

PRECEDENT STUDIES

JANUARY, 2024



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INTRODUCTION

Introduction

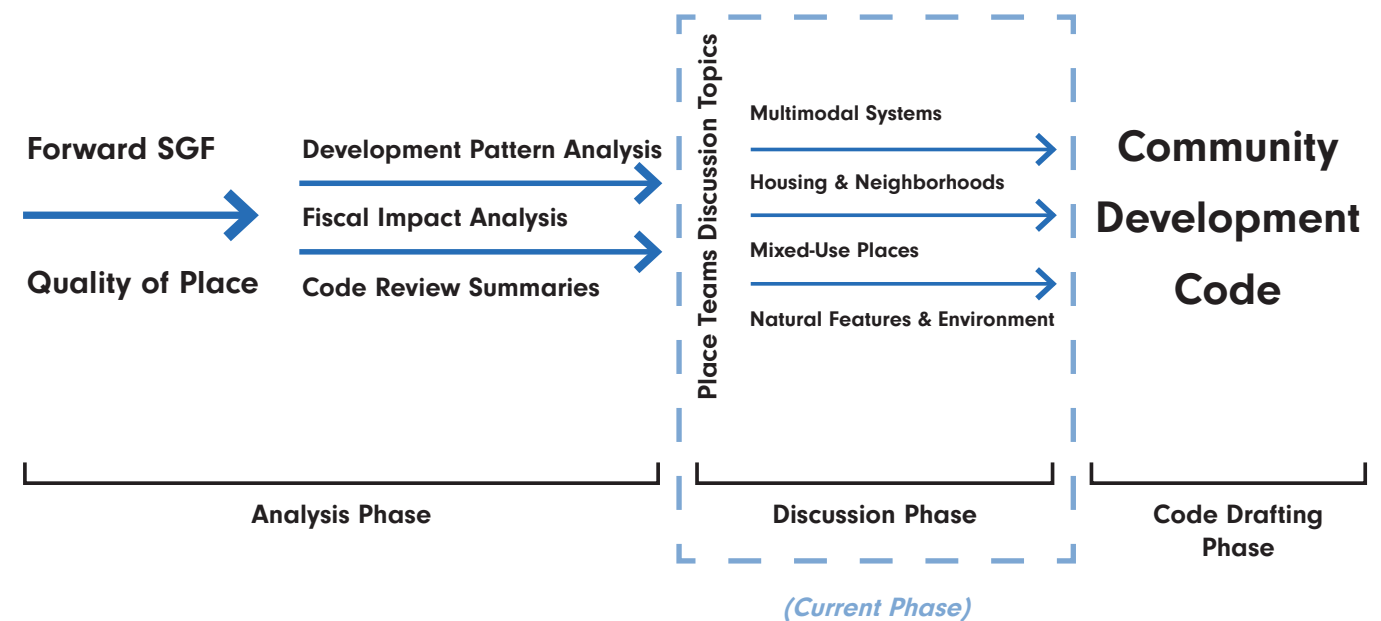
This document supports the Discussion Phase of the Community Development Code update process. Building upon the Analysis Phase (which included three studies: the Development Pattern Analysis, the Fiscal Impact Analysis, and the Code Review Summary), the Discussion Phase will engage the Springfield community, and particularly the Place Teams, in conversations to help shape priorities for the new Community Development Code.

This document contains Precedent Studies of a variety of places and sites across the Midwest region that illustrate relevant development and urban design concepts that exhibit Forward SGF's primary theme: Quality of Place. The Precedent Studies are structured around four primary topics: Housing & Neighborhoods, Mixed Use Places, Multimodal Systems, and Environment & Natural Features. The topics explored

through these Precedent Studies are intended to build on the topics introduced in the Code Review Summary, taking a few topics and exploring them more deeply. Each topic (Housing & Neighborhoods, Mixed Use Places, Multimodal Systems, and Environment & Natural Features) will illustrate a number of "Key Terms", and the Key Terms will then be explored and illustrated throughout each Precedent Study. At the end of each topic, a list of Community Discussion Starters will provide a few questions to inspire further discussion and conversation within the Place Teams and in the Springfield community.



As you navigate the document, a link icon will note maps with clickable links for further exploration of each precedent location.



1

MULTIMODAL TRANSPORTATION



Development codes impact multimodal transportation policies in a variety of ways and at multiple scales. This section outlines the two most important topics impacting the multimodality of a community – **Connectivity & Street Design**. Connectivity relates to the bigger-picture systems of streets and other public spaces which support movement but also influence accessibility between different city contexts or districts. Street design relates to how streets are specifically designed, including the mobility facilities and amenities provided. The following precedent studies include both rules of thumb and creative approaches to be considered as Springfield updates its Community Development Code.

Connectivity

Why is Connectivity important?

The Connectivity of a street network influences how different parts of a community relate to one another, and how people will move within and experience their community, and whether some users of the streets are prioritized over others. Streets and open spaces establish a framework of public spaces that has long-lasting consequences and impacts even as land use, development styles, and neighborhoods change over time. If this framework is established with high levels of connectivity, a flexible, resilient, and balanced transportation and open space network will emerge.

What does Forward SGF say about Connectivity?

Forward SGF includes a wide range of distinct Placetypes and anticipates different patterns of connectivity that can flexibly respond to their contexts. Meanwhile, the current regulations have a “one-size fits all” standard that does not account for different community context.

How can the Community Development Code impact Connectivity in Springfield?

The current development code only has one generic connectivity standard and it does not provide enough connectivity for many of the Placetypes. The code primarily deals with maximum intersection spacing, rather than planning for street networks and block structure. The updated code can improve connectivity by implementing standards for new streets and improvements to existing streets that ensure connections for different modes of transportation across different placetypes. Site design and development standards define how development supports these larger-scale patterns, accommodates transportation options, and supports the access and mobility of people through the design of public and private frontages, internal circulation (pedestrian and vehicle), and parking (bicycles and automobiles).

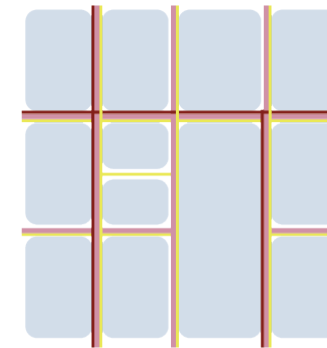


Connectivity: interconnecting networks of blocks, streets, open spaces, and pedestrian paths form a highly-connected community.

Connectivity Elements: Key Terms

A Street Networks

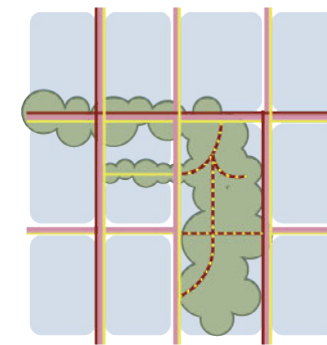
The organization and hierarchy of public roadways and streets. In addition to defining a significant portion of the “public realm”, street networks are also one of the most important elements establishing the “private realm”, and in particular the size and arrangement of blocks. The layout of streets establishes the foundation of a disconnected or connected network.



Street networks: The organized arrangement of accessible routes for different modes of transportation.

B Open Space Networks

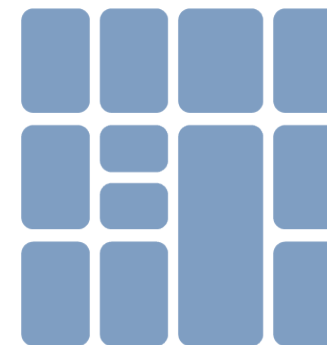
Public spaces throughout the community that support movement from one place to another. Partnered with the public street network, open spaces influence how people can move throughout the community. An open space network includes parks, but also includes alleys, mid-block walkways and pedestrian paths, trails, and other publicly accessible spaces beyond streets. Internal block connections, established as a public easement or within a larger development plan, are an important option for large-scale developments and blocks to support walkable connections.



Open space networks: The deliberate integration of green spaces and open areas into the development fabric.

C Blocks

The land area in between public space and street networks, typically hosting a number of platted lots. The geometric area of blocks (usually measured in acres and / or by perimeter dimensions) significantly influences connectivity. Smaller blocks supports greater levels of connectivity than larger blocks. Intersection density (the number of street intersections within a geographic area) is another way of measuring block sizes and connectivity levels.



Blocks: The physical dimensions of developable land, influencing the layout and connectivity of streets and transportation networks.

Street Design

Street Design

Why is Street Design important?

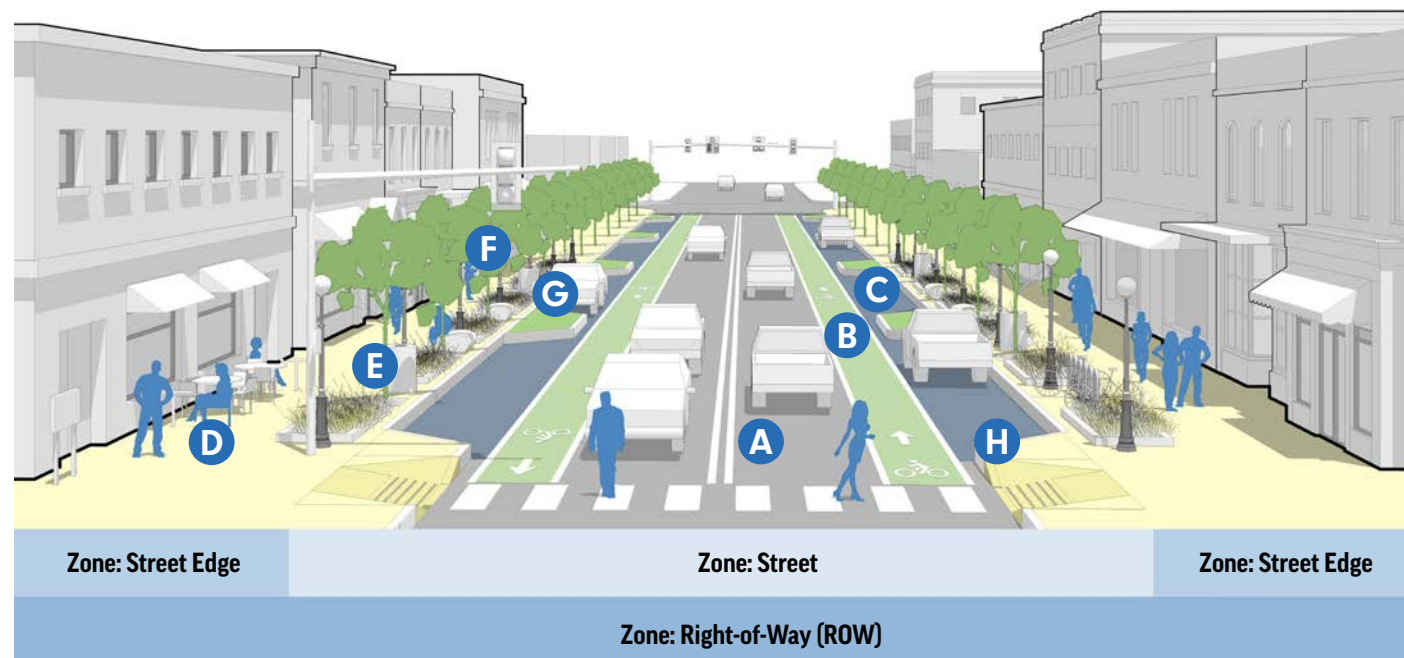
Street design plays a major role in shaping community identity and aesthetic appeal as well as impacting the safety, efficiency, and functionality of a large portion of the public realm. Setting up design standards as a guide or requirement for streets enables more consistency across the city and ensures all modes of travel are taken into account when designing and constructing new streets and street improvements.

What does Forward SGF say about Street Design?

Forward SGF recognizes the importance of street design as a positive contributor to community character and to ensure safe and convenient transportation for all users. It recommends updating the Street Design Guidelines and code to incorporate the adopted Complete Streets Policy and best practices for multimodal design.

How can the Community Development Code impact Connectivity in Springfield?

The current development code defines streets by their functional class (how they should operate) and the width of their right-of-way (wider for more, faster moving traffic), and lack of street design and streetscape standards. The current standards provide minimal if any guidance for the incorporation of sidewalks, bicycles, parking, amenities, and landscape. The updated code can implement new language and/or specified design standards that new streets and street improvements must follow. There are many ways in which new street design standards are implemented, but in general, the update will provide a refined guide of different street design options to ensure adequate access and connectivity exists for all users.



Conceptual illustration of key Street Design elements. Combinations of these elements can be arranged in many different ways depending on the street's context.

Street Design Elements: Key Terms

Zone: Right-of-way

The public area where streets are located, measured by width for the purposes of this study.

Zone: Street

The area located between curbs locating the travel lanes, and may also include other facilities such as bike lanes, on-street parking, turning lanes, etc.

Zone: Street Edge

The areas of the right-of-way adjacent to the street's edges, hosting a variety of facilities and amenities including sidewalks, trails, street trees, benches, bus stops, etc.

A Travel Lanes

A defined area of the street for the movement of vehicles, buses, bikes, and transit, typically marked by painted striping. The width and number of travel lanes significantly impacts the speed of drivers, multi-modality, and safety. Lane widths of 10 feet or less are appropriate in areas where slower vehicle speeds are desired and various modes of movement are prioritized. Lanes greater than 11 feet are most appropriate for highways or major trafficways.

B Bicycle Facilities

Defined areas of the street intended to support bicycle movement. On streets with a higher design-speed for vehicles, bicycle facilities are separated from travel lanes, and may be buffered to protect bicyclists. In urban and neighborhood contexts where design-speeds are slower for vehicles, bicyclists may share the road.

C Parking Areas

An area paved with a hard surface at the side of a street. It is designed for pedestrians. Parallel parking areas are typically 7-9 feet wide.

D Sidewalks

An area paved with a hard surface at the side of a street. It is designed for pedestrians, normally higher than the roadway to protect pedestrians from the traffic.

E Pedestrian Amenity

Elements located within the sidewalk area intended to accommodate pedestrian use. Examples of pedestrian amenities include benches, public art, planters, wayfinding signage, shade elements, and trash receptacles.

F Landscape Area

Areas, commonly between the sidewalk and street edge, hosting various landscaping elements in planter boxes, pots, or tree wells. Street trees are an important landscape amenity for a well-designed street because they serve various aesthetic, ecological, and even safety functions.

G Green Infrastructure

An approach to a street's landscape amenity designed to support water management and other ecological challenges. While street trees serve an important role in water management, green infrastructure may also include rain gardens, bioswales, or pervious pavers.

H Traffic Calming

Proactive street design strategies intended to moderate vehicle speeds and support the safety of all transportation modes, including pedestrians. Traffic calming designs should be applied based on nuanced analysis of conditions and context, and may include medians, curb or mid-block "bump-outs", speed humps, roundabouts, on-street parking, street trees, and signage.

Street Design

Roadway Design Strategies

There are a variety of design techniques that can be incorporated into new and existing streets to reduce vehicle speed and make the street safer for everyone. These techniques typically 1) alter the physical roadway, 2) adjust how a street is perceived, or 3) both.

Conceptual placement and purpose of these techniques is illustrated below, and several techniques may be used together for multiple traffic calming functions. Often several of these techniques are used strategically along a roadway to change the collective behavior of motorists to improve the multimodal environment and safety for all users.

Intersection Design Techniques

- ▶ **Corner Radii:** Narrowing corner radii by adding corner “bumpouts” or curb extensions reduce vehicle turning speeds as well as pedestrian crossing distances.



- ▶ **Gateway Treatments:** A combination of design techniques oftentimes implemented at an intersection to alert drivers that they are entering a slower area (also technique for change in perception). This treatment may include signage, entry portals, speed tables, raised crossings, and curb extensions.



Roadway Reconfiguration: These elements physically force a directional shift in vehicular traffic, inherently slowing the speed

- ▶ **Roundabouts (applied at intersection):** Round islands that serve to both reduce speeds and organize traffic, routing vehicles around the island rather than directly across the intersection.



- ▶ **Chicanes and Land Shifts:** Chicanes and lane shifts use alternating parking, curb extensions, or edge islands to form an S-shaped path of travel which lowers vehicle speeds.



Change in Perception

- ▶ **Building Lines:** A dense built environment with no significant setbacks constrains sightlines, making drivers more alert and aware of their surroundings. Density also encourages more pedestrian activity which inherently makes drivers more aware.



- ▶ **Street Trees:** Similar to building lines, street trees narrow a driver's visual field and indicate that a street is in an urban environment, not a highway.

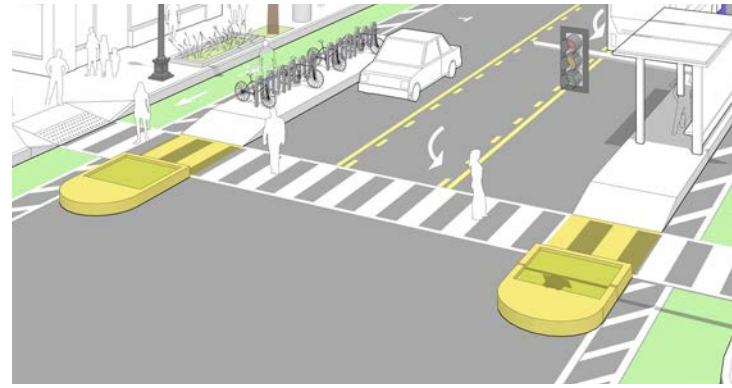


- ▶ **Pavement Materials:** Pavement appearance can be altered through unique treatments that add visual interest, such as colored or pattern-stamped asphalt, concrete, or concrete pavers, which can be used to make other traffic calming techniques more noticeable to drivers. Pedestrian crossings and intersections can be painted to highlight crossing areas.



Reduced Lane Width: Narrow lanes reduce speeds and minimize crashes on city streets by way of reducing the right-of-way and making drivers wary of traffic.

- ▶ **Medians / Pedestrian Refuges:** These physically reduce the drivable area and visually alert the driver of a change in environment. They can also be used to organize traffic at intersections or to block access at strategic points.



- ▶ **On-street parking:** Narrows the street and slows traffic by creating friction for moving vehicles.



- ▶ **Pinchpoints:** Used at a mid-block point to reduce the drivable area and vehicle speed by forcing drivers to alter their path (also roadway reconfiguration). This may expand the sidewalk realm and initiate space for on-street parking



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Precedent Studies

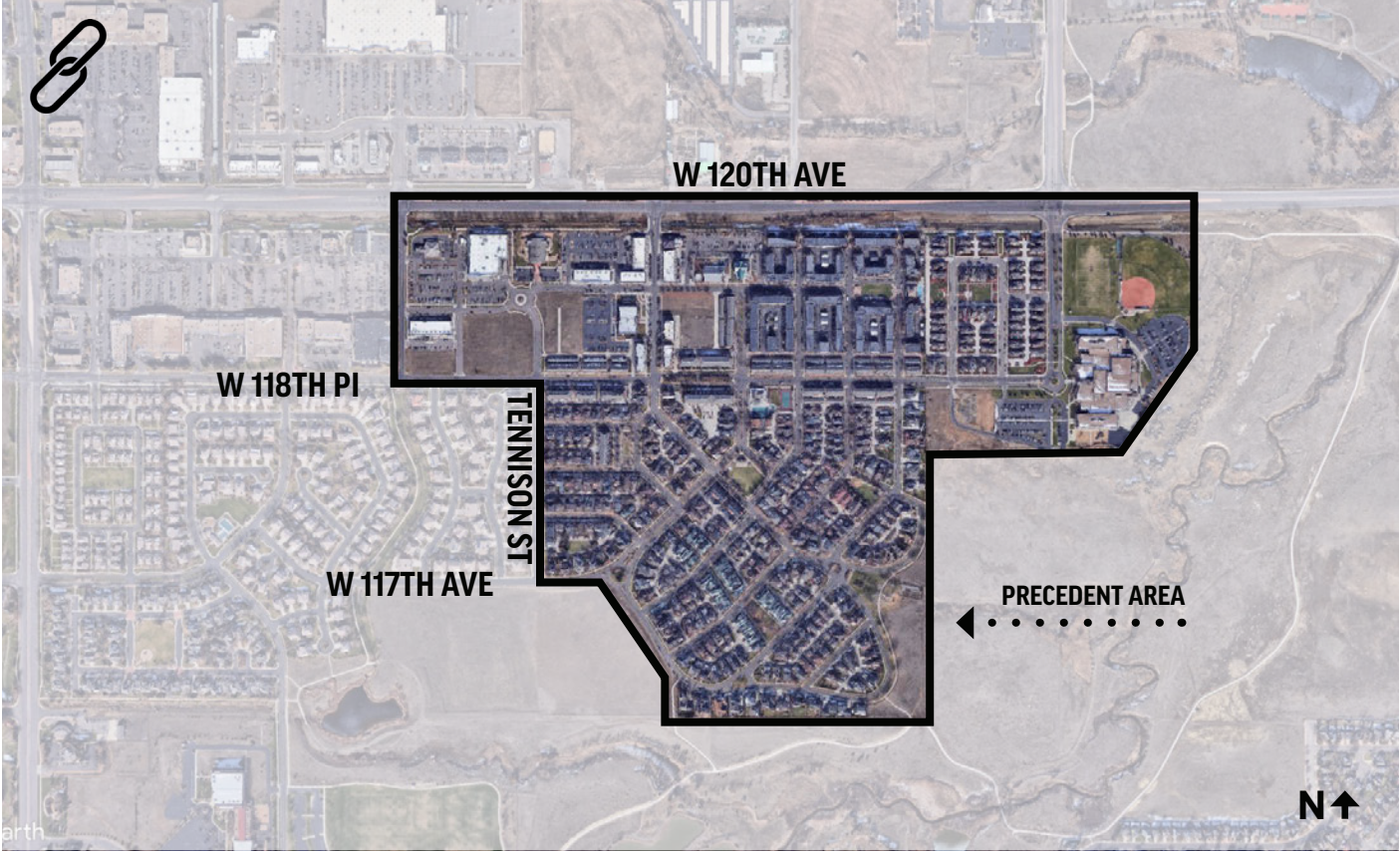
Bradburn Village, Westminster, CO

Introduction

Bradburn Village is a full service neighborhood anchored by a commercial center and composed of a variety of housing options. The development emphasizes walkability through its compact development pattern, network of block sizes, and design of the public spaces. Parks and other open spaces are integrated into the street network and increase the level of pedestrian connectivity throughout the community. Small residential blocks gradually transition to moderately sized commercial blocks, but trails and alleys serve to effectively break down the scale of the larger blocks.

The street design, documented through several street section diagrams, features a balanced amount of pedestrian space, landscaping and amenity space, and vehicle space. The elements included in the design of each street is based on the surrounding context of the street: neighborhood, commercial, or mixed use.

