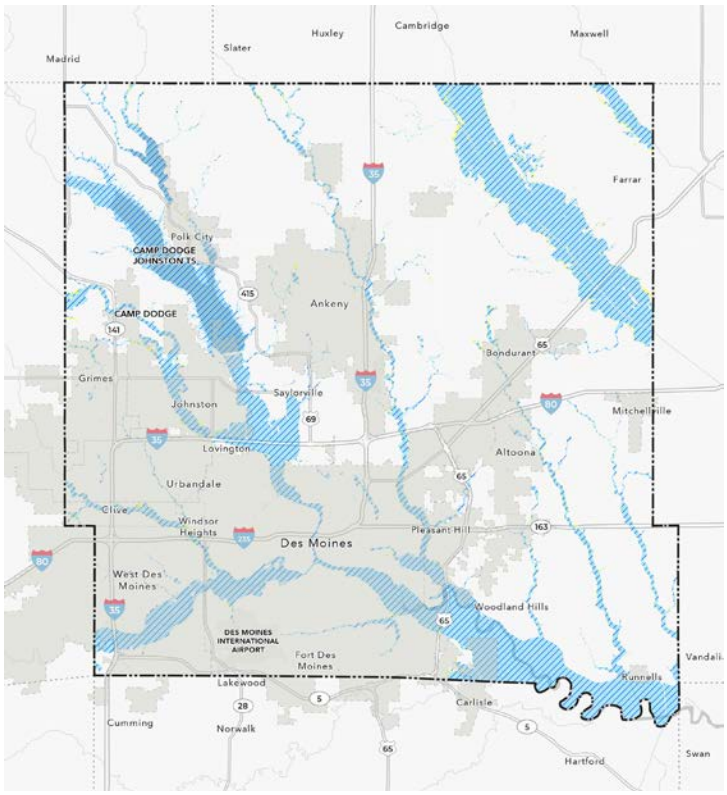
Background

The **Housing Sites of Opportunity Project** was completed in collaboration with Polk County Housing Trust Fund and Capital Crossroads with support from Wells Fargo. This project set out to explore potential **infill opportunity sites** and identify supporting characteristics within Polk County as it relates to **Missing Middle Housing.** These Missing Middle characteristics include compact development, smaller lot sizes where appropriate, shared spaces, and other similar features. Opportunity sites in this report are defined as land with high potential for infill housing development. **Infill housing** has many advantages, some of which include:

- Efficient use of land and infrastructure.
- Ability for land assemblage with favorable terms for acquisition to create unique development patterns.
- Opportunities to provide catalyst sites in neighborhoods and along corridors.

Nationwide, we are facing a housing shortage and need to find creative, long-term solutions to the housing crisis. One way to achieve this without placing too great of a strain on municipal infrastructure and services is by adding gentle densities through Missing Middle Housing within existing developed areas.

This report presents the methodologies, results, and recommendations from the project to highlight how Polk County can begin to efficiently develop new housing and participate in the conversation around housing affordability and availability in Central Iowa.



Map of Polk County and its incorporated areas.

What is Missing Middle Housing?

Missing Middle Housing typically includes all densities of housing from duplexes up to garden apartments, with intentional exclusion of single unit, detached housing or large apartment complexes. Missing Middle Housing densities often range from 2 to 18 dwelling units per acre.

Other examples include cottage courts, townhomes, rowhomes, triplexes, live/work housing, and more. It is intended to represent the "middle" of the spectrum of housing densities.

Project Methodology and Phasing

Project Methodology and Phasing

Land Assessment

The primary intent of the land assessment was to identify common characteristics for infill sites throughout the region, not to select specific sites for development. The land assessment and its outcomes demonstrated there were realistic opportunity sites located throughout the study area and supported further inquiry into typology development, 3D visualizations, and scenario development.

METHODS FOR ASSESSMENT

The land assessment included extensive parcel and market analyses. To identify potential commercial properties suitable for retrofits or new development, CoStar data was reviewed and analyzed. CoStar is a commercial broker database that provides an inventory of commercial properties and markets across the United States and beyond.

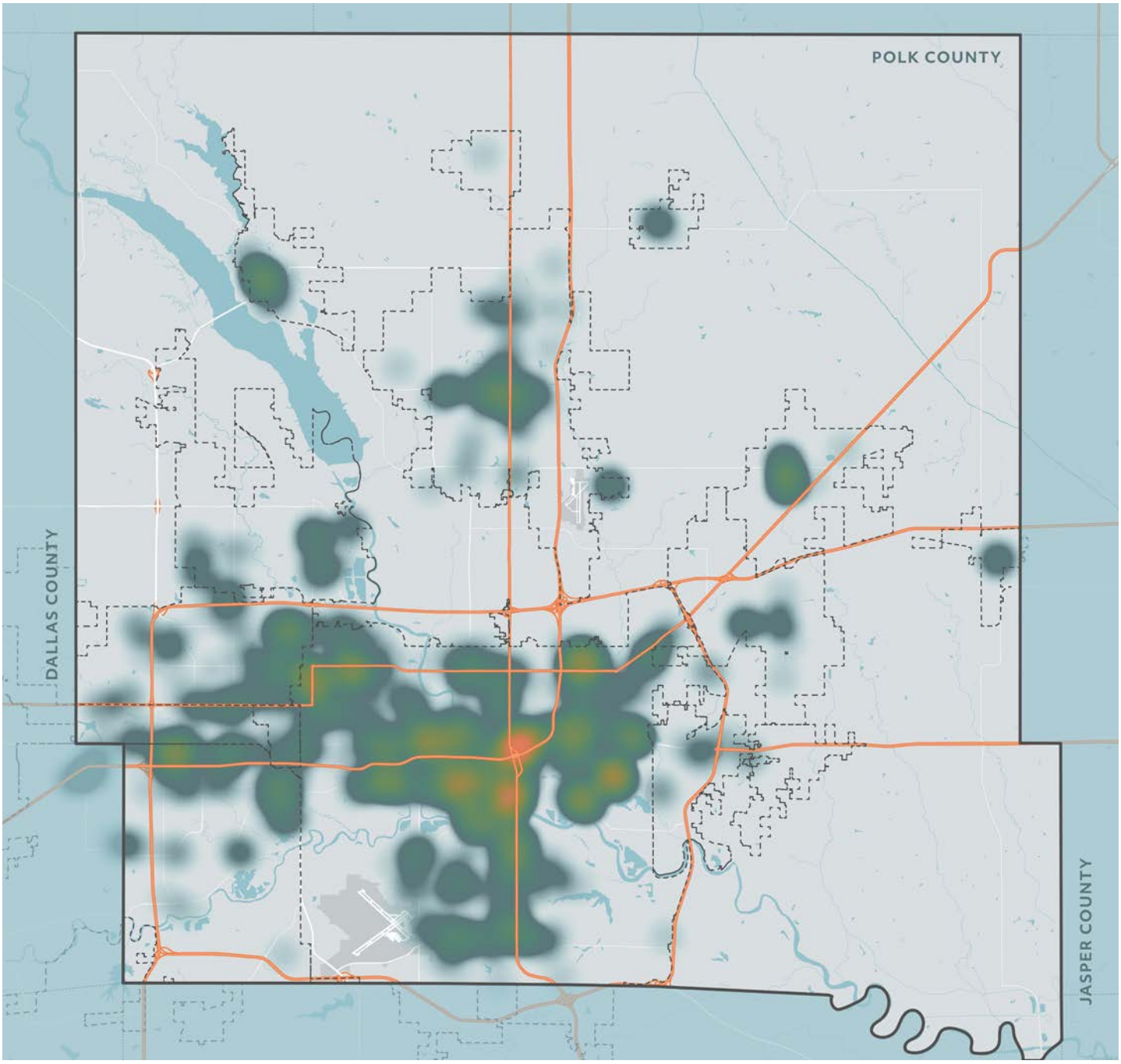
Retail Properties: For retail properties, we searched for existing properties that were rated 3 stars or below (out of 5 stars) with chronic vacancy of 25% or higher that had been on the market for 50 or more days. These properties were then reviewed by the project team and Polk County Housing Trust Fund staff to consider local context and/or condition to focus on a few properties.

Office Properties: For office properties, we searched for existing properties that had chronic vacancy of 25% or more for 50 days or longer on the market. Given the potential surplus of office inventory, all classes of properties were considered. The identified properties were then reviewed by the project team and Polk County Housing Trust Fund staff to further evaluate context and location to focus on a specific list of properties.

Public/Semi-Public and Faith-Based Owned Land: The parcel-by-parcel land assessment leveraged Polk County Assessor's GIS information to filter through existing properties in the Des Moines metro to identify public, semi-public, and faith-based owned land. Additional filters were added following this initial identification to account for development potential (examples: floodplain, zoning, parks, slope, etc.) and proximity to necessary services (examples: schools, grocery stores, transit stops, major employers).

From this analysis, there were **roughly 720 parcels identified as potentially opportunity sites for infill housing development.**

Heatmap of Land Assessment Results



Legend

- Polk County
- Municipalities
- Higher Density of Opportunity Sites
- Lower Density of Opportunity Sites

The heatmap above illustrates the results of the land assessment. The gradient of the heatmap represents the density of results across all categories. The more orange that shows up on the heatmap, the greater number of opportunity sites identified in that area. The more blue, the fewer opportunity sites identified in that area.

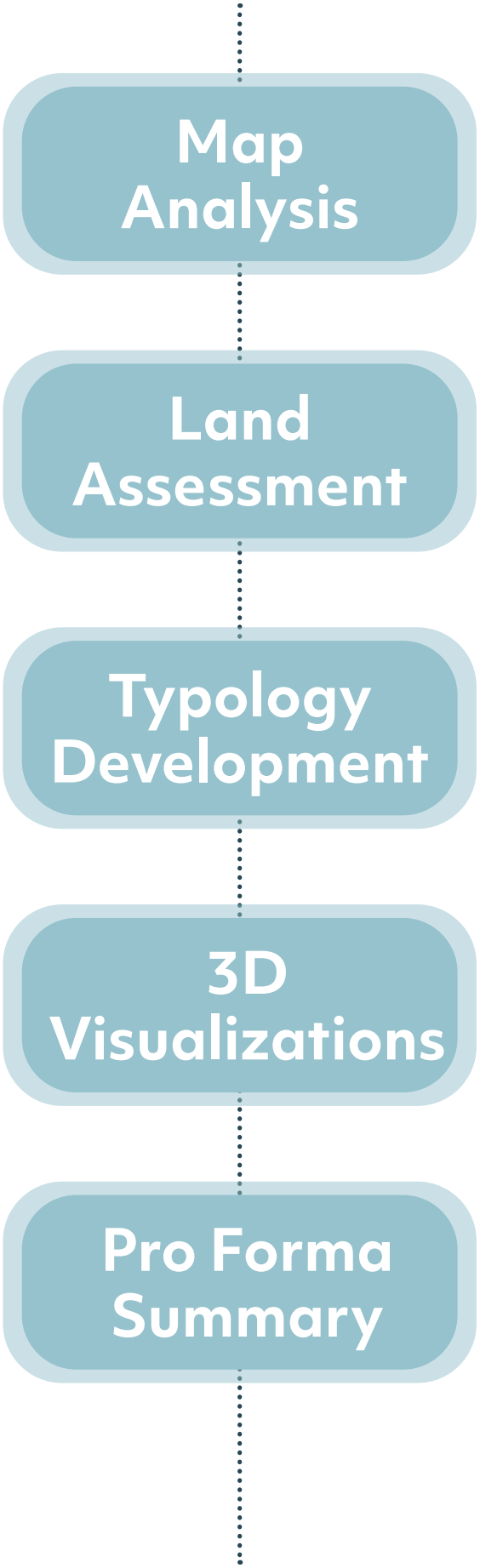
Typology Development

Following the land assessment, each of the land use type categories (retail, office, public/semi-public and faith-based parcels) were examined to identify any consistent forms and location factors present to determine the most common typologies. Ultimately, **ten typologies** were identified for further analysis and visualization:

- Faith-Based Infill Development, Greenspace
- Faith-Based Infill Development, Parking Lot
- Undeveloped Publicly Owned Land
- Standalone or Excess Parking Infill Redevelopment
- Aging Commercial or Retail, Medium
- Aging Commercial or Retail, Large
- Chronically Vacant Office Buildings
- Chronically Vacant Office Parks
- Undeveloped Flagpole Lots
- Greenfield Land Assembly Opportunities

3D Scenario Visualizations

Each typology had one or more 3D visualizations created that illustrated the Missing Middle Housing types that could best be added or retrofitted to the site. A base model was created for each typology to create a foundation for the scenarios that considered typical building setbacks, zoning requirements, and building codes to support a creative approach to piecing together what housing best fit for each typology. Each typology were then visualized in 3D scenarios to help illustrate these housing types and opportunities for development.



Pro Forma of Housing Types

To better understand the cost to construct units in these development scenarios, a pro forma was completed. This process included stakeholder interviews with local developers, regional housing estimations, local knowledge, consistency checks with recent construction examples, and utilization of assessor data from Polk County for years 2023-2025.

The stakeholder interviews with local developers allowed for the discussion of development opportunities and constraints for infill residential projects in the Des Moines metro. A comparison between recent construction costs per square foot and the estimated numbers from the pro forma was completed to ensure these costs were accurate to the local market. Estimated costs per square foot (SF) and costs per unit by housing type are provided in this section, with estimated average costs to build found in the ***Summary of Typologies*** section.

