



HARRIS COUNTY

# Harris County

Residential  
Development and  
Design Standards  
for Imagination  
Zones



# Harris County Residential Development and Design Standards

PREPARED BY:



EHRA ENGINEERING

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## INTRODUCTION

# Introduction

## HURRICANE HARVEY

Hurricane Harvey began as a tropical storm on August 17, 2017. The storm was downgraded to a tropical wave and then restrengthened to a tropical depression on August 22nd. The strengthening rapidly continued, and on the morning of August 25, Hurricane Harvey made landfall near Port Aransas on the Texas Gulf Coast as a Category 4 hurricane. The hurricane weakened over land as it drifted up the coast toward Harris County but remained a powerful tropical storm. The storm lingered over Harris County and dropped heavy rainfall for five days. Rainfall measurements were as high as 6.8 inches in one hour, 18.9 inches in six hours, and 25.6 inches in 24 hours. The highest recorded total in Harris County was 47.4 inches in four days. Many parts of the County experienced “widespread devastating flooding” (Linder, 2017).

## COMMUNITY DEVELOPMENT BLOCK GRANT – DISASTER RECOVERY (CDBG-DR)

As a result of Hurricane Harvey, Harris County was declared a disaster area and over \$2 billion in unmet housing needs were subsequently identified. The U.S. Department of Housing and Urban Development (HUD) issued \$1.115 billion in **Community Development Block Grant – Disaster Recovery (CDBG-DR)** funding to the County. According to the Harris County *Action Plan*, \$119 million has been initially awarded to fund the **Harris County Single Family New Construction Program**. Other Federal grants and funding sources are also pending to support housing programs in the County.

Harris County has initiated planning, design, and construction of residential developments, many of which, but not all, may be part of the Harris County Single Family New Construction Program. Affordable and attainable housing across the Harris County region is extremely limited.

## ALTERNATIVE LAND PLANNING STANDARDS

During the summer and fall of 2019, the Harris County Engineering Department under the direction of the County Engineer conducted a series of stakeholder meetings to gather input on the development of Alternative Land Planning Standards. Alternative standards were anticipated to require the use of sustainable planning and engineering practices such as higher lot densities, variable lot sizes, green stormwater infrastructure, water reuse, and other similar practices.

If a developer agreed to plan, design, and build a community using these alternative standards, the County would grant development benefits above those granted to projects permitted per traditional regulations. Possible development benefits included increased density, expedited reviews, pavement width variances, stormwater management variances, and other types of regulatory flexibility. Harris County eventually came to refer to the communities that would be created using the alternative planning standards and sustainable engineering approaches as **Harris County Imagination Zones (HCIZ's)**.

To foster creation of HCIZ's, both through direct action by Harris County and by the actions of private developers, the County has published two new documents. This document is the **Harris County Residential Development and Design Standards for Imagination Zones**. Its companion document is the **Harris County Green Stormwater Infrastructure Standards for Imagination Zones**.

# IMAGINATION ZONES



## OVERVIEW

Harris County has prepared land use and development design standards for the proposed Imagination Zones as well as new alternatives for land planning and platting of residential and commercial developments across the County. These design standards shall apply to the unincorporated areas of Harris County outside any city limit but within a city's extraterritorial jurisdiction (ETJ). Houston and 33 other incorporated cities are located across the County, and Houston's ETJ encompasses most of the unincorporated area. These standards will be in addition to, or deviations from, those regulations in Chapter 42 of the City of Houston Code of Ordinances that currently apply to Houston's ETJ.

Design standards for Imagination Zones shall be considered as guidelines and not regulatory. Because of their applicability to a wide range of properties with varying physical constraints, variances from strict interpretation may be desired. Over time, revisions, adjustments and/or amendments to the design standards may be needed.

Authority of a Texas county and city to regulate subdivision development within their jurisdiction is prescribed in the following chapters of the **Texas Local Government Code**:

- » Chapter 212: *Municipal Regulation of Subdivisions and Property Development*
- » Chapter 232: *County Regulation of Subdivisions*
- » Chapter 242: *Authority of Municipality and County to Regulate Subdivisions Outside Municipality's Extraterritorial Jurisdiction*

Additional authority to regulate the width, length, and geometry of streets in unincorporated Harris County is derived from the Harris County Road Law of 1913, a special law, having superior authority than laws or ordinances adopted under the general laws outlined above.

## PURPOSE

Imagination Zones are intended to promote a mix of affordable, workforce and market-rate housing with design options that include a variety of housing types, mixed-use developments, multi-modal transportation, compatibility and connectivity, resiliency, and green stormwater infrastructure (GSI), along with hike and bike trail connectivity to schools, shopping, and employment centers, where feasible. Parks and open space will include urban gardens within the communities where practical.

## IMPLEMENTATION

Imagination Zones will initially be implemented by Harris County as part of the County's Single Family New Construction Program. In the future, Imagination Zones may be implemented by private development entities in accordance with the County's standards, guidelines, and regulations.



# 2

## NEIGHBORHOOD PLANNING GUIDING PRINCIPLES OF HARRIS COUNTY

# Neighborhood Planning Guiding Principles of Harris County

## GUIDING PRINCIPLES



### COMPATIBILITY WITH SURROUNDING NEIGHBORHOODS

Imagination Zones are meant to provide opportunities for the County and private developers to create new mixed-use developments that can be designed to create the highest quality communities that include mixed-income, mixed land uses, and ethnic diversity. These new neighborhoods will be designed to maintain and/or enhance the quality of life, linking and blending communities to nearby neighborhoods, schools, shopping, and employment as well as provide complementary land uses, mobility, and connectivity.

### DIVERSITY

Development and/or redevelopment must offer a wide range of housing choices appropriate to the site and its location to create a community of socially and economically diverse residents.

### NEIGHBORLINESS

The planning and design of neighborhoods and the homes within those neighborhoods should promote opportunities for community residents to know, interact, and socialize with their neighbors.

### SUSTAINABILITY

Developments should be planned in a way that promote energy conservation, water efficiency, environmental quality, linkages to transit modes, and access to schools to provide options for mobility, access to the internet, reduced auto dependency, watershed protection and create usable dual purpose open space and green stormwater infrastructure (GSI) design options.

### FISCAL RESPONSIBILITY AND ECONOMIC DEVELOPMENT

The new Imagination Zones will be designed to be fiscally resourceful while creating long term value for the residents. One of the major tenants of the HCIZ's is to create long-term financially stable communities that maintain and grow real estate property values. In addition, the housing ownership options will be diverse and include rent-to-own and land trust alternatives to offer more ownership opportunities in the affordable price range in combination with mixed-income market-rate homes.



# PLANNING COMPONENTS



## OPEN SPACE

Each neighborhood should include an interconnected system of open spaces and pedestrian paths that promote the walkability and amenity of the new community while forging strong links with surrounding neighborhoods and parks. The size and scale of the open space system will be predominantly influenced by the size and scale of the new community. The open space system designed for every neighborhood can also contribute to the overall structure and identity of the new community by providing and creating dual-use purposes of detention, retention, beautification, urban gardens, and other green stormwater infrastructure (GSI) design considerations. The open space system will include:

- » Parks that contribute to a sense of community and neighborliness.
- » In denser urban areas, plazas and pocket parks for social gatherings, celebrations, and informal interaction.
- » Linear parks or greenways that offer scenic beauty and allow safe, uninterrupted pedestrian and bicycle movement along natural or man-made corridors.
- » Where practical, large parks that serve broader-based recreation needs in addition to those addressed by smaller parks.
- » Urban gardening and sustainable water-efficient designs
- » SPARK parks are encouraged as open space options in partnership with ISD schools
- » Houston BCycle (bicycle) station options

The overall open space goal will be to provide high-quality parks or green space within a 10-minute walk of every resident. A 10-minute walk is considered to be approximately one-half mile. This goal was initiated and adopted by the United States Conference of Mayors in 2017 and has been endorsed by the National Recreation and Park Association, the Urban Land Institute, and The Trust for Public Land.

## STREETS

Roadways and streets are the “connective tissue” of our modern communities and should be designed to distribute traffic in a way that minimizes impacts on adjacent communities. They also serve as an extension of the open space, pedestrian and bicycle network, contributing to the community’s sense of place and identity. Street rights-of-way provide pedestrian-friendly public spaces that contribute to the social life of the community. Street design should extend and enrich the open space system and the network of pedestrian and bicycle ways throughout the community by safely linking schools, parks, transit facilities, and shopping options.

A hierarchy of roadways within a development gives structure to the community and to the districts and neighborhoods within it. The street pattern should be designed to provide efficient multi-modal circulation. A network of roadways within a development should distribute traffic to the various uses and activities of the new community without overburdening existing perimeter streets. Multiple connections to perimeter streets are established to promote an even distribution of traffic and are configured and operated to discourage cut-through traffic within the existing and future neighborhoods. Cross-sections for proposed street types within Imagination Zones are provided herein.

Best practice design alternatives will include the National Association of City Transportation Officials (NACTO) roadway examples incorporating bike, hike, and stormwater quality design options.

All roadways systems employed including public or private streets will be designed with maintenance costs in mind to avoid increased Homeowners Association overhead and reduce monthly costs.

## TRANSIT

Transit connectivity is essential to the goal of achieving a compact, pedestrian-oriented community that provides the highest and best use of a property. The pattern and intensity of development should be planned in conjunction with programming transit improvements aimed at reducing automobile dependency. Partnership with **METRO and Harris County Transit** will be included in the design process to include access linkages to existing and proposed **METRO** Park and Ride or **METRONext** facilities, proposed Boost lines, or other transit facilities.



## NEIGHBORHOODS

Imagination Zone neighborhoods are intended to provide compact and walkable environments with a diversity of workforce, affordable, and market-rate housing opportunities. A mixture of housing types including single-family yard houses, garden houses, and row houses, and multifamily apartment houses are carefully planned and configured to promote a diverse and inter-generational population. A certain percentage of homes, as part of an affordable housing program, should be interspersed throughout the community and indistinguishable from market-rate homes.

Neighborhoods with tree-lined streets should create a continuous vegetated canopy with homes oriented to the streets in a way that creates a socially interactive community. Homes and units face the street, with front porches or stoops that provide “eyes on the street” and promote neighborliness. Parking garages for residential units are predominantly located along rear alleys and in auto courts in order to reduce their visual dominance. The configuration of the streets and open space system provide pedestrian and bicycling connectivity throughout the community. Each neighborhood is oriented to a central park and/or smaller pocket parks, tot lots and play areas for children. Coordination with School Park facilities (SPARK) will also be incorporated in the design process. SPARK creates managed facilities that produce efficient access to managed park programs in concert with the Independent School Districts.

## SUSTAINABILITY

Imagination Zone neighborhoods should embrace the fundamental tenets of sustainable development and design. Harris County has created several examples of sustainable design using green stormwater infrastructure (GSI) design standards. The HCIZ will include a collection of design options for applications of various sites that are created. One of the additional best practices will include the principles of Traditional Neighborhood Development to create an integrated “Green Urbanism” approach which will promote sustainability through multiple options to include the following:

- » **Green Community Planning:** Create a compact, walkable, and transit-oriented community with a mixture of residential, civic, and where possible, commercial uses that provides a clear alternative to automotive-dominant patterns of development prevalent across the County. Green Community Design will promote affordable and diverse housing suitable for a broad segment of the population, opportunities for all ages and aging-in-place within the community, and multi-modal alternatives to automobiles.
- » **Green Buildings:** Apply the sustainability principles of the U.S. Green Building Council (USGBC) LEED green building program to provide energy and water-efficient buildings and site designs that mitigate heat islands, reduce light pollution, and improve stormwater management.
- » **Green Community Design:** Incorporate sustainability principles into an Imagination Zone’s infrastructure system to include its roadways, utilities, and open space. For example, the street system should be designed to support bicycle and pedestrian circulation and allow plentiful shade tree plantings. The open space system should be designed to reduce off-site flooding and to naturally filter pollutants from stormwater before it is released into the natural stream systems.

# NEIGHBORHOOD SITE PLANNING STANDARDS

A

Single-family housing typologies for *Imagination Zones* include a variety of housing options such as detached *Yard Houses*, *Garden Court Houses*, and attached *Row Houses*, *Shop Houses*, *Cottage Housing and BayHome Housing*. Site planning and design standards for each housing type are detailed herein. Housing typologies are located and arranged to structure the community in a well-planned manner. Each neighborhood should include a variety of housing typologies.