Location & Context



Connectivity



Street Design



A Mixed use Street



17'	16.5'	21'	16.5'	17'	
Amenity + Walk	Parking	Travel Lanes	Parking	Amenity + Walk	
Zone: Street Edge		Zone: Street		Zone: Street Edge	
88' ROW					
Zone: Right-of-Way (ROW)					

Explore this street more on Google Street View: <https://maps.app.goo.gl/ysTfFJaZBNke3He6>

B Neighborhood Local Street



5'	6'	7'	11.5'	7'	7.5'	5'
Walk	Buffer	Parking	Travel Lanes	Parking	Buffer	Walk
Zone: Street Edge		Zone: Street			Zone: Street Edge	
49' ROW						
Zone: Right-of-Way (ROW)						

Explore this street more on Google Street View: <https://maps.app.goo.gl/riBVtK2AwxvM2UQL9>

C Commercial Connector Street



7'	8'	11.5'	22'	4'	7.5'
Walk	Buffer	Travel Lane	Travel Lanes	Buffer	Walk
Zone: Street Edge		Zone: Street		Zone: Street Edge	
60' ROW					
Zone: Right-of-Way (ROW)					

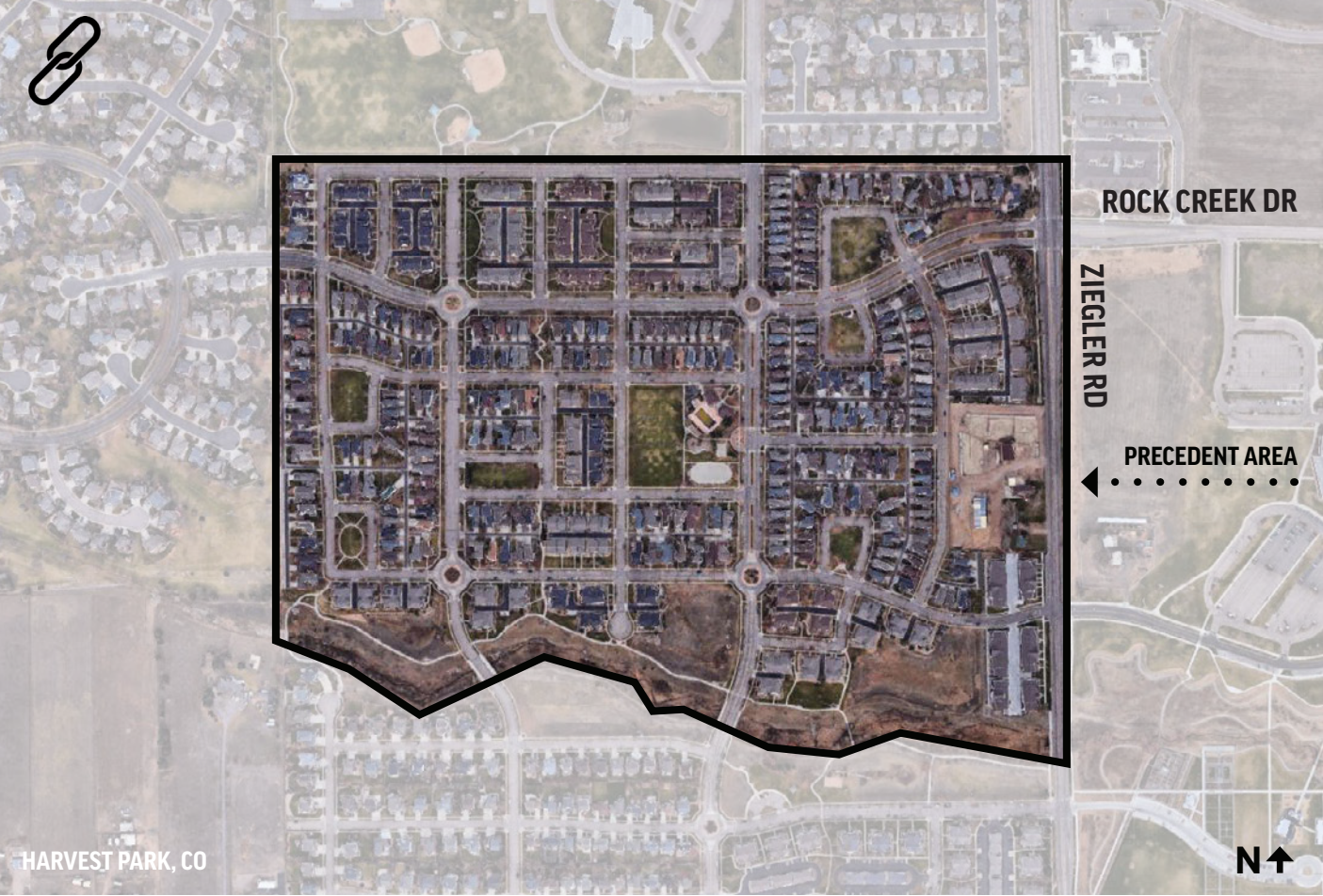
Explore this street more on Google Street View: <https://maps.app.goo.gl/G5KhhFABWegDeSvo7>

Harvest Park, Fort Collins, CO

Introduction

Harvest Park, Colorado is a planned community with a diverse mix of housing types. It serves as a development model within the City of Fort Collins, Colorado thanks to its street design, connectivity, and mix of residences. The neighborhood is well-connected, both internally and externally, by tree-lined streets that create small and walkable block structures. Several different types of open spaces increase the community's connectivity while providing recreational public spaces. Along the residential blocks, garages in the rear of the lots are access by an alley network, allowing homes to directly front onto the street and creating a social, walkable neighborhood feel.

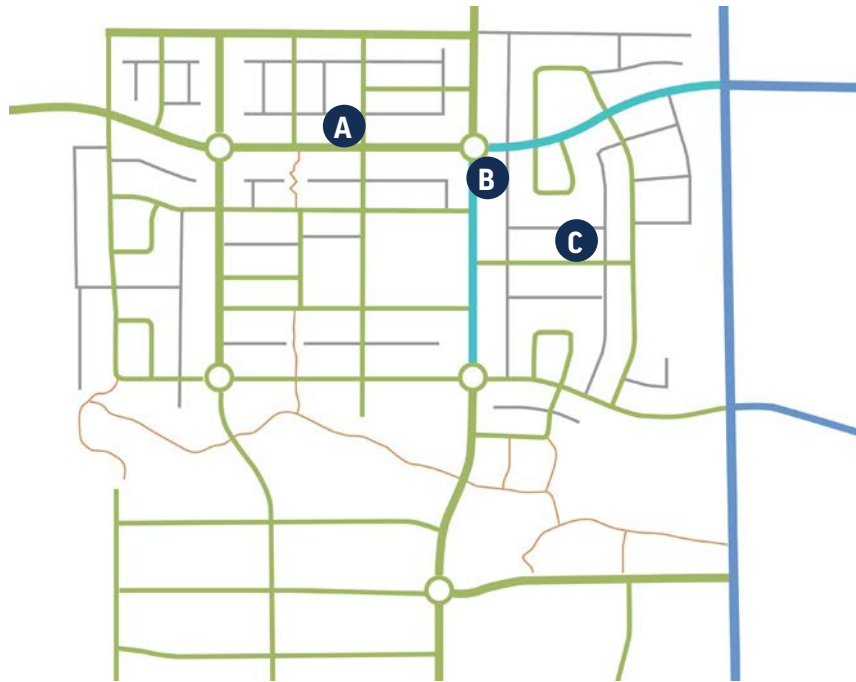
Location & Context



Connectivity



Street Design



Letters (A, B, C) note the location of each following street section.

- Commercial Connector Street
- Mixed use Street
- Neighborhood Connector
- Neighborhood Local Street
- Alley
- Trail

A Neighborhood Connector

Curb extensions at intersection protects pedestrians.



4.5'	16.5'	8'	5.5'	10.5'	10.5'	6.5'	7'	16.5'	4.5'
Walk	Buffer	Parking	Bike	Lane	Lane	Bike	Parking	Buffer	Walk
Zone: Street Edge			Zone: Street				Zone: Street Edge		
90' ROW									
Zone: Right-of-Way (ROW)									

Explore this street more on Google Street View: <https://maps.app.goo.gl/FbGR7K2thqbhE5gc9>

B Mixed use Street



Mid-block curb extension in parking lane provides green space & protects mid-block crosswalk.



5'	16'	5.5'	12.5'	16'	11'	5.5'	15.5'	5'	
Walk	Buffer + Parking	Bike	Lane	Median	Lane	Bike	Buffer + Parking	Walk	
Zone: Street Edge			Zone: Street				Zone: Street Edge		
92' ROW									
Zone: Right-of-Way (ROW)									

Explore this street more on Google Street View: <https://maps.app.goo.gl/48D8nr6Dn7knN4cZ6>

C Neighborhood Local Street



4'	5.5'	7'	16'	7'	5.5'	4'
Walk	Buffer	Parking	Travel Lane	Parking	Buffer	Walk
Zone: Street Edge			Zone: Street		Zone: Street Edge	
49' ROW						
Zone: Right-of-Way (ROW)						

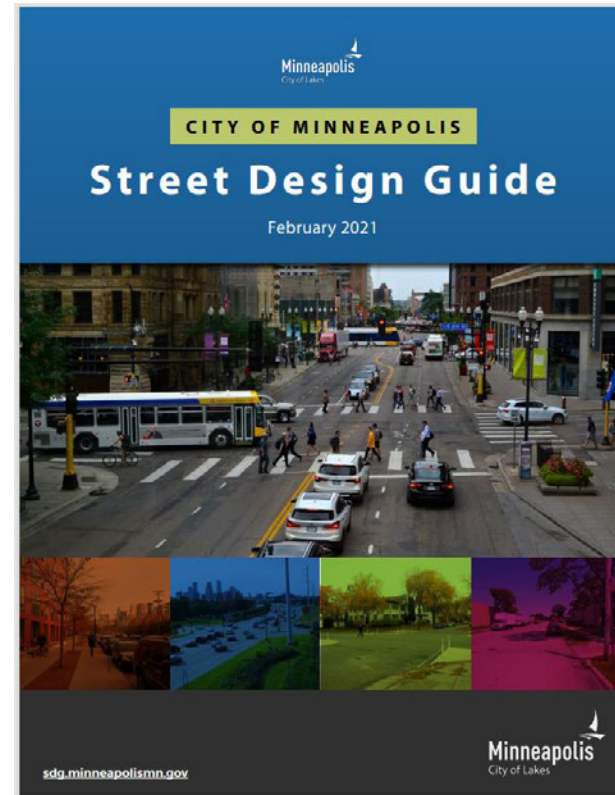
Explore this street more on Google Street View: <https://maps.app.goo.gl/EA5WC4Q7Q7MhbTRm9>

City of Minneapolis, MN

Introduction

The City of Minneapolis adopted **Street Design Guide** in 2021. It informs the planning and design of all future street projects in Minneapolis, including street reconstructions and street retrofit projects. The Street Design Guide has two interconnected sections:

- 1) Street Types Guidance, which provides guidance organized by ten street types:
 - Mixed Use Commercial Connector
 - Mixed Use Community Connector
 - Downtown Core
 - Mixed Use Regional Connector
 - Parkway
 - Production and Processing
 - Urban Neighborhood
 - Urban Neighborhood Connector
 - Alley
 - Trail
- 2) Street Design Guidance, which provides additional detailed guidance organized by six street zones:
 - Sidewalks
 - Boulevards and Furnishings
 - Bikeways
 - Transit Stops
 - Roadways
 - Intersections

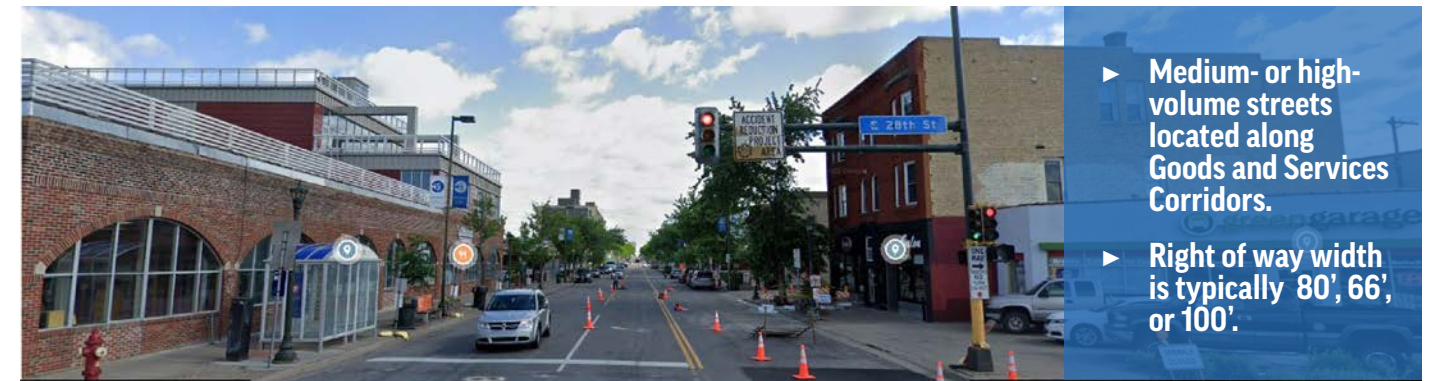


Website: <https://sdg.minneapolismn.gov/introduction/how-use>

Street Design

The *Street Design Guide* identified street typologies and design elements with similar concepts that *Forward SGF 2040* is pursuing. The street sections below highlight examples of different street types with their design elements.

Mixed Use Commercial Connector



- ▶ Medium- or high-volume streets located along Goods and Services Corridors.
- ▶ Right of way width is typically 80', 66', or 100'.

15.5'	7'	11.5'	11.5'	11.5'	7.5'	15.5'
Walk + Amenity Zone: Street Edge	Parking	Lane	Turn Lane Zone: Street	Lane	Parking	Amenity + Walk Zone: Street Edge
80' ROW Zone: Right-of-Way (ROW)						

Explore this street more on Google Street View: <https://maps.app.goo.gl/tjhEIX3GAwRDRTDP7>

Mixed Use Regional Connector



- ▶ High-volume streets with wide right of way that serve a mix of land uses.
- ▶ Right of way width is typically 130' or wider.

6'	12'	12'	13'	11'	11'	11'	11'	11'	31'	16'
Walk Zone: Street Edge	Turn Lane	Lane	Lane	Median	Turn Lane	Lane	Lane	Shoulder	Buffer Zone: Street Edge	Shared use path
145' ROW Zone: Right-of-Way (ROW)										

Explore this street more on Google Street View: <https://maps.app.goo.gl/tK4DCEkWEKoRt7zf6>

Street Design (Continued)

Mixed Use Community Connector Street



- ▶ Medium-high volume streets with a mix of adjacent land uses.
- ▶ Right of way width is typically 66', 80', 60', or 100'

9' / 13.5'	7.5'	5.5'	10'	10'	5.5'	7.5'	9' / 9'
Walk / Walk + Buffer	Parking	Bike	Lane	Lane	Bike	Parking	Walk / Walk + Buffer
64' ROW							

- Zone: Street Edge
- Zone: Street
- Zone: Right-of-way

Explore this street more on Google Street View: <https://maps.app.goo.gl/hcmbrATHGdcF4d99>

Urban Neighborhood Connector Street



- ▶ Predominately residential, medium-volume streets that often have local transit routes.
- ▶ Right of way width is typically 60', 66', and 80'.

6.5'	7.5'	6'	10'	11'	7'	7.5'	6.5'
Walk	Buffer	Bike	Lane	Sharrow	Parking	Buffer	Walk
62' ROW							

- Zone: Street Edge
- Zone: Street
- Zone: Right-of-way

Explore this street more on Google Street View: <https://maps.app.goo.gl/gQS1LOBsgnc9gwBQA>

Urban Neighborhood Street



- ▶ Local residential streets with low traffic volumes that provide access to residences, parks, and schools.
- ▶ Right of way width is commonly 60' with some 66', 80', and other widths.

5.5'	5'	7.5'	16'	7.5'	6'	5.5'
Walk	Buffer	Parking	Lane	Parking	Buffer	Walk
53' ROW						

- Zone: Street Edge
- Zone: Street
- Zone: Right-of-way

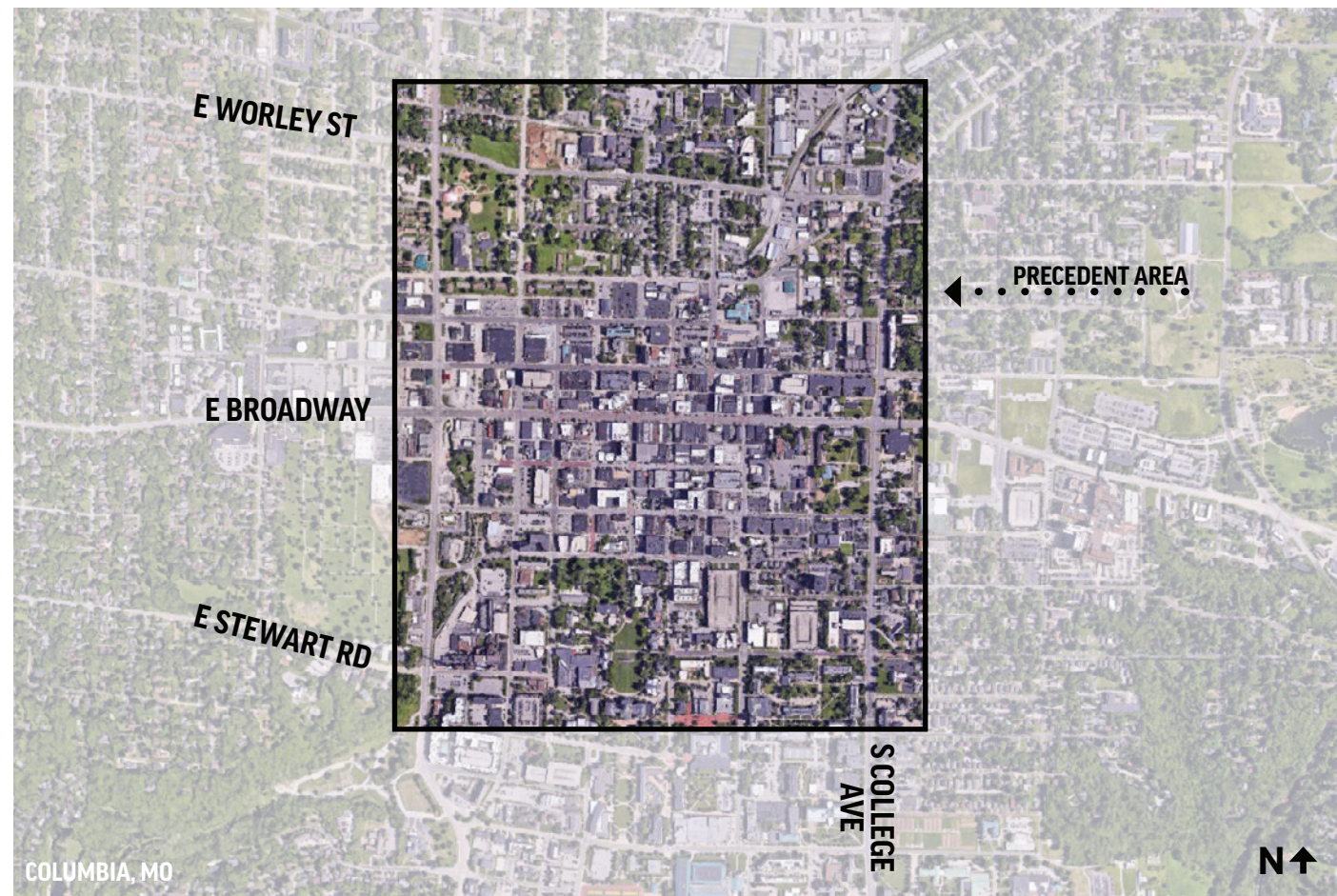
Explore this street more on Google Street View: <https://maps.app.goo.gl/HVCWZxnX7UoKi3dN6>

Downtown District, Columbia, MO

Introduction

Columbia, Missouri is home to the University of Missouri and located near the center of the state. Columbia's size, population, geography, and development context make it an appropriate parallel to Springfield, Missouri, and its network of street typologies and street design elements provide excellent precedent studies. The following diagrams illustrate how a city similar to Springfield can implement a range of flexible street typologies via the city's development code.

The precedent area examines a portion of Columbia's downtown district. Like Springfield, Columbia's downtown is older, more compact, and has narrower street widths than more recently developed areas of the city. Even with the size and width limitations of the downtown district, this precedent illustrates how streets can balance pedestrian, amenity, and vehicle space within a constrained right-of-way.



Street Typologies

A range of street sections are shown along four different streets to illustrate the function, effect, opportunities, and areas of improvement that are created through the codification of Street Typologies.



- Urban Pkwy
- Commercial Connector Street
- Mixed use Street
- Neighborhood Connector
- Neighborhood Local Street
- Alley

Letters (A, B, C,D) note the location of each following street section.

Street Typologies (Continued)

A1 Mixed Use Street, E. Broadway, 20 mph, Minor Arterial



14'	16'	12.5'	11'	12.5'	16'	10.5'
Walk + Amenity Zone: Street Edge	Parking	Lane	Turning Lane Zone: Street	Lane	Parking	Amenity + Walk Zone: Street Edge
92.5' ROW Zone: Right-of-Way (ROW)						

Explore this street more on Google Street View: <https://maps.app.goo.gl/A9F4wgfZji4z9qc76>

A2 Commercial Connector, E. Broadway, 30 mph, Minor Arterial



13'	10'	10'	10'	10'	10'	4'	6'
Walk Zone: Street Edge	Lane	Lane	Lane Zone: Street	Lane	Lane	Buffer	Walk Zone: Street Edge
76' ROW Zone: Right-of-Way (ROW)							

- ▶ As the context changes, the street typology and design changes, while still providing space for pedestrians..
- ▶ However, additional standards could be created to require improvements like bike lanes, landscaping, medians, bump-outs, etc.

Explore this street more on Google Street View: <https://maps.app.goo.gl/AUiL4NvVqwh3bSw46>

B1 Mixed Use Street, 9th St., 20 mph, Local



11.5'	8'	11'	11'	8'	12.5'
Walk + Amenity Zone: Street Edge	Parking	Lane Zone: Street	Lane	Parking	Amenity + Walk Zone: Street Edge
62' ROW Zone: Right-of-Way (ROW)					

Explore this street more on Google Street View: <https://maps.app.goo.gl/EMiBkdF4fdUqmRFs6>

C2 Mixed Use Street, 9th St., Local



7'	10.5'	10.5'	8'	10'
Walk Zone: Street Edge	Lane	Lane Zone: Street	Parking	Amenity + Walk Zone: Street Edge
46' ROW Zone: Right-of-Way (ROW)				

Explore this street more on Google Street View: <https://maps.app.goo.gl/DVSCYef2q2YTP6Yr5>

Street Typologies (Continued)

C1 Neighborhood Connector, Elm St., Local



5.5'	3.5'	14'	14'	8'	4'	5'
Walk	Buffer	Lane	Lane	Parking	Buffer	Walk
Zone: Street Edge		Zone: Street			Zone: Street Edge	
54' ROW Zone: Right-of-Way (ROW)						

Explore this street more on Google Street View: <https://maps.app.goo.gl/wyc29eIA4nfx543aA>

C2 Neighborhood Connector, Elm St., Local



5'	8.5'	14'	12.5'	10'
Walk	Parking	Lane	Lane	Amenity + Walk
Zone: Street Edge		Zone: Street		Zone: Street Edge
50' ROW Zone: Right-of-Way (ROW)				

- ▶ This section showcases how a minor project (partial reconstruction of pavement) provides an opportunity to include pedestrian improvements: a widened sidewalk, street trees, and amenities like benches and trash receptacles.
- ▶ This demonstrates how incremental improvements can be implemented when a new development is adopted and begins to influence the public realm.

Explore this street more on Google Street View: <https://maps.app.goo.gl/8ZiUpLQHnBJwDuaw7>

This is another example of how a street design may change according to the change in surrounding context.

D1 Urban Parkway, College Ave., Minor Arterial



5'	3'	10'	10'	10'	10'	10'	3'	5.5'
Walk	Buffer	Lane	Lane	Turning Lane	Lane	Lane	Buffer	Walk
Zone: Street Edge		Zone: Street					Zone: Street Edge	
66.5' ROW Zone: Right-of-Way (ROW)								

Explore this street more on Google Street View: <https://maps.app.goo.gl/sLv7WfmCJJ9cAo32A>

D2 Urban Parkway, College Ave., Minor Arterial



- ▶ In a campus environment, the street design alters and features more pedestrian crossings, a median, additional safety and traffic calming elements, and a wider buffer between the sidewalk and the travel lanes.

8'	3.5'	11'	11'	6'	11'	11'	3.5'	5.5'
Walk	Buffer	Lane	Lane	Median	Lane	Lane	Buffer	Walk
Zone: Street Edge		Zone: Street				Zone: Street Edge		
70.5' ROW Zone: Right-of-Way (ROW)								

Explore this street more on Google Street View: <https://maps.app.goo.gl/gHTHN5apcVVu3gYK7>

Community Discussion Starters

Connectivity

- ▶ How does block size, street network, and open space connection impact the quality, design, and function of different places?
- ▶ How can our street standards provide integration with social spaces to improve walkability and multimodal mobility?
- ▶ What locations in Springfield exhibit our aspirations for Connectivity? Which locations do not? What examples from other cities should we aspire to or avoid?


Street Design

- ▶ What are the range of different “street typologies” necessary to support the Placetypes in *Forward SGF*?
- ▶ How can a street typology approach be applied in Springfield, and how would it differ in different parts of the city?
- ▶ How do streets and streetscape designs affect the image of our city? How can these spaces be used to improve access and mobility in different contexts and Placetypes?
- ▶ What streetscape design standards are needed to beautify the city, integrate sustainable landscape practices, and improve safety throughout our street network?
- ▶ What streets in Springfield exhibit our aspirations for Street Design? Which streets do not? What examples from other cities should we aspire to or avoid?

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2

HOUSING & NEIGHBORHOODS

An aerial, isometric-style rendering of a residential neighborhood. The scene shows a mix of building types, including a tall apartment building on the left and several smaller, multi-story houses with gabled roofs. The houses are arranged in a grid-like pattern with narrow streets and sidewalks. There are green trees scattered throughout the blocks, and a few cars are visible on the roads. The overall color palette is muted, with greys, browns, and greens, giving it a professional, architectural feel.