ASSUMPTIONS

Cottage Court Units: Regional housing estimates from the National Association of Home Builders (NAHB) were used to understand the breakdowns for the cost of construction for detached unit developments. An assumed cost per square foot for detached units was produced and applied to determine an estimated cost per square foot, cost per unit, and average cost to build for the cottage court housing type.

All Other Housing Types: For attached housing in the Polk County market, some stakeholders provided recent costs per square foot to build, offering real-world context and estimates. These inputs were utilized to complete the cost per square foot, cost per unit, and cost to build estimates for the remaining housing types.

Net Efficiency: For all attached housing types shown in this project, a net efficiency assumption was developed to factor in the total occupant-dedicated square footage by housing type. This would exclude any hallways, mechanical rooms, or stairwells from the overall assumptions.

Construction Costs: These estimates leverage the NAHB's estimates to construct a detached, single-family unit in the Midwest region. General breakdowns of construction costs include general costs (5%), interior finishes (35%), exterior finishes (35%), grading and foundation (20%), and site work (5%). These datapoints were utilized to better understand the breakdowns of costs to construct and not directly applied to the pro forma.

Profit Margins: To assume some profit for developers within the estimates, a 10% profit margin was used.

Land Acquisition Costs: Due to the numerous variables involved in land acquisition for infill development projects, the pro forma excludes any estimates of land acquisition costs. In these types of projects, land could be donated, acquired at a discount or through a grant, or paid for at fair market value.

Adaptive Reuse Examples: Due to the varying costs of rehabilitation and the case-by-case nature of these types of projects, there were no estimates produced when adaptive reuse was proposed in the scenarios. These projects are often viewed as viable alternatives to new-build construction and help further initiatives for increasing housing supply.

Infrastructure Investments: In many of the scenarios, infrastructure (roads or utilities) is pre-existing to the parcel and offers an efficient means to development. The Greenfield Land Assembly Typology presented later in this report does illustrate a new local road in the development and it is important to note no cost assumptions were produced for level of investment to complete this.

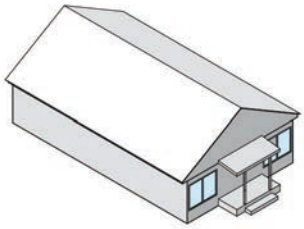

*AI generated image.

Missing Middle Housing Types

The following pages detail the Missing Middle Housing types used to help visualize each of the ten typologies and their respective development scenarios.

Each housing type includes quick notes on development characteristics, costs per square foot and estimated average costs per unit based on the pro forma results, and supportive imagery to provide real-world applications of the given housing type.

Terminology	
Term	**Definition**
Total Square Feet (SF)	Represents the total square foot of the structure.
Cost Per Square Foot (SF)	Assumes a low and high range for the cost per square foot following inputs from national and stakeholder datasets.
Average Cost to Build	Uses the low and high estimated costs per unit and includes the 10% profit margin to produce an average cost to build for each housing type.



Cottage Court

Total Square Feet (SF): 875 SF

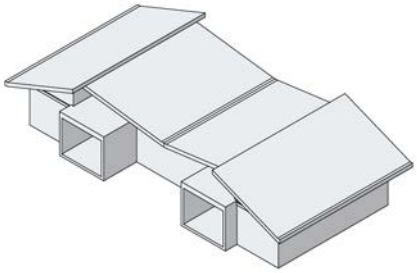
Cost per Square Foot (SF): $160/SF

Average Cost to Build: $154,000/unit*

Quick Notes: Slab-on-grade, detached structure, clustered housing around central amenity spaces, small footprint units less than 1,200 SF, owner or renter occupied.

**Does not include land acquisition costs.*

**AI generated image.*



Ranch Style Duplex

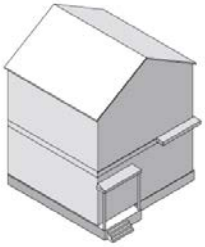
Total Square Feet (SF): 2,200 SF / 1,100 SF per unit

Cost per Square Foot (SF): $175/SF

Average Cost to Build: $211,750/unit*

Quick Notes: Two units per structure, driveway or parking pad, opportunities to incorporate universal design practices, owner or renter occupied.

**Does not include land acquisition costs.*



Stacked Duplex

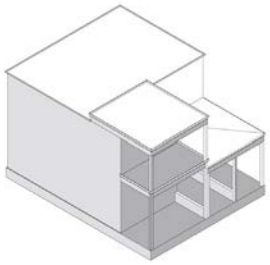
Total Square Feet (SF): 2,100 SF / 1,050 SF per unit

Cost per Square Foot (SF): $175/SF

Average Cost to Build: $192,019/unit*

Quick Notes: Slab-on-grade, standalone structure, rear access or alley loaded driveway, likely renter-occupied.

**Does not include land acquisition costs.*



Stacked Triplex

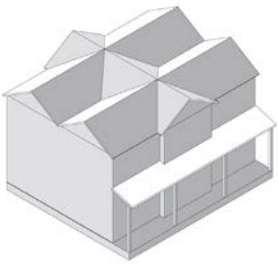
Total Square Feet (SF): 3,089 SF / 1,030 SF per unit

Cost per Square Foot (SF): $185-190/SF

Average Cost to Build: $201,750/unit*

Quick Notes: slab-on-grade, standalone structure, two units on first story, one large unit on second story, walk-up access, owner or renter-occupied.

**Does not include land acquisition costs.*



Side-by-Side Triplex

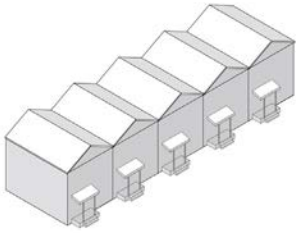
Total Square Feet (SF): 2,490 SF / 830 SF per unit

Cost per Square Foot (SF): $175-185/SF

Average Cost to Build: $115,632/unit*

Quick Notes: Slab-on-grade, standalone structure, all units accessed from first floor walk-up, two-stories, larger units, owner or renter-occupied.

**Does not include land acquisition costs.*



Townhomes

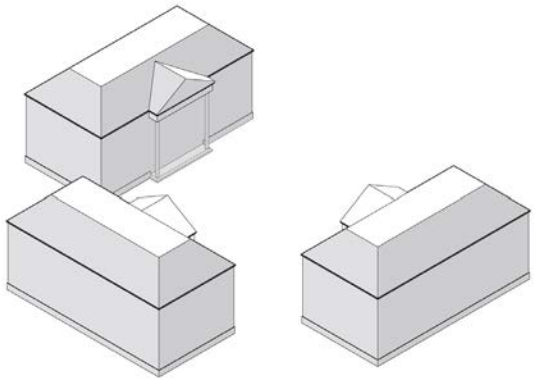
Total Square Feet (SF): 5,280 SF / 1,320 SF per unit

Cost per Square Foot (SF): $185-190/SF

Average Cost to Build: $258,638/unit*

Quick Notes: Two-story units, alley loaded development or shared parking, larger units, owner or renter-occupied.

**Does not include land acquisition costs.*



Garden Apartments

Total Square Feet (SF): 3,050 SF / 763 SF per unit

Cost per Square Foot (SF): $200-210/SF

Average Cost to Build: $77,375/unit*

Quick Notes: Slab-on-grade, standalone structures clustered in groups of three or more, central amenity spaces, minimum eight units per structure, stairwell access, likely renter occupied.

**Does not include land acquisition costs.*

Typology 1

Faith-Based Infill Development, Greenspace

Overview

Throughout Polk County, there are many faith-based properties that are situated on large parcels that contain a significant amount of open greenspace. The greenspace is often located behind the existing structure, but in some cases may be in front of the structure, which will need to be considered in the siting of the development.

Common Features Include:

- Owned and managed by a faith-based organization.
- Age of structures on site vary considerably - some very old, some built in the last 40 years.
- Often found in residential areas or within neighborhood commercial districts.
- Located along arterial roadways or collector roadways sometimes on corner lots. One to two access points depending on size of parcel.
- Adjoining greenspace could have its own access point or have a shared drive with the primary facility.
- Lot typically has a large greenspace and edge buffer trees.

Faith-Based Infill Development, Greenspace

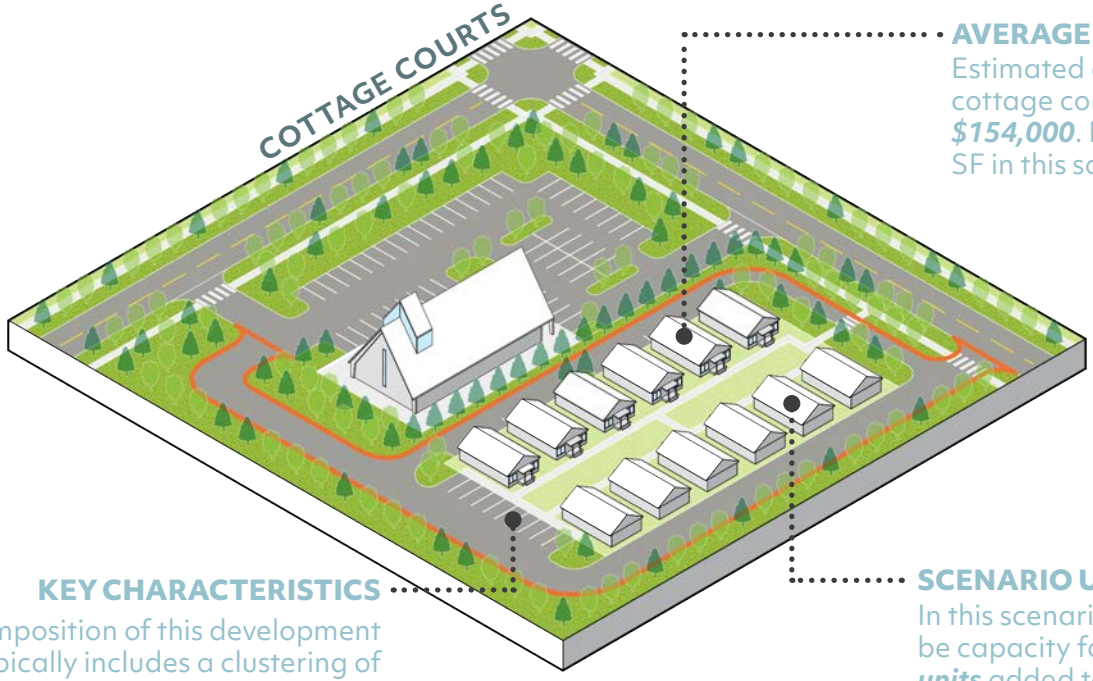
Proposed Infill Approach

This typology focuses on the remnant greenspaces often surrounding the faith-based structure on the same parcel. From the land audit, there were consistent instances of significant greenspace surrounding the structures that would support infill housing opportunities. Additionally, there is a trend of housing developments for the "YIGBY" – or "Yes in God's Back Yard" – movement across America. This movement highlights opportunities to leverage faith-based-owned land to develop and be the stewards of affordable housing.

These scenarios illustrate an opportunity to both add needed units to the market while also providing a revenue source for the faith-based organization long-term. Depending on the community, considerations for lot splits or rezoning would be necessary unless faith-based properties were allowed to develop residential uses on the property by right.

The typologies on the following page identify housing types that could be supported in this development pattern: **cottage courts and ranch style duplexes.**

COTTAGE COURTS

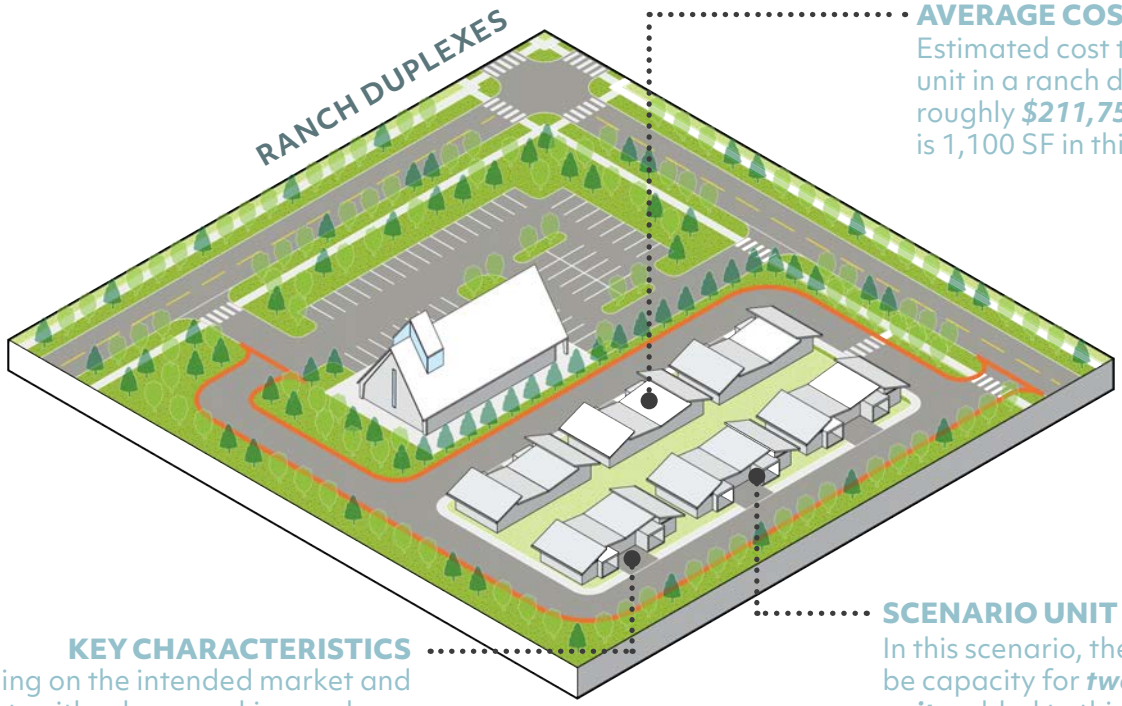


AVERAGE COST TO BUILD
Estimated cost to build a cottage court unit is roughly ***$154,000***. Each unit is 875 SF in this scenario.