B

Multifamily housing typologies for *Imagination Zones* should include *Multiplex Buildings*, and *Apartments and Mixed-Use Buildings*. Site planning and design standards for each form type are detailed herein. Multifamily housing with mixed-use buildings is intended to create activity centers within the community and should be incorporated on properties greater than 20 acres. However, activity centers may not be viable on smaller properties or where immediately adjacent to existing single-family neighborhoods. For larger properties, multifamily tracts should not be concentrated but rather distributed throughout the community with generally no more than five acres in a single location.

C

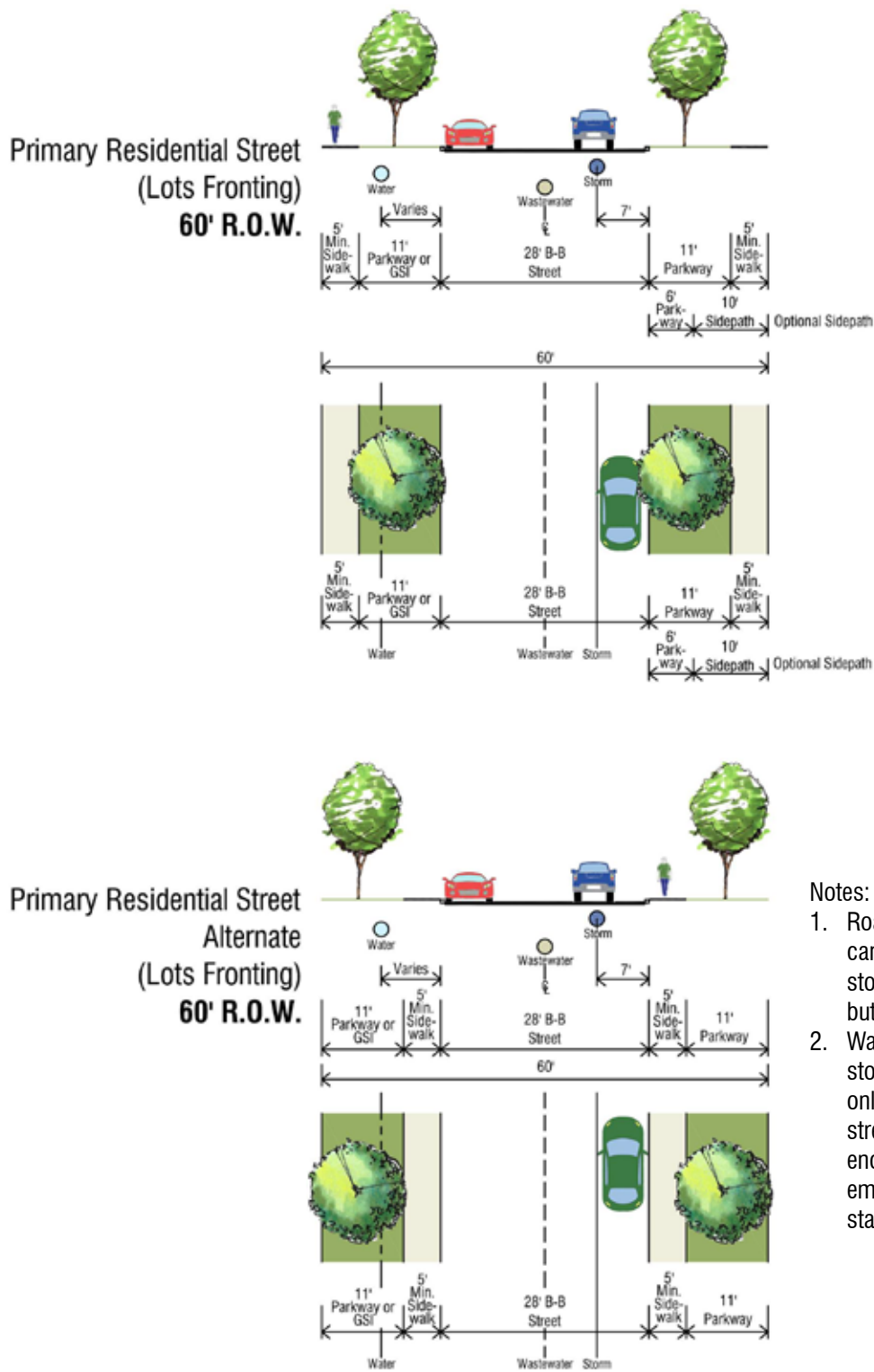
The layout, pattern, and street and alley system within an Imagination Zone should be consistent with the roadway types identified herein and conforming with the Harris County Multi-Modal Thoroughfare Plan. Roadways have been designed to accommodate pedestrian and bicycle use in addition to vehicular use. Neighborhood roadway cross-sections are presented below and detailed further under Streetscape Standards. With regard to stormwater drainage, roadways other than alleys can be canted or crowned but preferably canted. Roadway types include the following:

- » Primary Residential Street
- » Secondary Residential Street
- » Alley for Yard Houses
- » Alley – All Others
- » Activity Center Street
- » Neighborhood Connector Street
- » Neighborhood Entryway Street
- » Public Roadway Easement (PRE)

D

The predominant street types in a residential neighborhood should be a *Primary Residential Street* or a *Public Roadway Easement (PRE)*. (See separate PRE standards in subsection j). Residential lots accommodating all single-family housing typologies should front or side on primary residential streets. As shown in *Figure A*, a primary residential street should have a minimum right-of-way width of 60 feet with a 28-foot paving section and 5-foot-wide sidewalks on both sides of the street. Shade trees spaced no greater than 30 feet apart and parallel with the street, should be planted within the 11-foot-wide parkway between the street and sidewalk which is located along the right-of-way line. As an option, the sidewalk may be placed along the street curb with the parkway adjacent to the right-of-way line. In either case, the parkway may be used for a green stormwater infrastructure (GSI) facility, either intermittently or in a continuous line. On-street parallel parking may occur along both sides of the street with a single vehicular lane remaining in the middle. As part of the neighborhood pedestrian and bicycle network, the 5-foot sidewalk may be widened to a 10-foot wide sidepath with the parkway narrowed from 11 feet to 6 feet.

Figure A: Primary Residential Street Cross-Section & Plan



Notes:

1. Roadway can be canted or crowned for stormwater drainage, but preferably canted.
2. Wastewater and stormwater lines can only run parallel under street paving if encased and embedded in cement stabilized sand.

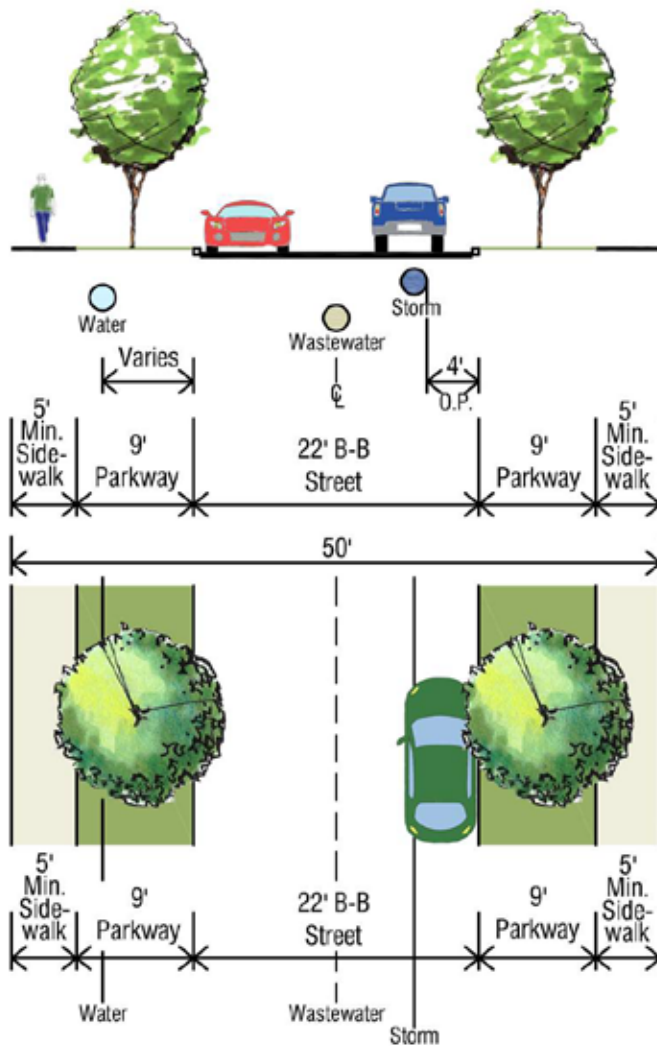
E A *Secondary Residential Street* can be used as an option to connect *Primary Residential Streets* when located along the sides of residential lots. As shown in *Figures B.1 and B.2*, a secondary residential street should have a minimum right-of-way width of 50 feet with a 22-foot paving section and 5-foot-wide sidewalks on both sides of the street. Shade trees spaced no greater than 30 feet apart and parallel with the street, should be planted within the 9-foot-wide parkway between the street and sidewalk. As with a *Primary Residential Street*, the parkway may be used for a green stormwater infrastructure (GSI) facility, either intermittently or in a continuous line, and may be located along the right-of-way line instead of the street curb. On-street parallel parking should be limited to one side. *Secondary Residential Streets* should not be used as transitways, primary entrances into a neighborhood, or to accommodate sidepaths as part of the neighborhood pedestrian and bicycle network.

F (i) As shown in *Figure C*, an *Alley for Yard Houses* should have a minimum right-of-way width of 15 feet with a 10-foot-wide paving section (single lane) intended for two-way traffic. As detailed herein, alleys are intended to serve as the principal means of vehicular rear access to residential Yard House lots, and alley rights-of-way are intended to accommodate underground utilities in conjunction with street rights-of-ways. Fences may be constructed on the property line. As discussed below, every adjacent Yard House garage should be set back from the alley right-of-way a minimum distance of 20 feet to provide a temporary “pull-in” space that will allow an oncoming vehicle to pass. This is similar to the function of a *Primary Residential Street* with parking on both sides of the street. Ten-foot-wide alleys in tandem with required garage setbacks have been successfully used in other Texas cities for more than 60 years.

(ii) As also shown in *Figure C*, an *Alley – All Others* should have a minimum right-of-way width of 20 feet with an 18-foot-wide paving section intended for two-way traffic. Garages should be setback a minimum of 3 feet to accommodate fire access and underground utilities.

Figure B.1: Secondary Residential Street Cross-Section & Plan

Secondary Residential Street  
(Lots Fronting)  
**50' R.O.W.**



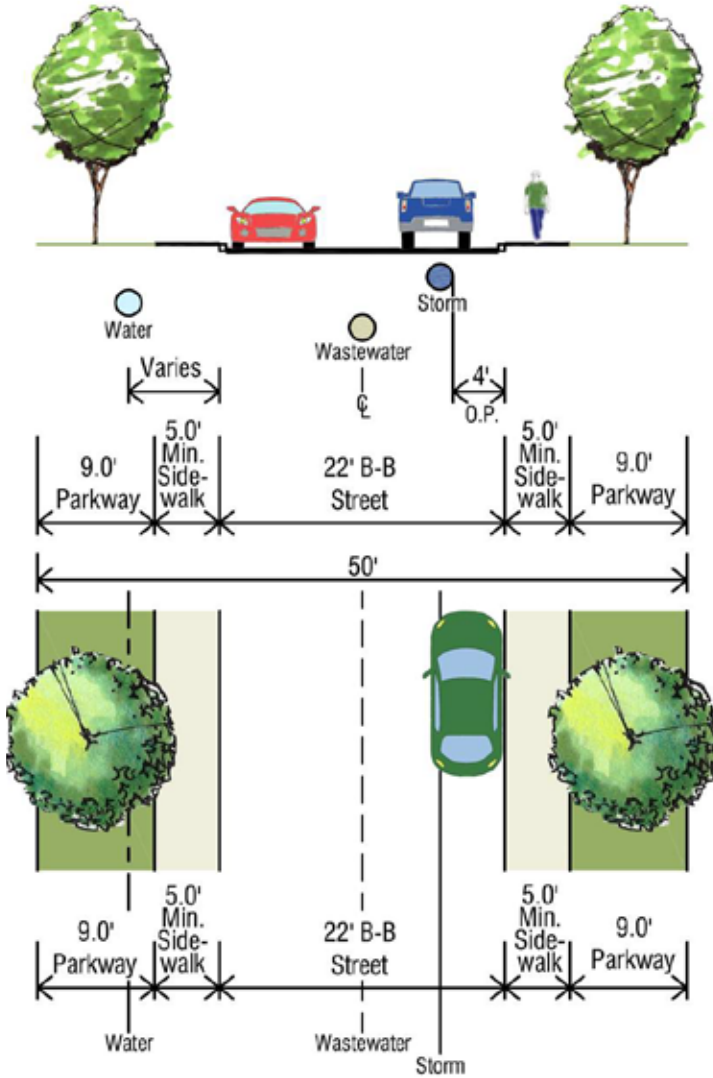
O.P. - outside of pipe

Notes:

1. Roadway can be canted or crowned for stormwater drainage, but preferably canted.
2. Wastewater and stormwater lines can only run parallel under street paving if encased and embedded in cement stabilized sand.