Housing and neighborhood development is an important topic for all development codes. A significant portion of all cities are dedicated to residential land use, and the housing market is a dynamic system intended to serve the varying desires and needs of residents over time. This section outlines two of the most important topics impacting the building blocks of residential areas – **Building Types and Neighborhood Design**. **Building Types** focuses on the wide array of residential buildings that can support residents in Springfield. **Neighborhood Design** focuses on the physical attributes and arrangements of buildings which influence a neighborhood’s character and the design of public spaces.

Building Types

Why are Building Types important?

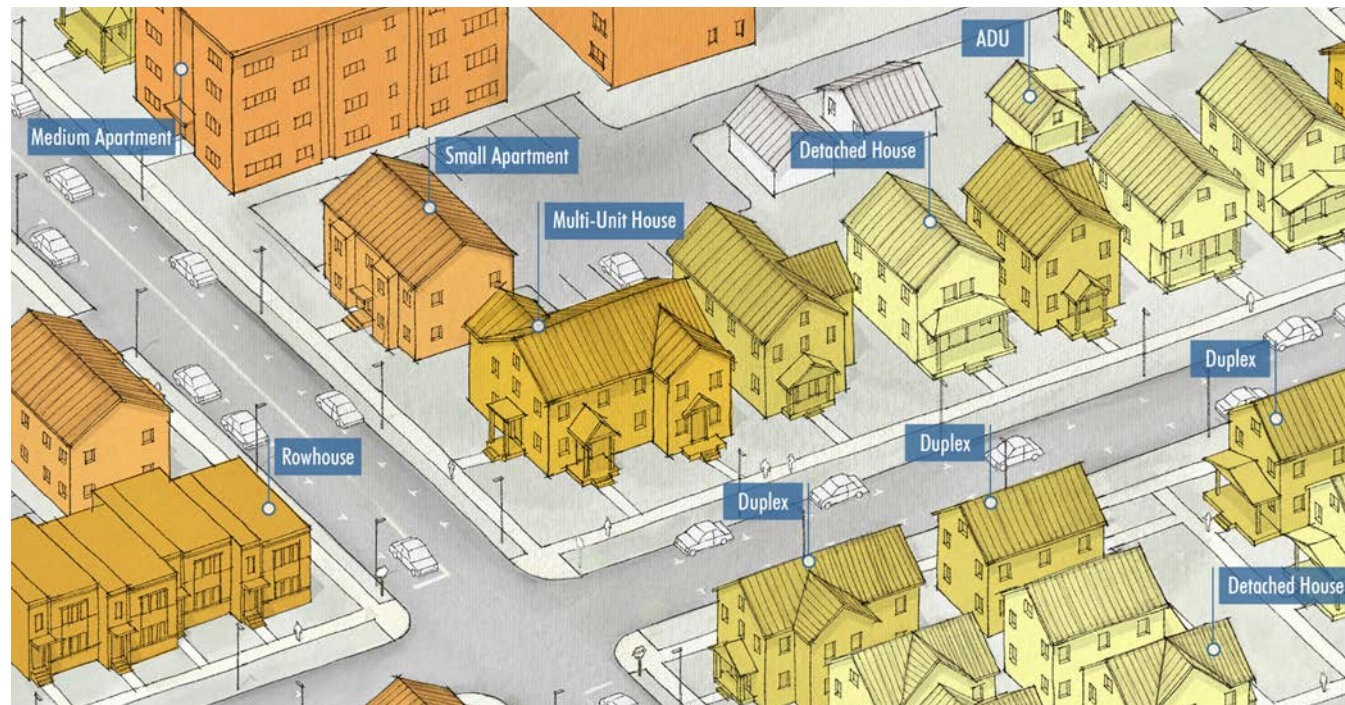
Housing needs are constantly changing with the condition and supply of the existing housing stock and shifting demographics. Measuring housing based on density (number of units per acre) is a conventional approach to regulating housing. However, this approach does not effectively address the more important design characteristics residents care most about, and even the same building type can produce many different unit densities depending on design.

What does Forward SGF say about Building Types?

Forward SGF promotes a wide range of building formats, lot sizes, and housing types for residential and mixed-use areas.

How can the Community Development Code impact Building Types in Springfield?

The current development code regulates housing and neighborhoods based largely on the density of development, or the amount of development on a given piece of land. The new Community Development Code can provide a more modernized, straightforward, and nuanced approach to regulating residential uses by building type rather than by density. Clearly defining housing types and formats, and applying them to zoning categories, will produce clearer outcomes and raise expectations for both residents and developers.



Building Types: Key Terms

Detached House

A residential building designed for one principal dwelling unit situated on a single lot in neighborhood setting. It may accommodate accessory buildings or an accessory dwelling unit subject to meeting additional criteria, lot standards, and building design standards. Variants of this type are based primarily on the lot size required in different zone districts or development contexts.

Multi-Unit House

A residential building designed to accommodate two to four primary dwelling units on a single lot in a neighborhood setting. This building type has the scale, massing, and appearance of a detached house, and the accommodations for multiple units are minimized in the design of the building. Configuration of units may vary (up / down, front to back, side to side), and these variations typically prevent platting of individual units and lots (see Attached House). Variants of this type include and are commonly referred to as duplex, tri-plex, or quad-plex.

Attached House

A residential building type designed to accommodate two or more dwelling units, in a neighborhood or mixed-density setting. Each unit is separated by a common side wall with a side-by-side configuration, and each has its own private entrance. It is distinguished from a multi-unit house in that each unit may be platted on its own lot and may appear as distinct and separate units through entrances and façade designs. Variants of this type include and may be commonly referred to as paired house, townhouse, or row house.

Apartment / Mixed Use

A residential building designed to accommodate

multiple units in a single building and on a single lot, in a mixed-density, high-density, or mixed-use setting. Buildings typically have a common entry shared by all units and interior common space accessing individual units. In some settings buildings can accommodate accessory or ground floor non-residential uses. Variants of this building include small-, medium-, and large-scale buildings, dependent on the lot size, building footprint, height, and number of units.

Standard Lot

A common configuration for residential lots. In this arrangement, a block contains two rows of lots, where each row fronts on the long side of the block with houses facing the streets on either side of the block.

Front / Rear Corner Lot

A configuration where a corner lot is split into two lots – a larger front corner lot where the building and lot front on the long side of the block consistent with other lots on the block, and a smaller rear corner lot where the building and lot front on the short side of the block.

End-Grain Lot

A configuration where one or more corner lots are divided to form multiple smaller lots where the buildings and lots front on the short end of the block, often to create a transition from the interior of the block to different building types along a corridor or at the edges of neighborhoods.

Courtyard Lot

A configuration where one or more lots are divided to form multiple smaller lots that are arranged around and front on a common courtyard, serving as the shared frontage for all lots, and providing access to the street front for the entire courtyard pattern.

Neighborhood Design

Why is Neighborhood Design important?

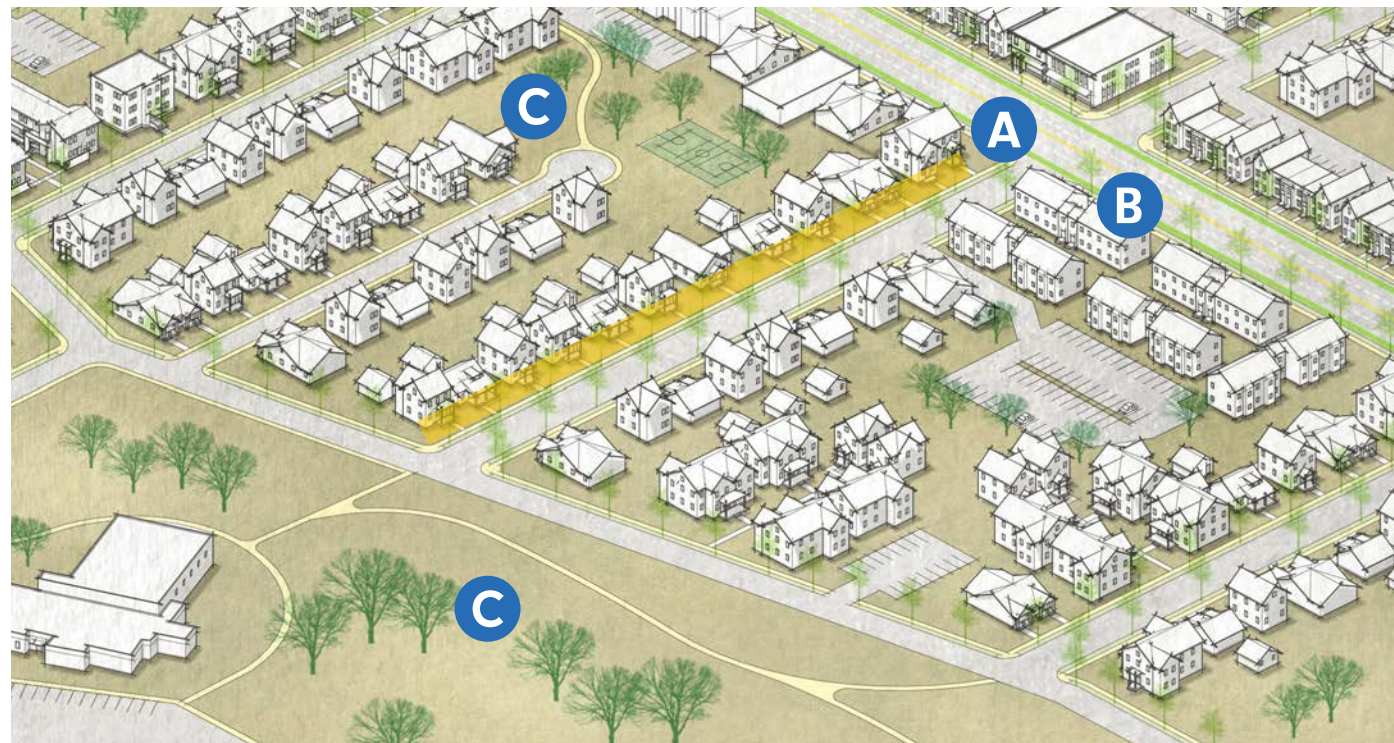
The way neighborhoods are designed plays a significant role in establishing the quality, function, and character of residential settings. The design elements detailed in this section demonstrate simple urban design approaches that arguably are more impactful for influencing the quality of a neighborhood's urban design than the architectural aesthetic of buildings alone.

What does Forward SGF say about Neighborhood Design?

Forward SGF emphasizes the importance of quality of place and physical community image. The plan particularly calls for a focus on design, rather than land use or type of housing, in the creation of neighborhoods. A focus on urban design enables a broader range of compatible housing types to promote infill and adaptive reuse, while reinforcing important neighborhood characteristics.

How can the Community Development Code impact Neighborhood Design in Springfield?

Neighborhood design is influenced by a spectrum of elements from the layout and design of public spaces to frontage orientation and access (driveways, alleys, etc.) of individual sites. The development code's neighborhood design standards will play a significant role in how development impacts existing neighborhoods. Further, newly constructed neighborhoods will be influenced by the subdivision regulations as public space and block networks are established.



Neighborhood Design: Key Terms

A Frontage Design

Frontage design establishes neighborhood character through the relationship of buildings and lot configurations to the streetscape and other public spaces. Elements of frontage design include: entry features, access design (driveway configuration and location), and garage orientation (placement and extent).

B Building Scale & Vernacular

Scale and vernacular are determined by the physical size and breakdown of building facades using various architectural strategies. A compatible mix of residential building types in residential contexts can be achieved through consistency in scale or by establishing transitional areas where scale is increased.

C Public Space

Public space design, which includes streetscapes, common areas, gateways, and focal points, is an important element of neighborhood design. Precedents focusing more specifically on the design and function of public spaces can be found under Multimodal Transportation and Natural Features & Environment.

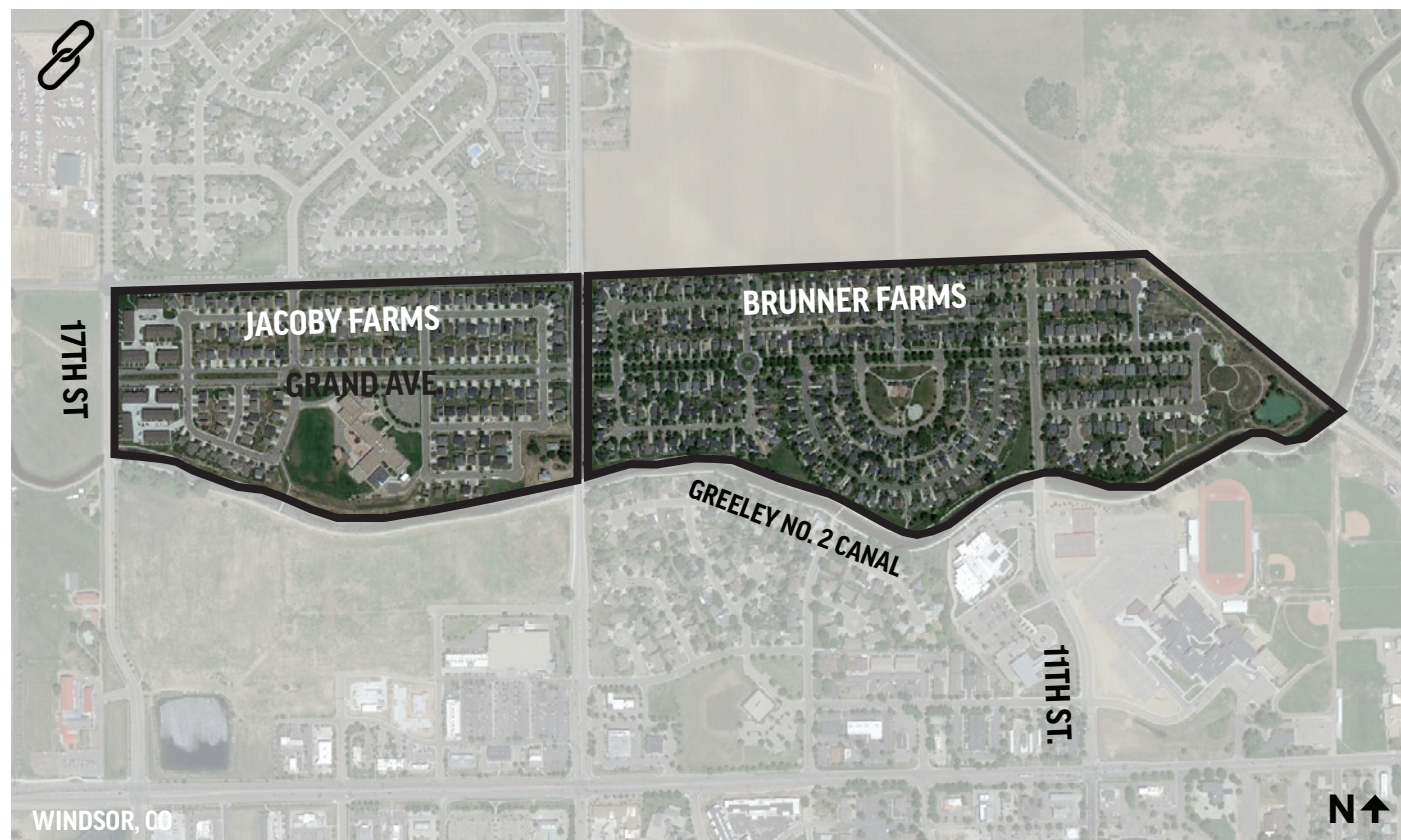
Precedent Studies

Brunner Farms & Jacoby Farms, Windsor, CO

Introduction

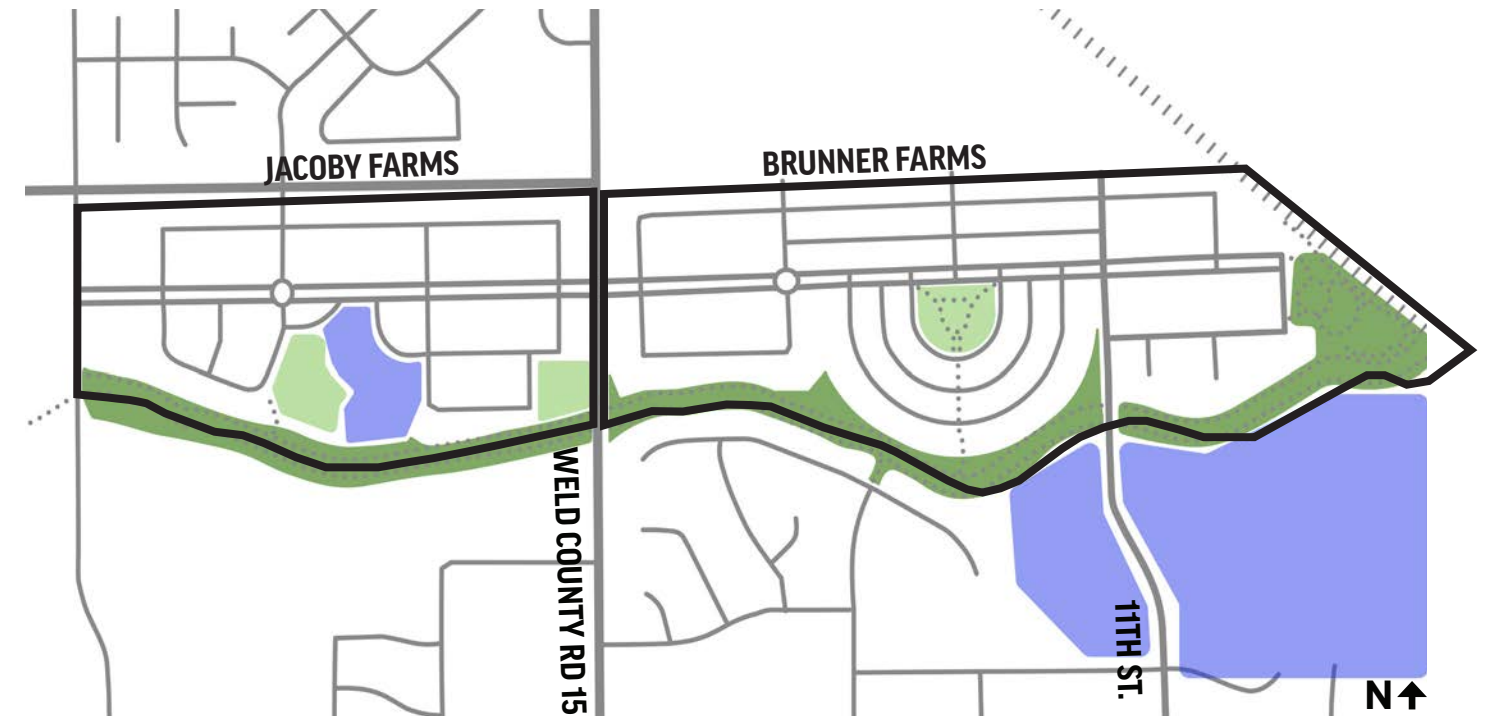
The Brunner Farms and Jacoby Farms subdivisions, in Windsor, Colorado, are two neighborhoods that demonstrate two different approaches for building frontage, site access, and garage orientation. Despite being composed of the same building type (single-family detached), the differing approaches to site design result in two distinct contexts within the same neighborhood.

Location & Context



Neighborhood Design

Public Space



Jacoby Farms and Brunner Farms incorporate a network of public spaces that connect the neighborhoods and provide residents with easy, walkable access to a variety of parks, trails, playgrounds, ball fields, and civic destinations like schools and community centers. The public spaces themselves are linked by a system of pedestrian paths and trails, which line either side of the Greeley No. 2 Canal.

- Natural Open Space
- Parks
- Civic Spaces
- Streets
- Alleys
- Pedestrian Paths & Trails
- Rail



BRUNNER FARMS
A larger central common area includes a lawn, playground, and walking paths.



BRUNNER FARMS
Another park includes a playground and large open fields.

Building Types: Jacoby Farms



Housing Type: Single-Family Detached
 Total Housing Units: 1 | Area: 0.15 acres | Density: 6.7 units per acre | Access: Front Loaded Garage



Housing Type: Single-Family Detached
 Total Housing Units: 1 | Area: 0.17 acres | Density: 5.9 units per acre | Access: Front Loaded Garage



Housing Type: Single-Family Detached | 2-story
 Total Housing Units: 1 | Area: 0.13 acres | Density: 7.7 units per acre | Access: Front Loaded Garage

Neighborhood Design: Jacoby Farms



Sorensen Drive
 Access Format: Single - Double Lane | Garage Format: 1-2-Car, Setback



Grand Avenue
 Access Format: Single - Double Lane | Garage Format: 1-2-Car, Setback



Stoll Drive
 Access Format: Double Lane | Garage Format: 1-2-Car, Setback

Building Types: Brunner Farms



Housing Type: Single-Family Detached
 Total Housing Units: 1 | Area: 0.13 acres | Density: 7.7 units per acre | Access: Alley



Housing Type: Single-Family Detached | 2-story
 Total Housing Units: 1 | Area: 0.15 acres | Density: 6.7 units per acre | Access: Alley

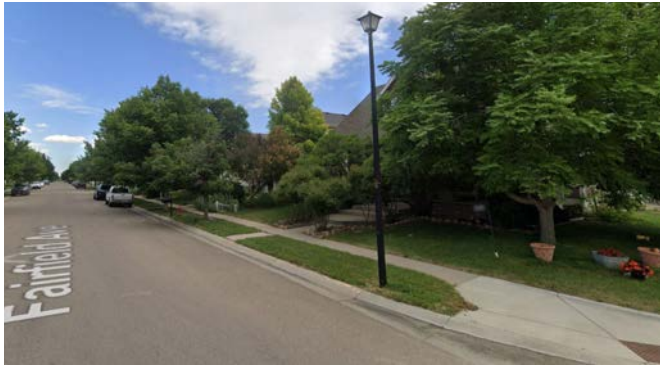


Housing Type: Single-Family Detached
 Total Housing Units: 1 | Area: 0.15 acres | Density: 6.7 units per acre | Access: Front - rear garage

Neighborhood Design: Brunner Farms



Canal Drive
 Access Format: Double Lane | Garage Format: 2-Car, Front Loaded



Fairfield Avenue
 Access Format: Alleyway | Garage Format: 1-2-Car, Alleyway Loaded



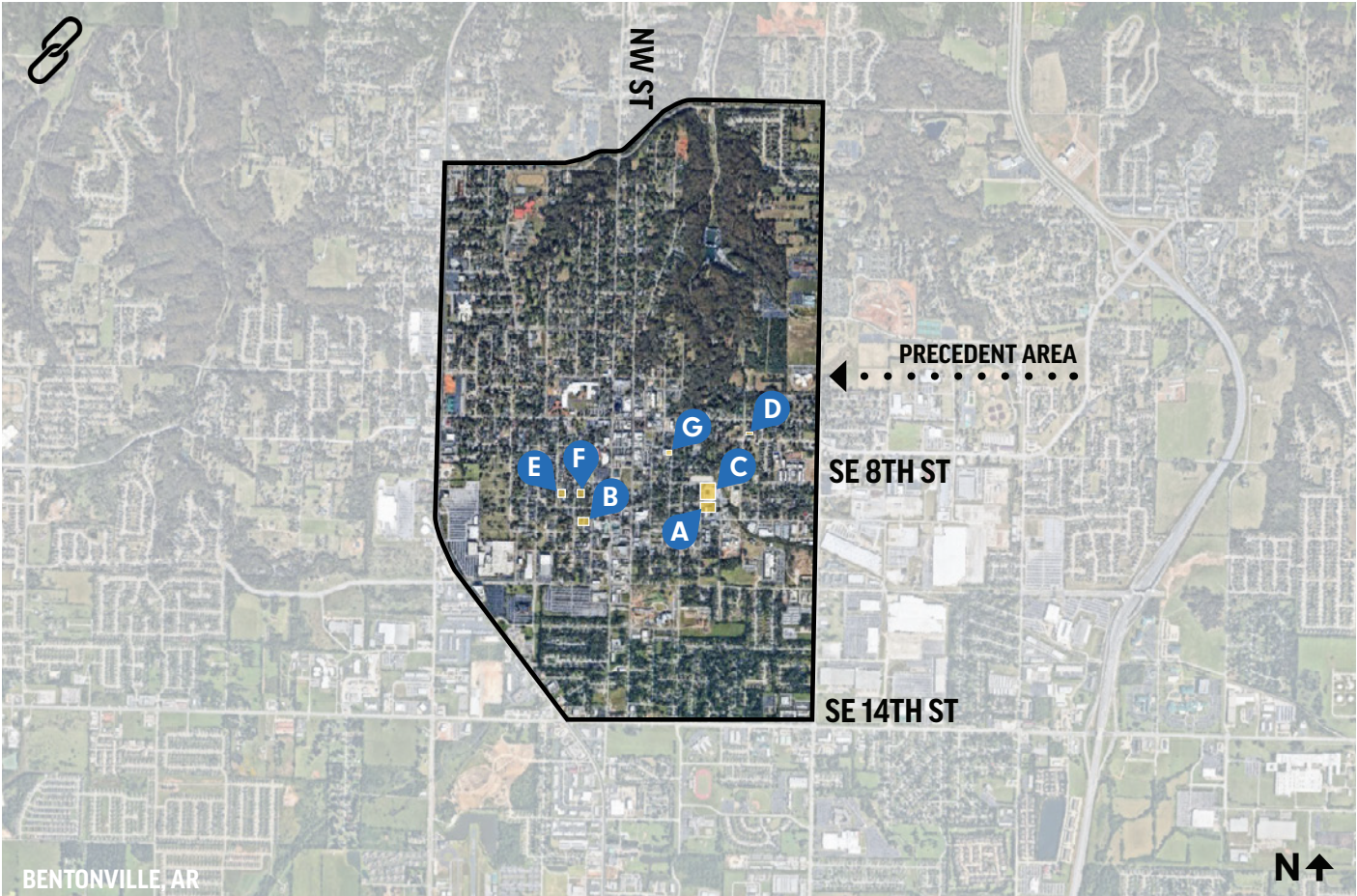
Crescent Drive
 Access Format: Single Lane | Garage Format: 1-2-Car, Setback

Bentonville, AR

Introduction

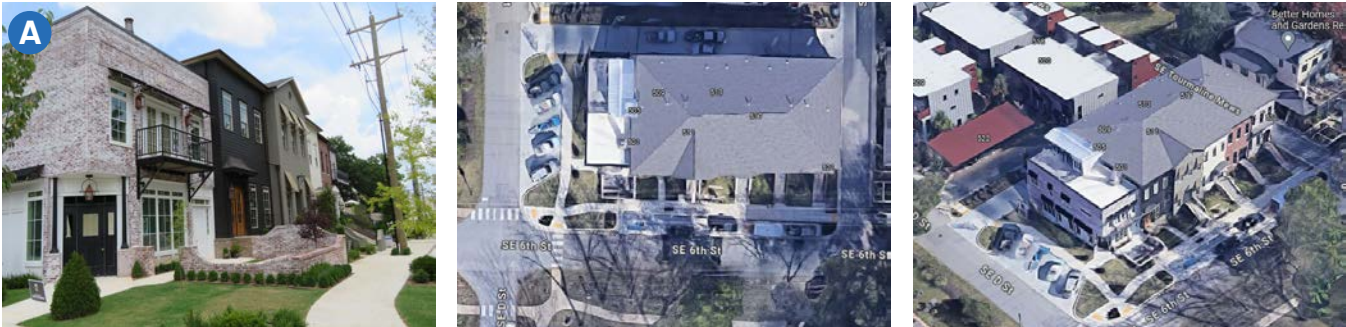
Downtown and downtown-adjacent neighborhoods in Bentonville, Arkansas have experienced significant reinvestment in recent years, including the introduction of a variety of housing types beyond single-family homes. This analysis demonstrates that density does not necessarily lead to compatibility, but rather the thoughtful design and intentional format of new buildings influence compatibility with existing neighborhoods.