SCENARIO UNIT COUNT
In this scenario, there could be capacity for ***twelve new units*** added to this property.

KEY CHARACTERISTICS
The composition of this development typically includes a clustering of homes around a central greenspace with dedicated pathways to each unit. These scenarios highlight opportunities for off-street parking areas that connect into the principal structure's parking lot and access points.

RANCH DUPLEXES



AVERAGE COST TO BUILD
Estimated cost to build a unit in a ranch duplex is roughly ***$211,750***. Each unit is 1,100 SF in this scenario.

SCENARIO UNIT COUNT
In this scenario, there could be capacity for ***twelve new units*** added to this property.

KEY CHARACTERISTICS
Depending on the intended market and occupant to either have parking pads or structured garages attached or detached from the unit.

Typology 2

Faith-Based Infill Development, Parking Lot

Overview

There are several faith-based properties in Polk County that have significantly sized parking lots surrounding the place of worship. Many faith-based organizations are experiencing congregation size decreases and may no longer require the amount of parking necessary upon construction or initial occupancy. These parking lots, especially when they are behind the existing structure, present an opportunity for infill residential development.

Common Features Include:

- Large parking lots that often surround the property and include one larger rectangular area as well as the occasional second lot nestled behind the structure.
- Age of structures on site will vary considerably - some very old, some built in the last 40 years.
- Often found in residential areas or within neighborhood commercial districts.
- Located along arterial roadways or collector roadways sometimes on corner lots.
- One to two access points depending on size of parcel.
- Lot typically has a large greenspace and edge buffer trees.

Faith-Based Infill Development, Parking Lot

Proposed Infill Approach

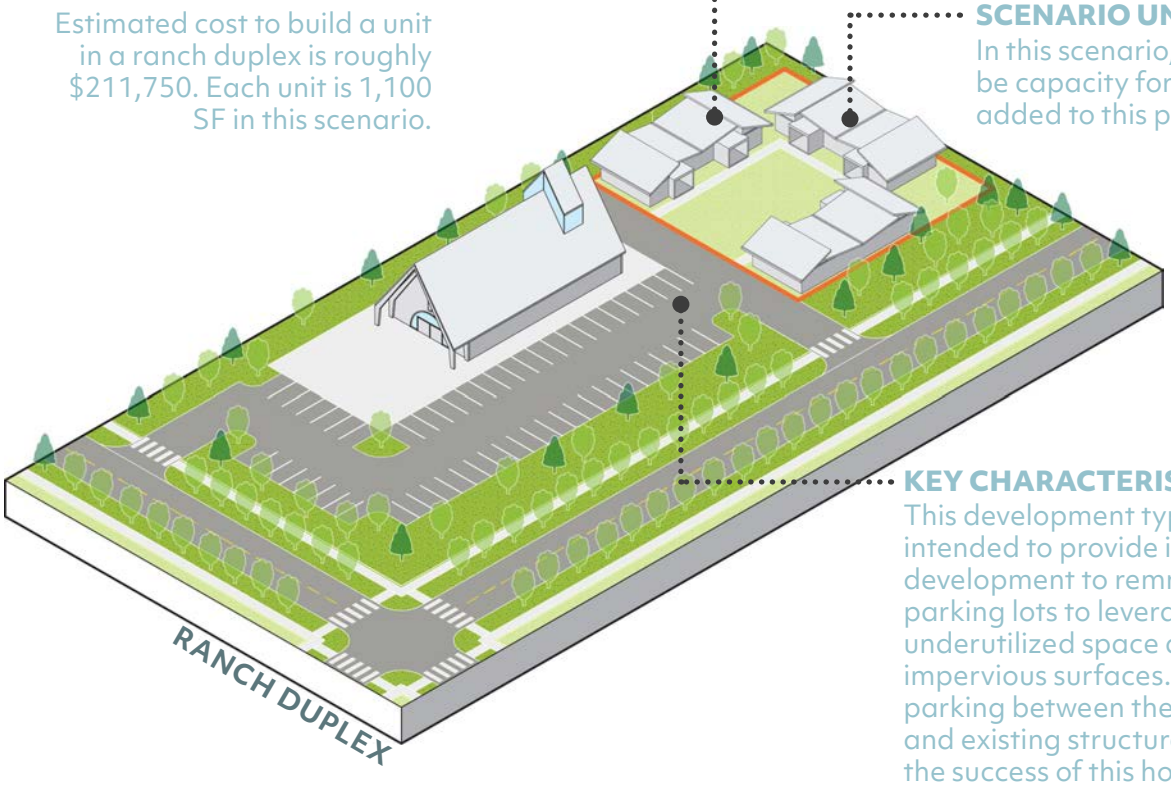
From the land assessment, there were many instances where there were far larger parking lots than needed on faith-based properties. Nationwide there has been a downturn in faith-based organization attendance and this is placing a strain on these organizations. By separating off a portion of the parking lot for housing, the faith-based organization would be able to return part of the impervious surface to livable, affordable housing space with some remnant area for a central greenspace. There would not be any new parking necessary to support the units as the remnant parking lot could be shared with the few units created.

These scenarios illustrate an opportunity to both add needed units to the market while also providing a revenue source for the faith-based organization long-term. Depending on the community, considerations for lot splits or rezoning would be necessary unless faith-based properties were allowed to develop residential uses on the property by right.

The most viable housing types for this scenario are **ranch style duplexes and townhomes** as they increase density while still supporting various household sizes. The ranch style duplexes also offer opportunities for universal design practices to be employed to ensure accessibility of the units, no matter the occupant's abilities.

AVERAGE COST TO BUILD
Estimated cost to build a unit in a ranch duplex is roughly $211,750. Each unit is 1,100 SF in this scenario.

SCENARIO UNIT COUNT
In this scenario, there could be capacity for ***six new units*** added to this property.

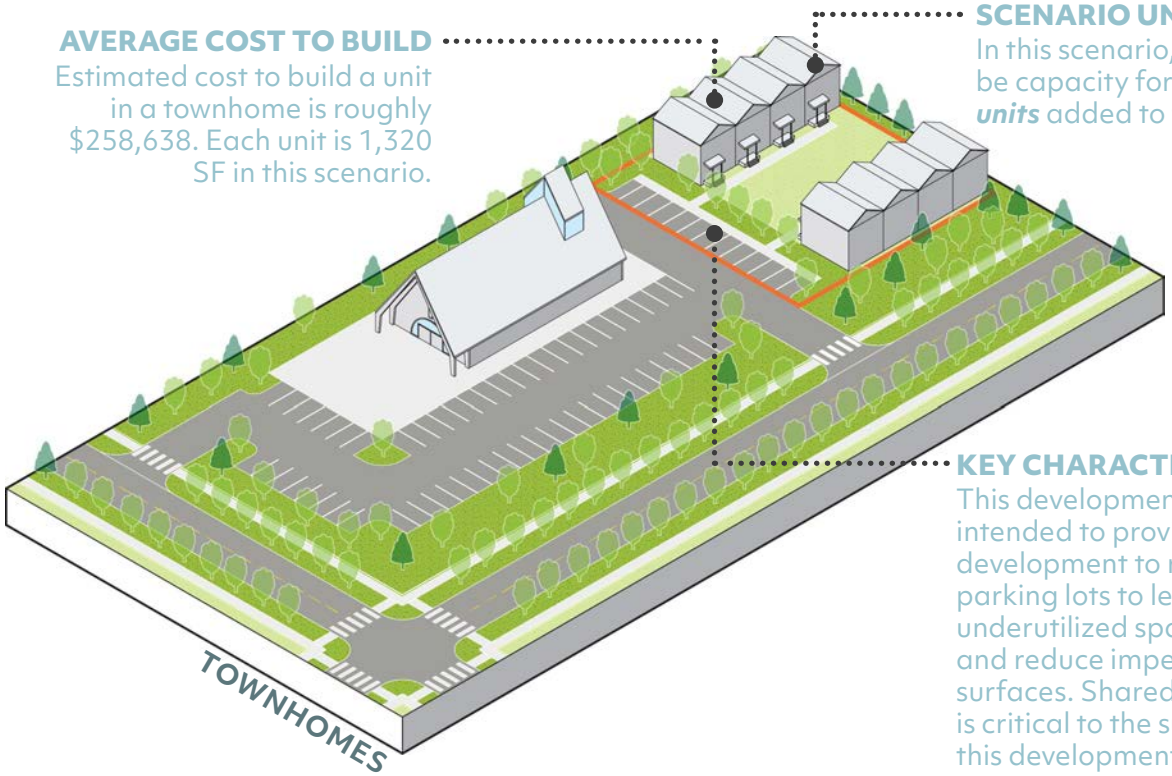


RANCH DUPLEX

KEY CHARACTERISTICS
This development type is intended to provide infill development to remnant parking lots to leverage underutilized space and reduce impervious surfaces. Shared parking between the housing and existing structure is key to the success of this housing type.

AVERAGE COST TO BUILD
Estimated cost to build a unit in a townhome is roughly $258,638. Each unit is 1,320 SF in this scenario.

SCENARIO UNIT COUNT
In this scenario, there could be capacity for ***eight new units*** added to this property.



TOWNHOMES

KEY CHARACTERISTICS
This development type is intended to provide infill development to remnant parking lots to leverage underutilized space and reduce impervious surfaces. Shared parking is critical to the success of this development type.

Typology 3

Undeveloped Publicly Owned Land

Overview

There are publicly owned parcels throughout Polk County that may be suitable for infill development of residential properties. This includes land owned by Polk County, incorporated cities, or other public agencies. As public land, this land is tax exempt and the construction of infill residential would add to the tax base while also providing a necessary public good with new affordable housing for residents.

Common Features Include:

- Publicly owned parcel(s).
- Shape and size can vary greatly.
- Located along local or collector roadways with close connections to major corridors.
- One to two access points depending on size of parcel.
- Lot typically has a large greenspace and edge buffer trees.

Undeveloped Publicly Owned Land

Proposed Infill Approach

Over time, many municipalities or other public entities take ownership of land through purchase, condemnation, or tax sales. Due to this, there are remnant parcels that could be assembled throughout the county to support infill housing. In these typologies, it is essential that the development be structured for residents at or below 80% Median Family Income price points to ensure affordable units are present throughout the communities.

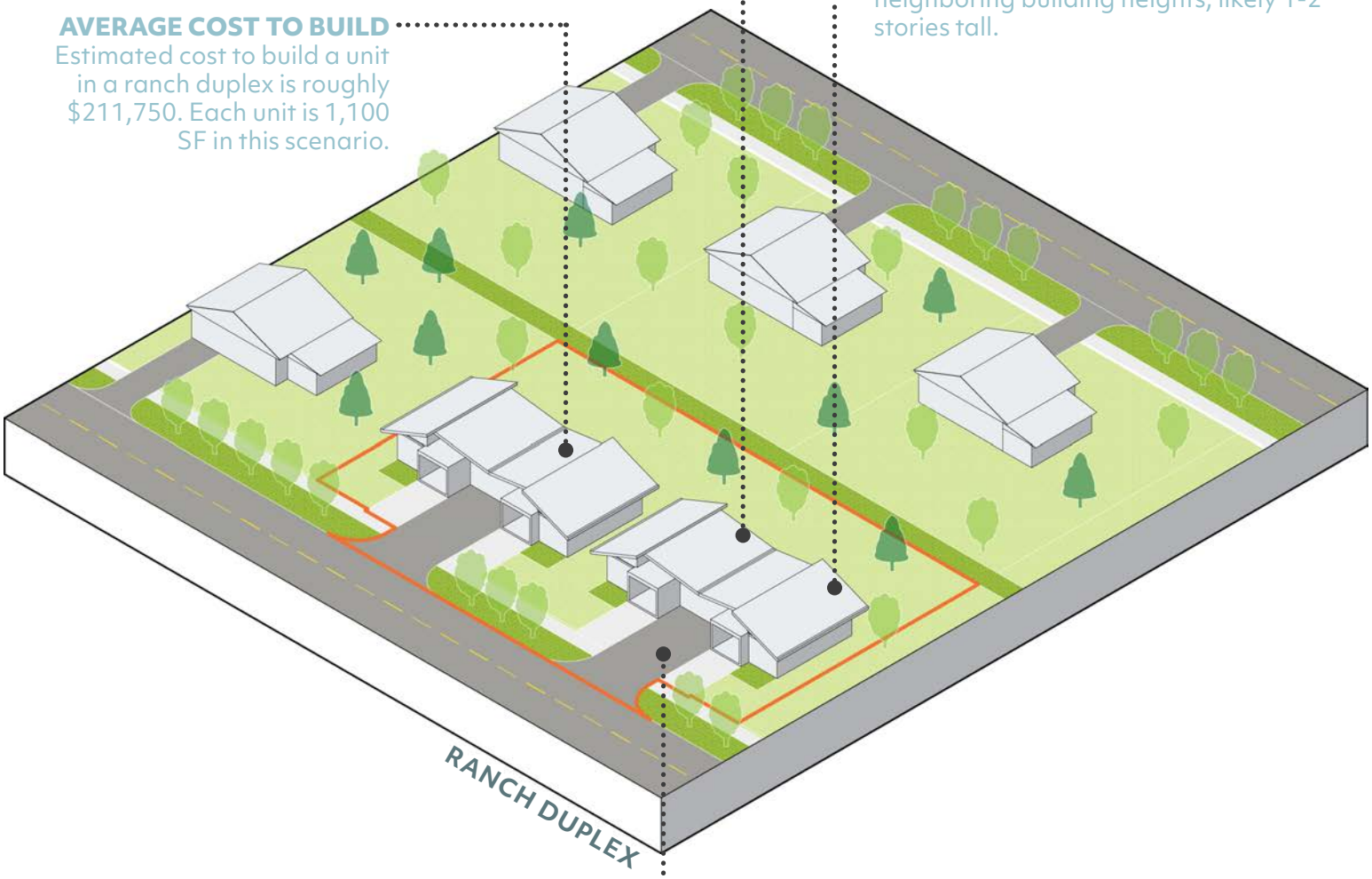
This scenario has identified **ranch style duplexes** to be the most complementary to most neighborhoods in the Polk County area. These single-story structures would not standout and would gently increase density. Flexibility and conversations related to the design and blending of the existing neighborhood with new development will need to be considered on a case-by-case basis since neighborhoods vary greatly throughout the county.