Figure B.2: Secondary Residential Street Cross-Section & Plan

Secondary Residential Street Alternate  
(Lots Siding)  
**50' R.O.W.**



O.P. - outside of pipe

Notes:

1. Water line location varies in location depending on surface use in parkway.
2. Wastewater and stormwater lines can only run parallel under street paving if encased and embedded in cement stabilized sand.

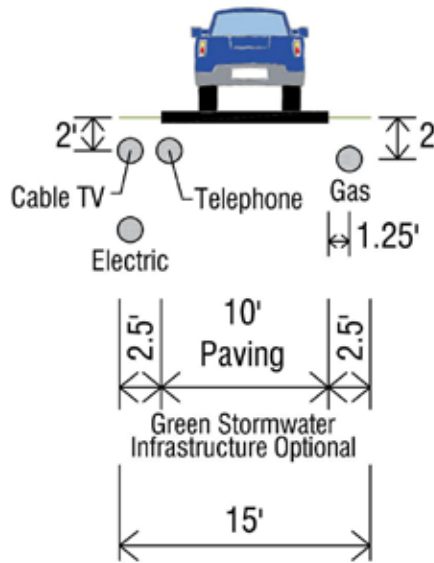


Figure C: Alley Cross-Section & Plan

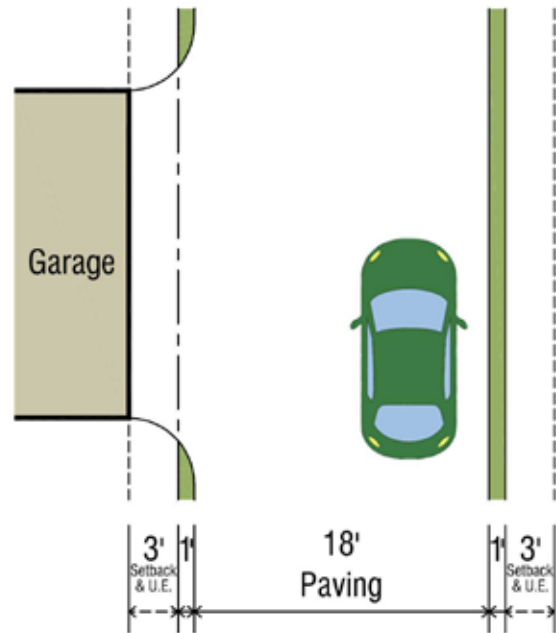
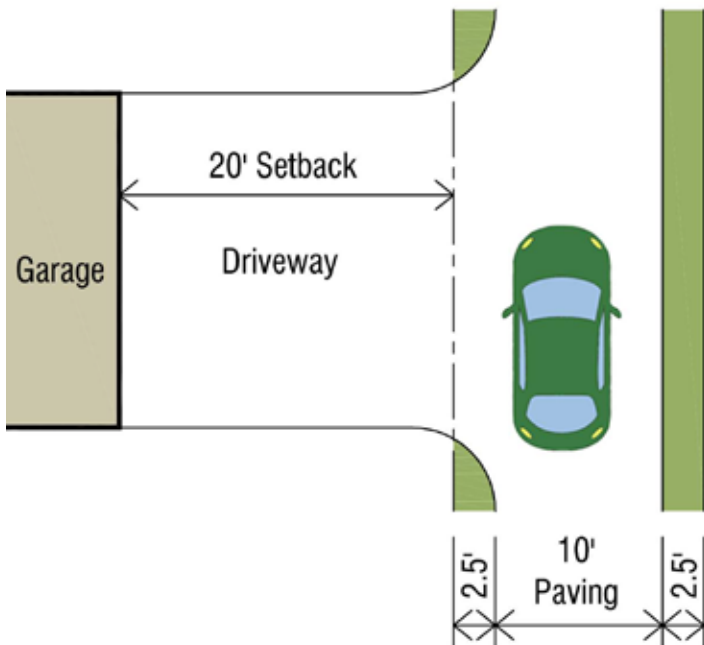
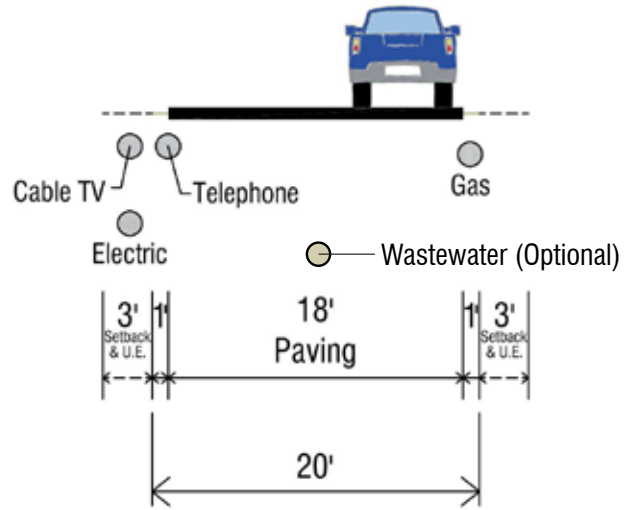
Notes:

1. All paving within an alley may be permeable per GSI standards
2. Wastewater and stormwater line can only run parallel under street paving if encased and embedded in cement stabilized sand.

## Public Alley 15' R.O.W.



## Public Alley 20' R.O.W.



An **Activity Center Street** should have a minimum right-of-way width ranging from 65 feet to 90 feet depending on: 1) whether the activity center is on one side or both sides of the street, 2) whether on-street parking is provided on one side or both sides of the street, and 3) whether the parking spaces are parallel or head-in. A “Main Street” with the activity center on both sides is termed “double-loaded”. A “Main Street” with the activity center only on one side is termed “single-loaded”. Examples of an Activity Center Street include streets that link to schools, parks, transit, or community center land uses.

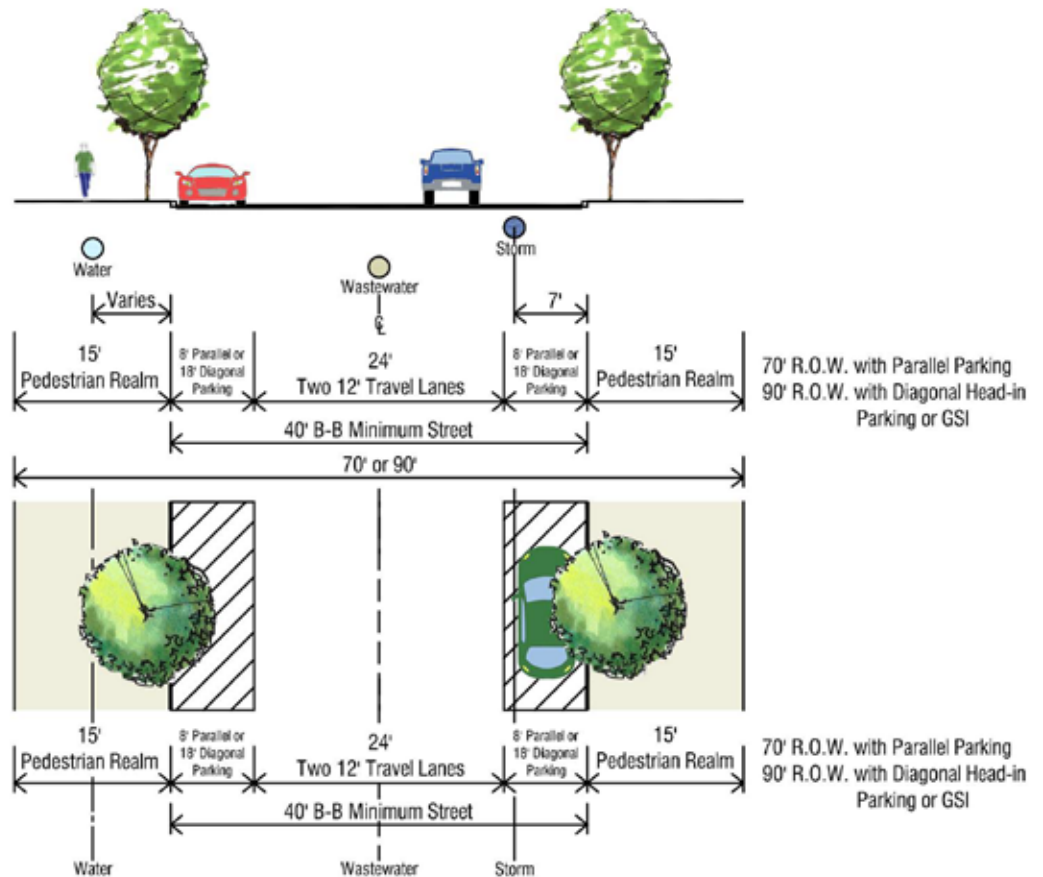
As shown in **Figure D**, a double-loaded **Activity Center Street** should have a minimum right-of-way width of 70 feet with two 12-foot-wide travel lanes in the center, an 8-foot-wide parallel parking space on either side and a 15-foot-wide pedestrian realm behind each outer street curb. The minimum right-of-way width should be expanded to 90 feet where head-in parking spaces are provided on both sides instead of parallel spaces.

**Figure D: Activity Center Street (Double-Loaded) Cross-Section & Plan**

**Activity Center Street  
(Double-Loaded)  
70' or 90' R.O.W.**

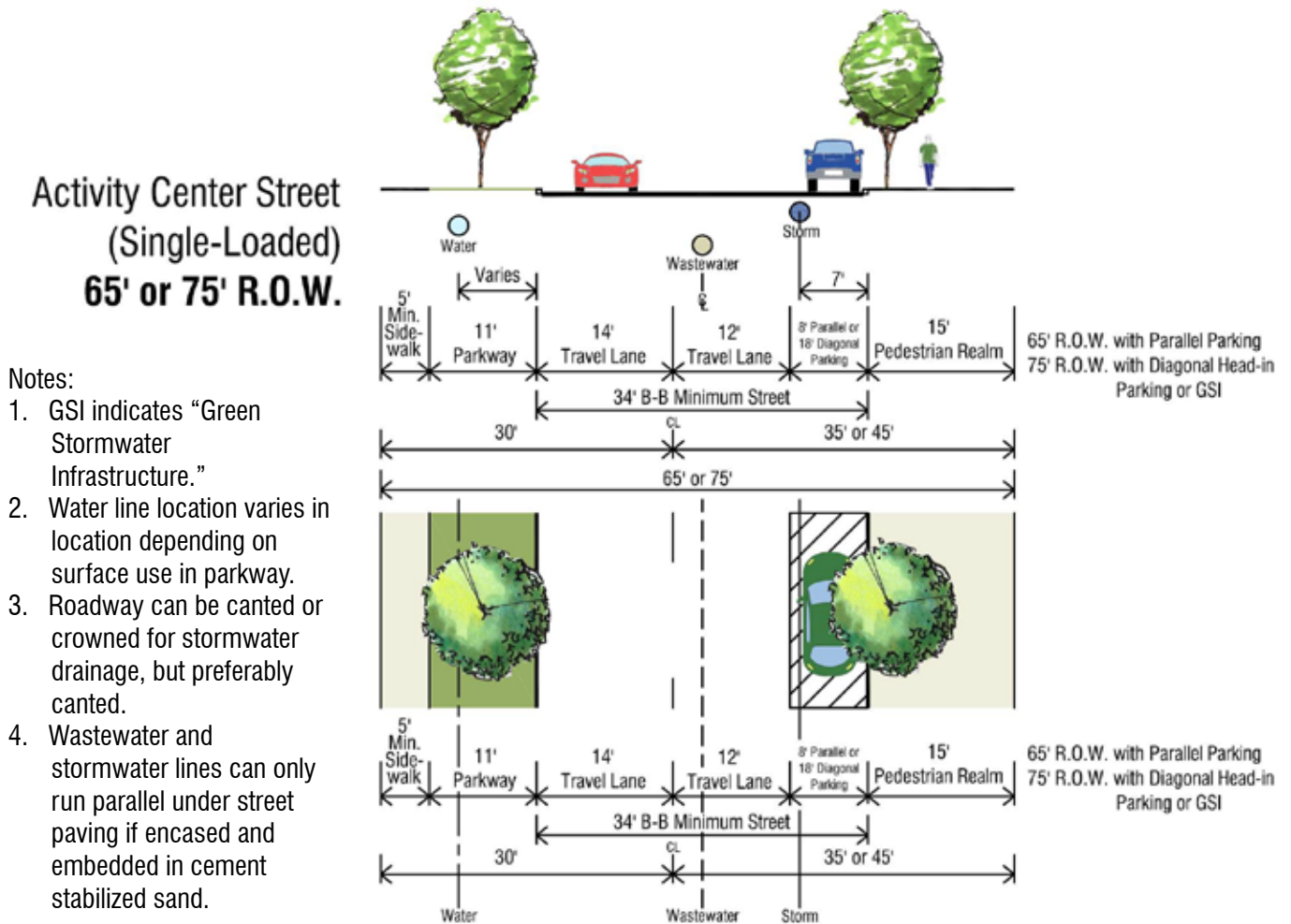
**Notes:**

1. GSI indicates “Green Stormwater Infrastructure.”
2. Water line location varies in location depending on surface use in parkway.
3. Roadway can be canted or crowned for stormwater drainage, but preferably canted.
4. Wastewater and stormwater lines can only run parallel under street paving if encased and embedded in cement stabilized sand.