Location & Context



Note: Map labels buildings within current extent, there are two more buildings out of the focused area.

Building Types



Housing Type: 4 Townhomes & 1 Live-Work Corner Building
 Total Housing Units: 5 | Area: 0.34 acres | Density: 14.7 units per acre | Access: Side Lot



Housing Type: Narrow Lot Single Family
 Total Housing Units: 4 | Area: 0.29 acres | Density: 13.6 units per acre | Access: Shared Alley



Housing Type: Townhomes
 Total Housing Units: 15 | Area: 1.1 acres | Density: 13.5 units per acre | Access: Front and Alley Access

Building Types (Continued)



Housing Type: Accessory Dwelling Unit
 Total Housing Units: 2 (1 + 1 ADU) | Area: 0.18 acres | Density: 11.1 units per acre | Access: Front driveway



Housing Type: Townhomes
 Total Housing Units: 3 | Area: 0.21 acres | Density: 14.3 units per acre | Access: Side Lot Access



Housing Type: Small Lot Single Family
 Total Housing Units: 4 | Area: 0.45 acres | Density: 8.8 units per acre | Access: Side Lot Access



Housing Type: Garden Apartment Complex (does not show on the aerial map)
 Total Housing Units: 172 | Area: 15.09 acres | Density: 11.4 units per acre | Access: Front Lot Access / Internal Streets



Housing Type: Narrow Lot Single Family
 Total Housing Units: 4 | Area: 0.48 acres | Density: 8.3 units per acre | Access: Shared Alley



Housing Type: Single-Family Detached (does not show on the aerial map)
 Total Housing Units: 1 | Area: 0.21 acres | Density: 4.8 units per acre | Access: Front Loaded Garages

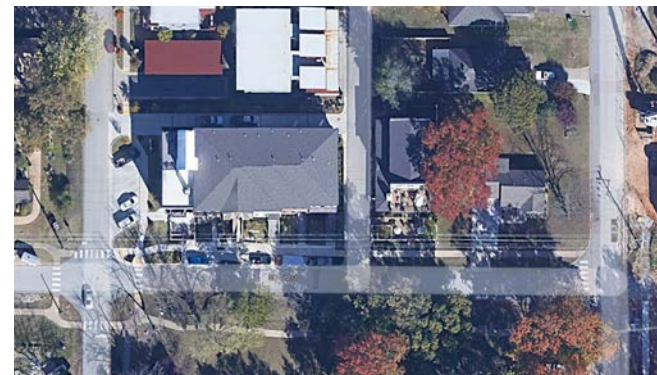
Neighborhood Design



SW B Street
Access Format: Alley | Garage Format: 2-Car, Alley-loaded | Entry Features: Stoop & Porch



SE 6th Street
Access Format: Alley | Garage Format: 1-2-Car, Alleyway Loaded, Park-Under | Entry Features: Stoop



SW D Street
Access Format: Alley & Shared Driveways | Garage Format: 1-2-Car, Rear | Entry Features: Porch & Stoop



Community Discussion Starters

Building Types & Density


- ▶ Should accessory dwelling units be considered in other residential districts (with detached houses or other building types)?
- ▶ What design considerations are important for enabling “accessory apartments” (ADUs)?
- ▶ *Small Lot Houses*: What design considerations are important and what contexts are appropriate for houses on lots smaller than 5,000 square feet?
- ▶ *Missing Middle” Housing*: Where and how should the range of small scale, multi-unit housing be expanded to provide more housing options for Springfield’s communities?

Neighborhood Design

- ▶ What elements are essential to quality neighborhoods and compatible design - building scale (size), street frontage, development pattern, open space, and/or building character?
- ▶ What design and development considerations are most important in locations where a range of residential building types mix or transition?

3

MIXED USE PLACES



Mixed Use places are community anchors that support a range of functions including employment, access to goods and services, entertainment, and cultural activities. Springfield's centers of activity include both legacy walkable destinations, (such as Downtown and Commercial Street), as well as commercial areas along major thoroughfares, such as Glenstone Avenue. Development in both contexts can be impacted by the Community Development Code through special attention to the primary topics illustrated in this section: **Vibrancy & Placemaking and Integration of Housing**. **Vibrancy & Placemaking** focuses on the physical design and arrangement of buildings, parking, internal access streets, tenant uses, and networks of public space (streets, open space, civic destinations, etc.). **Integration of Housing** addresses the benefits of integrating residential living near businesses and commercial areas, and illustrates a variety of forms through which this can be achieved while ensuring high-quality urban design.

Vibrancy & Placemaking

Why is Vibrancy & Placemaking important?

Attention to the vibrancy and placemaking of mixed use destinations is important for a variety of functional reasons, but is also critical to fostering community connection and activity within the city. Well-designed mixed use places are the outcome of more than simply architectural design, and are a product of the micro- and macro- urban design patterns that create a comfortable, enjoyable sense of place for residents and visitors alike.

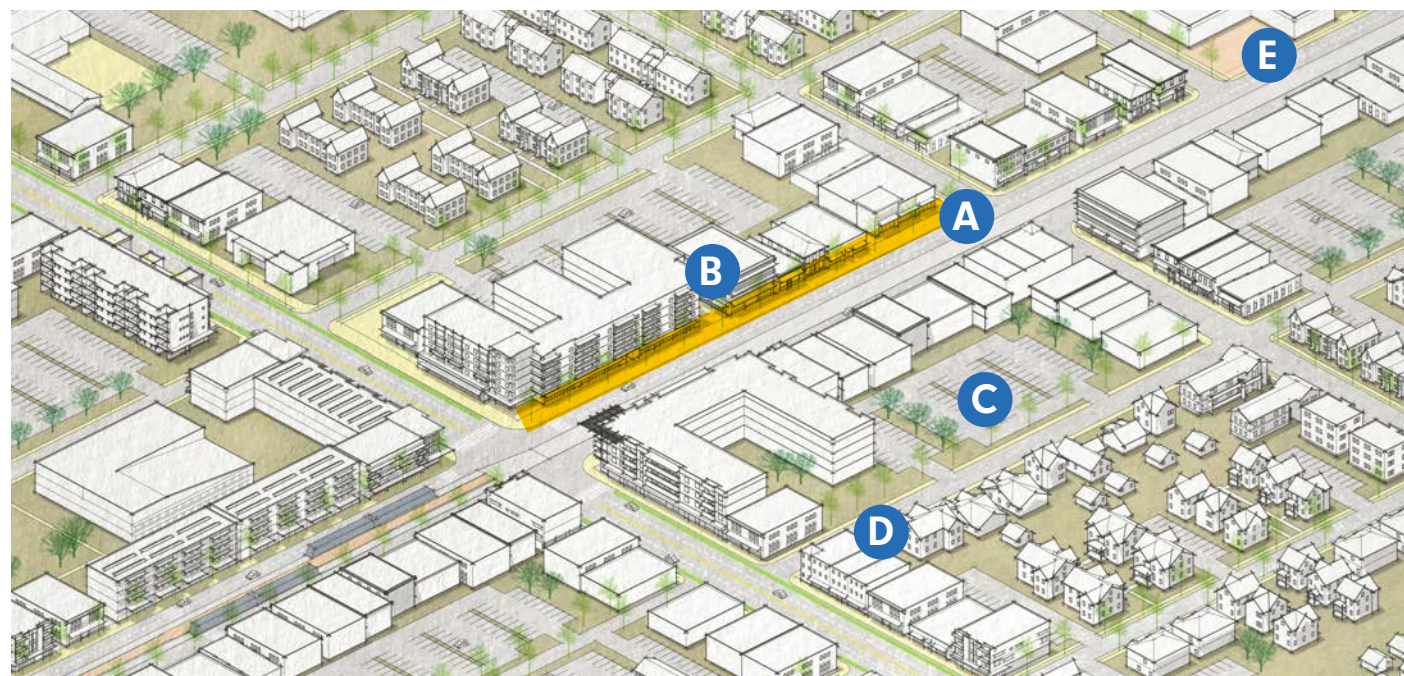
What does Forward SGF say about Vibrancy & Placemaking?

Forward SGF pays special attention to Quality of Place, including a theme of enhancing the city's physical

image. Key goals to enhance the quality of mixed use places are outlined within the plan, including a call to reinvest in and diversify corridor development and strengthen existing urban environments. The plan also prioritizes protecting and increasing "walkable neighborhood hubs" integrated into residential areas.

How can the Community Development Code impact Vibrancy & Placemaking in Springfield?

The design elements defined within this section, when implemented through the Community Development Code, can create vibrancy and place for both individual site or large-scale developments.



Vibrancy & Placemaking Elements: Key Terms

A Frontage Design

Frontage design is one of the most important factors in establishing the sense of place for mixed-use destinations, by forming the relationship of buildings and lot configurations to the streetscape and other public spaces. Elements of frontage design in this context include: entry features, building setbacks, the front building line, transparency, and access design (driveway locations). The closer buildings are to the streetscape the more important these details become (particularly in areas where walkability is a goal).

B Building Scale & Vernacular

The physical size and visual breakdown of building facades using various architectural strategies. Special attention to this design element should be paid to large-scale buildings in order to minimize blank walls. While consistency is sometimes important, a diverse range of building formats and scales can contribute to a dynamic context. Harmony between different building types is achieved through careful attention to design and building vernacular.

C Optimized Parking Facilities

Within mixed use places, the impact of parking facilities should be minimized by access and location management, consolidation and sharing strategies, and other approaches that ensure parking facilities are not a dominant visual feature of the place. While vehicle access and parking are almost always essential to walkable places, they should be coordinated at the block, corridor, or district scale to avoid undermining compact, connected, and diverse places.

D Mix of Uses

The variety of uses within a compact destination, which creates multiple reasons for people to be there. The ability of a single place to attract a broad segment of the community increases the activity and vibrancy of the place.

E Common Areas & Public Space

Common areas and public spaces include a community's streetscapes, common areas, gateways, focal points, internal access streets, gathering spaces (formal and informal), and open space typologies. These space can soften development and create public spaces for people.

Integration of Housing

Why is Integration of Housing important?

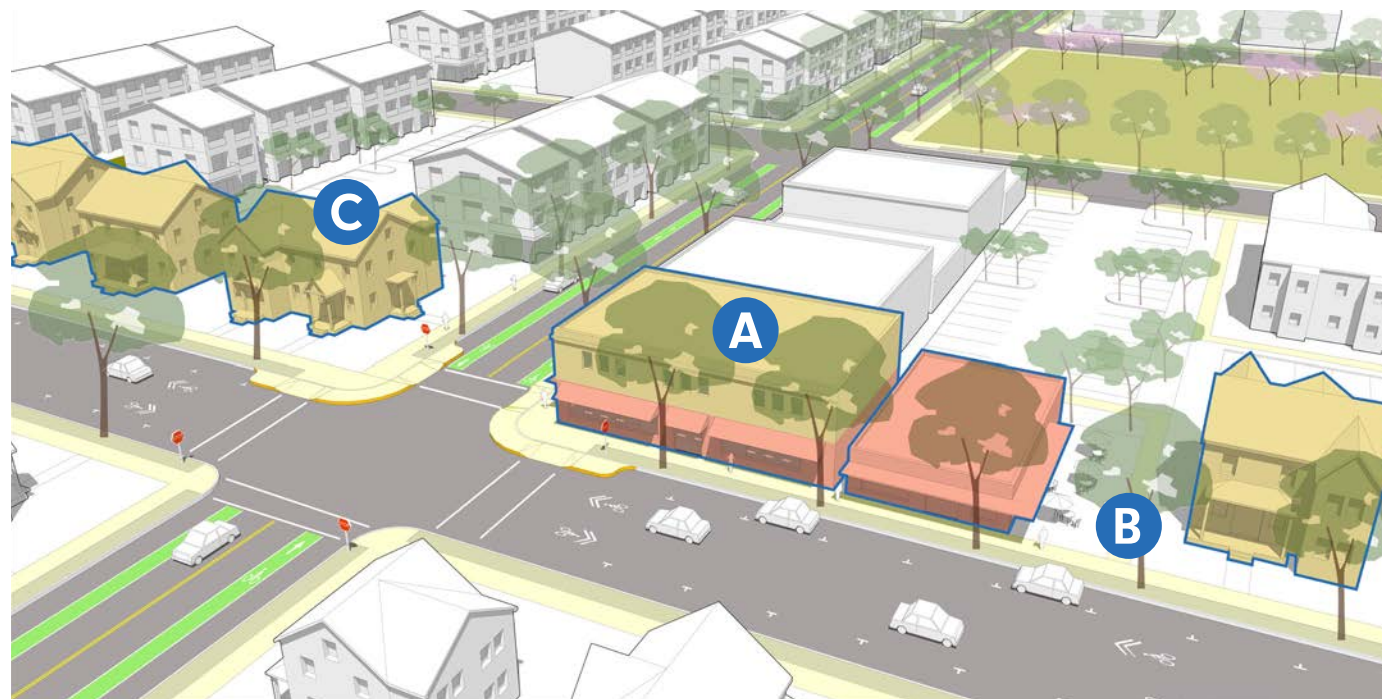
Housing is an important part of any community, and can be provided through a wide range of building types and formats that meet the needs of residents over time. Allowing a variety of housing formats in close proximity to businesses encourages economic investment and pedestrian activity. Mixed use housing helps to create harmonious transitions between higher intensity commercial areas and surrounding residential neighborhoods, and contributes to a more walkable city by providing a place to live within a walkable distance of employment, recreational destinations, and daily goods and services.

What does Forward SGF say about Integration of Housing?

Forward SGF recommends utilizing mixed use housing for revitalization and infill, as well as adaptive reuse of existing buildings.

How can the Community Development Code impact Integration of Housing in Springfield?

Although Springfield already has diverse types of mixed use housing, there are very few design and development standards in place to ensure this type of development occurs. As a variety of housing typologies grows in popularity, development codes can define design standards and promote mixed use housing that adds to Springfield's "Quality of Place" by considering which districts are appropriate for mixed use buildings, and how and where residential buildings could be incorporated into non-residential districts.



Residential uses are highlighted in yellow, commercial uses are highlighted in red.

Integration of Housing Elements: Key Terms

A Mixed Use Buildings (Vertical Mixed Use)

This describes development that mixes both residential and non-residential uses in a single building. Typically, non-residential uses are located on the ground floor and accessible from the sidewalk and / or street, and residential units are located on the second floor and above. Mixed use buildings come in many formats and scales, and can be tailored for a variety of contexts.

B Horizontal Mixed Use

Horizontal mixed use describes an area that blends residential and non-residential uses at a corridor or district level. Horizontal mixed use can include mixed use buildings (vertical mixed use), but may also include a broader area of single-use buildings (both residential and non-residential) integrated compatibly into a place. This is achieved by integrating compatible zoning districts close to each other to support transitional areas, or by allowing a broader range of housing types and formats into some non-residential zones.

C Residential Buildings in Mixed Use Places

The inclusion of residential-only buildings in mixed use places is one method to achieve horizontally mixed use places. Standards for design, scale, and building format can ensure a compatible environment for residential buildings in a mixed use place.

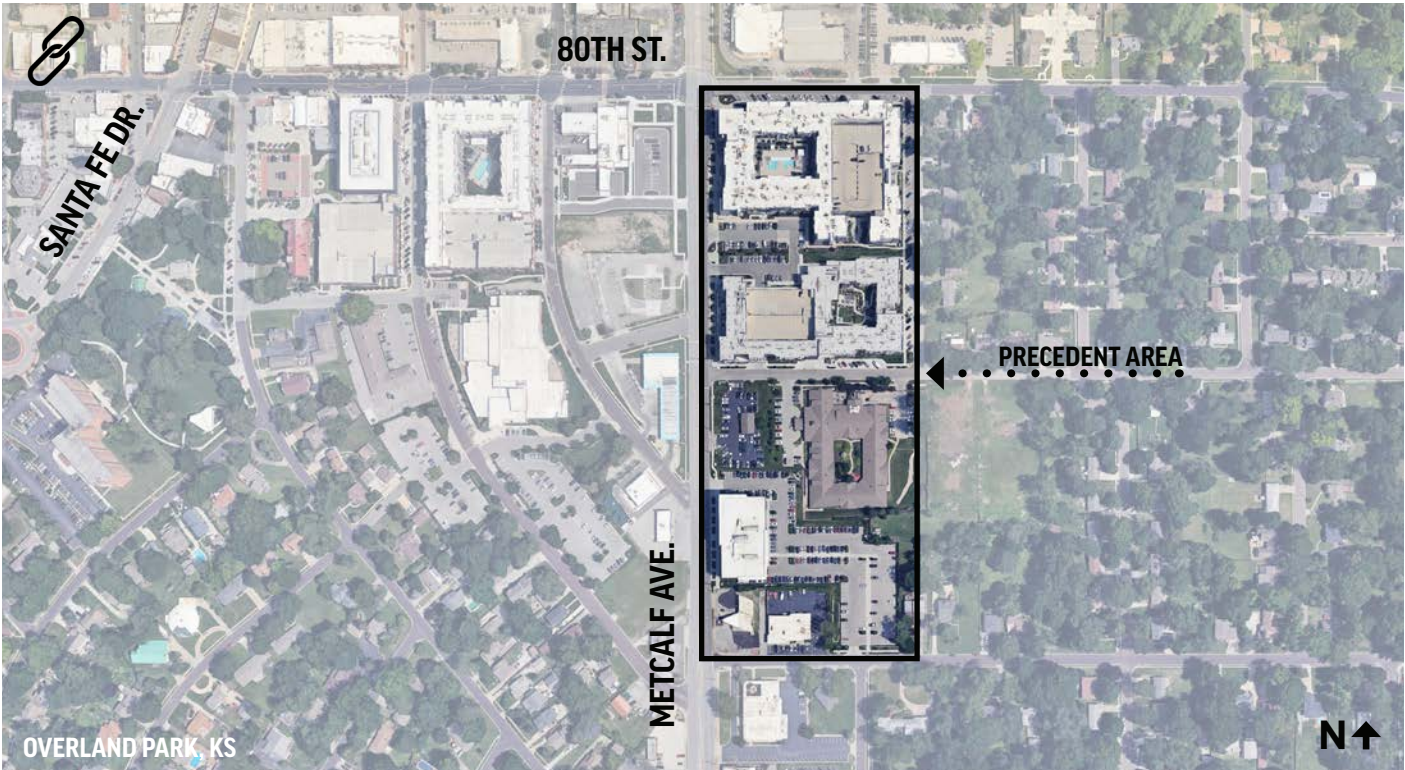
Precedent Studies

Metcalf Avenue, Overland Park, KS

Introduction

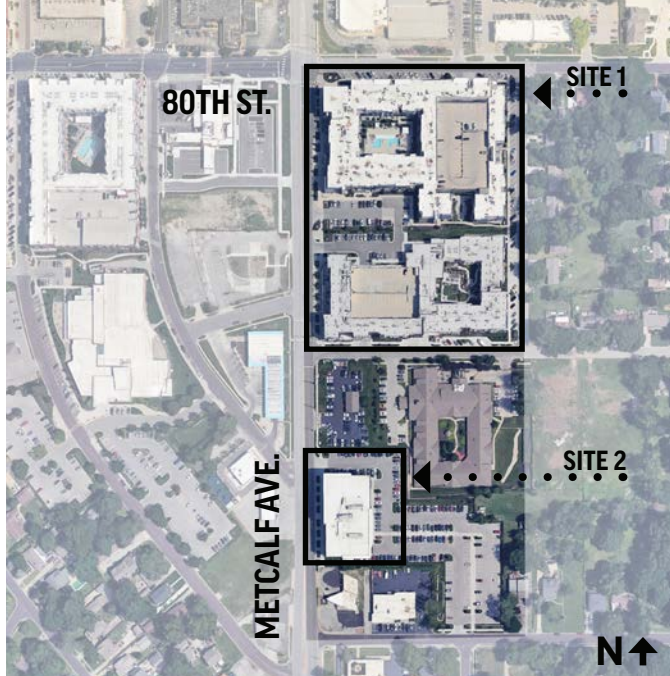
Metcalf Avenue is a major arterial roadway and suburban commercial corridor in Overland Park, Kansas, providing connections to multiple commercial centers, neighborhoods, and civic destinations throughout the city. Several market dynamics contributed to the decline of the Metcalf corridor over time, including disinvestment and the decline of brick-and-mortar retail, resulting in significant vacancy and an over-supply of under-utilized retail space. To address these issues and spur reinvestment in the Metcalf Avenue corridor, the City of Overland Park established a plan for the corridor (*Vision Metcalf*) in 2008. Following the plan's adoption, recent reinvestments have introduced a greater mix of uses along with urban design-oriented development practices. These investments are incrementally bringing an emphasis on placemaking, integration of housing, and walkability to the Metcalf Avenue corridor. Through a series of diagrams, this precedent study illustrates a two-block area along the corridor that houses two recent infill redevelopment projects, in order to examine how declining and under-performing suburban corridors can once again provide thriving, inviting, human-scaled, and walkable connections throughout a city.