Municipalities will need to be open to this right increase in density and any necessary rezonings or expansion of by right housing types to permit these unit types within existing single-family neighborhoods to support Missing Middle and infill residential opportunities throughout the Metro.

SCENARIO UNIT COUNT
In this scenario, there could be capacity for ***four new units*** added to this property.

KEY CHARACTERISTICS
These publicly owned parcels vary in size throughout the Metro but often are located along local streets within pre-existing neighborhoods. Depending on size, lot splits could be an opportunity to introduce gentle densities, such as duplexes. To maintain the built character of the neighborhood, these infill structures should match neighboring building heights, likely 1-2 stories tall.

AVERAGE COST TO BUILD
Estimated cost to build a unit in a ranch duplex is roughly $211,750. Each unit is 1,100 SF in this scenario.



KEY CHARACTERISTICS
There are options depending on the intended market and occupant to either have parking pads or structured garages attached or detached from the unit. These should be considered on a case-by-case basis depending on the constraints of the parcel and flexibility in zoning code.

Typology 4

Standalone or Excess Parking Lot

Overview

There are various commercial and office properties in Polk County that have excess or unused parking lots that could be prime locations for infill residential development. By utilizing this type of land use, municipalities could support the transition of underutilized properties into more productive and needed land uses.

Common Features Include:

- Mainly privately owned lots.
- Large standalone parking lots or excess parking on an existing office or commercial lot.
- Mainly rectangular parcels.
- Typically located along arterial roadways or collector roadways.
- Two to three access points from the road.
- Minimal landscaping.

Standalone or Excess Parking Lot

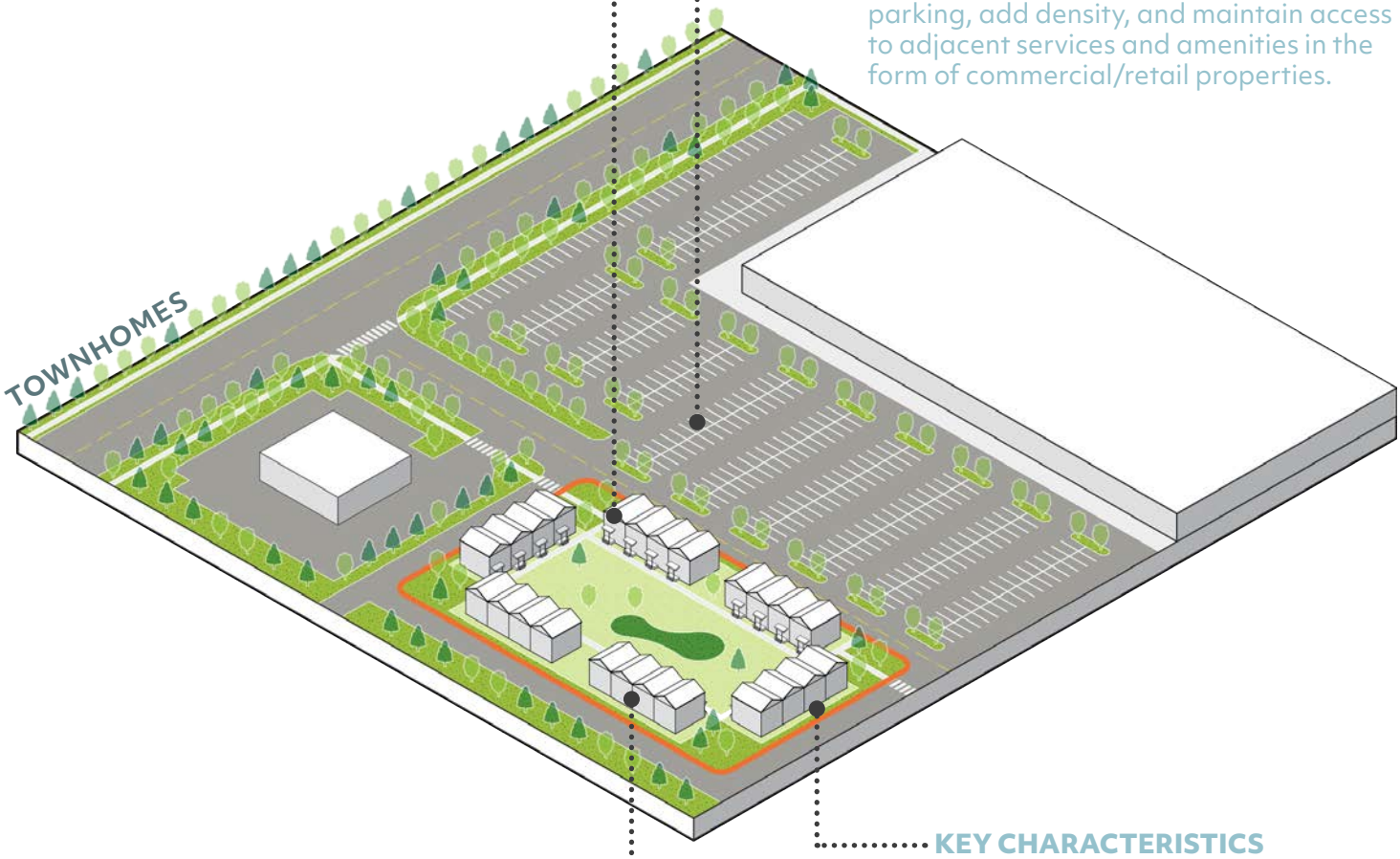
Proposed Infill Approach

Nationwide, we are seeing a trend where there are vacant or declining occupancy rates for big box retailers. Traditionally, these big box stores were developed with expansive parking lots meant to accommodate peak shopping days at the peak of in-store shopping. With the surge of online shopping and evolving market trends, there is a need to identify opportunities for reuse or reorganization of these developments to include viable uses, such as housing.

This typology explores a scenario in which **groups of four townhomes** with shared central amenity spaces are introduced to showcase opportunities for increased density in commercial districts and the highest and best use of the land. Keeping the new housing in dense, commercial areas will help residents experience walkable access to services, schools, and food vendors. The siting of these units could be on street fronted or nestled behind the active, street-facing commercial to create a gradient of densities and uses.

SCENARIO UNIT COUNT
In this scenario, there could be capacity for ***twenty-four new units*** added to this property.

KEY CHARACTERISTICS
This typology is best suited for declining strip center developments located off collectors or arterial roadways. These sites have historically been over-parked and have remnant space available as an infill opportunity site. The benefit to this development type is the ability to share parking, add density, and maintain access to adjacent services and amenities in the form of commercial/retail properties.



AVERAGE COST TO BUILD
Estimated cost to build a unit in a townhome is roughly $258,638. Each unit is 1,320 SF in this scenario.

KEY CHARACTERISTICS
These sites can and will vary in location and scale. When possible, increased densities (townhomes and garden apartments) are most ideal housing types. To support on-site amenities for the residents, some form of active or passive green spaces should be included.

Typology 5

Aging Commercial or Retail, Medium Lot

Overview

There are various standalone commercial properties that are older with high or chronic vacancy issues that may be suitable for retrofits or teardowns for redevelopment. Lot sizes are typically smaller, and buildings are mostly 1-2 stories. The properties are typically located in older retail corridors in the metropolitan area that have good access to arterial/collector roadways but are not as competitive against larger retail districts or centers.

Common Features Include:

- Privately owned and managed.
- Typically older built in the 1990s or earlier.
- Small to medium parking lots that often surround the property.
- One to two stories tall.
- Located along arterial roadways or collector roadways in older retail corridors.
- One or two access points.
- Minimal landscaping.

Aging Commercial or Retail, Medium Lot

Proposed Infill Approach

The aging commercial category focuses on primarily high or chronic vacancies for standalone properties. In these scenarios, there are a mix of opportunities for adaptive reuse of the structure or full-scale redevelopment, this depends on the quality of the pre-existing structure and if the cost to redevelop is less than the cost to retrofit. The primary benefit of choosing these sites are the smaller lot sizes that support infill redevelopment, and locations on active and typically dense corridors with access to other key arterials/collectors.

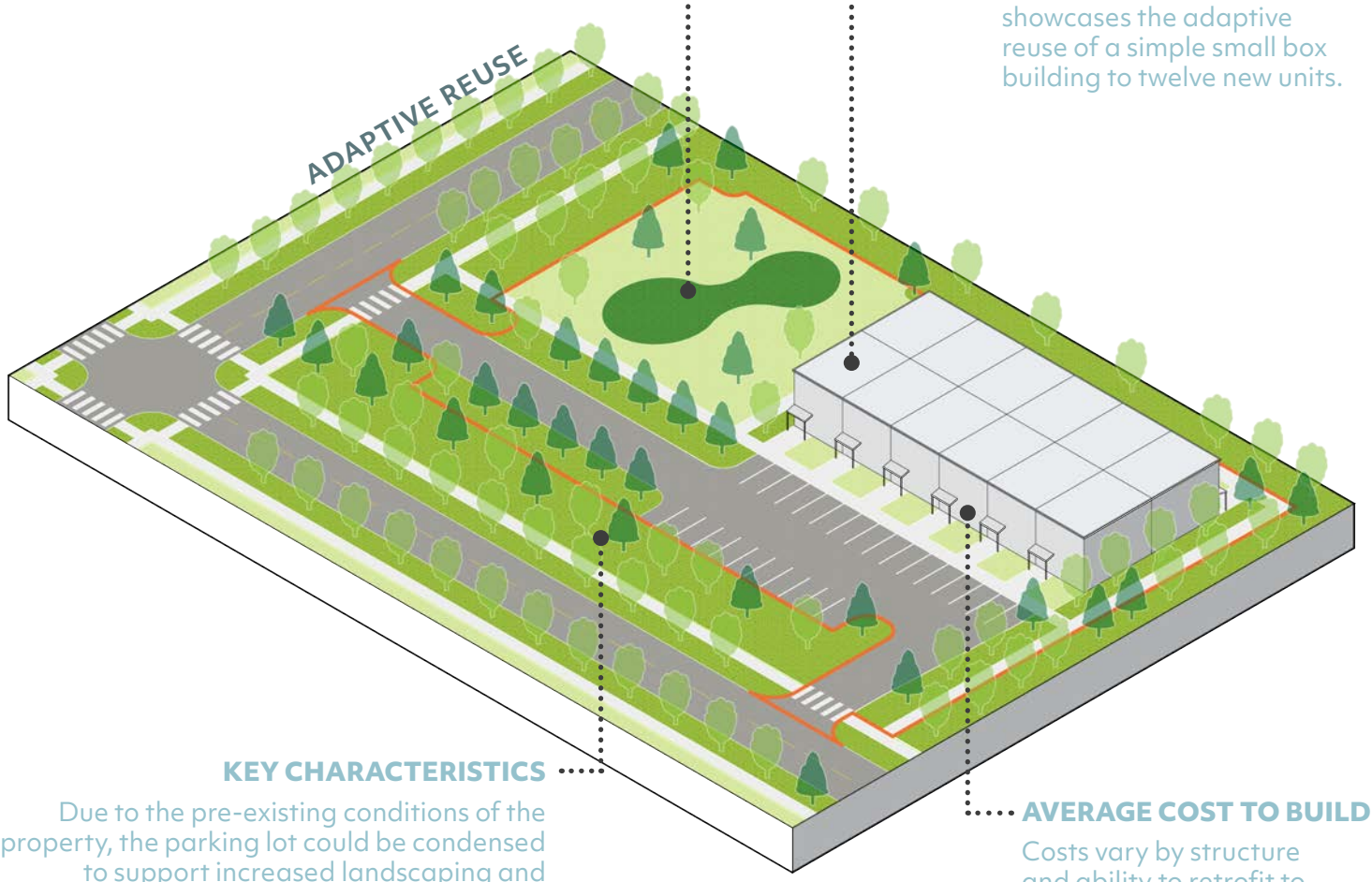
The scenario considered on the opposite page highlights **adaptive reuse of the pre-existing structure**. In this typology, a single-story commercial building is transformed into roughly twelve new units. The International Building Code (IBC), in its current form, supports the transition of commercial structures into multifamily uses as any development of three or more units requires fire sprinkling and other fire-rated materials that would likely exist or need minimal updating to meet code. If the structure already has the code compliant features, it could be a much easier retrofit and cost effective practice for adding new units to underused structures. The overall parking scheme was reduced to support the parking minimums and the remnant space is repurposed into amenity space for the tenants.