A single-loaded *Activity Center Street* should have a minimum right-of-way width of 65 feet with parallel spaces on one side. The minimum right-of-way width expands to 75 feet if the spaces are head-in. As shown in **Figure E**, one side of the street right-of-way, 30 feet in width has a cross-section equal to half of a *Primary Residential Street*, while the remaining right-of-way width, 35' to 45', has a cross-section equal to half of a double-loaded *Activity Center Street*.

**Figure E: Activity Center Street (Single-Loaded) Cross-Section & Plan**

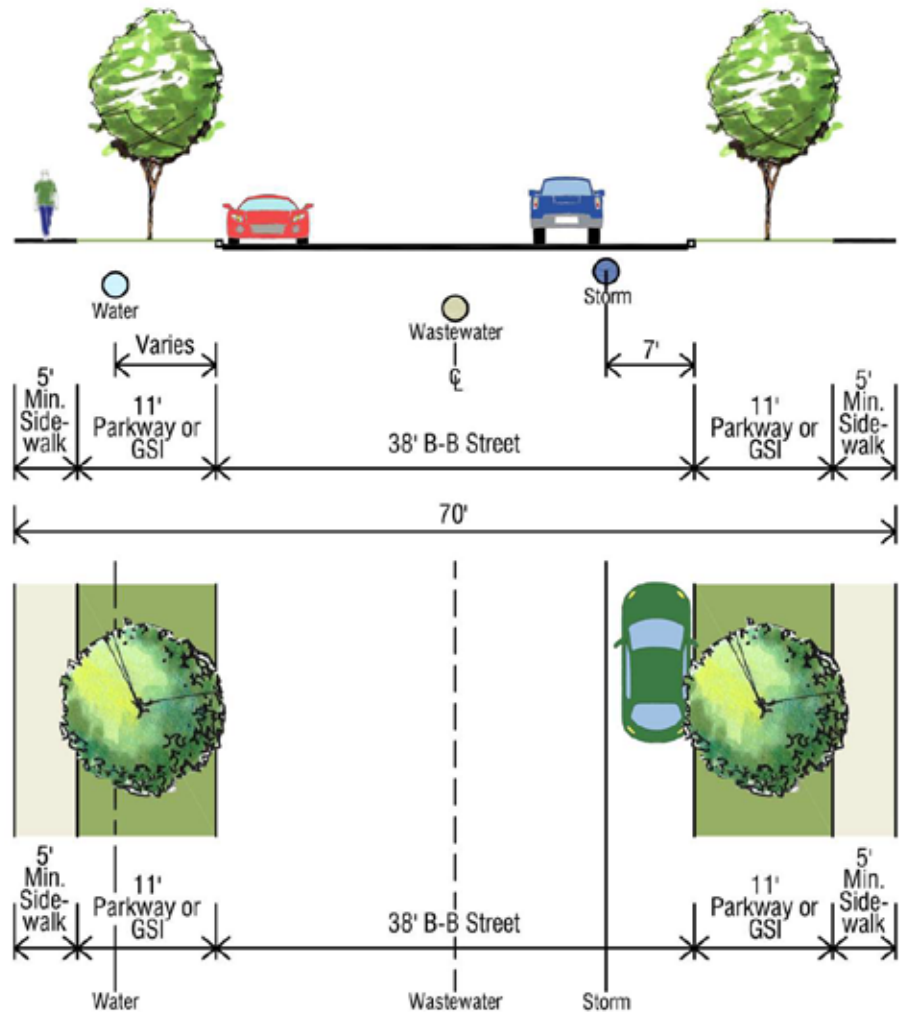


H

As shown in **Figure F**, a Neighborhood Connector Street should have a minimum right-of-way width of 70 feet with a 38-foot paving section and 5-foot-wide sidewalks on both sides of the street. Shade trees spaced no greater than 30 feet apart, parallel with the street, should be planted within the 7-foot-wide parkway between the street and sidewalk. In contrast with a Primary Residential Street, frequent on-street parallel parking is anticipated on both sides of the street. As a result, the added street width is needed to maintain a travel lane in both directions. Neighborhood Connector Streets should be used in limited situations where traffic levels warrant and/or where adjacent to a high-traffic use such as school or other type of institution. If the need for on-street parking is minimal or infrequent, the wider expanse of street paving can encourage higher-speed traffic that is detrimental to a pedestrian-friendly residential neighborhood.

**Figure F: Neighborhood Connector Street Cross-Section & Plan**

**Neighborhood  
Connector Street  
70' R.O.W.**

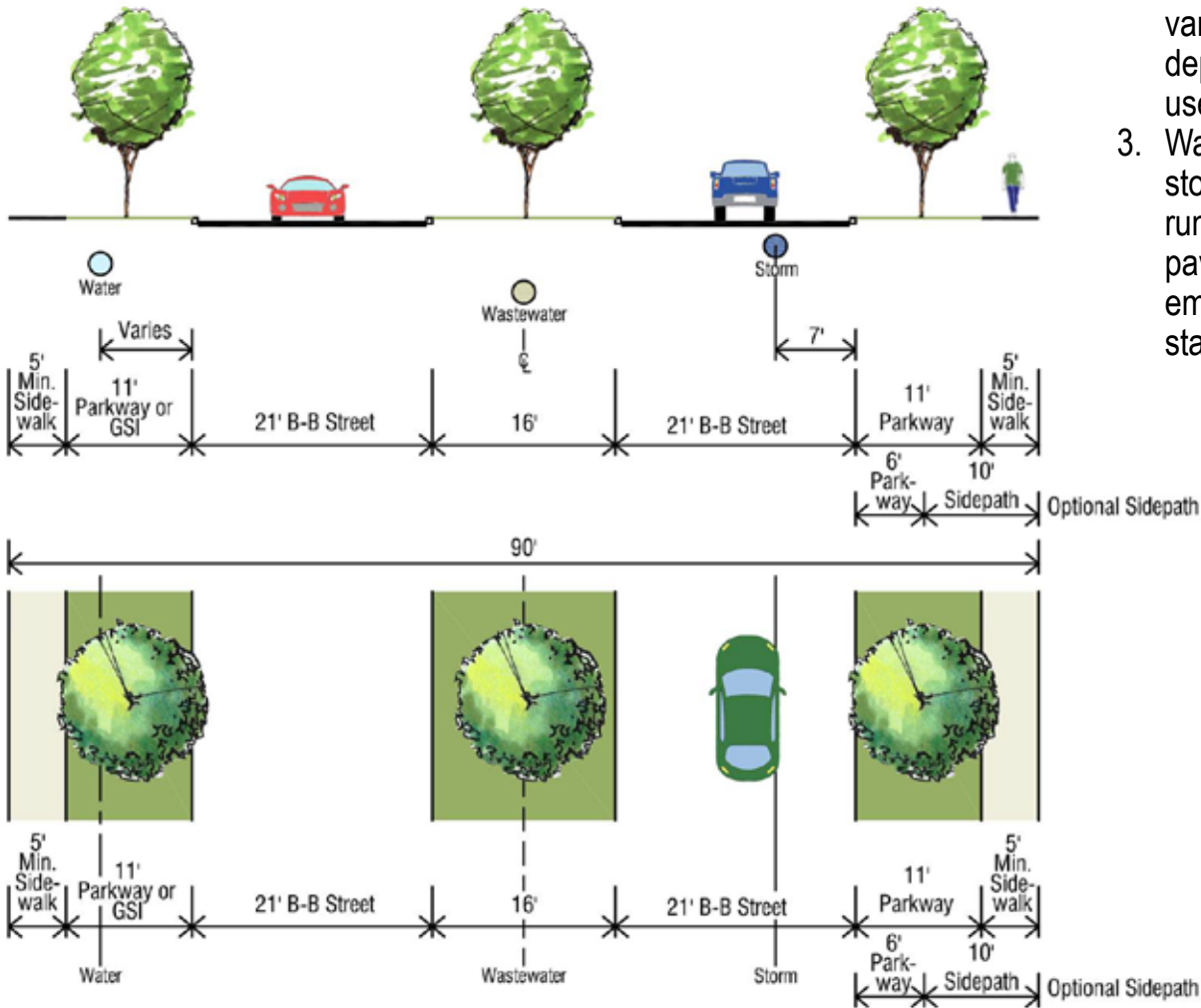


**Notes:**

1. GSI indicates "Green Stormwater Infrastructure."
2. Water line location varies in location depending on surface use in parkway.
3. Roadway can be canted or crowned for stormwater drainage, but preferably canted.
4. Wastewater and stormwater line can only run parallel under street paving if encased and embedded in cement stabilized sand.

**Figure G: Neighborhood Entryway Street Cross-Section & Plan**

**Neighborhood  
Entryway Street  
90' R.O.W.**



**Notes:**

1. GSI indicates “Green Stormwater Infrastructure.”
2. Water line location varies in location depending on surface use in parkway.
3. Wastewater and stormwater line can only run parallel under street paving if encased and embedded in cement stabilized sand.

As shown in **Figure G**, a Neighborhood Entryway Street should have a minimum right-of-way width of 90 feet with a 24-foot paving section in either direction separated by a 10-foot center median. Sidewalks at least five feet in width should be located on both sides of the street with the option to convert one of the sidewalks into a 10-foot wide sidepath. Shade trees should be planted in the parkway between the sidewalk and street curb as well as in the center median. Neighborhood Entryway Streets are intended for limited use at major entrances into an Imagination Zone but are not intended to extend through the entire neighborhood. Residential lots may face or side to the street, but no residential rear yard should adjoin the street right-of-way.

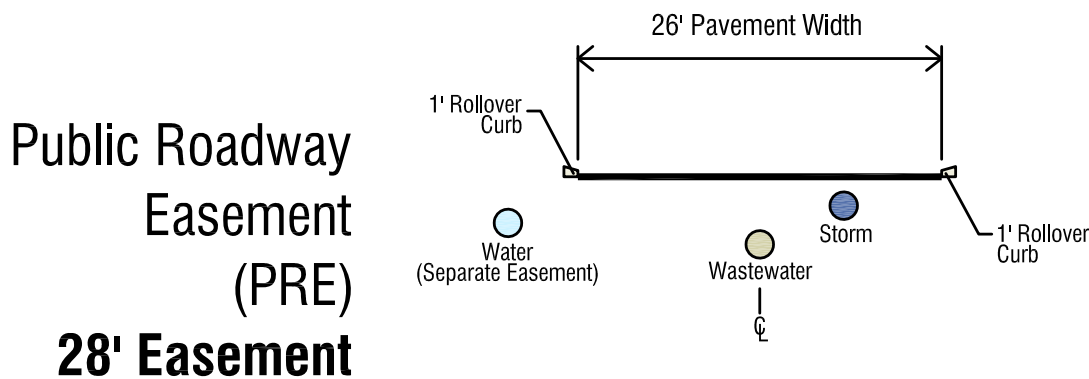
As an alternative to the Primary Residential Street, a Public Roadway Easement (PRE) may be used. There are situations in which the design of a residential development dictates the need for restricted width of the access way into and throughout the development for the cohesiveness of the neighborhood. Historically, these have been called private streets or Public Access Easements (PAE's). And it has been the responsibility of property owners within these developments to maintain the streets and often times the waterlines, sanitary sewer lines and the storm drainage lines. (Let's call these items, "improvements".)