Location & Context



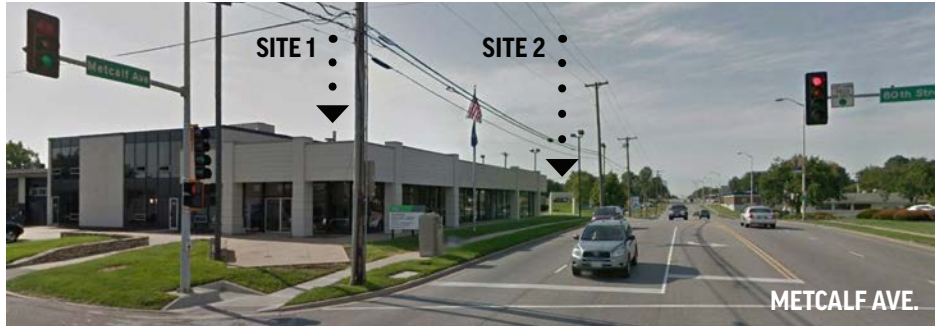
This precedent study area is located along the east side of Metcalf Avenue, and lies between Downtown Overland Park (to the west) and nearby neighborhoods (to the east).

Incremental Infill Redevelopment



The new infill redevelopment sites now provide a blend of amenities and services along with residential units. Street-front frontage and streetscape improvements are helping to reframe the Metcalf Ave. corridor as a more walkable, pedestrian-friendly place.

Incremental Infill: Before & After



Before: View looking south along Metcalf Ave.

Before the precedent area was redeveloped, it housed under-utilized commercial space and vacant lots. The streetscape was uninviting, and while there was an existing narrow sidewalk, no streetscape amenities or landscaping protected pedestrians from the adjacent fast-moving traffic.



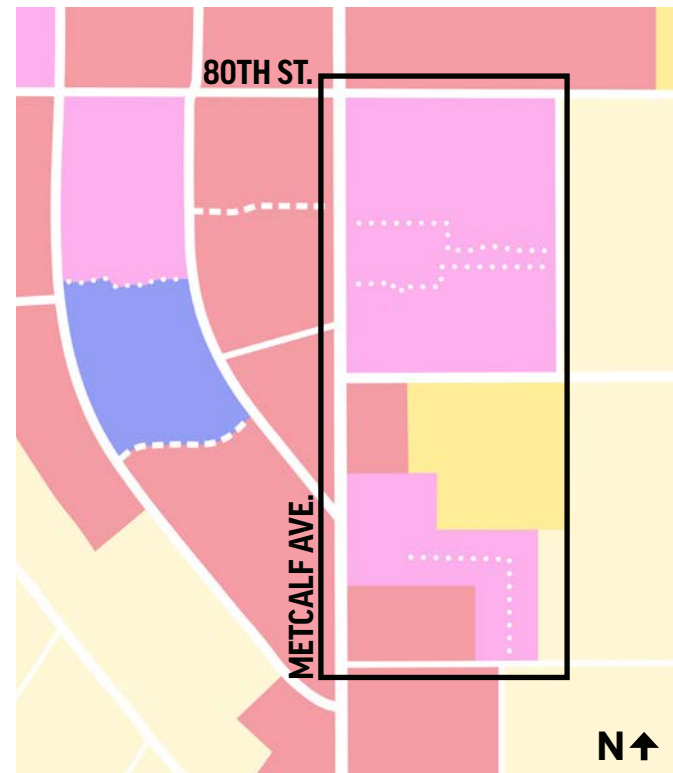
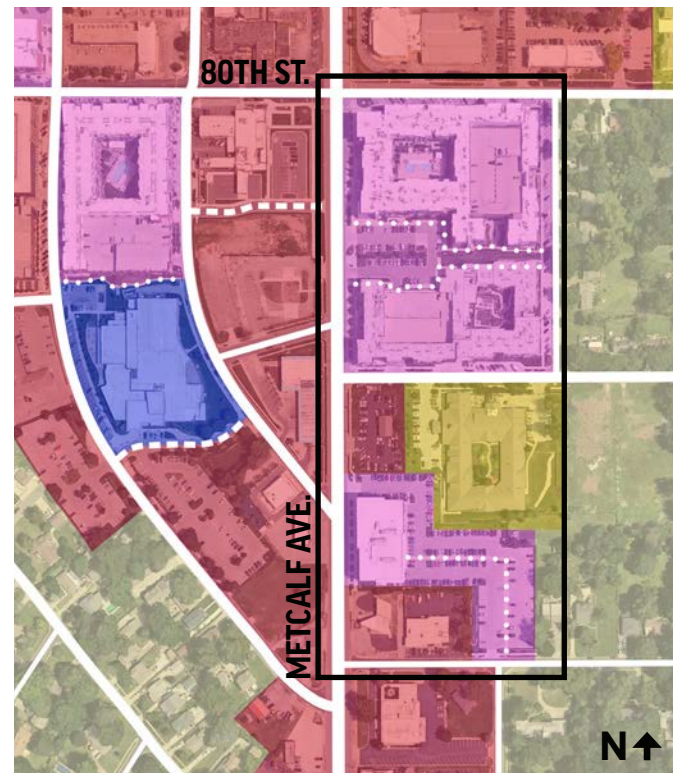
After: View looking south along Metcalf Ave.

After redevelopment, this area is transforming into a thriving mix of residential, office, and retail spaces. The Street-Front frontage type promotes safety and walkability, and streetscape includes wide sidewalks and plentiful landscaping to ensure that pedestrians are protected from nearby traffic.

Vibrancy & Placemaking

Mix of Uses

The redeveloped sites are introducing a greater blend of uses to the Metcalf Ave. corridor. Site 1 contains a mix of residential units on the upper stories with commercial (small retail, offices, and services) on the ground floor. Site 2 contains offices on the upper stories and commercial on the ground floor.

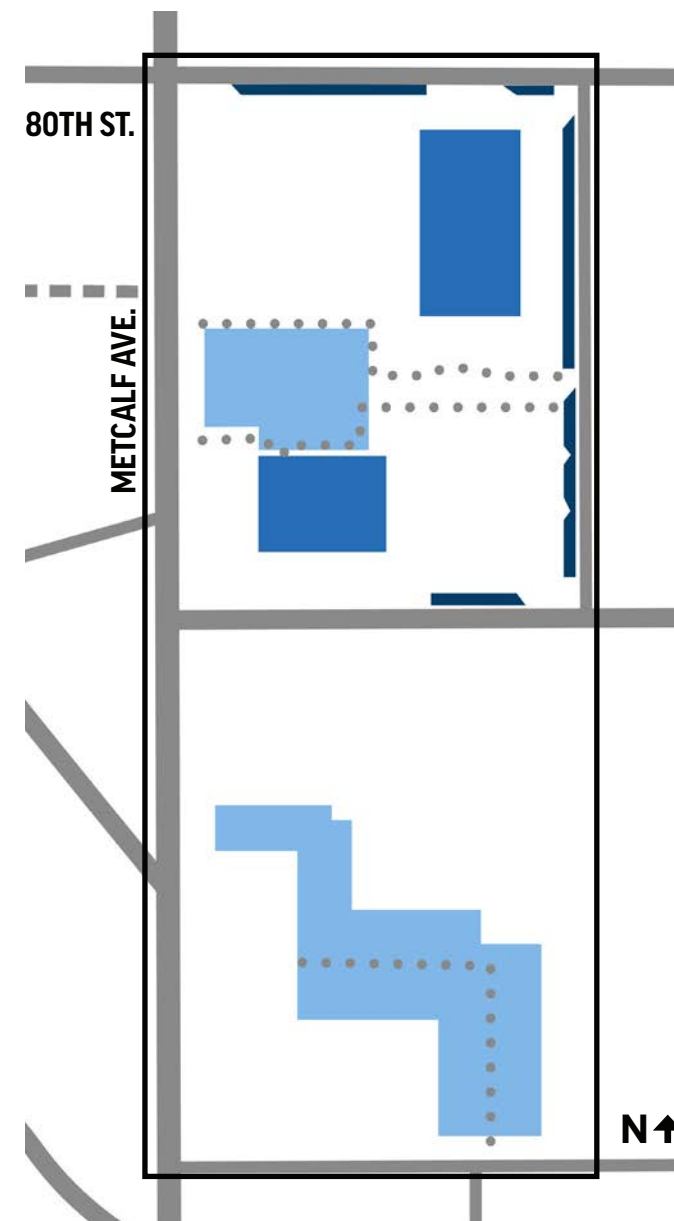


- Commercial
- Mixed Use
- Civic / Institutional
- Medium Density Residential
- Low Density Residential
- Streets
- Alleys
- Mid-Block Pedestrian Paths

The Mixed Use infill sites provide a gradual transition of uses and intensity of development between the nearby commercial and civic uses in Downtown Overland Park, and the adjacent neighborhoods located to the east of the precedent area.

Optimized Parking Facilities

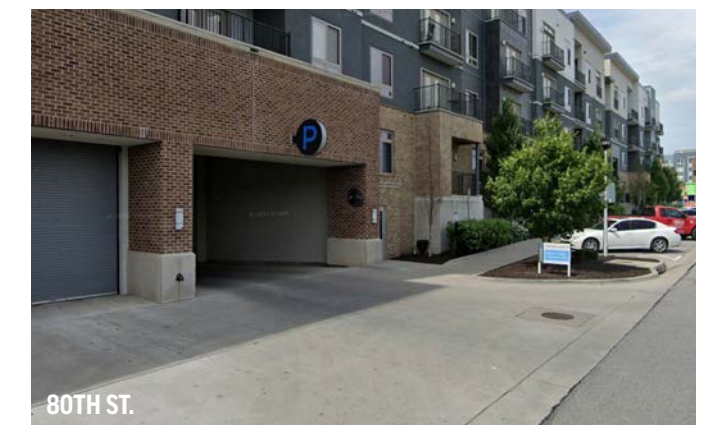
The precedent area manages parking at the site-level, while ensuring that parking does not dominate the frontage of each site along Metcalf Ave. Site 1 utilizes a blend of parking strategies tailored to meet the needs of a Mixed Use site, including on-street parking, structured parking, and a smaller internal surface lot. Site 2 utilizes surface parking lots, but only locates a small amount of parking to the side of the site while the majority of the parking is located to the rear of the site, thus maintaining an activated and pedestrian-oriented frontage and streetscape.



- Structured Parking
- On-Street Parking
- Surface Parking (Shared)
- Streets
- Alleys
- Mid-Block Pedestrian Paths



Surface parking accessed via Metcalf Ave., and the shared lot minimizes sidewalk and frontage interruptions.



Structured parking accessed via 80th St.

Vibrancy & Placemaking (Continued)

Frontage Design & Building Scale

The redeveloped sites on Metcalf Ave. mark a noticeable shift towards more human-scale and pedestrian-friendly design along the corridor. Both redeveloped sites feature street-front frontage, frequent entries, minimized curb-cuts, and high levels of ground floor transparency; features which increase safety and encourage walkability. While the block sizes are moderately-sized, pedestrian paths enhance connectivity throughout each site. Landscaping, bike infrastructure, and wide sidewalks increase the space dedicated to pedestrians and cyclists, and serves to buffer sidewalk users from nearby quick-moving traffic.



Design of building facade visually breaks up the scale into smaller components.

Street-Front frontage, frequent entries, and plentiful windows contribute to safer & activated streetscapes.

Site 1



Site 1

Building facade “steps back” above the ground level, contributing to a human-scale streetscape.

Landscaping softens the streetscape, contributes to stormwater management, and buffers pedestrians from passing vehicles.



Site 2

Highly transparent facade fosters walkability & safety.

Bike infrastructure supports multimodal transportation.

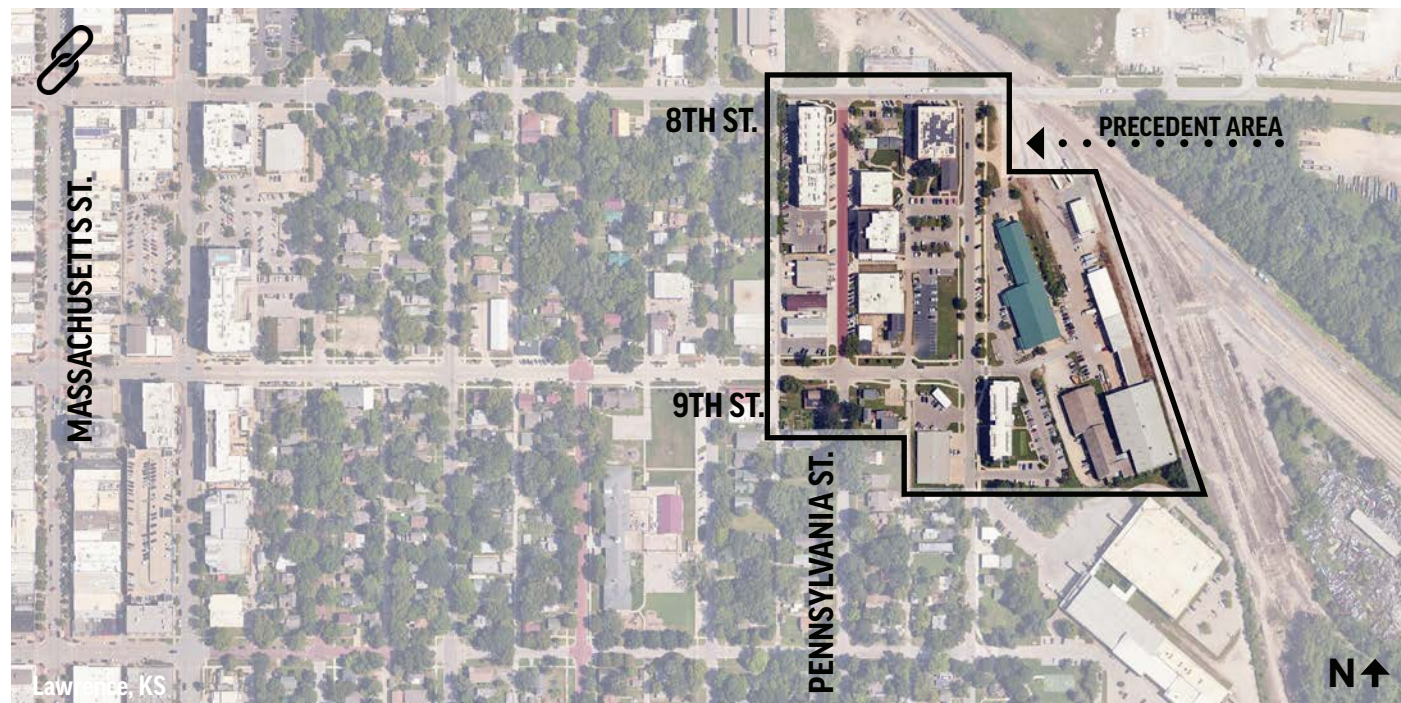
Warehouse Arts District, Lawrence, KS

Introduction

The Warehouse Arts District, in Lawrence, Kansas, is a mixed use district with a distinct artistic and artisan culture. Containing restaurants, a wine bar, a brewery, offices, art galleries and studios, an event space, maker spaces, artisan and light industrial businesses, and residences, this district is a walkable destination for residents of nearby neighborhoods while also attracting visitors from the Kansas City metro. The district is a walkable distance from Massachusetts Street, connected via the 9th Street Arts Corridor. Three mixed-income, mixed use buildings provide affordable housing units along with market-rate units, helping to combat gentrification in the area and providing housing within a walkable distance of jobs along the Mass. St. commercial corridor. The brick, turn-of-the-century, industrial architectural style of the district is preserved through rehabbed historic buildings and newer infill buildings that draw from the same palette of materials and design elements. The district's blend of residential units, offices and employment opportunities, and recreational destinations ensures a lively street-life and fosters a safe atmosphere.

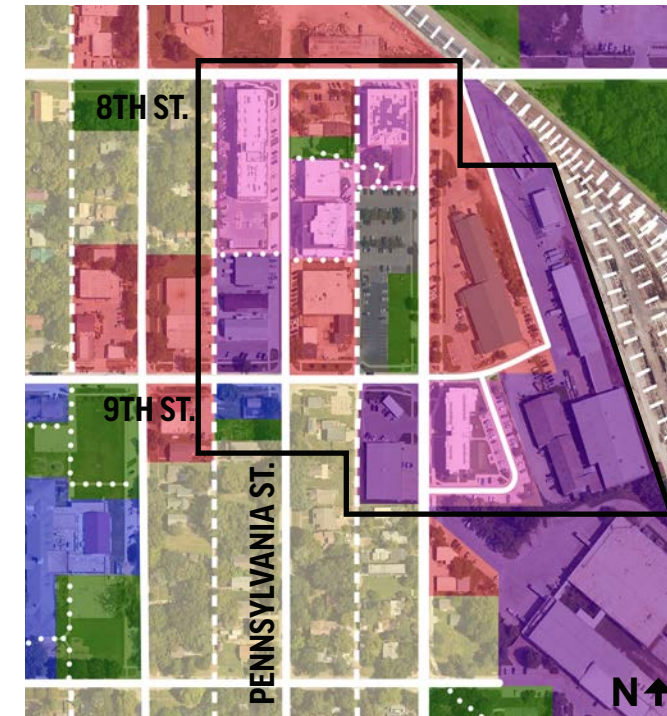


Location & Context

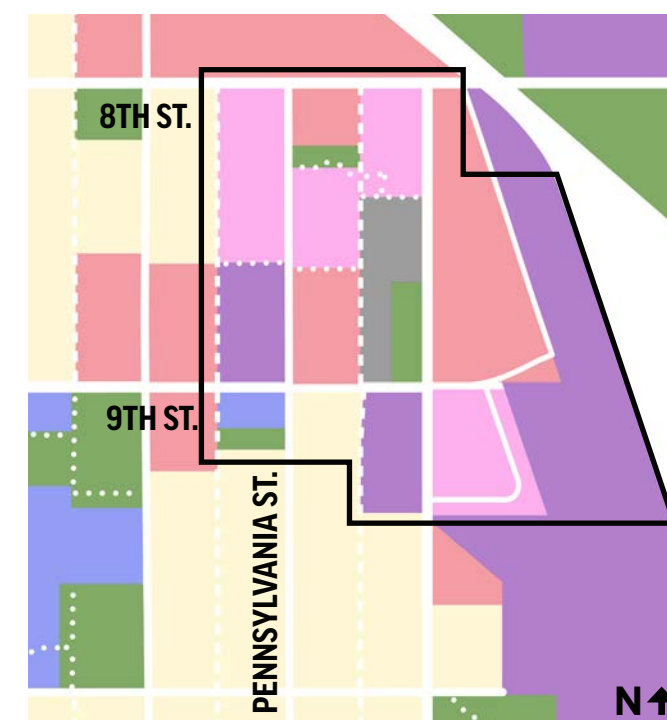


Vibrancy & Placemaking

Mix of Uses



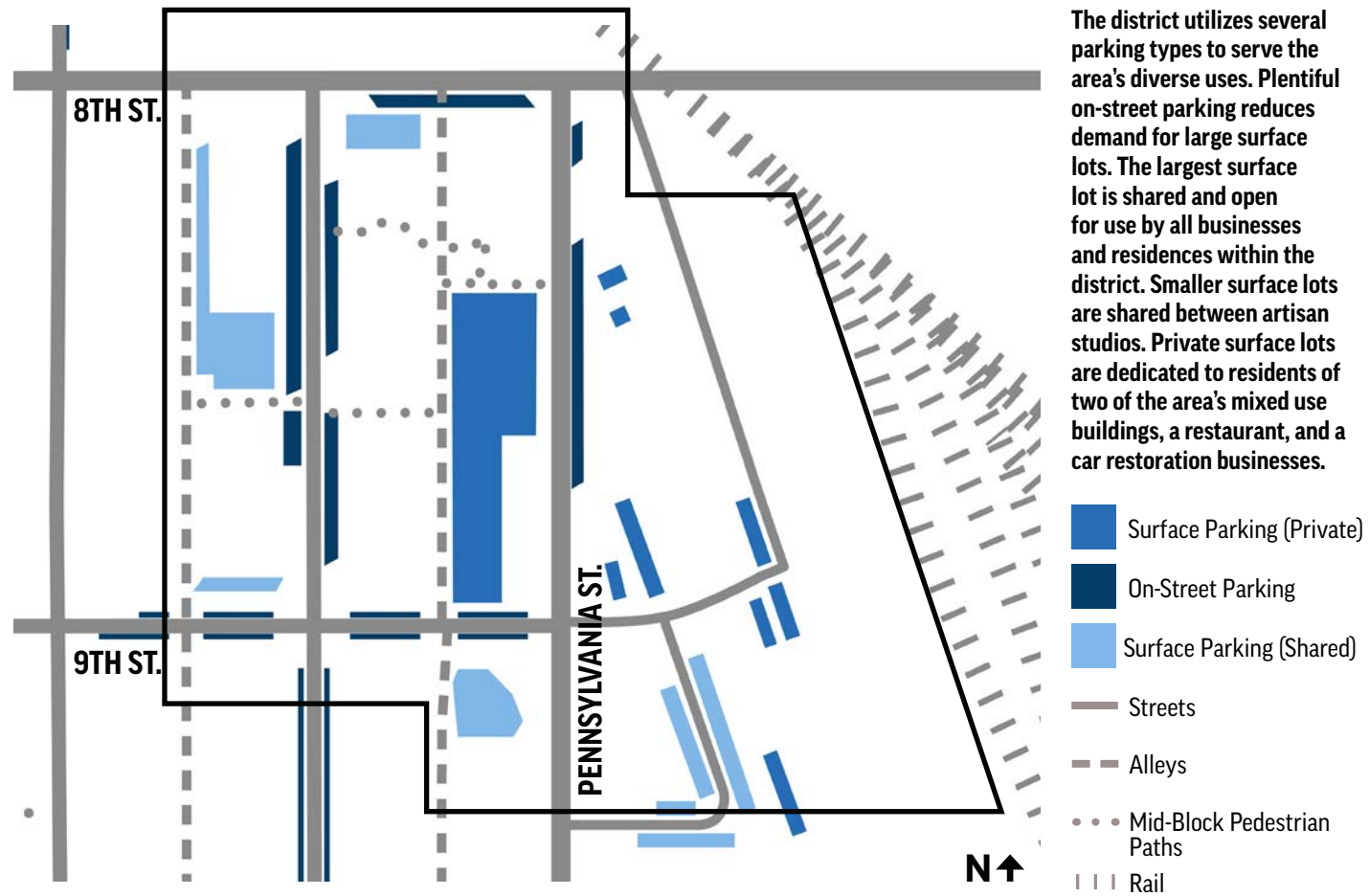
The precedent study area integrates a mix of uses, including mixed-density residential, mixed use buildings (which house multifamily residential units), and small-scale commercial, artisan, and light industrial uses. Small-scale open spaces and civic destinations are present within and adjacent to the precedent study area.



- Commercial
- Light Industrial / Artisanal
- Mixed Use
- Civic / Institutional
- Mixed Density Residential
- Open Space
- Streets
- Alleys
- Mid-Block Pedestrian Paths
- Rail
- Shared Parking

Vibrancy & Placemaking (Continued)

Optimized Parking Facilities

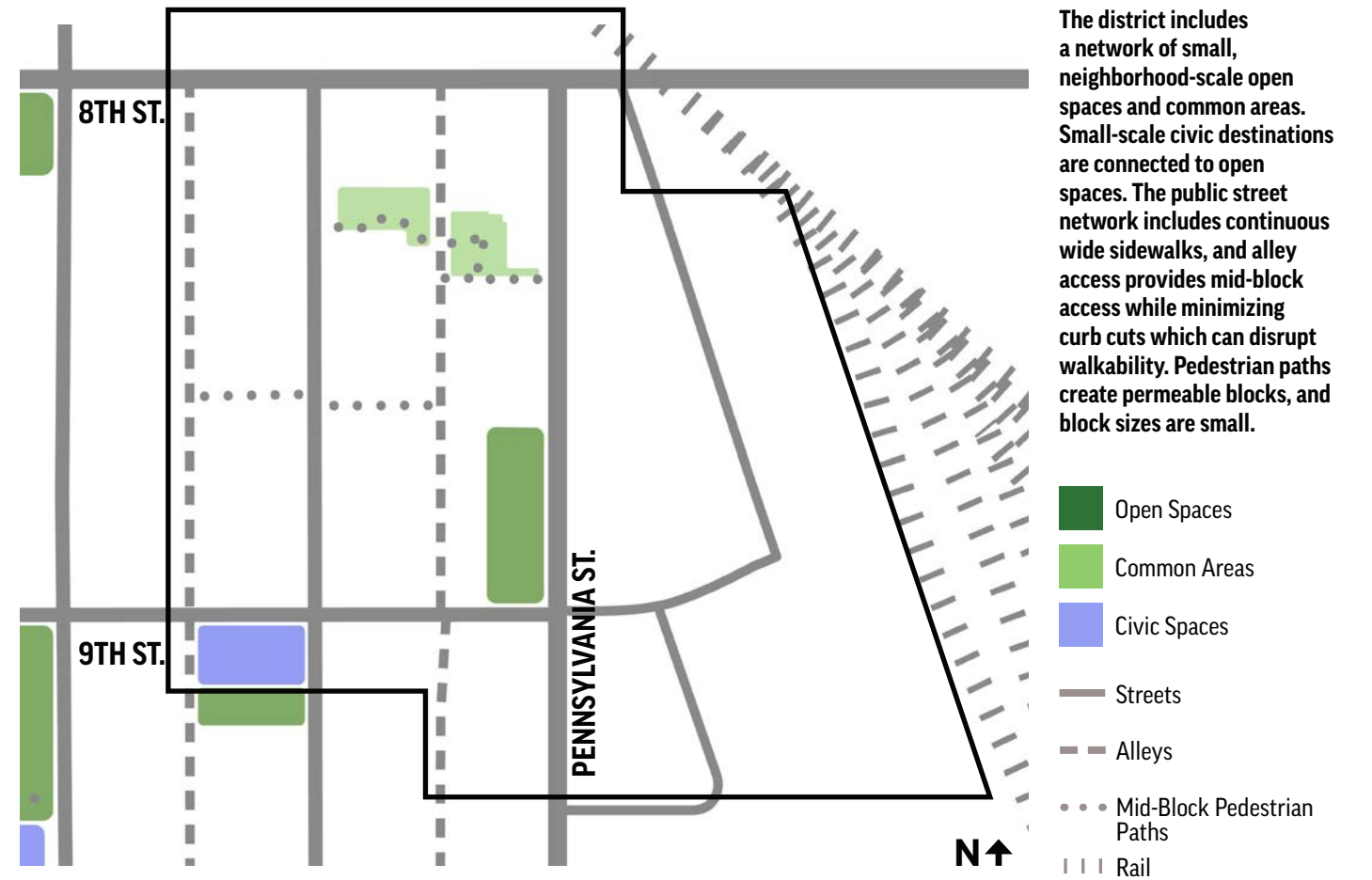


A mid-block pedestrian path leads to shared parking at the rear of this block.