KEY CHARACTERISTICS

To maintain buffers of the residential units from the roadway, the remnant space should be maintained as open space.

SCENARIO UNIT COUNT

There is a varied estimated unit count anticipated with this scenario. This scenario showcases the adaptive reuse of a simple small box building to twelve new units.



KEY CHARACTERISTICS

Due to the pre-existing conditions of the property, the parking lot could be condensed to support increased landscaping and residential site characteristics.

AVERAGE COST TO BUILD

Costs vary by structure and ability to retrofit to residential uses.

Typology 6

Aging Commercial or Retail, Large Lot

Overview

There are larger commercial properties or shopping centers, typically a big box or equivalent in size, spread throughout the Des Moines Metropolitan Area in older commercial corridors that may be opportunities for infill development. The large structures themselves are not likely candidates for retrofits. Rather, the large lot and parking lot could be repurposed in part to accommodate a multi-family residential development. This could help to reinvigorate any existing or future commercial tenant in these developments in addition to providing an affordable housing option.

Common Features Include:

- Privately owned and managed.
- Mix of entirely vacant structures or partially vacant shopping centers.
- Large parking lots that often surround the property and include one larger rectangular area.
- Typically 1-story structures, some of which may be big box sized.
- Located along arterial roadways or collector roadways.
- Two to three access points from the road.
- Minimal landscaping.

Aging Commercial or Retail, Large Lot

Proposed Infill Approach

As discussed in Typologies 4 and 5, big box retailers and large commercial developments are declining nationwide and need a new approach for reuse or redevelopment. In terms of big box structures themselves, they do not lend themselves well to reuse, so the following scenario assumes full site redevelopment. The benefit of choosing such a site due in part to its location along a major roadway with connections to nearby destinations, multiple access points, and minimal pre-existing site features which makes for easier demolition. There are likely higher costs associated with this typology due to the larger size, commercial status, and location of these parcels.

The scenario on the opposite page highlights a **mixed-density redevelopment approach** to full site redevelopment. This scenario would create a new neighborhood-scale redevelopment that could include townhomes, stacked duplexes, and garden apartments. These varied unit types, floor plans, and development patterns would create opportunities for a variety of household types and needs. Leveraging the location of the pre-existing site would allow the newly created neighborhood to be connected to other nearby destinations and services via walking, transit, or their own vehicles.

AVERAGE COST TO BUILD

Estimated cost to build a unit in a side-by-side triplex is roughly $115,632. Each unit is 830 SF in this scenario.

AVERAGE COST TO BUILD

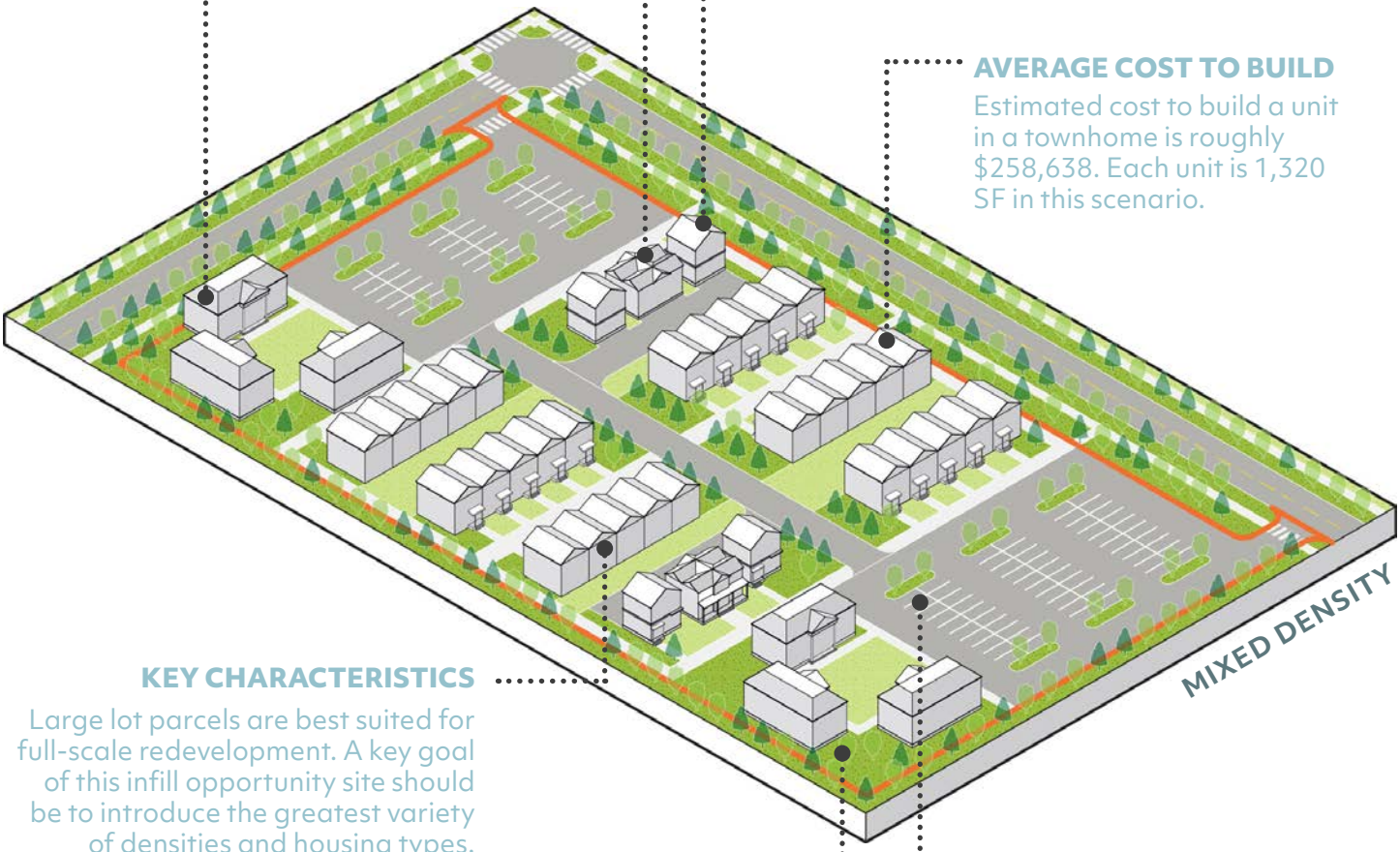
Estimated cost to build a unit in a garden apartment is roughly $77,375. Each unit is 763 SF in this scenario.

AVERAGE COST TO BUILD

Estimated cost to build a unit in a vertically stacked duplex is roughly $192,019. Each unit is 1,050 SF in this scenario.

AVERAGE COST TO BUILD

Estimated cost to build a unit in a townhome is roughly $258,638. Each unit is 1,320 SF in this scenario.



KEY CHARACTERISTICS

Large lot parcels are best suited for full-scale redevelopment. A key goal of this infill opportunity site should be to introduce the greatest variety of densities and housing types.

KEY CHARACTERISTICS

These sites historically have large quantities of hardscaping in the form of parking lots. Intentional landscaping and added plantings will help offset the urban heat island and support a neighborhood sense of place.

SCENARIO UNIT COUNT

The varied unit types in this scenario paired with the full-site redevelopment provide for the greatest increase in overall units. ***There are 30 townhome units, eight duplex units, six triplex units, and 48 garden apartment units shown in this scenario for a total of 92 new housing units.***

Typology 7

Chronically Vacant Office Buildings

Overview

There are office properties spread throughout Polk County that are frequently vacant that may be suitable for retrofits or tear downs. Unlike the larger office properties, these structures are located on smaller, individual sites in largely older commercial corridors mainly in suburban Des Moines. Many are older medical offices that have high turnover rates or sit empty.

Common Features Include:

- Privately owned and managed.
- Plenty of parking spaces typically surround the property, which is often rectangular.
- Smaller buildings that were typically constructed between late 1970s to early 1990s.
- Minimum height: 2+ stories
- Located along arterial roadways or collector roadways with close connections to major corridors.
- One to two access points from the road.
- Minimal landscaping.

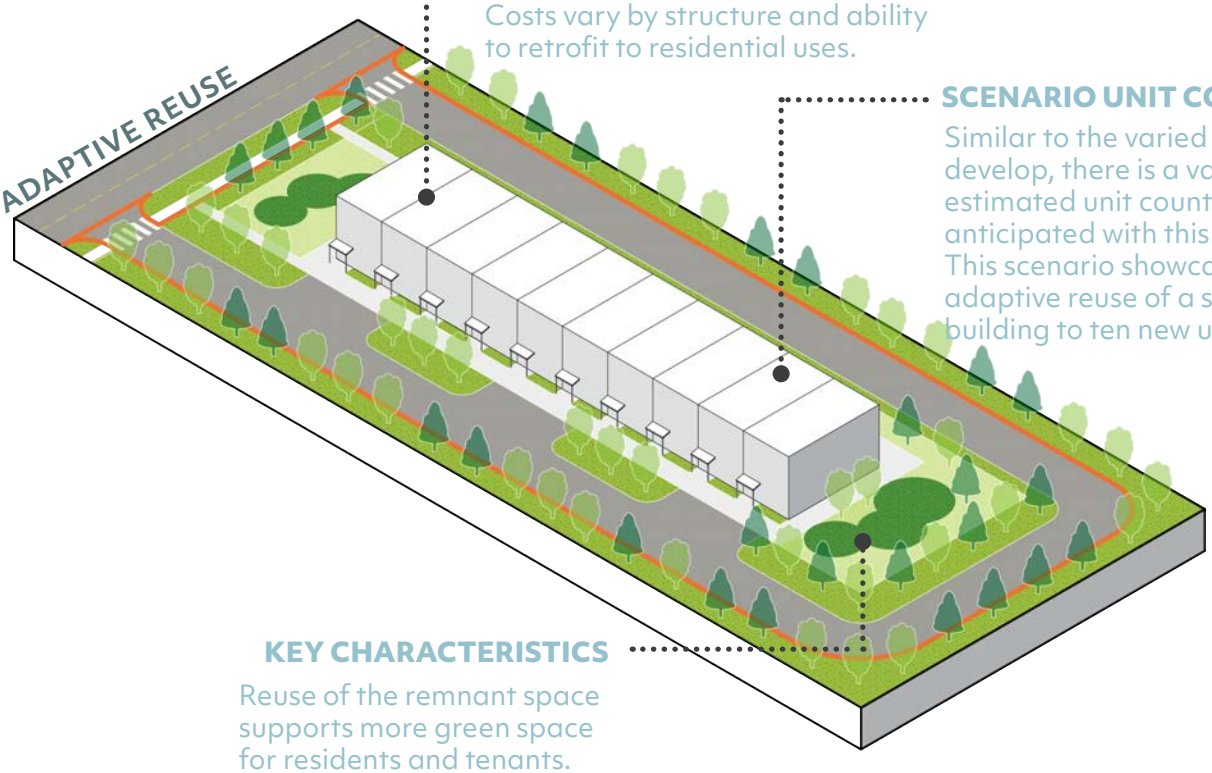
Chronically Vacant Office Buildings

Proposed Infill Approach

In the wake of the COVID-19 pandemic, in-person working requirements have evolved to a more hybrid or fully remote setting reducing the overall need for dedicated office spaces and office parks. This scenario considers how to retrofit pre-existing structures or fully redevelop a site where there was once a standalone office building. These sites are often located on active corridors, near food and retail destinations, and have appropriate site access to support residential development.

This typology explores two scenarios: **adaptive reuse and a mixed-use option.** The adaptive reuse option transforms the existing building into roughly ten units with double-sided access. The International Building Code (IBC), in its current form, supports the transition of commercial structures into multifamily uses as any development of three or more units requires fire sprinkling and other fire-rated materials that would likely exist or need minimal updating to meet code. If the structure already has the code compliant features, it could be a much easier retrofit and cost effective practice for adding new units to underused structures. The mixed-use option considers structure redevelopment while maintaining the site's traffic flow patterns as they typically support two access points.

ADAPTIVE REUSE



AVERAGE COST TO BUILD

Costs vary by structure and ability to retrofit to residential uses.