However, in view of our region's need for affordable housing, residents in such an area are not well suited to maintain these improvements. But in the case where these improvements are constructed to public standards and the governmental authority is willing to maintain these improvements, they should be placed on the County Road Log, and treated as a County maintenance road.

It is therefore through the Harris County Imagination Zones that Harris County *may* elect to maintain these types of improvements. The Imagination Zones can provide for both neighborhood appearance and maintenance of improvements to a standard matching other completely public communities. In this way, affordable housing communities will achieve equity that otherwise might be impossible.

As shown in **Figure H**, a **Public Roadway Easement (PRE)** should have a minimum easement width of 28 feet with a minimum pavement width of 26 feet. Typically, no sidewalks are located adjacent to the PRE but rather are located in a separate walking path network through the community. Each dwelling will have a connection to this walking path which is a minimum of 6 feet wide. Parallel parking is not allowed along a PRE, but head-in parking may be provided adjacent to the PRE. Sanitary sewer and storm sewer is allowed beneath the PRE if encased and embedded in cement stabilized sand and water is located in an adjacent waterline easement. The PRE must be constructed to County public street standards, as a minimum.

**Figure H: Public Roadway Easement Cross-Section and Plan**



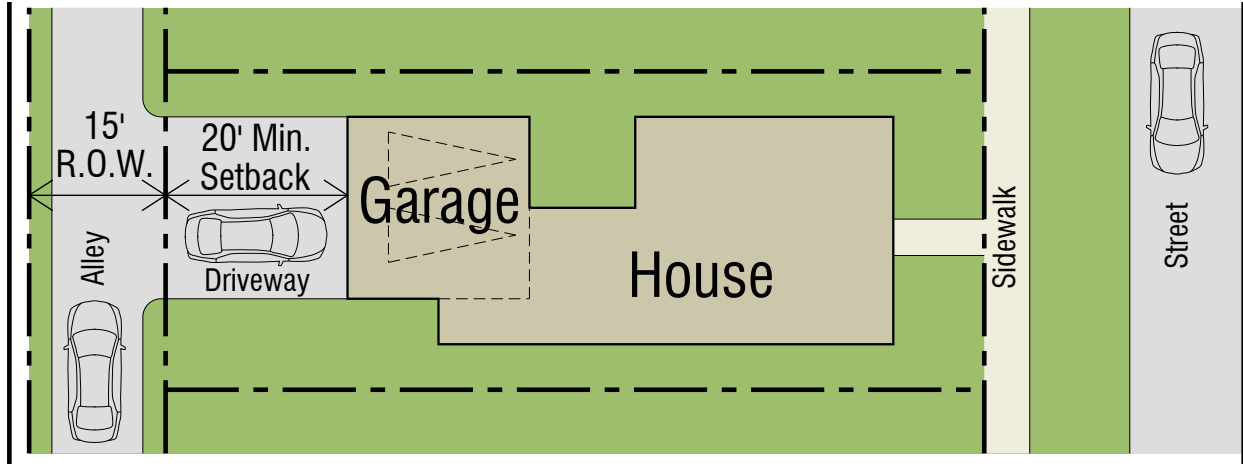
Note:

1. Wastewater and stormwater lines can only run parallel under street paving if encased and embedded in cement stabilized sand.

**K** Most properties will be served by alleys except for higher-density multi-family residential or mixed-use sites. Certain exceptions to this standard may be permitted for Yard Houses, corner lots, and/or cul-de-sac lots as described herein.

**L** As shown in **Figure I**, residential garages facing an alley with a 15-foot right-of-way width should be set back at least 20 feet but no more than 30 feet from the alley right-of-way line. A paved driveway, at least equal in width to the width of the garage, should connect the garage to the alley. The driveway provides a temporary space for a vehicle to pull in and clear the alley in order to allow an oncoming vehicle to pass. The driveway may also accommodate additional vehicle parking for the residence. The garage setback may be reduced to 3 feet from a minimum 20-foot-wide alley right-of-way.

**Figure I: Rear Entry Garage**



**M** As shown in **Figure J**, block lengths should typically be 800 feet or less in length but should not exceed 1,200 feet in length, except as desired or required for parks and schools. Dead-end streets are not permitted, except as an interim condition. If provided, a dead-end street should not exceed 150 feet in length, which equals the maximum length for a dead-end fire apparatus access road per the International Fire Code adopted by Harris County. A dead-end street greater than 150 feet in length should terminate with one of the turnaround design options identified in Appendix D of the Fire Code.

**Figure J: Block Length**



**O** Residential lot orientation to the street should conform with the following:

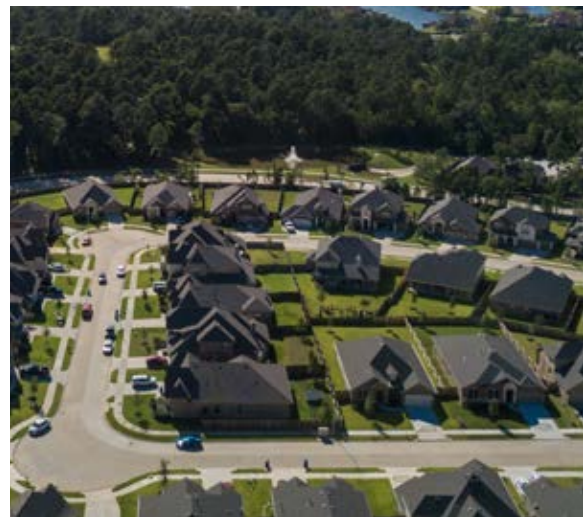
- » Residential lots fronting a Primary Residential Street should be maximized. Lots fronting an Activity Center Street or a Neighborhood Collector Street, should be minimized. Designs that incorporate side yards along Activity or Neighborhood Collector streets are encouraged.
- » Residential lots may side to a Secondary Residential Street but not front this street type.
- » Residential rear yards should avoid adjoining the right-of-way of a Primary Residential Street, Secondary Residential Street, or a Cul-de-sac.

**P** At least 90 percent of all Yard House lots should be less than 5,000 square feet in size, exclusive of cul-de-sac lots on isolated parcels as discussed above.

**Q** At least 90 percent of all residential lots should be located within 1000-1200 feet of an open space that is either designated park land, a stormwater detention pond designed for recreational use, or a greenway, as measured in a straight line from the edge of the lot to the edge of the open space property.

**R** Each neighborhood should include or be adjacent to a neighborhood or pocket park. Parks, greenways, and other recreational open space should predominantly adjoin public streets and minimally adjoin alleys or residential rear yards in order to maximize access and visibility for community residents.

**S** Public utility lines to include underground water, wastewater, and stormwater should generally be located along and within street rights-of-way. Franchise utilities to include electric, natural gas and telecommunications should be predominantly located along and within alley rights-of-way. Above-ground franchise utilities should not be located along or within an *Activity Center Street*. Internet access via fiber designs will be required to provide minimum standards for remote education options and home office operations.







Single-Family  
Typologies

3

SINGLE-FAMILY TYPOLOGIES & LOT STANDARDS

# Single-Family Typologies & Lot Standards

- » **Yard Houses**
- » **Garden Court Houses**
- » **Zero Lot-Line Houses**
- » **Row Houses and Shop Houses**
- » **Cottage Housing**
- » **BayHome Housing**

## YARD HOUSES

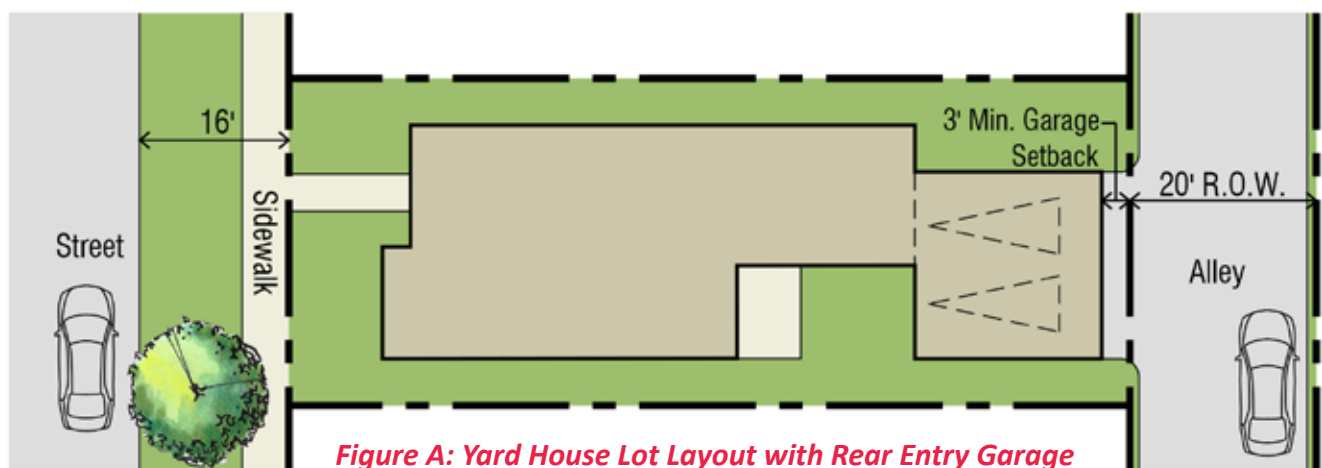
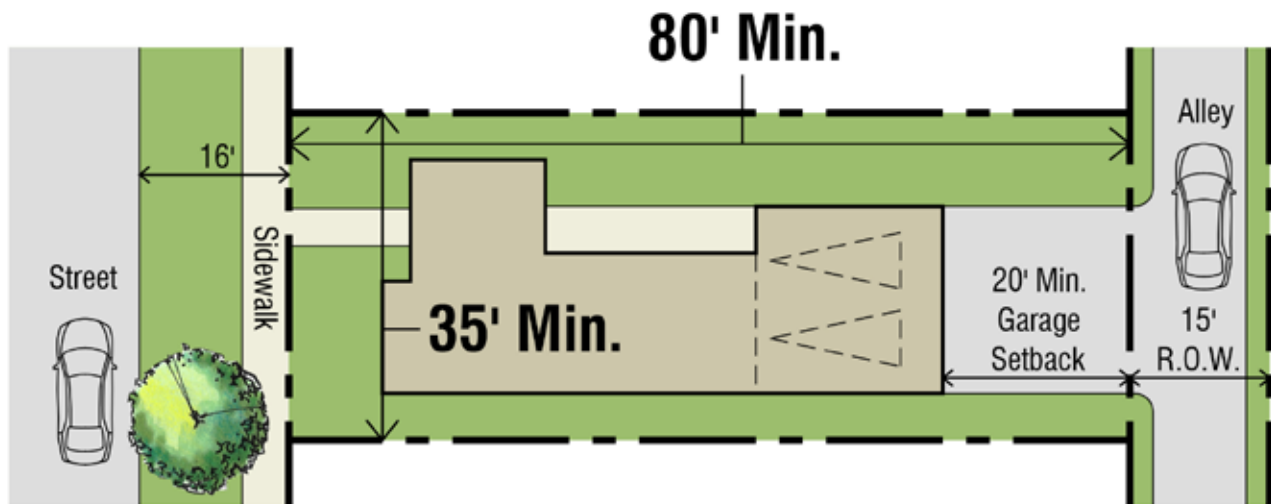


The **Yard House** features a single-family residence that is separated, or detached, from other residences with permeable open space on all four sides of the home that extends outward from the building to the property lines. Only one main building for single-family use with accessory buildings, as permitted herein, should be located upon the lot or platted tract. At least 35% of each lot should be pervious open space.

Among the housing typologies, **Yard Houses** will feature the largest lots and thus, the lowest density. **Yard Houses** will likely be the dominant housing type in suburban settings but may be the least practical in an urban setting depending on location, land values, and adjacent land uses. Yard Houses may be either front-entry or rear-entry, depending on the lot width.