On-street parking and street trees coexist throughout the district.

Common Areas & Public Space



A thriving community garden provides local food production.



Common area for gatherings includes another mid-block pedestrian path.

Vibrancy & Placemaking (Continued)

Frontage Design & Building Scale

Pennsylvania Street forms the “main street” of the Warehouse Arts District. Street-front frontage is consistent along Pennsylvania Street, but the blocks remain highly permeable for pedestrians and include small open and common areas, along with mid-block pedestrian paths. Each block is served by alley access and includes on-street angled parking. Public realm elements like small blocks, wide sidewalks, and street trees all work cohesively to encourage walkability. Consistent frontage design and compatible building scales allow the district’s blend of uses to harmoniously coexist. The district’s commercial, artisan, and light industrial uses are small-scale and low-intensity, and fit the district’s artistic and artisan culture. First-floor transparency is achieved through frequent entries and windows, and along with semi-private outdoor gathering spaces functions to foster a sense of activation and safety. The architectural design of newer buildings fits stylistically with the district’s historic buildings, contributing to a strong sense of place.



PENNSYLVANIA ST.

Artisan and light-industrial uses are small-scale and within low-rise buildings, ensuring that these uses do not negatively impact nearby residential lofts.



PENNSYLVANIA ST.

Street-Front frontage contributes to safer & activated streetscapes.



PENNSYLVANIA ST.

Larger mixed-use building steps down in height, includes variations in the facade, and incorporates frequent ground-floor entries to break down the scale of the building.



PENNSYLVANIA ST.

Blocks are small, and the frontage is punctuated by mid-block pedestrian paths and small open and common areas, and semi-private outdoor spaces.

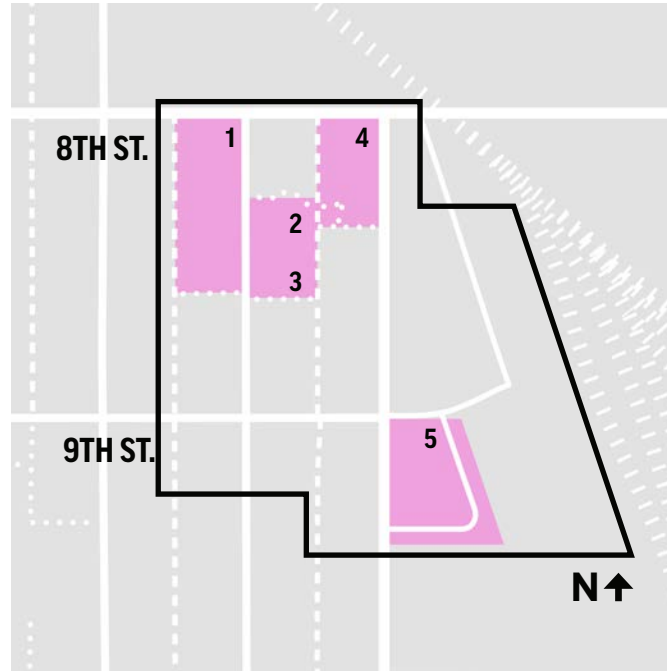


E 8TH ST.

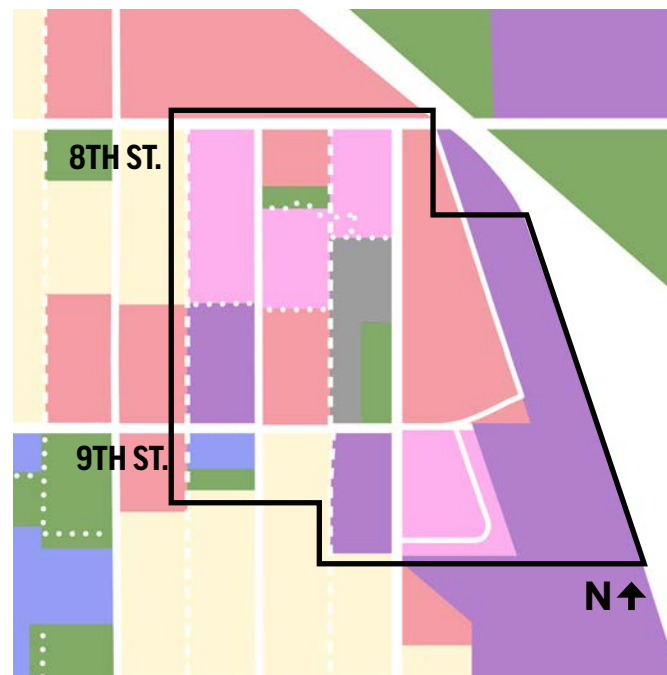
The medium-scale mixed-use building has street-front frontage. An alley next to the building helps to improve pedestrian comfortability while walking on sidewalks.

Integration of Housing

Mixed Use: Horizontal & Vertical



Mixed-income multifamily housing is integrated into the Warehouse Arts District precedent study area through five mixed use buildings (vertical mixed use) which house a blend of residential units with small-scale retail and maker spaces, an art gallery and event space, and restaurant and brewery spaces.



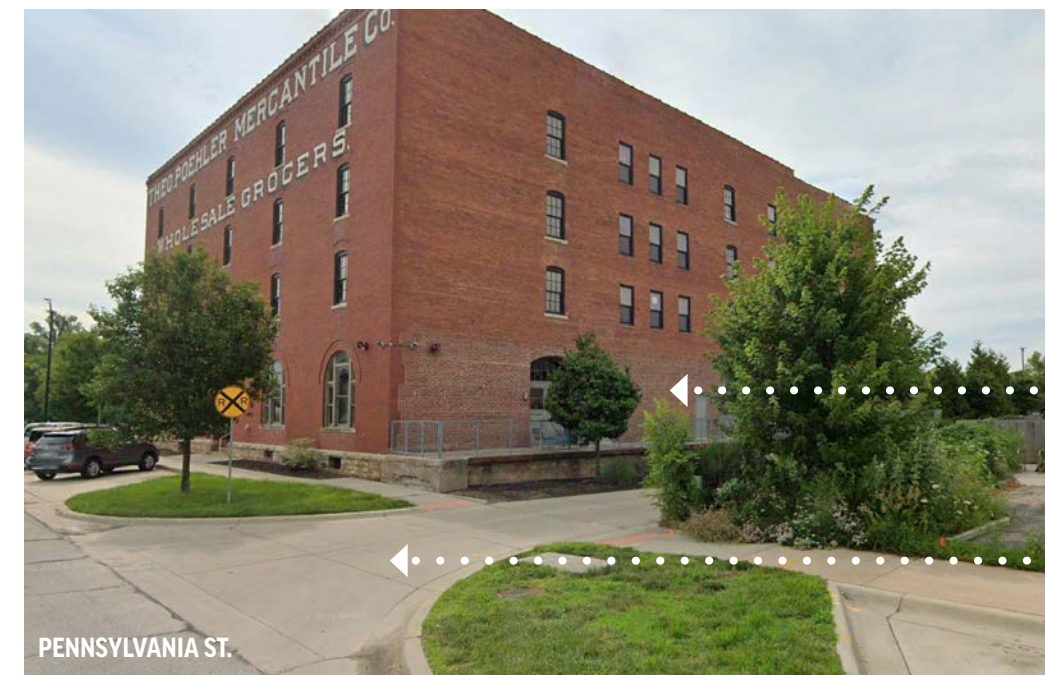
This precedent study area also exhibits horizontal mixed use through the integration of mixed-density neighborhoods (which blend neighborhood-scale detached homes, duplexes, detached homes with ADUs, and multi-unit houses), mixed use buildings containing multifamily residential units, and a blend of commercial, artisanal and light industrial, and civic uses.

- Commercial
- Light Industrial / Artisanal
- Mixed Use
- Civic / Institutional
- Mixed Density Residential
- Open Space
- Streets
- Alleys
- Mid-Block Pedestrian Paths
- Rail
- Shared Parking

Mixed Use: Vertical



The district's newest mixed use building includes commercial and residential uses on the ground floor with residential units above.



One of the district's mixed use, mixed-income loft buildings. Three of the district's five mixed use buildings include both affordable and market-rate residential units.

Alley Access

Glenwood Park, Atlanta, GA

Introduction

Glenwood Park is a 28-acre planned community in Atlanta, Georgia. This community contains neighborhoods, mixed use and commercial streets, and a network of interconnected public spaces. A connected street network is combined with an alley network and mid-block pedestrian paths to ensure that it is comfortably walkable. The community contains a blend of homes, retail and restaurants, offices, services, a school, and a grocery store: creating a fully complete neighborhood. Glenwood Park is a thriving example for creating complete, mixed use, and walkable communities in a suburban area.

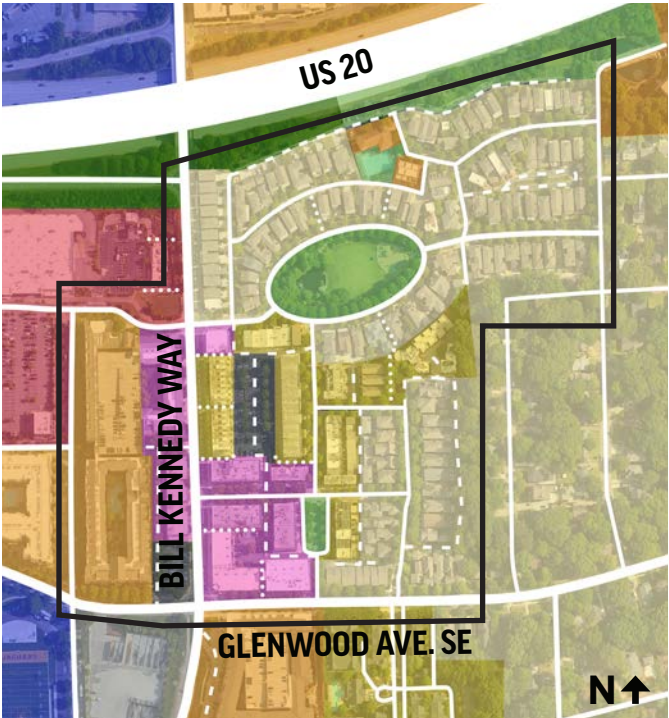


Location & Context

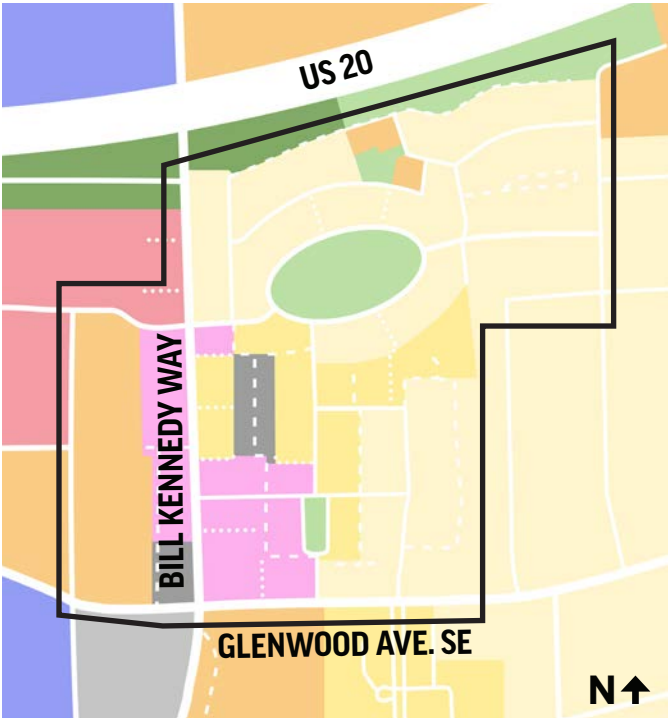


Vibrancy & Placemaking

Mix of Uses



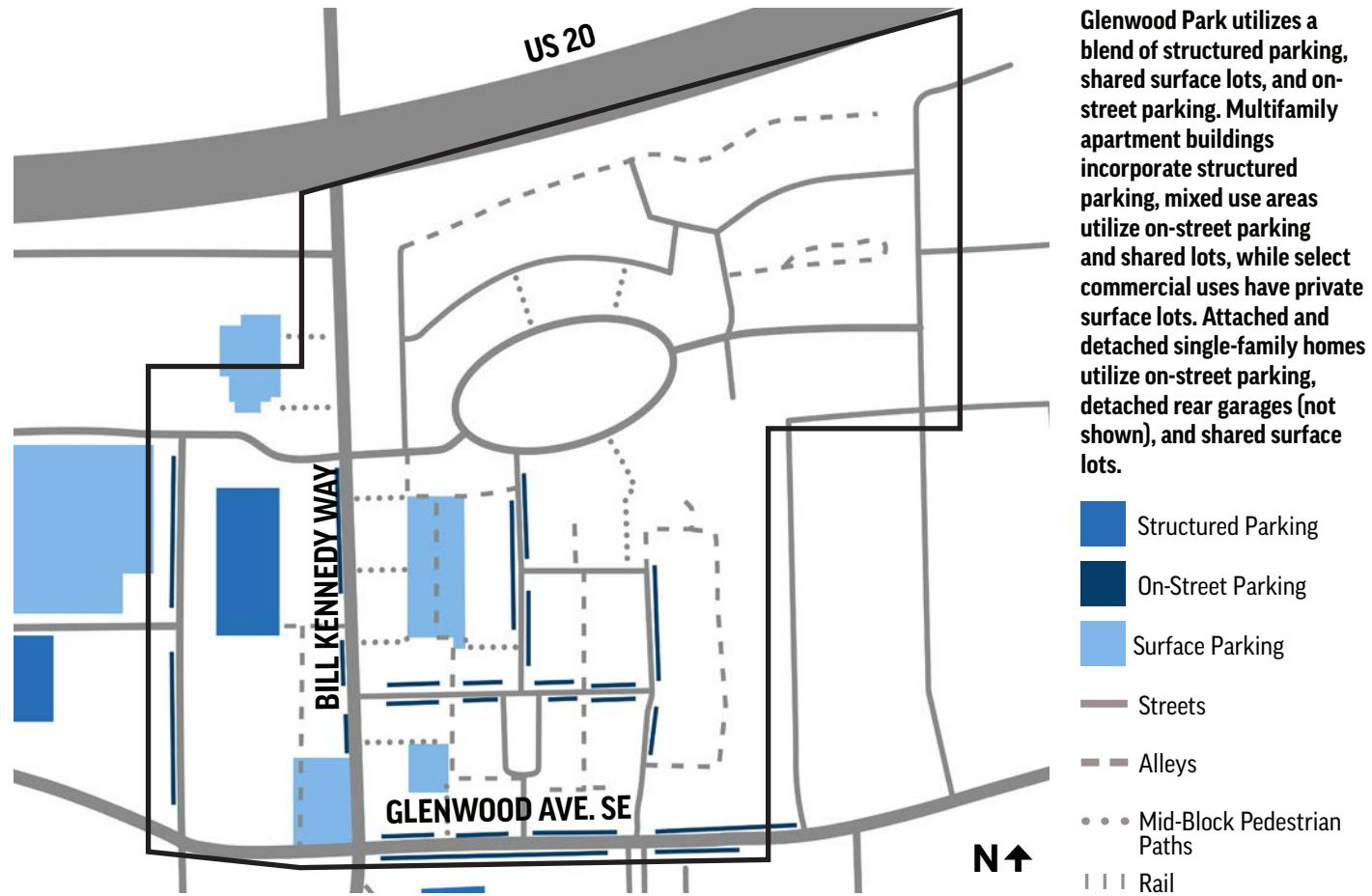
The precedent study area integrates a mix of residential and non-residential uses. Residential options include single family detached homes, attached single family homes (such as row homes and townhomes), multifamily apartment buildings, and mixed use buildings containing residential units. Non-residential uses include small-scale commercial, a diverse mix of services, amenities, and restaurants, and multiple parks and open spaces. A grocery store is within a walkable distance of the precedent study area: a critical component of a truly walkable, complete neighborhood.



- Commercial
- Mixed Use
- Multifamily Residential
- Attached Single Family Residential
- Detached Single Family Residential
- Civic / Institutional
- Streets
- Alleys
- Mid-Block Pedestrian Paths
- Rail
- Shared Parking
- Open Space

Vibrancy & Placemaking (Continued)

Optimized Parking Facilities

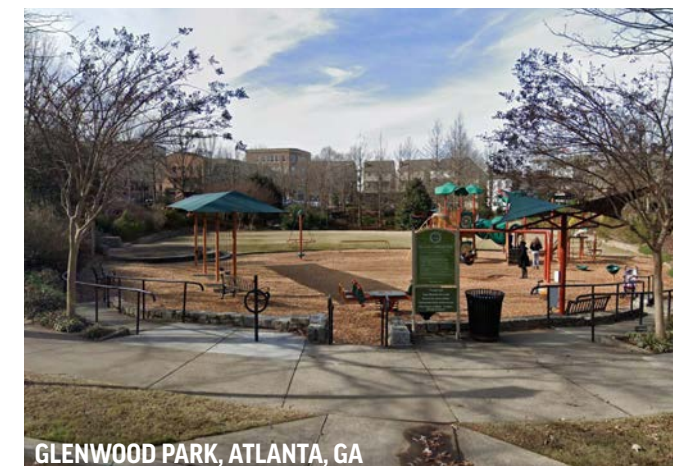


GLENWOOD PARK, ATLANTA, GA
On-street parking provides convenient access to businesses.

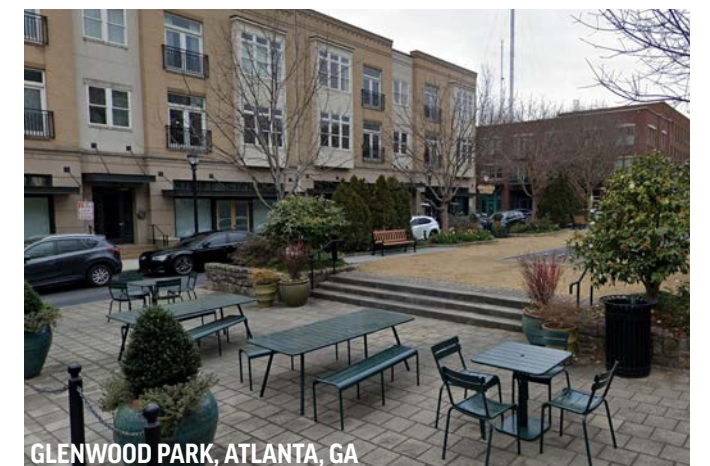


GLENWOOD PARK, ATLANTA, GA
A shared lot (located on the interior of a block) provides parking for row homes.

Common Areas & Public Space



GLENWOOD PARK, ATLANTA, GA
A larger central common area includes a lawn, playground, walking paths, and small lake.



GLENWOOD PARK, ATLANTA, GA
A central green with seating provides a gathering space.

Vibrancy & Placemaking

Frontage Design & Building Scale

The frontage design and relationship between building scales in this precedent area are tailored to create a harmonious mix of uses and a walkable, bikeable community. Residential neighborhood streets feature moderate to small setbacks, while mixed use and commercial areas feature street-front frontage or minimal setbacks. Mixed use areas ensure that mixed use and commercial building scales are compatible with adjacent residential buildings. Pedestrian paths connect to the street networks and serve to break down the scale of the blocks. Residential frontage includes plentiful windows, while commercial and mixed use areas include highly-transparent ground floors: elements which increase safety and walkability. Planters, a two-way cycletrack, and sidewalks create a balanced active-transportation oriented space and beautify the streetscape.



Similar scale of residential and mixed use buildings ensure harmonious transitions between uses.

Mid-block pedestrian path.

Protected cycletrack.



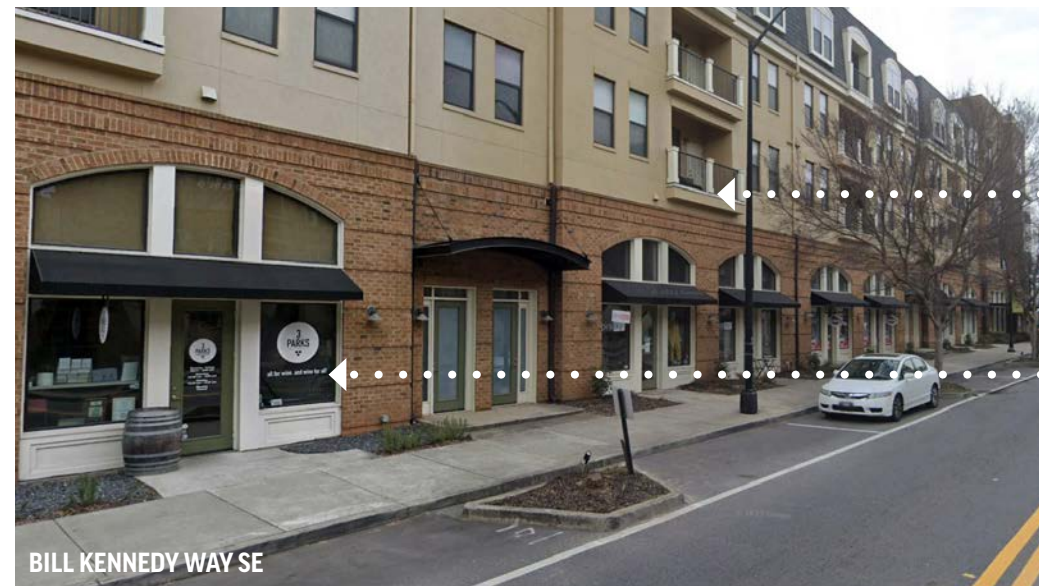
Street-Front frontage contributes to safer & activated streetscapes. Wide sidewalks provide space for outdoor seating.



Detached single-family homes feature a moderate setback and porches, with rear detached garages access via alleys.



Mixed use and commercial buildings feature a variety of compatible architectural styles within a one- to three-story scale.



Variety of materials and inclusion of decks serves to break down the scale of the building.

Frequent entries and transparent facade.

Integration of Housing

Mixed Use: Vertical



A mixed use building (vertical mixed use) houses small-scale commercial on the ground floor along with multifamily residential units above.

BILL KENNEDY WY SE & FAITH AVE SE

Mixed Use: Horizontal



One of many possible horizontal mixed use formats, townhomes are adjacent to a moderately scaled mixed-use building. Scale and architectural style ensures compatibility.

BILL KENNEDY WY SE



Two mixed use buildings with commercial on the ground floor and apartments above face a central green.

BRASFIELD SQUARE SE



Another format for horizontal mixed use, small-scale liner commercial buildings front onto the street while a multifamily residential building sits behind.