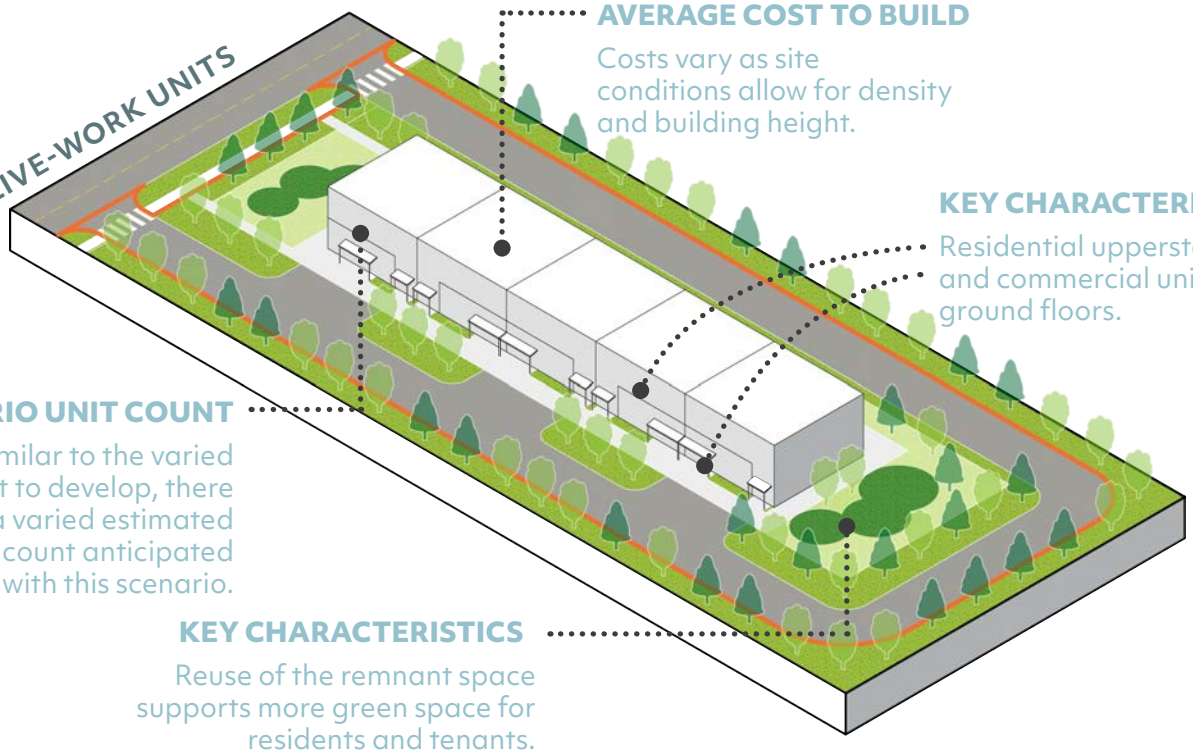
SCENARIO UNIT COUNT

Similar to the varied cost to develop, there is a varied estimated unit count anticipated with this scenario. This scenario showcases the adaptive reuse of a small box building to ten new units.

KEY CHARACTERISTICS

Reuse of the remnant space supports more green space for residents and tenants.

LIVE-WORK UNITS



AVERAGE COST TO BUILD

Costs vary as site conditions allow for density and building height.

KEY CHARACTERISTICS

Residential upperstory units and commercial units on ground floors.

SCENARIO UNIT COUNT

Similar to the varied cost to develop, there is a varied estimated unit count anticipated with this scenario.

KEY CHARACTERISTICS

Reuse of the remnant space supports more green space for residents and tenants.

Typology 8

Chronically Vacant Office Parks

Overview

There are pockets of office parks within the Des Moines Metropolitan Area that experience chronic high vacancy rates due to reduced overall demand and shifting consumer preferences for office park locations, features, and amenities. Many of these sites are clustered in different areas throughout the metro. These sites benefit from enhanced landscaping, plentiful parking, multiple access points, some transit spots nearby, and good roadway access.

Common Features Include:

- Privately owned and managed.
- Large parking lots that often surround the property and include one larger rectangular area.
- Large office buildings that were typically constructed between late 1970s to early 1990s.
- Minimum height: 2+ stories
- Located along arterial roadways or collector roadways with close connections to major corridors.
- Two to three access points from the road.
- Landscaping is typically limited to mature, established trees, grassy areas, pedestrian pathways, and some planting beds.

Chronically Vacant Office Parks

Proposed Infill Approach

This typology focuses on opportunities for full-scale site redevelopment of office parks. Like standalone office buildings, office parks are becoming increasingly vacant and due to their size, have a dramatic impact on the activity and appearance of the surrounding areas. In recent cases, there have been successful applications of adaptive reuse for these office parks that could be explored further. As typical with **adaptive reuse** applications, there are some challenges faced in building and energy codes and sometimes historic preservation requirements that may not make adaptive reuse viable and therefore redevelopment of the structure is necessary.

In many of the applications from the land audit, the pre-existing structures had a rectangular shape that would lend itself to consistent floorplan layouts and reuse of the structure. The expansive parking lot would easily accommodate the municipality's zoning code requirements for parking and potentially allow the site to absorb some of the parking lot for added amenity space and/or greenscaping.

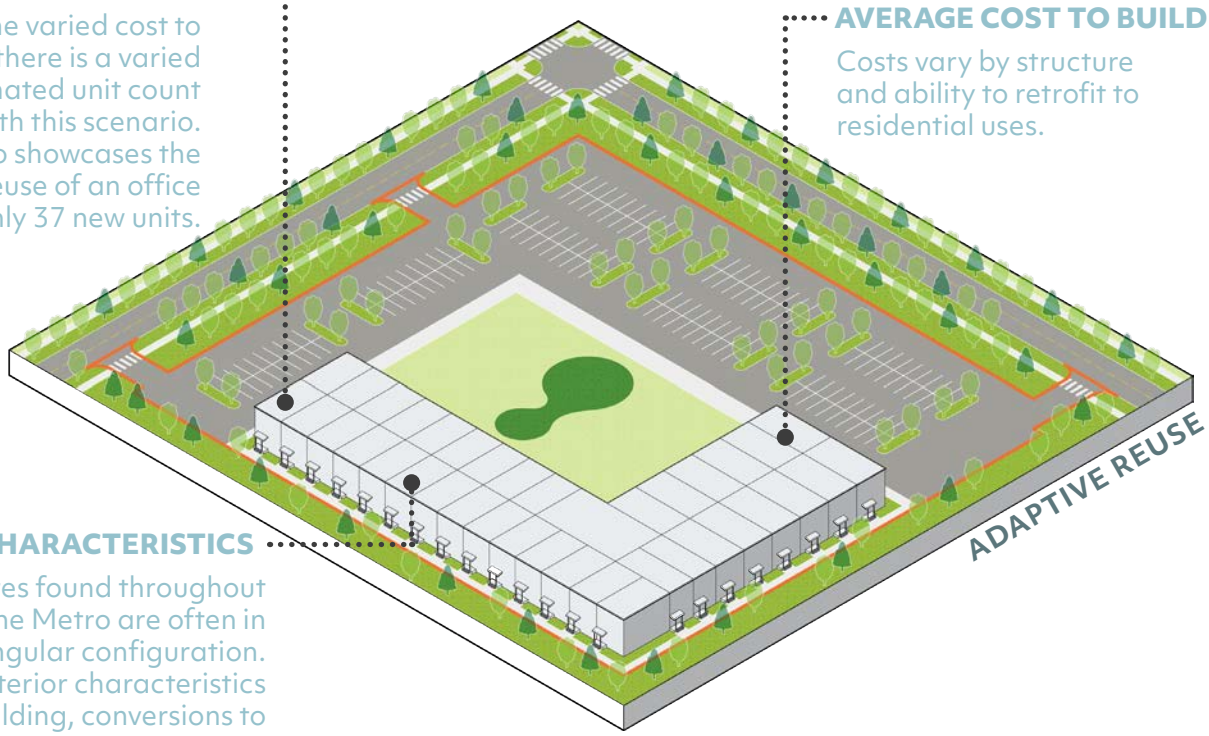
The redevelopment of this site would lend itself to **higher densities in the form of apartments.** These structures are likely to be less than four stories tall and should be sensitive to the surrounding developments to remain complementary to the area's sense of place. The unit mixes could be creative and range from studios to three-bedroom units and walk-ups to support a variety of household mixes.

SCENARIO UNIT COUNT

Similar to the varied cost to develop, there is a varied estimated unit count anticipated with this scenario. This scenario showcases the adaptive reuse of an office building to roughly 37 new units.

AVERAGE COST TO BUILD

Costs vary by structure and ability to retrofit to residential uses.



KEY CHARACTERISTICS

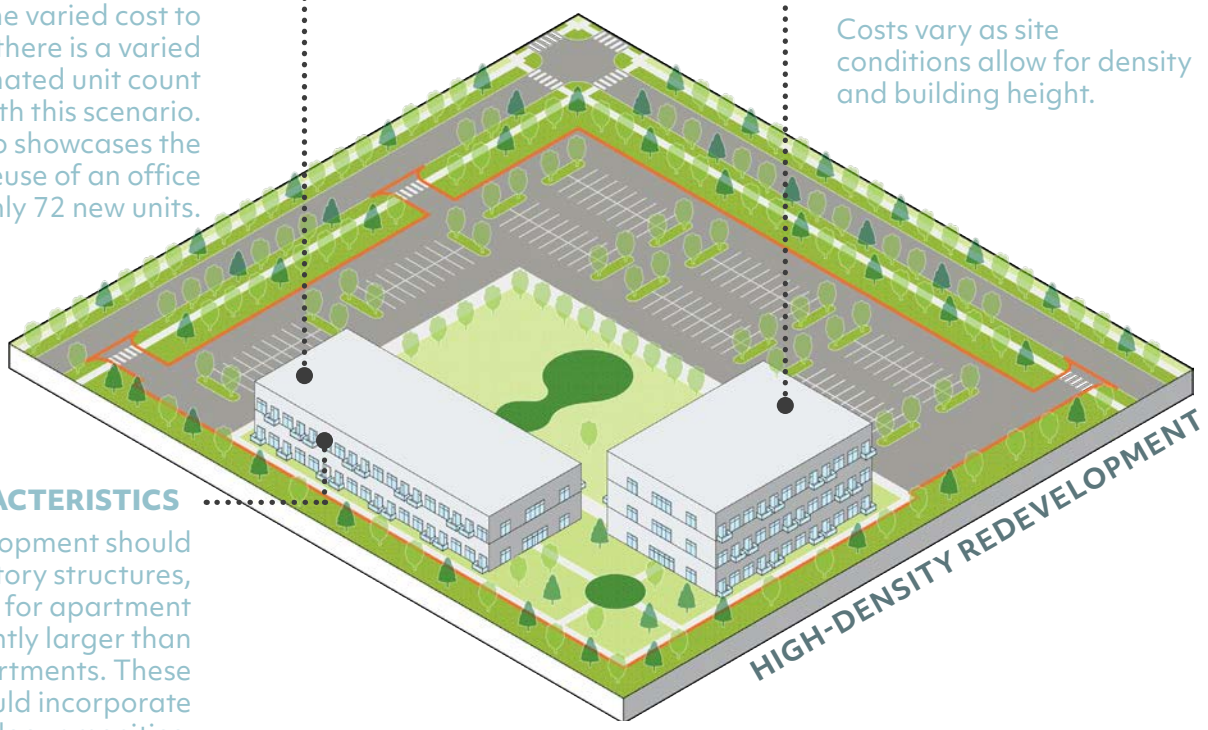
Original structures found throughout office parks in the Metro are often in an "L" or rectangular configuration. Due to the interior characteristics of the building, conversions to apartment is an appropriate reuse to help meet housing needs in the area.

SCENARIO UNIT COUNT

Similar to the varied cost to develop, there is a varied estimated unit count anticipated with this scenario. This scenario showcases the adaptive reuse of an office building to roughly 72 new units.

AVERAGE COST TO BUILD

Costs vary as site conditions allow for density and building height.



KEY CHARACTERISTICS

The new development should be a mix of 2+ story structures, best suited for apartment complexes slightly larger than garden apartments. These complexes should incorporate indoor and outdoor amenities, with connections to adjacent services, amenities, and transit services when appropriate.

Typology 9

Undeveloped Flagpole Lots

Overview

There are several locations throughout Polk County that have between 3 and 6 undeveloped parcels that are all connected and typically under common ownership. The individual parcels are typically small, undeveloped residential lots surrounded by existing low-density residential detached homes. The collection of parcels may have one street frontage parcel that resembles a flagpole and provides access to the rest of the parcels, which are often otherwise surrounded by development.

Common Features Include:

- Privately owned parcels from either one or a mix of owners.
- Greenfield development with access or pre-existing connections to infrastructure and utilities.
- Often the configurations feature one potential access point connected to the local road.
- Landscaping is typically limited to mature, established trees, and grassy areas.

Undeveloped Flagpole Lots

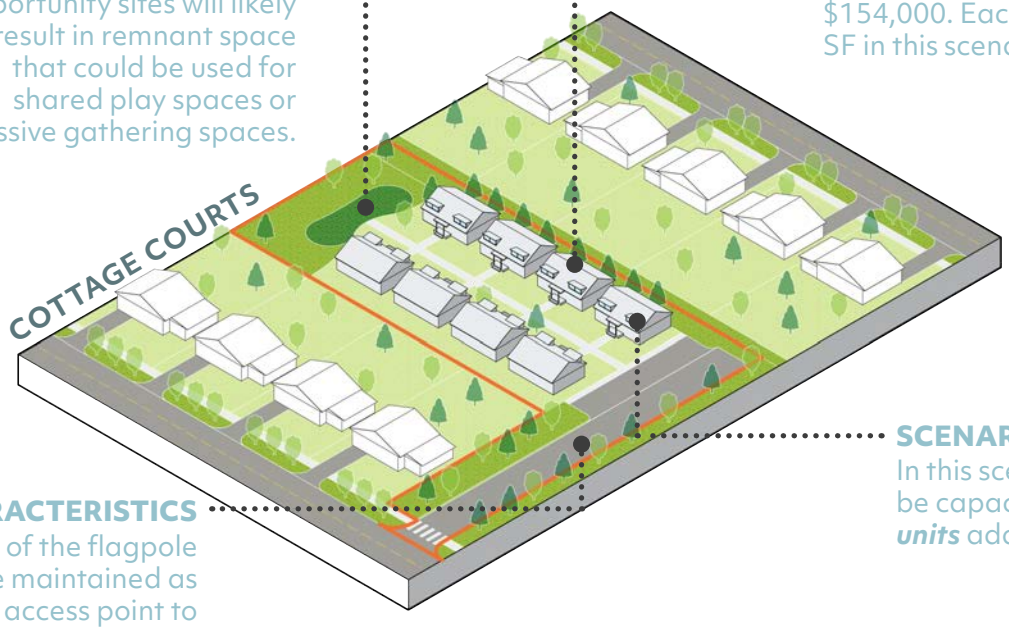
Proposed Infill Approach

Flagpole lots are comprised of a singular, narrow driveway access parcel, connected to a series of remnant narrow parcels. Individually, these parcels are not suitable for development of any kind. However, when assembled together, these parcels offer opportunities to increase land efficiency and add needed housing units.