Lot standards and form types for Yard Houses include the following planning and design elements:

- » Lot sizes and dimensions
- » Building setbacks
- » Building setback encroachments
- » Building height
- » Vehicular access and parking
- » Pedestrian access
- » Building variation and diversity
- » Building roofs
- » Porches
- » Garages
- » Carriage house units



*Figure A: Yard House Lot Layout with Rear Entry Garage*

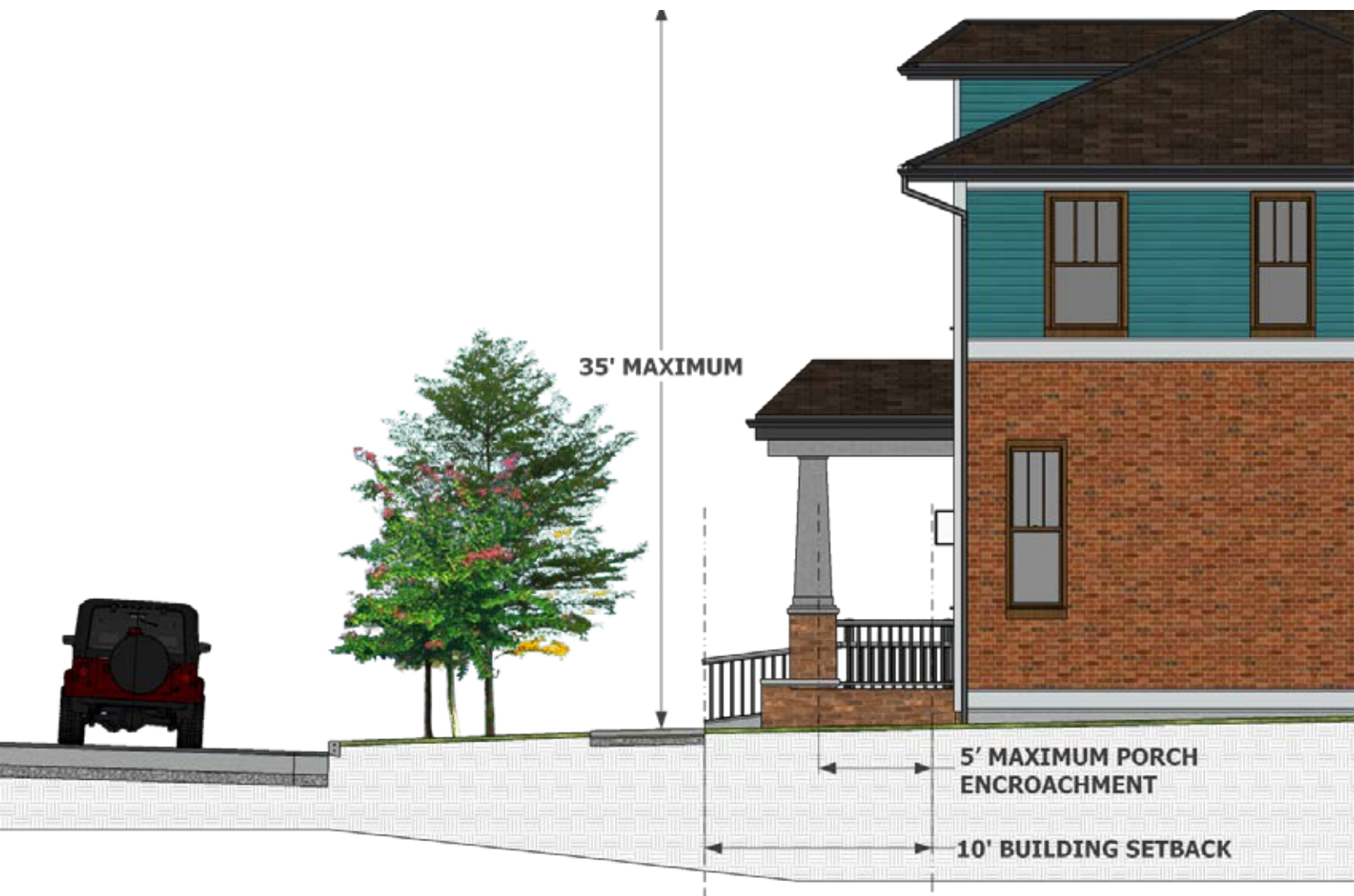
## LOT SIZES AND DIMENSIONS:

- » Lots are typically less than 5,000 square feet but no smaller than approximately 3,200 square feet.
- » **Minimum lot width:** 35 feet, measured along the front building setback line of the lot. A lesser lot width can be considered as long as the average minimum area of the lots on a blockface is 3,200 square feet.
- » **Minimum lot depth:** 80 feet, measured down a side property line. If the side property lines are unequal in length, the minimum lot depth is measured on the shorter side.
- » **Note:** Lot sizes and dimensions smaller than the prescribed minimums may be acceptable in exchange for greater open space and amenities.

## BUILDING SETBACKS:

- » **Minimum front yard facing the street:** 10 feet, but no greater than 15 feet
- » **Minimum side yard:** 3 feet where siding to another lot or an alley; 10 feet where siding to a street (i.e., corner lot)
- » **Minimum rear yard:** 5 feet; however, garage doors facing an alley should be set back at least 20 feet from a 15-foot-wide alley right-of-way or 3 feet from a 20-foot-wide alley right-of-way.

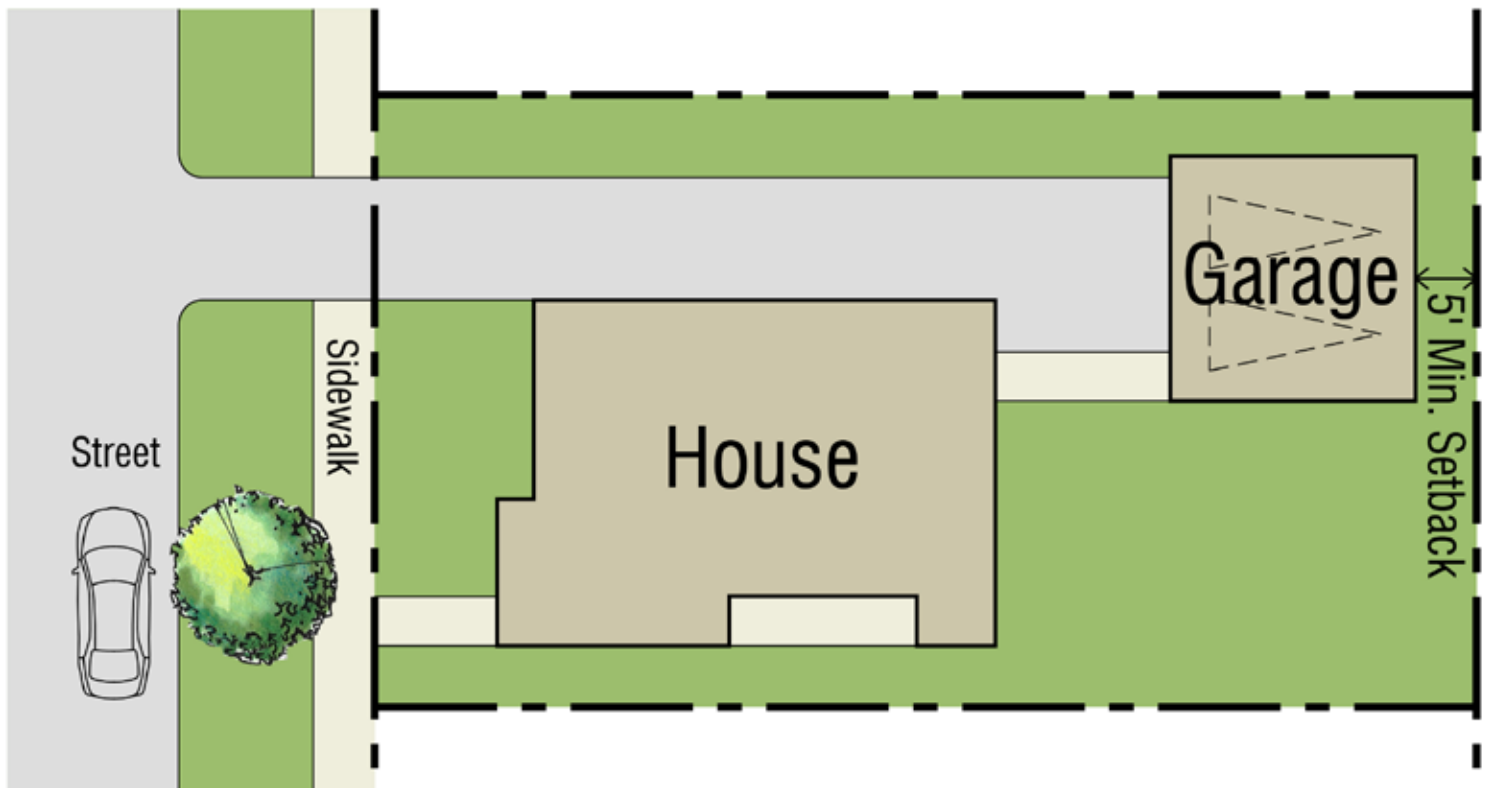
*Figure B: Yard House Building Setback and Height*



## BUILDING SETBACK ENCROACHMENTS:

- » Porches, awnings, chimneys, and roof overhangs may encroach up to 5 feet within the minimum 10-foot front yard setback and up to 2 feet within the minimum 5-foot side yard setback.
- » Uncovered steps and stoops no greater than 6 feet in width may encroach an additional 2 feet beyond the maximum 5-foot porch encroachment.
- » Bay windows may encroach 3 feet into a minimum front yard setback.
- » No encroachments are permitted within easement or right-of-way.

*Figure C: Yard House Lot Layout with Front Entry Garage*



## PEDESTRIAN ACCESS

- » A paved pedestrian walkway, at least 4 feet in width, should be provided from the public sidewalk to the residence.

## BUILDING VARIATION AND DIVERSITY

- » Diversity of floor plans are encouraged along the same residential blockface.
- » Each residential blockface should contain at least four different front elevations (facades) and in no event should the same front elevation (façade) be adjacent to another.
- » Where practicable, the blockface should include a mix of home heights ranging from one-story to three stories. A one-story home should not be located next to a three-story home.

## BUILDING ROOFS

- » Yard Houses should have sloping roofs employing generous overhangs, awnings over windows, gables, hips, and dormers.
- » Simple roof rooms with minimal breaks are preferred to lessen the likelihood of roof leaks over time.
- » South and west facing roof slopes should be optimized to provide opportunity for rooftop solar panels.
- » Flat roofs with slopes of less than 2:12 are prohibited except where intended for outdoor terraces and decks.
- » Mansard and false roofs are not permitted.
- » Rooftop equipment such as HVAC units and satellite dishes should not be visible from the street to which the house faces.

## PORCHES

- » At least 65% of all Yard Houses within the neighborhood should have first floor front or corner porches with a minimum area of 60 square feet and a minimum depth of 6 feet.
- » For lots larger than 4,500 square feet, the minimum area of the porch should be 80 square feet.
- » Houses without front porches must have a covered front stoop with a minimum area of 20 square feet.
- » Most, if not all, of the porches should be covered by an eave or structural element integral to the house that provides shade and allows greater use under varying weather conditions.
- » Two-story porches and second floor porches are permitted to provide additional outdoor usable space.