BILL KENNEDY WY SE

Community Discussion Starters

Vibrancy & Placemaking

- ▶ Consider how development standards for uses, lot size, building standards, design standards may differ based on different contexts and scales (multimodal vs. car-oriented, neighborhood-scale vs. regional-scale).
- ▶ How can we improve internal connections for large commercial sites and corridors that lack connectivity? How can development reorient towards pedestrians in areas that are transitioning into mixed-use environments?
- ▶ What design and placemaking elements are important to steer investment in new or existing mixed-use areas?
- ▶ What other design elements can we draw from existing exemplary places in Springfield (or neighboring communities) that exhibit “Quality of Place”? What design elements from places in Springfield and neighboring communities should we avoid?

Integration of Housing

- ▶ How can we promote residential uses in more non-residential districts, considering both “mixed use” buildings (i.e. residential above or behind non-residential) and residential-only (i.e. residential buildings integrated into mixed use contexts)?

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4

ENVIRONMENT & NATURAL FEATURES



Environmental and Natural Features can significantly contribute to the unique identities of regions, cities, districts and neighborhoods, and specific projects. Integrating natural and environmental elements into the development code can help strengthen the regional distinctiveness of Springfield, help beautify the city, promote environmentally functional site design, protect water quality, and preserve ecosystem services that minimize the impacts of new development. This section demonstrates how both the built environment – **Public Space Networks and Site Design** – can impact natural systems. An effective development code will seek to promote green design strategies in every project and at every scale, but also not allow any one strategy to compromise the development and urban design contribution of sites and buildings to larger-scale patterns.

Public Space Networks

Why are Public Space Networks important?

Public spaces are integral to a well-functioning built environment, and come in the form of streets, sidewalks, pedestrian paths, parks, natural areas, and public open spaces of all scales. By leveraging a city or region's natural assets and utilizing sustainable design practices, a community's network of open spaces can help to minimize many negative impacts of the built environment: urban heat, flooding, and high building operating costs. Integrating highly-efficient and "green" design practices into the design of public spaces also offers the opportunity to enhance the aesthetic quality of Springfield, improve local water quality, and create inviting, walkable streets.

What does Forward SGF say about Public Space Networks?

Forward SGF calls for the protection of Springfield's unique natural assets by promoting low-impact development, "greening" the city, protecting and improving water quality, and prioritizing Springfield's recreational open spaces for locals and visitors alike.

How can the Community Development Code impact Public Space Networks in Springfield?

The Community Development Code can impact the design of streets and other public spaces, to incorporate and protect the natural environment.

Public Space Networks: Key Terms

A Light Imprint Development

A comprehensive site and building design strategy that minimizes the impact of the built environment on natural systems, particularly water, by utilizing approaches calibrated to a variety of contexts from urban to rural. The concept involves four considerations: paving, channeling, storage, and filtration. Site design strategies should complement water management systems and needs within the public realm, including green infrastructure, on-site water containment, and reduced impervious surfaces.

B Street Trees

Street trees are planted in the public right-of-way along city streets. Street trees are critical urban infrastructure: providing stormwater management, improving air quality, stabilizing or raising property values, enhancing beautification, and providing shade. Without street trees, undue strain is placed on traditional "gray" infrastructure and building systems.

C Water Management

The control and movement of water resources to minimize damage and to maximize efficient beneficial use of water.

D Impervious vs. Pervious Surfaces

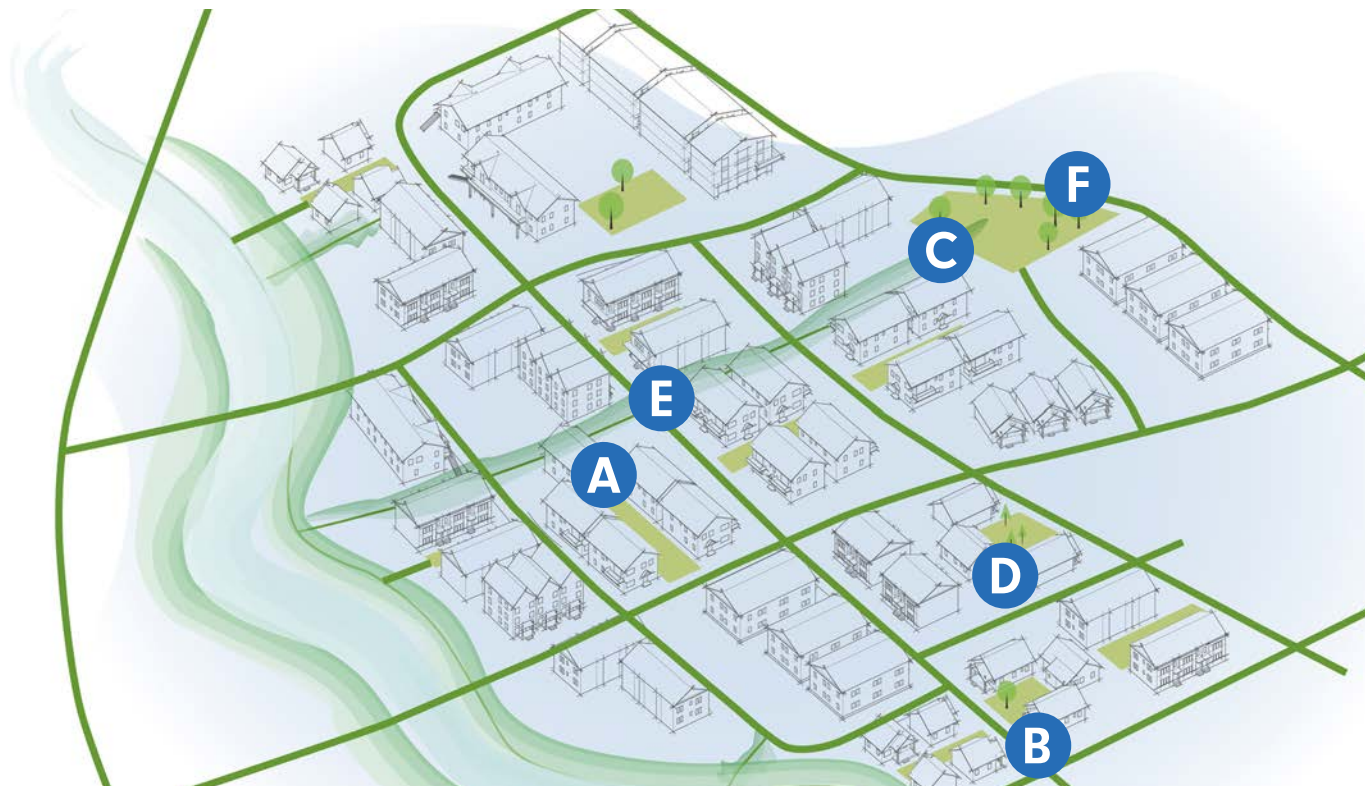
Pervious surfaces allow rainwater to absorb into the ground where it falls, rather than becoming runoff. Impervious surfaces are impenetrable surfaces that prevent water percolation, resulting in a number of harmful side effects including overwhelming sewer systems, causing flash flooding events, and decreasing water quality.

E Green Infrastructure

Green infrastructure is an approach to stormwater management that utilizes nature-based systems to filter stormwater back into the ground where it falls, allowing the stormwater to pass through layers of filtration materials and finally back into the groundwater system. This mitigates flood risk, improves water quality, and reduces demands on traditional "gray" infrastructure. Familiar examples may be rain gardens, street trees, and bioswales, though there are many more different types of green infrastructure strategies available.

F Open Space Typologies

Open space typologies refers to a defined set of different categories of open spaces, and form the building blocks of a public space network. Open space typologies include trails (greenways, multi-use trails (on and off-street), and nature trails), parks (mini-parks, neighborhood parks, community parks, school parks, and sports complexes), natural open spaces (bodies of water, prairies, wetlands, floodplains, and wooded areas), and civic and social spaces (greens, squares, plazas, courtyards, gardens, and streetscapes).



Site Design

Why is Site Design important?

In the past, development codes have either viewed development and environmental assets as being in opposition to one another, or have relegated these issues to site design strategies that resort to “the greener, the better,” ignoring the larger context. The alternative is to consider how natural assets and systems can support development (and vice versa), by using design strategies tailored to different contexts. This approach can preserve a community’s unique natural features, while also supporting development and redevelopment. From landscaping, building efficiency, impervious to pervious surface ratio, to site and building location -- there are many techniques that can ensure that site design plays a role as important as public spaces do in establishing harmony between the natural and built environment.



What does Forward SGF say about Site Design?

Forward SGF calls for the protection of Springfield's unique natural assets by promoting low-impact development and sustainable site design.

How can the Community Development Code impact Site Design in Springfield?

Site and building performance and sustainability will be influenced significantly through the Community Development Code, particularly through sections regarding landscaping, parking, and building design.



Site Design: Key Terms

A Light Imprint Development

A comprehensive site and building design strategy that minimizes the impact of the built environment on natural systems, particularly water systems, by optimizing paving, channeling, storage, and filtration. Site design strategies should complement water management systems within the public realm, including green infrastructure, on-site water capture, and reduced impervious surfaces.

B Net Zero Development

A development strategy that results in developments which remove as many greenhouse gas (GHG) emissions from the environment as they contribute, “netting” zero emissions. This is achieved through highly-efficient building design, minimizing embodied carbon through material choices, using green infrastructure and native landscaping to reduce reliance on traditional “gray” infrastructure, reusing water and other resources on-site, among other techniques.

C Recycled and Sustainable Materials

Exterior and interior construction materials sourced from previous construction uses or other recycling sources. Examples of materials that can be recycled include brick, steel, timber, windows, and tiles.

D Natural Ventilation and Solar Energy

Natural ventilation uses building design and orientation to provide it with fresh air (without heavy reliance on air conditioning). Solar energy is generated from solar panels to provide on-site energy generation. These strategies reduce a building’s reliance on the power grid, while also significantly lowering operating costs.

E Site & Building Context & Orientation

The context and orientation of a site or building also impacts its effect on both local environments and public spaces. Building orientation can affect energy demands and ventilation, while site

context and orientation affects the streetscape and site users access (or lack of access) to destinations via transit, walking, or biking. These impacts not only affect the environment, but also dramatically impact a site or building costs, such as energy bills and transportation costs to users or residents.

F Water Management

The control and movement of water resources to minimize damage and to maximize efficient, beneficial use of water.

G Impervious vs. Pervious Surfaces

Pervious surfaces allow rainwater to absorb into the ground where it falls, rather than becoming runoff. Impervious surfaces do not absorb water, resulting in harmful side effects including overwhelming sewer systems, flash flooding events, and poor water quality.

H Green Infrastructure

Green infrastructure is an approach to stormwater management that utilizes nature-based systems to filter stormwater back into the ground where it falls, allowing the stormwater to pass through layers of filtration materials and finally back into the groundwater. This mitigates flood risk, improves water quality, and reduces demands on traditional “gray” infrastructure. Familiar examples may be rain gardens, street trees, and bioswales.

I Native Landscaping

The use of native plants in landscaping provides ecosystem services such as stormwater management, pollination, and shade.

J Urban Farming & Community Gardening

The practice of growing fresh foods like fruits and vegetables in a suburban or urban environment. Community gardens are shared spaces, while urban farms are typically operated privately or by non-profits. Vacant lots, parks, school grounds, yards, and rooftops are some of the spaces that provide opportunities for urban food production.

Precedent Studies

[Click to explore this precedent on Google Street View.](#)

Carlton Landing, Eufaula, OK

Introduction

Carlton Landing is a planned community located by Lake Eufaula in Oklahoma. "Green" design is central to the design of this community, and by prioritizing "light imprint" strategies the community has saved millions of dollars in development costs while enhancing design. Carlton Landing seamlessly blends efficient and sustainable site design with a robust public space network (streets, alleys, parks, and pedestrian paths), illustrating how private and public space can work in tandem to preserve and enhance a community's unique natural assets while using nature-based infrastructure techniques.



Location & Context



Public Space Networks

Carlton Landing's public space network is intentionally designed to prioritize pedestrian activity and infrastructure simultaneously. The community is designed around a system of parks of many sizes, connected by pedestrian paths and walkable green streets. Many of the community's homes do not front on to a public street, instead facing onto parks and pedestrian paths. To ensure safe and slow neighborhood streets, the street network is laid out in small increments to increase stop and yield points for drivers and lane widths are no more than 9.5'. Alleyways provide garage access behind homes while also providing critical stormwater infrastructure. The community's public spaces include natural parks and trails, playgrounds, sports facilities, a farmer's market, and a lake-front beach.

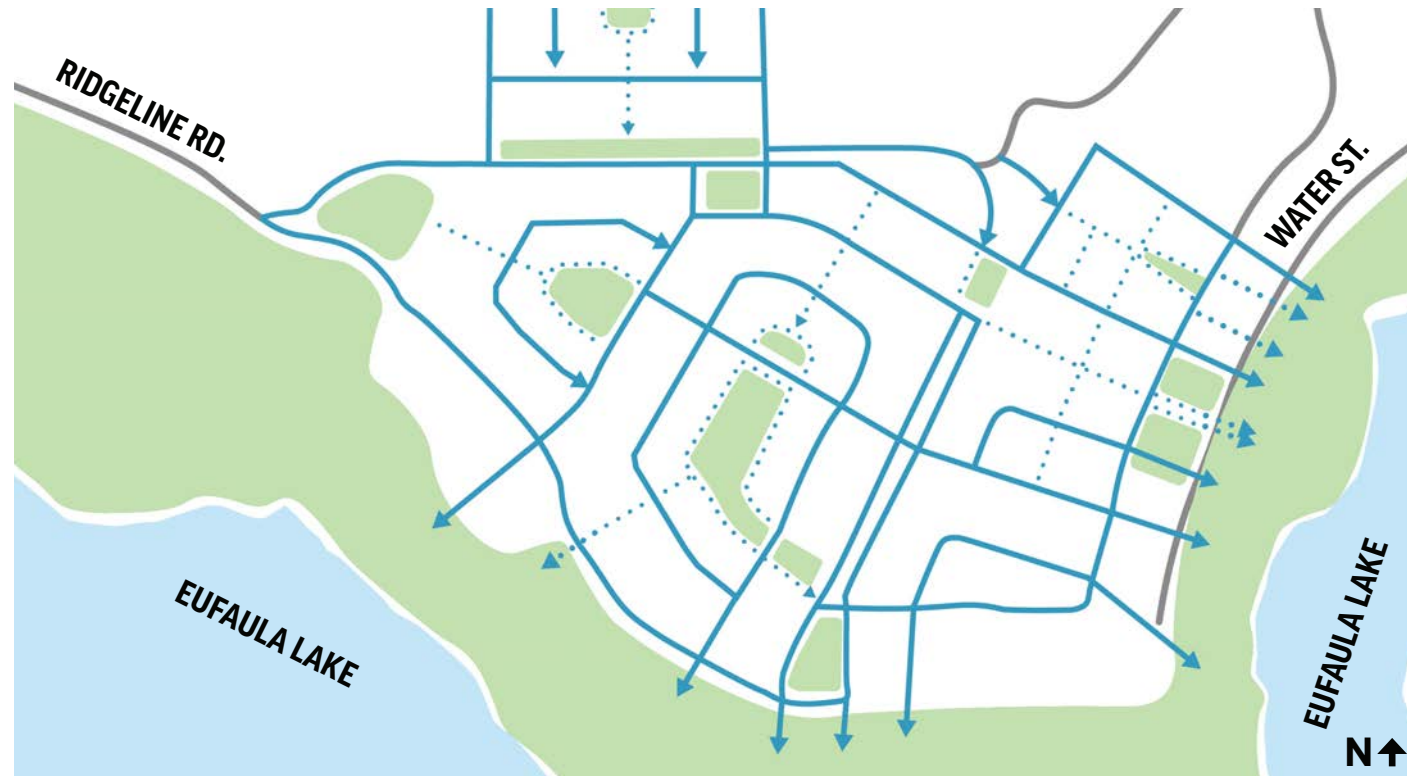


Low-impact design principles are central to the design of this community. A network of linear green and parks, connected via pedestrian paths and a green street network, lead to the lakefront, where there are trails near the water.

- Natural Open Space
- Parks & Greens
- Civic Spaces
- Pedestrian Paths
- Green Streets

Public Space Networks (Continued)

Water Management & Green Infrastructure

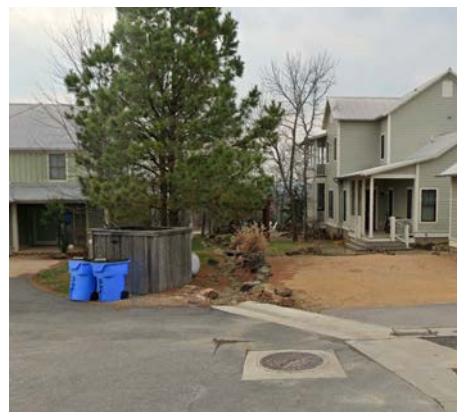


The street, alley, and pedestrian path network throughout Carlton Landing not only serves transportation needs, but it also directs the flow of stormwater throughout the community. Arrows in the diagram above indicate the direction of the flow of stormwater based on the site's topography. The design of the community's streets, alleys, and pedestrian paths allows stormwater to flow through the network and back into parks and open spaces, and the nearby lake -- mitigating flood risk, protecting water quality, and reducing the need for traditional infrastructure.

- Parks & Open Space
- ⋯ Pedestrian Paths
- Green Streets & Alleys



A bioswale in the median directs stormwater towards the lake.



An alley terminates in a bioswale.



A street-side bioswale directs stormwater away from homes.

Open Space Typologies

The following photos illustrate several of the open space typologies found throughout Carlton Landing:



Pedestrian Pathway



Neighborhood Street with Sidewalks



Community Garden



Central Courtyard



Lakefront Open Space



Public Bocce Ball Courts

Public Space Networks & Site Design

Water Management & Green Infrastructure



Street-side green infrastructure (bioswale).



Pervious pavers & tree pits in the parking lane.



Native landscaping is used private property and in the public right-of-way.



Raised, pervious sidewalks allows stormwater to flow through and underneath.

Recycled & Sustainable Materials



Built structures in Carlton Landing utilize an array of recycled, sustainable materials, including timber, brick, steel, etc.

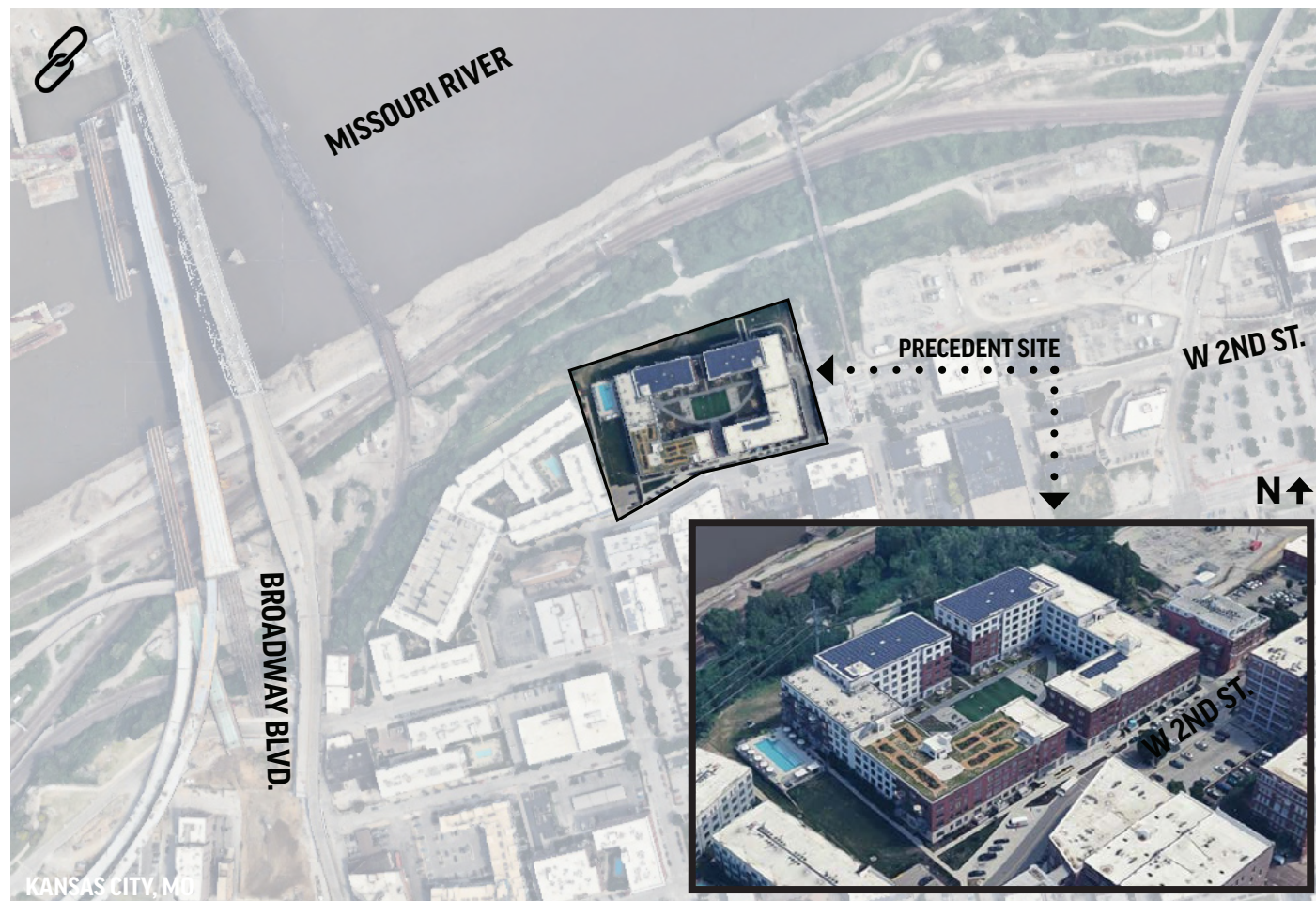
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Second + Delaware Apartments, Kansas City, MO

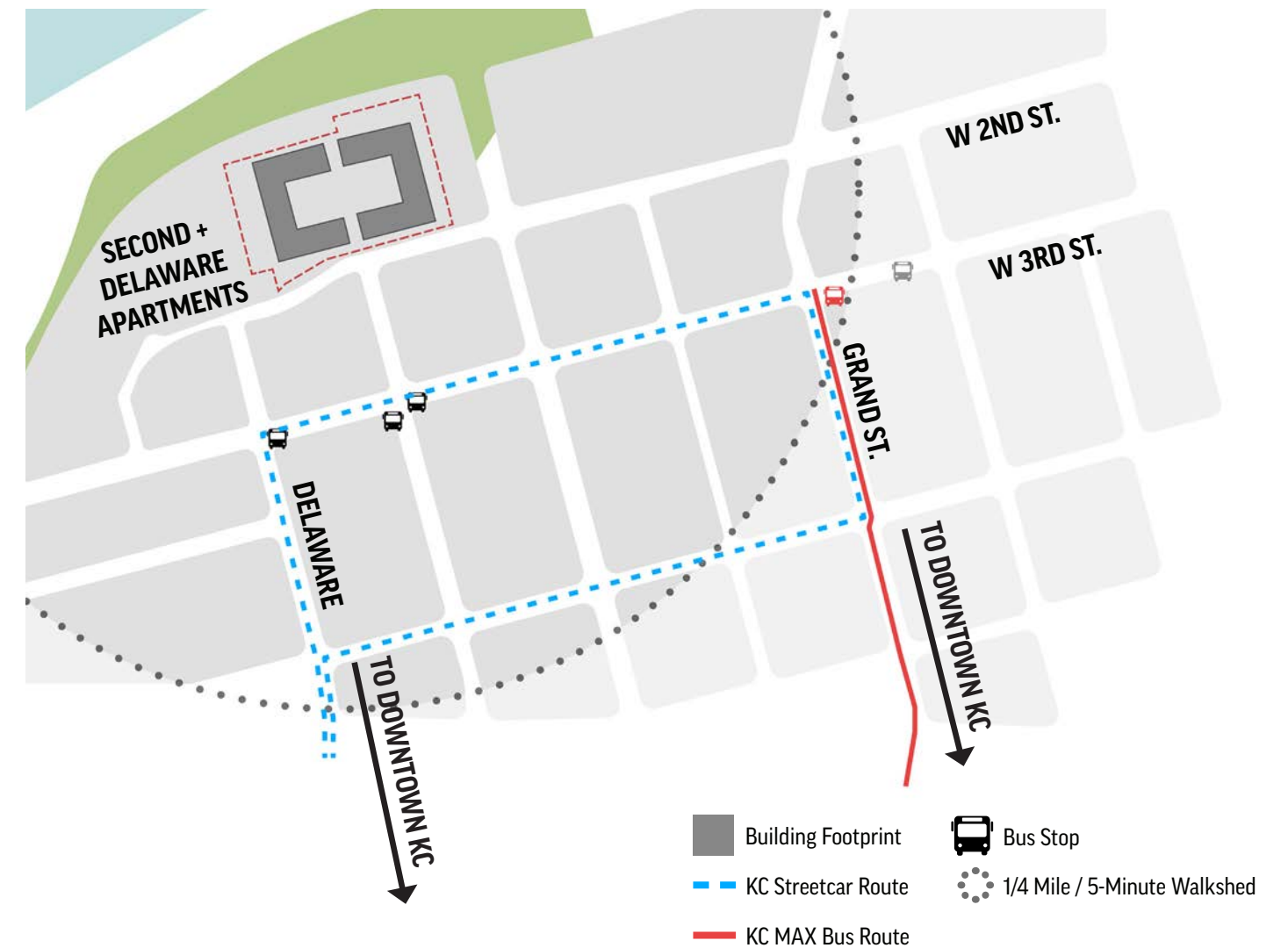
Introduction

Second + Delaware Apartments is a multifamily residential building located in Kansas City's River Market District. This building is one of the largest Passive House developments worldwide, and is so efficiently designed that it consumes 92% less energy than a comparably-sized but traditionally-built building would consume. Its location ensures that residents can easily access the local River Market amenities, parks and open spaces, bus transit, and the city's streetcar system. A green roof, central courtyard, and other recreational spaces are provide common areas for residents while mitigating effects from the site's impervious surfaces. The building is the winner of the Passive House Institute US Award for Community Development.