The narrow, driveway access parcel would be maintained to ensure residents have dedicated access to the units, and the other remnant parcels would be developed for residential use. **Cottage courts and duplexes** have been identified as the most viable unit types for this typology as they are single-story units, can be clustered closer together, and have the highest yield of units. Each of these developments account for typical setbacks from adjacent property lines and still maintain space for shared greenspaces that could be accessed by the other nearby properties as desired. Each unit would have their own dedicated pathway and access point to their home, similar to that of the surrounding units.

KEY CHARACTERISTICS
The shape of these infill opportunity sites will likely result in remnant space that could be used for shared play spaces or passive gathering spaces.

AVERAGE COST TO BUILD
Estimated cost to build a cottage court unit is roughly $154,000. Each unit is 875 SF in this scenario.

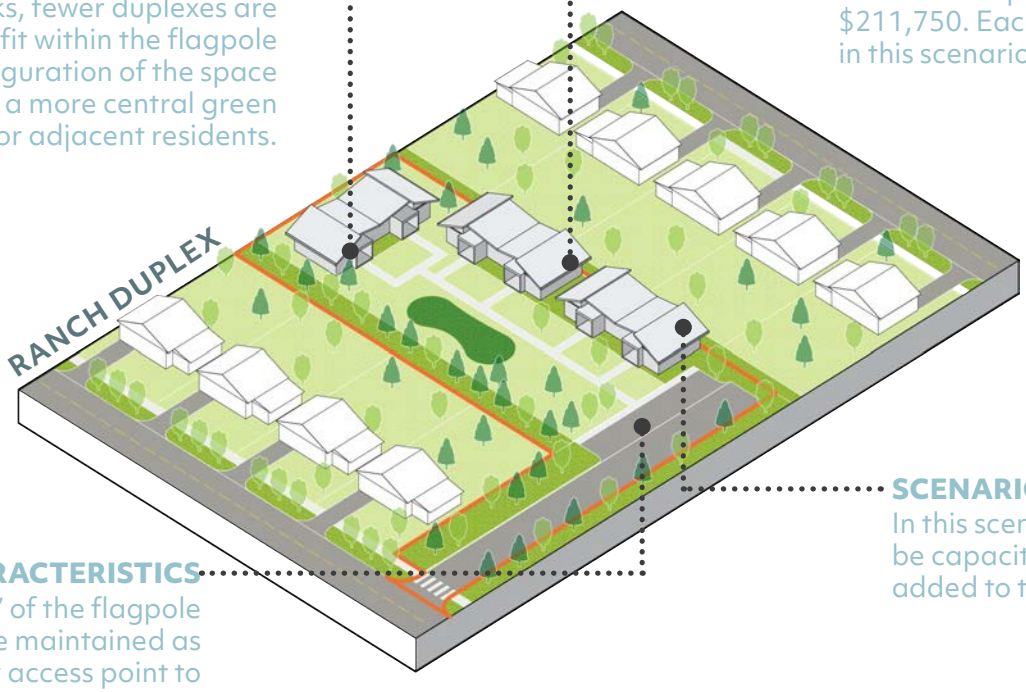


SCENARIO UNIT COUNT
In this scenario, there could be capacity for ***eight new units*** added to this property.

KEY CHARACTERISTICS
The "pole" of the flagpole lot should be maintained as the roadway access point to connect to the development.

KEY CHARACTERISTICS
Due to space constraints and setbacks, fewer duplexes are likely to fit within the flagpole lot. Reconfiguration of the space supports a more central green space for adjacent residents.

AVERAGE COST TO BUILD
Estimated cost to build a unit in a ranch duplex is roughly $211,750. Each unit is 1,100 SF in this scenario.



SCENARIO UNIT COUNT
In this scenario, there could be capacity for ***six new units*** added to this property.

KEY CHARACTERISTICS
The "pole" of the flagpole lot should be maintained as the roadway access point to connect to the development.

Typology 10

Greenfield Land Assembly

Overview

There are several locations throughout Polk County that have between 4 and 8 undeveloped parcels that all share borders and are typically under a common ownership along a roadway frontage. In some instances, it may take up an entire small block or stretch of roadway. The individual parcels are typically small, undeveloped parcels though some may be larger rectangles.

Common Features Include:

- Privately owned parcels from either one or a mix of owners.
- Greenfield development with access or pre-existing connections to infrastructure and utilities.
- Often the configurations feature one access point connected to the local road.
- No formal landscaping typically found, but the land is often covered in grass with some mature, established trees present in some instances.

Greenfield Land Assembly

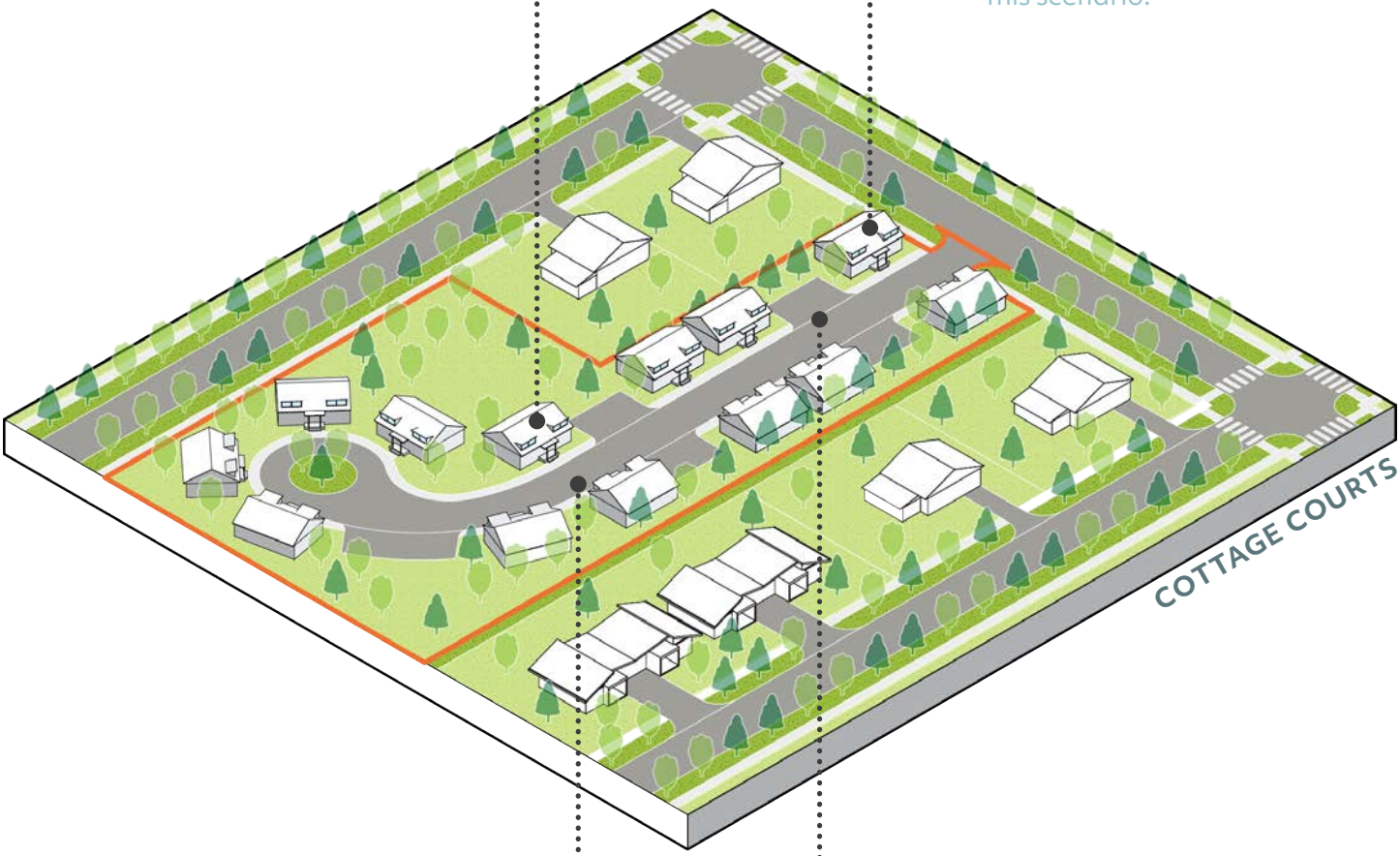
Proposed Infill Approach

Greenfield parcels are varied in configuration and size throughout the metro; however, there are consistent takeaways to learn from and apply to infill redevelopment practices. The greenfield land assembly typology highlights the frequency of four to eight undeveloped parcels that share common boundaries throughout the metro. In most cases, these parcels have common ownership along a roadway frontage. There may be some applications in which land assemblage would need to occur to consolidate ownership and individual lots to support the overall development scheme.

In the scenario shown on the opposite page, **cottage courts in a cul-de-sac development** were identified to support the infill initiatives. In this model option, the cottage courts account for single-car households and provides the on-street parking facilities to accommodate this. These facilities are scattered throughout the street to support more clustered housing. The remnant greenspace surrounding the units could include additional screening and landscaping from the roadway to increase privacy or introduce new neighborhood park facilities as desired.

SCENARIO UNIT COUNT
In this scenario, there could be capacity for ***thirteen new units*** added to this property.

AVERAGE COST TO BUILD
Estimated cost to build a cottage court unit is roughly $154,000. Each unit is 875 SF in this scenario.



KEY CHARACTERISTICS
This development type has the most varied land assembly configurations of all the typologies. In this scenario, the cottage courts are clustered in a cul-de-sac formation with pockets for parking stalls to centralize these facilities and promote more units in the area.

KEY CHARACTERISTICS
This scenario introduces more new infrastructure than any of the other scenarios presented in this report. The cost to construct the new road, utility extensions, and other related impacts are varied and will need to be considered on a case-by-case basis between the developer and City.

Section 3: Strategies to Consider for Implementation

Opportunities to Consider

The Housing Sites of Opportunity Project intentionally focuses on smaller square footage, Missing Middle Housing types to provide development scenarios that respond to market demand in Polk County communities. Including flexibility and creativity into regulatory processes opens the conversation for more alternative housing solutions, such as Missing Middle Housing. Increasingly, Missing Middle Housing is becoming an approachable and mainstream topic, showcasing how these housing types are needed and viable in pre-existing environments. This project builds upon this momentum, both regionally and nationally, to maintain the conversation in Polk County with developers, municipalities, and housing advocates in the area.

There are several key opportunities to reduce regulatory and physical barriers to development and to support the ten typologies outlined in this document. Some of these opportunities fall under the purview of municipalities, while others are more state-level topics to lobby and advocate for. These key opportunities include:

- Zoning Regulations
- Building Code Amendments
- Programs and Incentives

Zoning Regulations

In many of the communities today, the residential zoning districts have regulations in place that prohibit or do not support the development of Missing Middle Housing types. Some factors most zoning codes do not allow:

- Small units (less than 1,200 square feet)
- Reducing minimum lot sizes
- Missing Middle Housing types by right
- Off-street parking flexibility
- Setbacks and density reductions
- Residential uses within commercial zones

This section of recommendations explores some of the key factors excluded from traditional zoning that could be considered for future amendments and discussions throughout our communities. This is not an exhaustive list of ways zoning codes do not typically support these types of development, however, they are conversation starters to create more flexible and dynamic built environments for our communities.

CREATIVE PARKING SOLUTIONS

In many of the pre-existing neighborhoods where infill residential development would be supported, the lot sizes are not conducive to allow for Missing Middle Housing densities and the parking requirements as determined by the local zoning code. Requiring off-street parking for infill developments often leads to making the project impossible due to the lot size, setbacks, and other site requirements. To alleviate these challenges and further support infill residential development, creative parking

solutions should be considered. In many states throughout the country, there has been a movement to reduce or entirely eliminate off-street parking requirements in residential development.

In 2024, the City of St. Louis reduced the off-street parking requirements for new residential and commercial developments. Single-family developments previously required 2 stalls per unit and now require 1 stall per unit. For two units or multi-family projects, the requirement was reduced from 2 stalls per unit (1 stall per unit for senior-specific developments) to 1.5 stalls per unit or 1 stall per unit if located in a transit-oriented development (TOD). These smaller reductions help to alleviate the potential site challenges for new residential development, allowing for more density in the structure, and creating more compact neighborhoods.