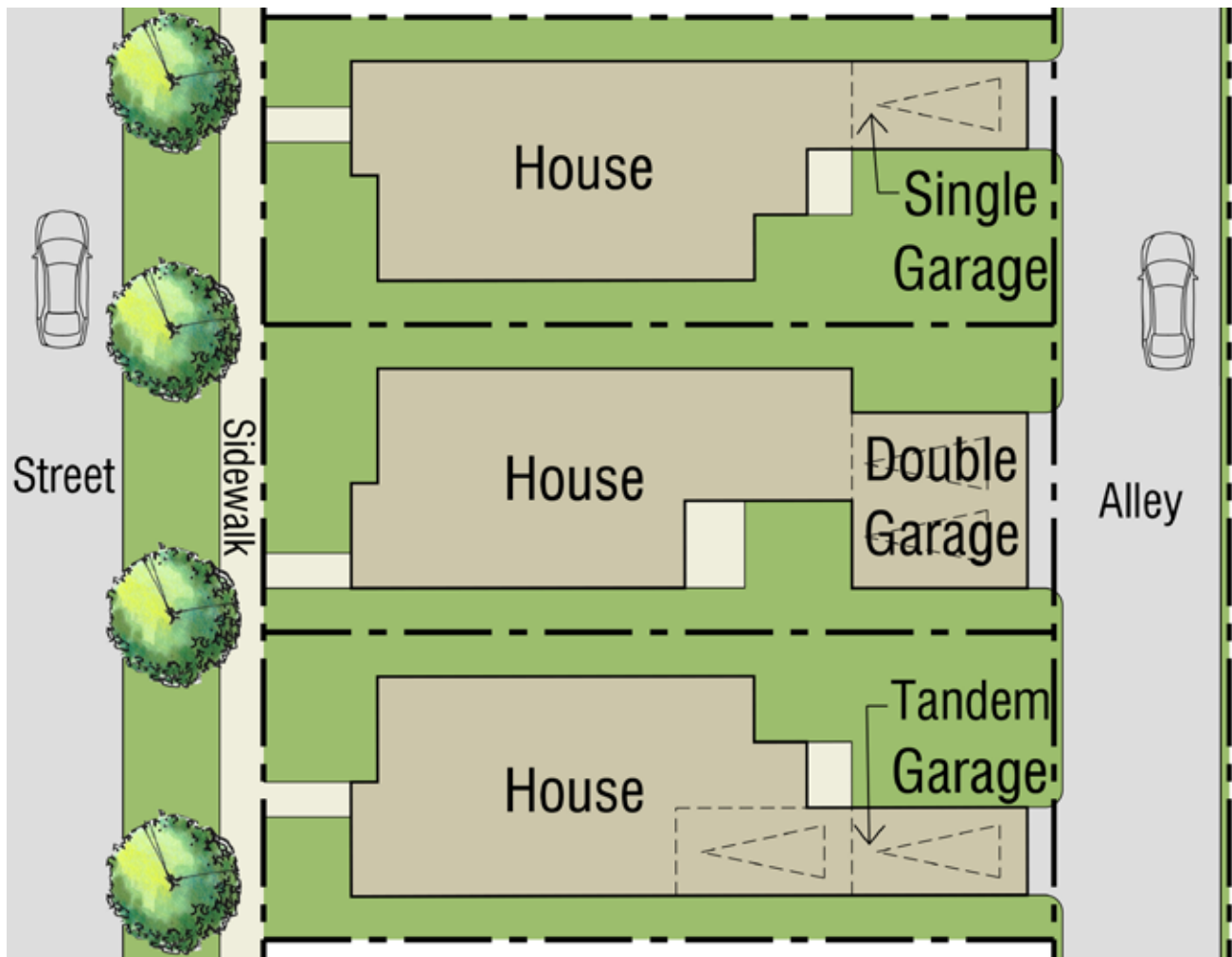
*Figure D: Yard House Porches*



## GARAGES

- » Garages may be attached or semi-attached (by means of a breezeway) to the main structure. In certain instances, garages may be a detached accessory building separate from the main structure in order to enhance site design and provide greater usable open space. Whether a garage is attached, semi-attached, or detached is subject to the governing regulations under which the home is designed.
- » A garage should have a minimum dimension of 10 feet by 20 feet for each parking space enclosed within the garage.
- » Tandem garages are permitted in which one vehicle is parked behind the other within the enclosed space.
- » Single or tandem garages should have a door with a minimum width of 10 feet; double garages should provide a garage door with a minimum width of 18 feet.
- » Three-car garages are allowed only on lots larger than 4,500 square feet and must be detached or semi-attached with a tandem configuration in one bay.
- » Garage doors and/or garage walls may include windows to provide natural light.

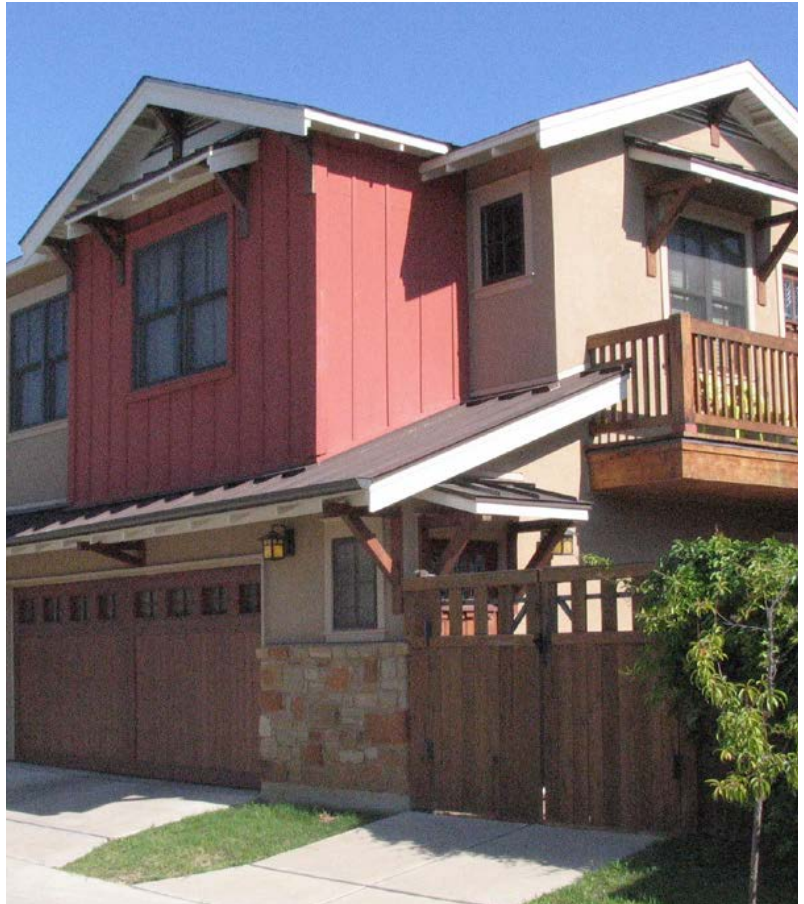
*Figure E: Yard House Garages*





## CARRIAGE HOUSE UNITS (Accessory Dwelling Unit - ADU)

- » A carriage house unit is an accessory dwelling sharing a lot with a main residential structure and typically located above the garage.
- » Carriage house units are intended to accommodate smaller families (or individuals), promote housing diversity and affordability, and provide live-work opportunities.
- » The maximum size of a carriage house is 1200 square feet
- » The maximum height of a carriage house is two stories, but no greater than 25 feet.
- » Building facades and roofs should be similar in design to the main residential building.



## GARDEN COURT HOUSES



Garden Court Houses are groupings of four or more detached houses or “cottages” around a publicly accessible common green that adjoins a public street. The adjoining street may be any type described herein other than a Secondary Residential Street or double-loaded Activity Center Street. The common green shared by the homes allows for lot sizes smaller than those for Yard Houses, with lots ranging in size from approximately 2,400 to 3,200 square feet. With their orientation to common open space instead of a street, Garden Court Houses provide a unique alternative to Yard Houses. Depending on the total amount of open space, the overall density may be more or less than Yard Houses. Garden Court Houses may front a street only if mixed with Yard Houses. In this instance, the average area of the lots on a blockface must be a minimum of 3,200 square feet.

Lot standards and form types for Garden Court Houses include the following planning and design elements:

- » Lot sizes and dimensions
- » Common green
- » Building setbacks
- » Building setback encroachments
- » Building height
- » Vehicular access and parking
- » Pedestrian access
- » Building variation and diversity
- » Building roofs
- » Porches
- » Garages

## LOT SIZES AND DIMENSIONS

- » Lots are typically less than 3,200 square feet but no smaller than approximately 2,400 square feet.
- » **Minimum lot width:** 30 feet, measured along the front building setback line of the lot
- » **Minimum lot depth:** 70 feet, measured down a side property line. If the side property lines are unequal in length, the minimum lot depth is measured on the shorter side.
- » **Note:** Lot sizes and dimensions smaller than the prescribed minimums may be acceptable in exchange for greater open space and amenities.

Figure A: Garden Court Lot Layout



## COMMON GREEN

- » All Garden Court lots should front on a common green that fronts a public street, preferably a Primary Residential Street.
- » The common green should be platted as a landscape reserve.
- » The common green may have public street frontage at one end, both ends, or on two streets at their intersecting corner.
- » Minimum width of the common green, separate from the individual lots, should be no less than 30 feet.
- » The common green may vary in width along its depth inward from the street, and the variation need not be equally spaced along either side of the green.
- » The design should be open and welcoming to the street, with no fencing or shrub plantings greater than three feet in height.
- » At least one shade tree per adjoining lot should be planted within the common green, and trees should be preferably placed informally.

**Figure B: Garden Court Common Green**



## BUILDING SETBACKS

- » **Minimum front yard facing the common green:** 10 feet, but no greater than 15 feet
- » **Minimum side yard:** 3 feet where siding to another lot or an alley
- » **Minimum side yard to a street right-of-way line:** 10 feet, but no greater than 15 feet
- » **Minimum rear yard:** 5 feet; however, garage doors facing an alley should be set back at least 3 feet from a 20-foot-wide alley right-of-way or 20 feet from a 15-foot-wide alley right-of-way.

## BUILDING SETBACK ENCROACHMENTS

- » Porches, awnings, chimneys, and roof overhangs may encroach up to 6 feet within the minimum 10-foot setback from the common green.
- » Porches, awnings, chimneys, and roof overhangs may encroach up to 3 feet within the minimum 10-foot side yard setback from the street right-of-way line or up to 2 feet from an interior side lot line.
- » Uncovered steps and stoops facing the common green may encroach an additional 2 feet beyond the maximum 6-foot porch encroachment.
- » Bay windows may encroach up to 3 feet into the minimum 10-foot setback from the common green or street.
- » No encroachments are permitted within an easement or right-of-way.

## BUILDING HEIGHT

- » Garden Court Houses should not exceed a height of 35 feet, measured from the finish floor elevation of the ground floor, or three stories.
- » The finish floor elevation of the ground floor must be at least 1.5 feet above the highest pedestrian walkway elevation within the common green fronting the house. Finish floor elevation must also comply with Harris County floodplain regulations.

## VEHICULAR ACCESS AND PARKING

- » Garden Court Houses will be accessed by rear or side alleys with paved driveways connecting the alley to the garage.
- » Lots less than 45 feet in width must be served by alleys with 20-foot rights-of-way.
- » The alley should be substantially screened from the common green through the placement of buildings and landscaping.
- » No more than two parking spaces are permitted on each garden court lot.
- » No individual parking space may exceed an area of 12 x 24 feet.
- » At least one parking space should be located within a garage.
- » No parking is permitted within the green, the front yard of the lot facing the common green, or the side yard facing the street.

## PEDESTRIAN ACCESS

- » Pedestrian walkway(s) at least 5 feet in width should be located within the common green to provide a convenient route from the public sidewalk along the street to each residential lot adjoining the common green.
- » A walkway at least 4 feet in width should connect the garden court walkway to the front door, front porch, or stoop of each house.
- » Walkways should comply with the *Texas Accessibility Standards*.
- » A pedestrian route from a public sidewalk to a garden court lot should not exceed 200 feet in length.

## GARAGES

- » Garages may be attached or semi-attached (by means of a breezeway) to the main structure. In certain instances, garages may be a detached accessory building separate from the main structure in order to enhance site design and provide greater usable open space. Whether a garage is attached, semi-attached, or detached is subject to governing regulations under which the home is designed.
- » A garage should have a minimum dimension of 10 feet by 20 feet for each parking space enclosed within the garage
- » Tandem garages are permitted in which one vehicle is parked behind the other within the enclosed space.
- » Single or tandem garages should have a minimum door width of 10 feet; double garages should have a minimum door width of 18 feet.
- » Garage doors and/or garage walls may include windows to provide natural light.

## BUILDING VARIATION AND DIVERSITY

- » No garden court may include more than two homes with the same front elevation (facades).
- » A separation of at least four lots should be maintained along any side of a common green containing the same front elevation (façade).
- » Homes with the same floor plan model should not directly align or face each other across a common green unless they have different front elevations (facades).
- » The garden court may include a mix of homes ranging in incremental height from one-story to three stories. A one-story home should not be located next door to a three-story home.

## BUILDING ROOFS

- » Garden Court Houses should have sloping roofs employing generous overhangs, awnings over windows, gables, hips, and dormers.
- » Simple roof forms with minimal breaks are preferred to lessen the likelihood of roof leaks over time.
- » South and west facing roof slopes should be optimized to provide opportunity for rooftop solar panels.
- » Flat roofs are prohibited except where intended for outdoor terraces and decks.
- » Mansard and false roofs are not permitted.
- » Rooftop equipment such as HVAC units and satellite dishes should not be visible from the public street or common green.