Location & Context



Site & Building Context



The site location and context of the Second + Delaware Apartments impacts the development's sustainability while providing amenities to residents. The development is located within easy walking distance of multiple transit opportunities: the KC Streetcar, the RIDEKC MAX route, and multiple bus stops. Not only does this help to reduce the building's indirect GHG emissions from transportation, but it can help reduce transportation costs for the building's residents, as well as promote community health by encouraging walking and biking as reasonable transportation choices.

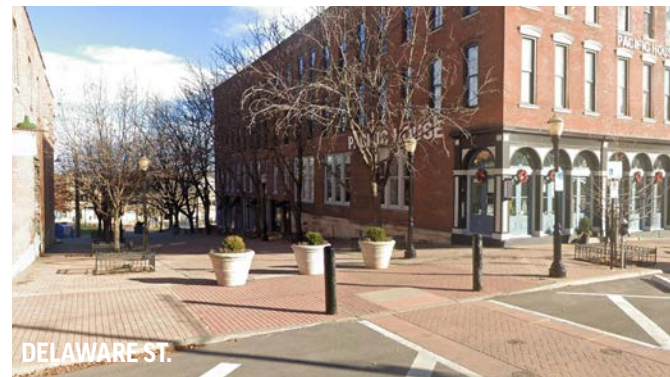
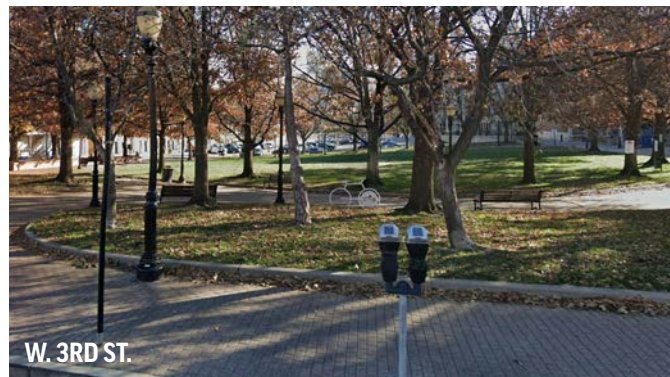
Public Space Networks

Open Space Typologies



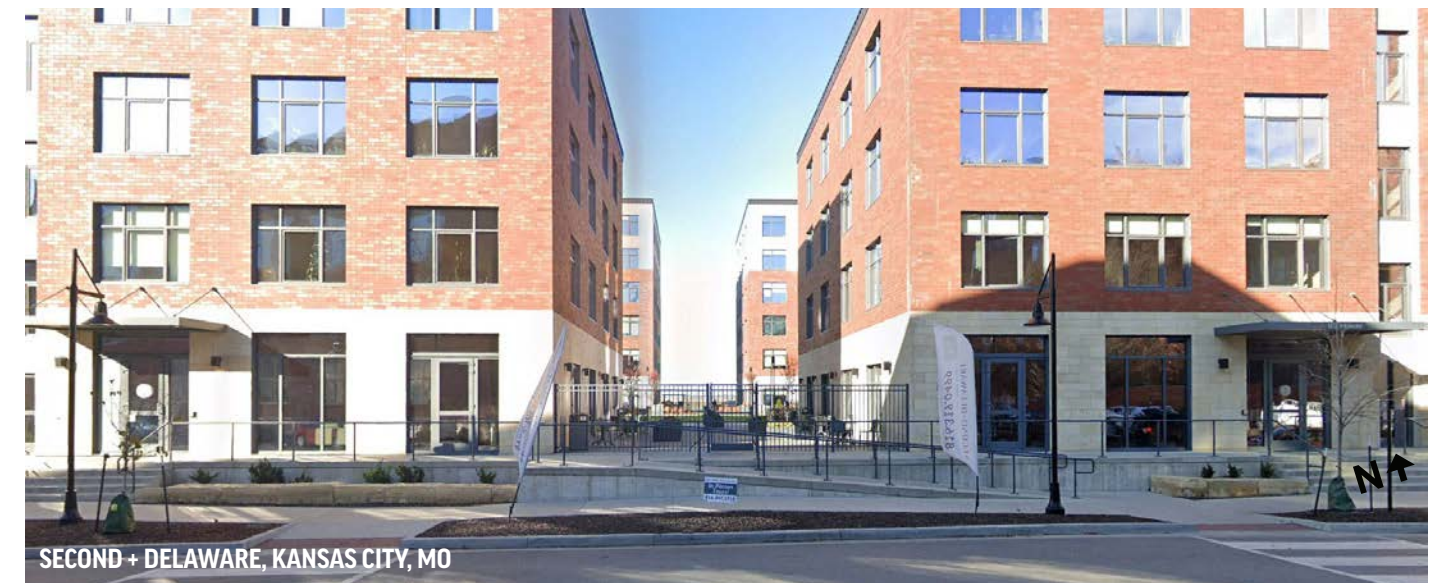
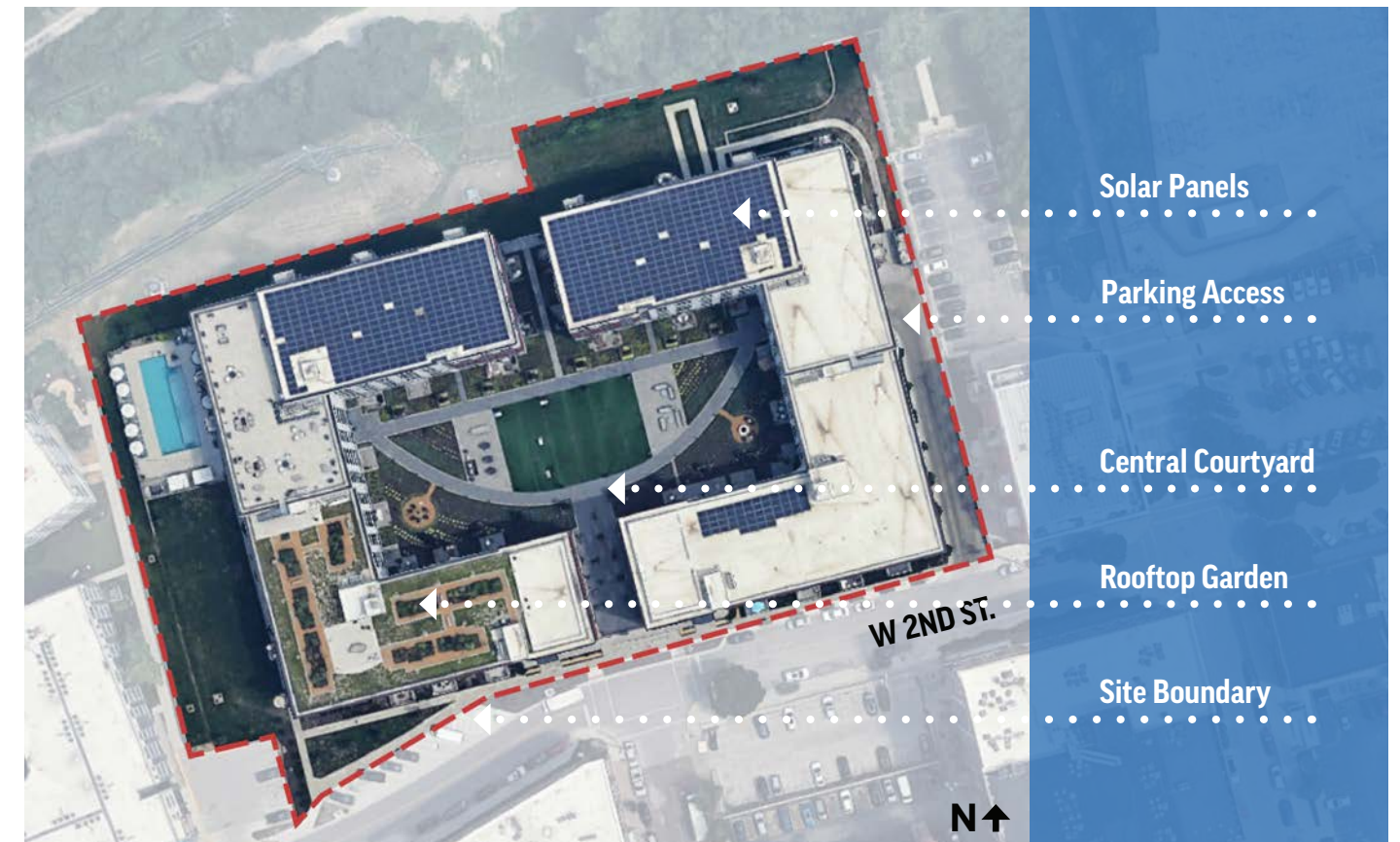
Second + Delaware includes private green space on-site, but is located within a walkable distance (noted by the 1/4 mile walkshed radius on the graphic above) of public parks and open spaces as well as civic destinations, including a local farmers market. Additional public spaces (alleys & pedestrian paths) help to connect residents to these public spaces.

- Parks & Open Space
- Civic Spaces
- Streets
- Alleys
- 1/4 Mile / 5-Minute Walkshed
- Pedestrian Paths







Site Design (Continued)

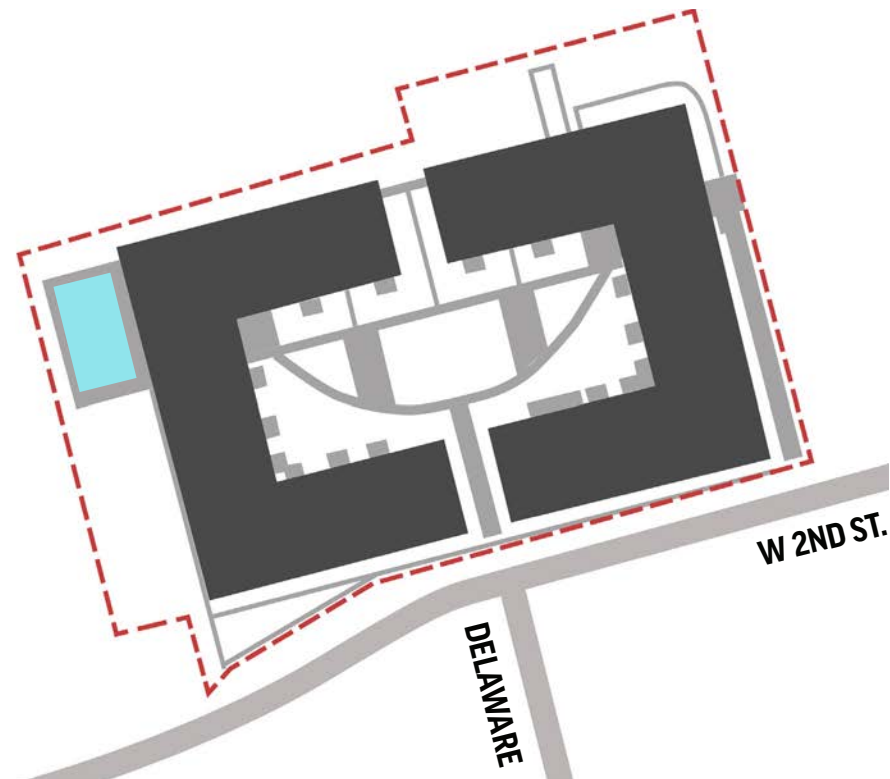
Site Plan



Impervious Surfaces

Impervious surfaces on the site include the building footprint, recreational pool area, sidewalks, and parking access drive. A green roof and on-site green infrastructure mitigates the impact of the impervious surfaces.




-  Paved Streets / Paths
-  Building Footprint
-  Pool
-  Site Boundary

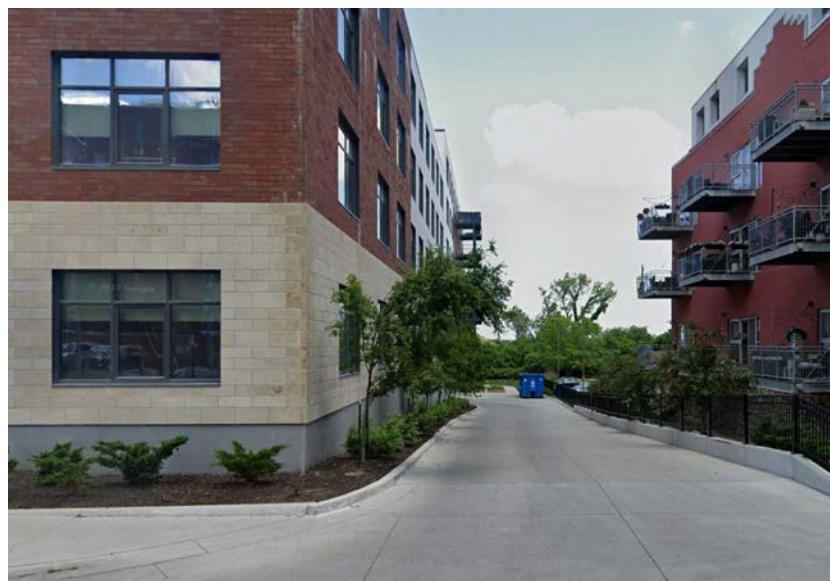
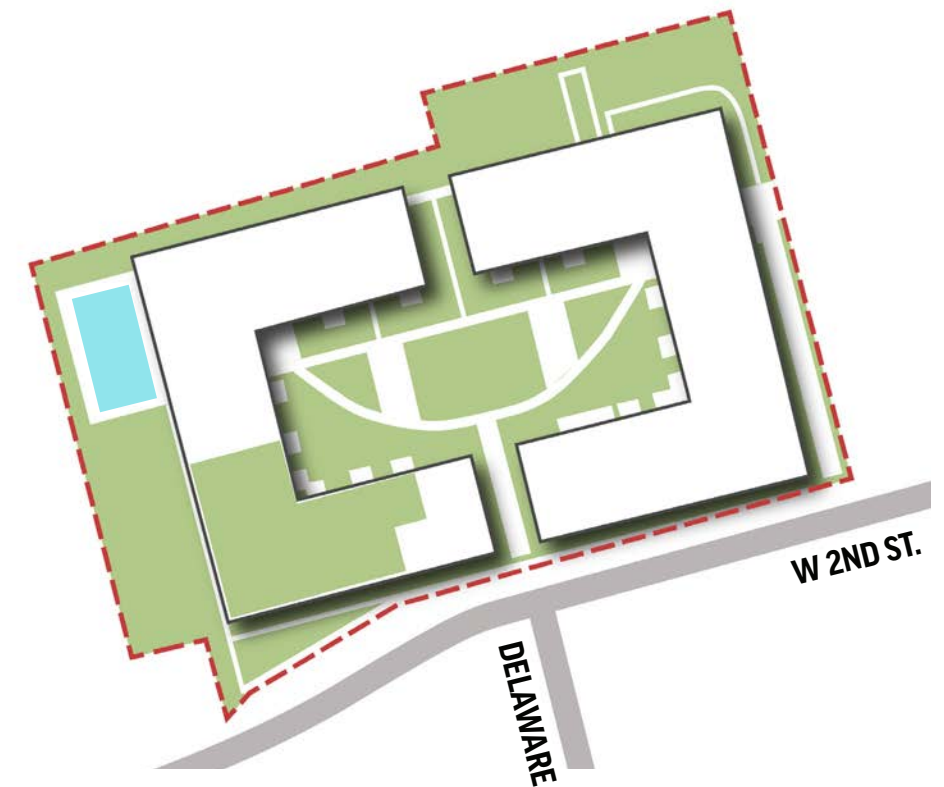


Site Design (Continued)

Pervious Surfaces

Despite the site's small footprint, landscaping mitigates the site's impervious surfaces. A landscaped central courtyard features green infrastructure as well as gathering space for residents. A green roof captures rainwater and provides space for gardening. Green space surrounding the site creates a buffer between the residences and adjacent properties.

-  Open Space
-  Pool
-  Site Boundary



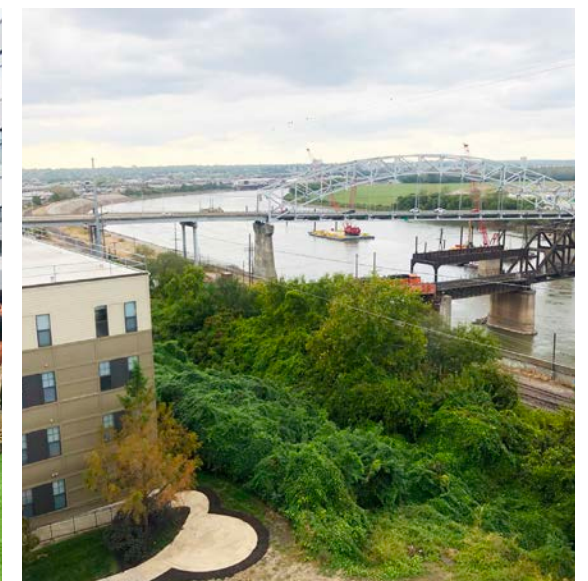
Parking Garage Access Drive



On-Site Sidewalks

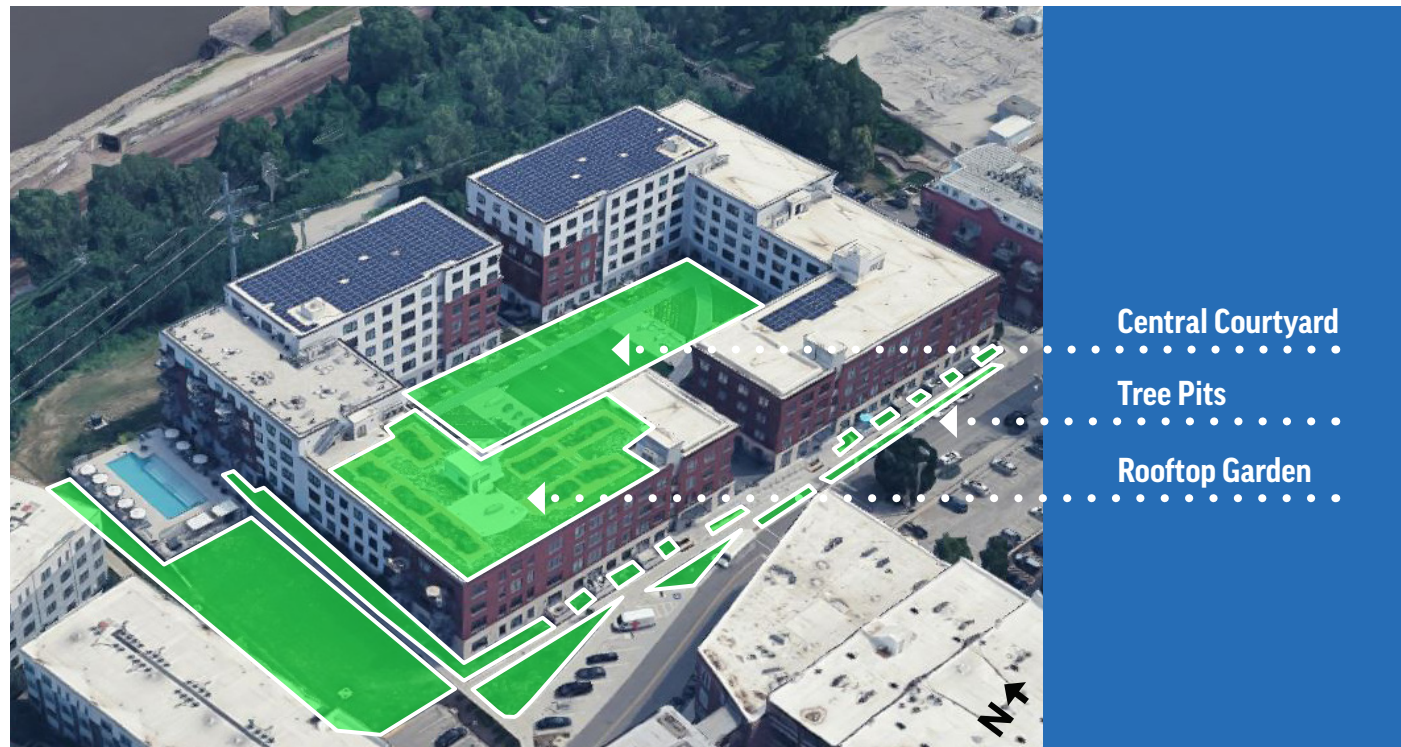


Central Courtyard

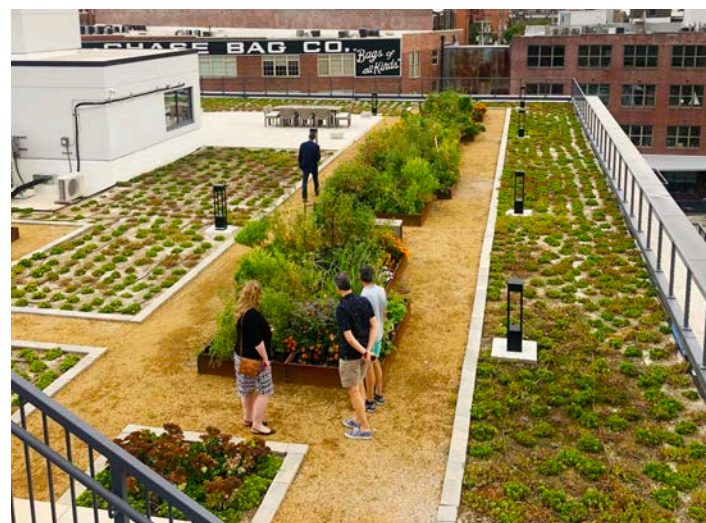


Natural Buffer Green Space

Green Infrastructure & Urban Farming



The development's central courtyard provides green infrastructure benefits while also providing a gathering space for residents. The green roof includes rooftop gardening space for residents.



Rooftop Garden



Central Courtyard

Site Design (Continued)

Highly-Efficient Design and Solar Energy



The building's highly-efficient and insulated Passive House design results in a building that consumes 92% less energy than a traditionally-built comparable building. This means that residents pay significantly lower energy bills.



Solar panels on the roof provide on-site energy production.



Triple-glazed high-performance windows and 16"-thick insulated walls.

Community Discussion Starters

Public Space Networks

- ▶ How can street trees enhance streets as “linear parks” and increase Springfield’s urban forest through standards that take into account context, standards, specifications, and preservation?
- ▶ How can we promote a wide range of natural and open spaces to support development, including public, common, and private spaces?
- ▶ Consider a system of open space typologies for Springfield, similar to *Forward SGF’s* street typologies. What open space typologies would serve Springfield’s communities, ecology, and add to “Quality of Place”? For example:
 - ▶ Trails: Greenways, multi-use trails (on- & off-street), nature trails.
 - ▶ Parks: mini-parks, neighborhood parks, community parks, school parks, sports complexes.
 - ▶ Natural Areas: water bodies, prairies, wetlands, floodplains, woodland areas.
 - ▶ Civic & Social Spaces: greens, squares, plazas, courtyards & gardens, streetscapes.

Site Design

- ▶ What standards and guidelines will ensure longevity of landscape investments and promote landscapes that serve both aesthetic goals and provide ecosystem services?
- ▶ What considerations are important for coordinating site and landscape design with streetscapes and a broader system of landscapes and open spaces?
- ▶ How can we promote a wide range of natural and open spaces to support development, including public, common, and private spaces?

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