For the faith-based and commercial typologies shown within this document, there is a viable case where shared parking is a creative solution for the overall development. Many of these pre-existing sites are not fully utilizing the initially required parking for that development type, leading to unnecessary setbacks of the principal structure, large areas of impervious surfaces and underutilized parking lots. The construction of new units and the subsequent residents would then use the pre-existing parking areas and would not require any new parking to be added.

DESIGN QUALITY REQUIREMENTS

While it has many health, safety and welfare benefits, zoning has historically controlled and restricted the outcomes of development throughout the country. Especially in the case of allowing creative housing development, denser development patterns, smaller lots, and more, zoning has regulated Missing Middle Housing types out of many municipalities' vocabulary. There are a number of zoning amendments and overhauls that could take place to correct course on this trend; however, this section will focus on the opportunity municipalities have to incorporate form based codes (FBC) into their practices to allow for optimal development and flexibility. FBCs regulate the building size and height, its relation to the street, and façade design, whereas Euclidean zoning regulates land by use, then density and design. Benefits to FBCs include:

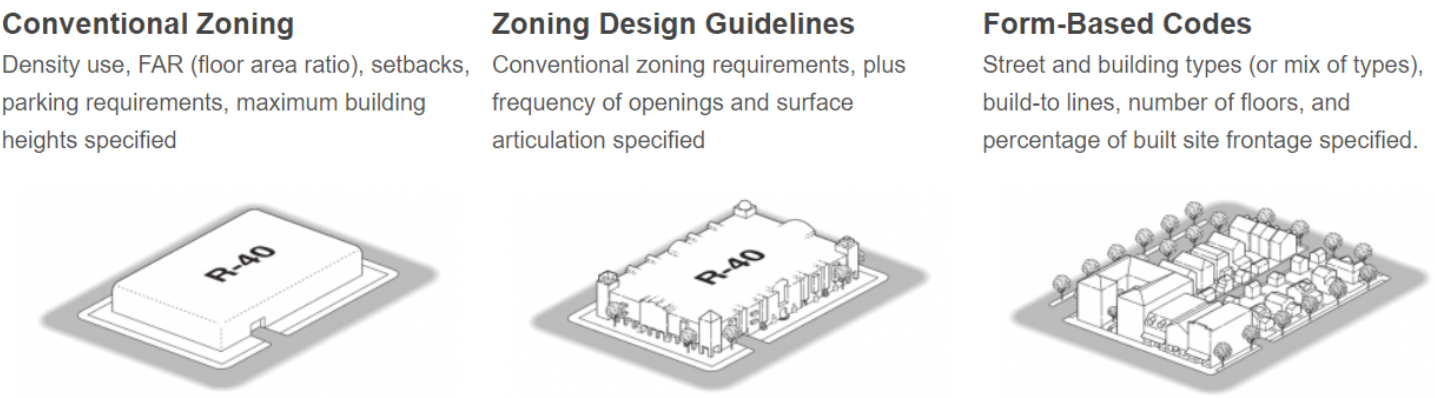
- **Flexibility in allowable units per development.** Zoning often determines the allowable unit counts on a per acre basis and where this can occur. FBCs typically utilize some type of transect planning to guide densities, with supporting guidelines on building height, design, and relation to the public realm.
- **Allowance for a greater mix of housing types.** FBCs do not regulate use and therefore allow for more housing types throughout those districts as long as they conform to the massing, scale, and lot placement requirements.
- **Creates an environment of predictability.** With zoning, if the project does not perfectly align within the guidelines and regulations, it could require a rezoning, variance, or conditional use permit. With FBCs, there are clear expectations for the design, form, and construction of the project with little interaction to the uses within the structure. This limits a developer's risk in a project and helps expedites timelines.
- **Reduces the need for Planned Unit Developments (PUDs).** Due to the restrictions and exclusions of many housing types in traditional zoning, PUDs are often viewed as a tool to develop a district or area that better aligns with the desired outcomes, such as Missing Middle Housing. PUDs are a great tool; however, when used consistently as a work around to zoning regulations, it creates inconsistencies in the built environment and expectations by the City for developers.

There are still challenges associated with FBCs

as there are with traditional zoning. Since FBCs are heavier on design, this does require expertise in this field to ensure all components are clearly written and considered. If City Staff or developers are unfamiliar with FBCs and how they operate, this can create confusion. Further training and workshops on how to utilize FBCs as a tool to get the municipality's desired outcome is likely a next step following adoption of such a code. The City of Des Moines currently has a version of a FBC adopted and staff could serve as a resource in answering questions and lessons learned. Other items, such as parking and building codes, still require attention and consideration with FBCs.

BY-RIGHT HOUSING TYPES

Many zoning regulations have tables or compatible uses by district that prescribe what types of development be constructed in that zoning district. One option in loosening restrictions for allowed housing types by zoning district is to expand the list of housing units allowed by-right. By-right uses are those that are categorized as permitted uses within the zoning district and require administrative approval instead of a public hearing or rezoning. This would greatly increase the likelihood of development for Missing Middle Housing types if included within these by right lists and streamline the process of approval and development. In terms of the Housing Sites of Opportunity Project, this would directly apply to all ten typologies. Often, commercial properties face greater flexibility and allow for more density; however, residential and faith-based properties face more challenges. Municipalities should consider expanding the lists of by-right housing types to be inclusive of Missing Middle Housing types to expand opportunities within the community.



The graphic above highlights the differences between conventional zoning, impacts of design guidelines, and how form based codes differ from these two practices. Each provide solutions and regulations for cities to base decisions from that produce varied built environment outcomes.

Source: Habitat for Humanity, Greater La Crosse Region, 2025

Building Code Amendments

The building codes required for all types of development provide guidelines for construction materials, fire and safety protections, and other built characteristics. There are two key codes that impact the Housing Sites of Opportunity Project development types: the International Building Code (IBC) and the International Residential Code (IRC). Residential developments qualify under both codes depending on the density of the development.

The IRC applies to one to two-family homes and duplexes/townhomes. The IBC includes commercial, mixed-use, and multi-family units (any residential development of three or more units). These mixed code requirements greatly impact the overall cost to develop residential units, especially those that typically fall within the Missing Middle Housing definition. For example, the cost to develop a duplex/townhome versus a triplex significantly increases due to varied requirements for fire protection, construction materials, and building characteristics. The table below highlights some of these comparisons.

To reduce the cost to develop and support Missing Middle Housing, cities throughout Polk County should explore opportunities to adopt local amendments to the IRC that would allow for more gentle densities to fall within the IRC's guidelines. At minimum, allowance for triplexes and fourplexes within the IRC's guidelines would increase the ability to develop these types of units for infill development throughout the county.

International Residential Code (IRC) vs. International Building Code (IBC) Requirements for Residential Development

Code Type	Density Threshold	Fire Protection	Building Materials	Egress	ADA Requirements
IRC	1-2 units	No fire sprinklers are required in the development.	Can use standard wood framing; fewer rated assemblies	Direct exterior exit; no shared corridors; simpler stair design rules	Not subject to Fair Housing Act design requirements
IBC	3+ units; Mixed-Use	Fire sprinkler systems (NFPA 13 or 13R) are required.	Fire rated materials required; must comply with construction type classifications	Rules for number of exits, corridor width; stair design	Subject to Fair Housing Act design requirements

Programs and Incentives

As part of this project, a series of stakeholder interviews were completed with local developers actively constructing Missing Middle Housing in Polk County to better understand what was supporting their efforts in constructing these unit types. The most commonly mentioned programs or incentives included Workforce Housing Tax Credits, Tax Increment Financing rebates, Low-Income Housing Tax Credits, and the City of Des Moines' Missing Middle Residential Tax Abatement Program.

Workforce Housing Tax Credits (WHTC) are administered by the Iowa Economic Development Authority and offer incentives that reduce the cost to develop or rehabilitate housing to support the workforce. The program offers a refundable sales/use tax rebate on construction materials and a tax credit equal up to 10%-20% of qualified projects. The credit is based on the level of investment, is transferable, and lasts five years. Eligibility is contingent upon the development meeting a series of requirements and must include at least four single-family units or three or more multi-family units. The WHTC program functions as a gap-financing tool to help support this needed development type.

Tax Increment Financing (TIF) rebates are locally controlled and serve as a financing mechanism to support development through tax generation. To qualify, a property must be within a TIF district. These district boundaries are utilized to capture the increase in property tax revenue for property located within and reinvest the dollars to spur continued growth in the area. Similar to WHTC, TIF operates as a gap financing tool to reimburse investment in the area by developers. This rebate is flexible and determined on a case-by-case basis.

The City of Des Moines currently offers a **Missing Middle Residential Tax Abatement (MMRTA) Program.** The MMRTA applies to Missing Middle Housing types in groups of 2-12 units, renovations of existing structures, and new accessory housing structures. These project qualify for a 10-year tax abatement on the value added to a property with additional schedules provided depending on the project type. This program was noted often as a critical component to the layered financing mechanisms for developers in the area and should be preserved and expanded to continue to support this type of development.

Low-Income Housing Tax Credits (LIHTC) is often a key incentive used for the development of affordable rental housing. LIHTC provides tax credits to developers to subsidize the acquisition, construction, or rehabilitation of rental units. The program requires that a portion of the units be set aside for varied MFI thresholds and must be maintained at that level of affordability for a designated portion of time, usually at least 30 years. This program can be layered in with others to make affordable housing development possible.

Land Acquisition Costs encounter many variables for infill development projects. The pro forma excludes any estimates of land acquisition costs and any special land development costs, such as replacing existing or missing infrastructure. Consideration of land acquisition and site development costs must be considered for each infill site. It is further assumed that grants and other land acquisition programs may be required to assist with these costs.

Land Assemblage by Municipalities is another approach cities can leverage to be directly involved in residential development. As demonstrated in the land assessment, many clusters of parcels are owned by cities today throughout their respective communities that are suitable locations for infill residential development. This approach to land assemblage can continue to support local housing goals by making land available in support of Missing Middle Housing development.

Photography Credits

Alpegor, Adobe Stock

Duplex, p.5

Architect

Ranch Style Duplex, p. 15 (right)

Confluence

Cottage Court, cover; Gentle Density Graphic, p.4; Cottage Court, p.6; Cottage Court, p.13 (top left); Cottage Court, p.14 (left)

Congress for New Urbanism

Cottage Court, p.14 (right)

CoStar

Triplex, p. 13 (middle right); Side-by-Side Triplex, p.16 (right); Townhomes. p.17 (right); Garden Apartments, p.17 (left)

Fair Housing Council of Oregon

Side-by-Side Triplex, p. 16 (left)

Houseplans.pro

Stacked Triplex, p.16 (right)

ImageNet

Townhomes, p.17 (left)

Zillow

Duplex, p.13 (top right); Ranch Style Duplex, p.15 (left); Stacked Duplex, p.15 (left and right); Stacked Triplex, p.16 (left); Garden Apartments, p. 17 (right)

99acres

Ranch Style Duplex, p. 15 (right)

Appendix

Tables and Findings

Land Assessment Results by City					
City	Retail Parcels	Office Parcels	Faith-Based Parcels	Vacant Parcels	Totals
Alleman	0	0	1	0	**1**
Altoona	0	0	10	0	**10**
Ankeny	6	5	35	7	**53**
Bondurant	0	1	2	11	**14**
Clive	1	7	4	0	**12**
Des Moines	17	20	245	189	**471**
Elkhart	0	0	4	0	**4**
Johnston	1	1	9	12	**23**
Mitchellville	0	0	4	0	**4**
Pleasant Hill	0	0	8	1	**9**
Polk City	0	0	5	10	**15**
Urbandale	7	7	19	10	**43**
West Des Moines	6	32	24	3	**65**
Windsor Heights	0	0	3	0	**3**
Totals	**38**	**73**	**373**	**243**	**727**

Source: Confluence with inputs from Polk County Assessor

Pro Forma Analysis Summary					
Housing Type	**Square Foot (SF) per Unit**	**Cost per Square Foot (SF)**	**Cost per Unit**	**Assumed Profit Margin**	**Average Cost to Build**
Cottage Court (1 unit)	875 SF	$160	$140,000	10%	$154,000 *per unit*
Ranch Duplex (2 units)	1,100 SF	$175	$192,500	10%	$211,750 *per unit*
Stacked Duplex (2 units)	1,050 SF	$175	$174,563	10%	$192,019 *per unit*
Triplex, Stacked (3 units)	1,030 SF	$185-$190	$180,964	10%	$201,750 *per unit*
Triplex, Side-by-Side (3 units)	830 SF	$175-$185	$102,200	10%	$115,632 *per unit*
Townhome (4 units/cluster)	1,320 SF	$185-$190	$231,990	10%	$258,638 *per unit*
Garden Apartments (8 units/building)	763 SF	$200-$210	$68,625	10%	$77,375 *per unit*

Source: Confluence, 2025

2025 HUD % Median Family Income (MFI) for Polk County					
% MFI	**1-Person**	**2-Person**	**3-Person**	**4-Person**	**5-Person**
30%	$24,060	$27,480	$30,930	$34,350	$37,110
50%	$40,100	$45,800	$51,550	$57,250	$61,850
60%	$48,120	$54,960	$61,860	$68,700	$74,220
80%	$64,160	$73,280	$82,480	$91,600	$98,960
100%	$80,200	$91,600	$103,100	$114,500	$123,700

Source: U.S. Department of Housing and Urban Development, 2025

POLK COUNTY
HOUSING
TRUST FUND

505 5th Avenue, Suite 1000
Des Moines, Iowa
PCHTF.ORG