*Figure C: Garden Court Porches on Common Green*



## PORCHES

- » At least 65% of all houses facing an individual common green should have first floor front porches with a minimum area of 60 square feet and a minimum depth of 6 feet.
- » Houses without front porches must have a covered front stoop with a minimum area of 20 square feet.
- » Most, if not all, of the porches should be covered by an eave or structural element integral to the house that provides shade and allows greater use under varying weather conditions.
- » Two-story porches and second floor porches facing the common green are permitted to provide additional outdoor usable space.

# ZERO LOT-LINE HOUSES – A VARIATION ON YARD HOUSES AND GARDEN COURT HOUSES



*Zero Lot-Line Houses* are separate, individual houses where one side of the home is built along the property line of the adjacent lot in a “zero lot line” condition. On the other side of the lot, a minimum 5-foot-wide yard is provided along the property line. Lots are smaller than for either *Yard Houses* or *Garden Court Houses*. Each lot is typically at least 26 feet in width and 60 feet in depth with lot sizes ranging from 1,600 to 2,400 square feet. At least 25% of each lot should be pervious open space compared to 35% for *Yard Houses*. Private open space within each lot is reduced in exchange for public, useable open space and parks. Overall density will be greater than for either *Yard Houses* or *Garden Court Houses*.

Lots and blocks may be arranged similar to *Yard House* lots with all lots facing a street or may be arranged around a common green similar to *Garden Court Houses*. Both lot orientations may occur within the same neighborhood. *Zero Lot-Line Houses* increase housing variety and diversity within a neighborhood and offer residents additional choices.

Lot standards and form types for *Zero Lot-Line Houses* include the following planning and design elements:

- » Lot sizes and dimensions
- » Common green (If provided)
- » Building setbacks
- » Building setback encroachments
- » Building height
- » Vehicular access and parking
- » Building variation and diversity
- » Building roofs
- » Porches
- » Garages
- » Side Yard Fencing



## LOT SIZES AND DIMENSIONS

- » Lots are typically less than 2,400 square feet but no smaller than approximately 1,600 square feet.
- » **Minimum lot width:** 26 feet, measured along the front building setback line of the lot
- » **Minimum lot depth:** 60 feet, measured down a side property line. If the side property lines are unequal in length, the minimum lot depth is measured on the shorter side.
- » **Note:** Lot sizes and dimensions smaller than the prescribed minimums may be acceptable in exchange for greater common open space and amenities.



**Figure A: Zero Lot-Line Block Layouts**



## COMMON GREEN (IF PROVIDED)

- » The common green should be platted as a landscape reserve that adjoins a public street.
- » The common green may have street frontage at one end, both ends, or on two streets at their intersecting corner.
- » Minimum width, separate from the individual lots, should be no less than 20 feet.
- » The common green may vary in width along its depth inward from the street, and the variation need not be equally spaced along either side.
- » Pedestrian walkway(s) at least 5 feet in width should be located within the common green to provide a convenient route from the public sidewalk along the street to each residential lot adjoining the common green.
- » A walkway at least 4 feet in width should connect the garden court walkway to the front door, front porch, or stoop of each home.
- » Walkways should comply with the *Texas Accessibility Standards*.
- » A pedestrian route from a public sidewalk to a zero lot-line lot facing a garden court green should not exceed 200 feet in length.
- » The design of the common green should be open and welcoming to the street, with no fencing or shrub plantings greater than three feet in height.
- » At least one shade tree per adjoining lot should be planted within the common green, and trees should preferably be placed informally.

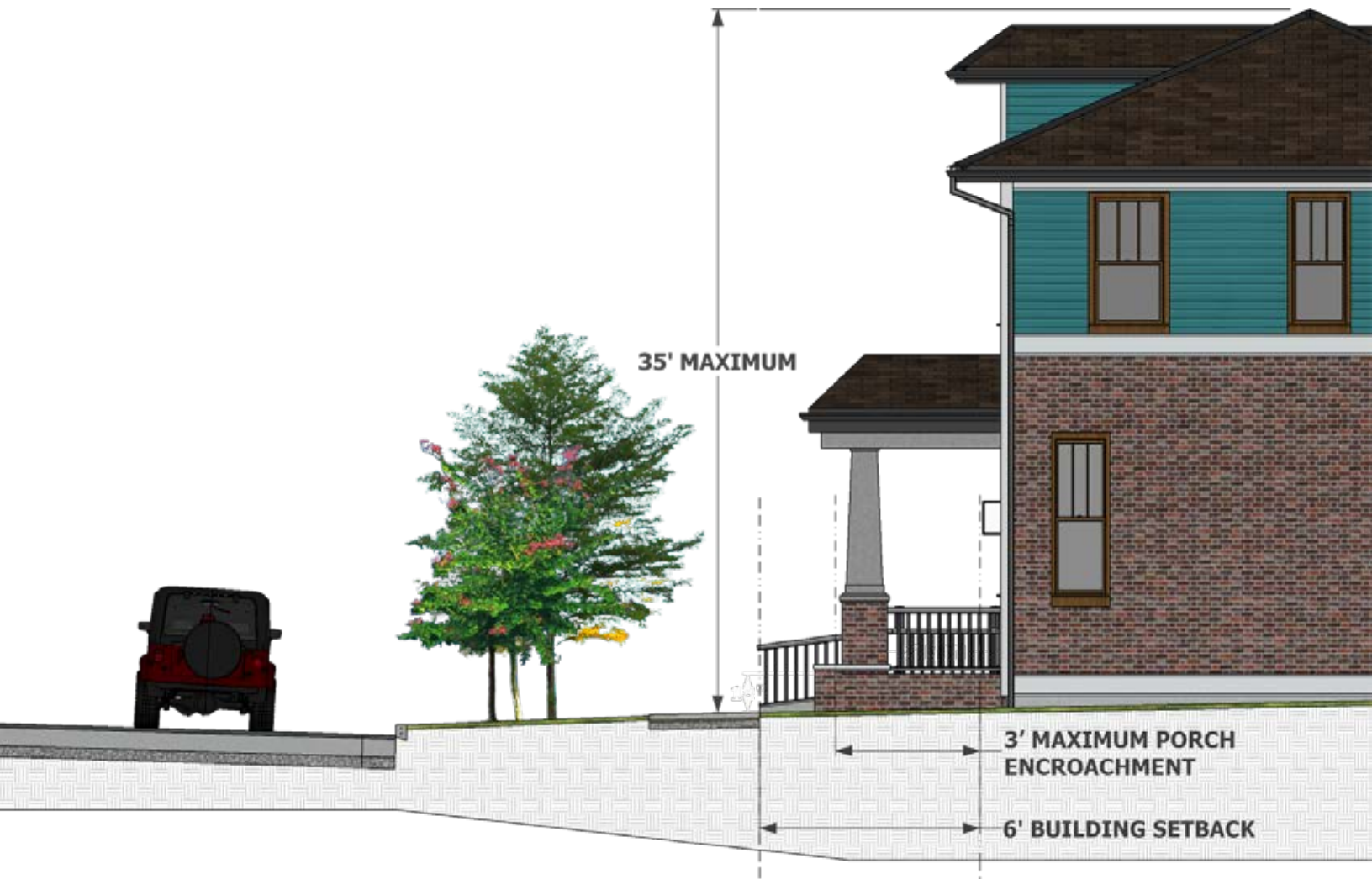
## BUILDING SETBACKS

- » **Minimum front yard facing a street or common green:** 6 feet, but no greater than 10 feet
- » **Minimum side yard to a street right-of-way line:** 6 feet, but no greater than 15 feet
- » **Minimum side yard separation between buildings:** 5 feet with a minimum setback of 5 feet on one property line and zero feet on the other side property line.
- » To the extent practicable, a side yard should provide some level of usability while still maintaining privacy between adjacent houses.
- » **Minimum rear yard:** 5 feet; however, garage doors facing an alley should be set back at least 3 feet.

## BUILDING SETBACK ENCROACHMENTS

- » Porches, awnings, chimneys, and roof overhangs may encroach up to 3 feet within the minimum 6-foot setback from the street or common green.
- » Uncovered steps and stoops facing the street or common green may encroach an additional 2 feet beyond the maximum 3-foot porch encroachment.
- » Bay windows may encroach up to 3 feet into the minimum 6-foot setback from the street or common green.
- » No encroachments are permitted within an easement or right-of-way.

*Figure B: Zero Lot-Line Building Setback and Height*



## BUILDING HEIGHT

- » Zero Lot-Line Houses should not exceed a height of 35 feet, measured from the finish floor elevation of the ground floor, or three stories.
- » For houses facing the street, the finish floor elevation of the ground floor must be at least 1.5 feet above the adjacent sidewalk elevation within the street right-of-way. Finish floor elevation must also comply with Harris County floodplain regulations.
- » For houses facing a common green, the finish floor elevation of the ground floor must be at least one and one-half feet above the adjacent pedestrian walkway elevation within the common green.

## VEHICULAR ACCESS AND PARKING

- » Zero Lot-Line Houses will be accessed by rear or side alleys (20-foot R.O.W.'s) with paved driveways connecting the alley to the garage.
- » If a common green is provided, the alley should be substantially screened from the common green through the placement of buildings and landscaping.
- » No more than two parking spaces are permitted on each lot.
- » No individual parking space may exceed an area of 12 x 24 feet.
- » At least one parking space should be located within a garage.
- » No parking is permitted within a front or side yard facing the street or garden court green.

## BUILDING VARIATION AND DIVERSITY

- » Each block face along a street or common green should include at least four different floor plan models with no more than two of the same building elevations.
- » A separation of at least four lots should be maintained for any model with similar elevations, colors, or materials.
- » Homes with the same floor plan model should not directly align or face each other across a common green.
- » The block face may include a mix of homes ranging in incremental height from one-story to three stories, but no one-story home should be located next door to a three-story home.

## BUILDING ROOFS

- » Zero Lot-Line Houses should have sloping roofs employing generous overhangs, awnings over windows, gables, hips, and dormers.
- » Simple roof forms with minimal breaks are preferred to lessen the likelihood of roof leaks over time.
- » South and west facing roof slopes should be optimized to provide opportunity for rooftop solar panels.
- » Flat roofs with slopes of less than 2:12 are prohibited except where intended for outdoor terraces and decks.
- » Mansard and false roofs are not permitted.
- » Rooftop equipment such as HVAC units and satellite dishes should not be visible from the public street or common green.

**Figure C: Zero Lot-Line Porch**



## PORCHES

- » At least 65% of all houses should have first floor front porches with a minimum area of 60 square feet and a minimum depth of 6 feet.
- » Houses without front porches must have a covered front stoop with a minimum area of 20 square feet.
- » Most, if not all, of the porch should be covered by an eave or structural element integral to the house that provides shade and allows greater use under varying weather conditions.
- » Two-story porches and second floor porches facing a street or common green are permitted to provide additional outdoor usable space.

## GARAGES

- » A garage should have a minimum dimension of 10 feet by 20 feet for each parking space enclosed within the garage.
- » Single garages should have a minimum door width of 10 feet; double garages should have a minimum door width of 18 feet.
- » Garage doors and/or garage walls may include windows to provide natural light.

## SIDE YARD FENCING

- » Endcap lots at the end of a block face adjacent to a street may include fences or walls up to 6 feet in height along the length of the building to screen the side yard and provide privacy.
- » Fencing should not extend down the side lot line into a front or rear yard building setback.

## ROW HOUSES & SHOP HOUSES



Residential *Row Houses* include a variety of attached houses on small lots that can range in size from approximately 1,400 to 2,500 square feet. They provide lifestyle diversity and additional opportunities for home ownership. *Shop Houses* are configured similar to *Row Houses* but are distinguished by a ground level studio or workspace that typically faces the street. They are well-suited for busier streets within or at the edge of the neighborhood. *Shop Houses* are intended to provide opportunities for neighborhood economic activity and home or work-at-home occupations that can reduce the need for automotive trips.

Lots can vary in width from 16 feet to 30 feet and vary in depth from 65 feet to 90 feet or more. Larger lots can provide space for courtyards, patios or carriage house units as prescribed below. Overall density will be similar to *Zero Lot-Line Houses*. Up to 90% of each lot may be impervious compared to 65% for *Yard Houses* (35% pervious). Consequently, common open space and parks within close proximity are essential.

Lots and blocks may be arranged similar to *Yard House* lots with all lots facing a street or arranged around a common green similar to Garden Court Houses and *Zero Lot-line Houses*. Both lot orientations may occur within the same neighborhood.

Row Houses



Shop Houses

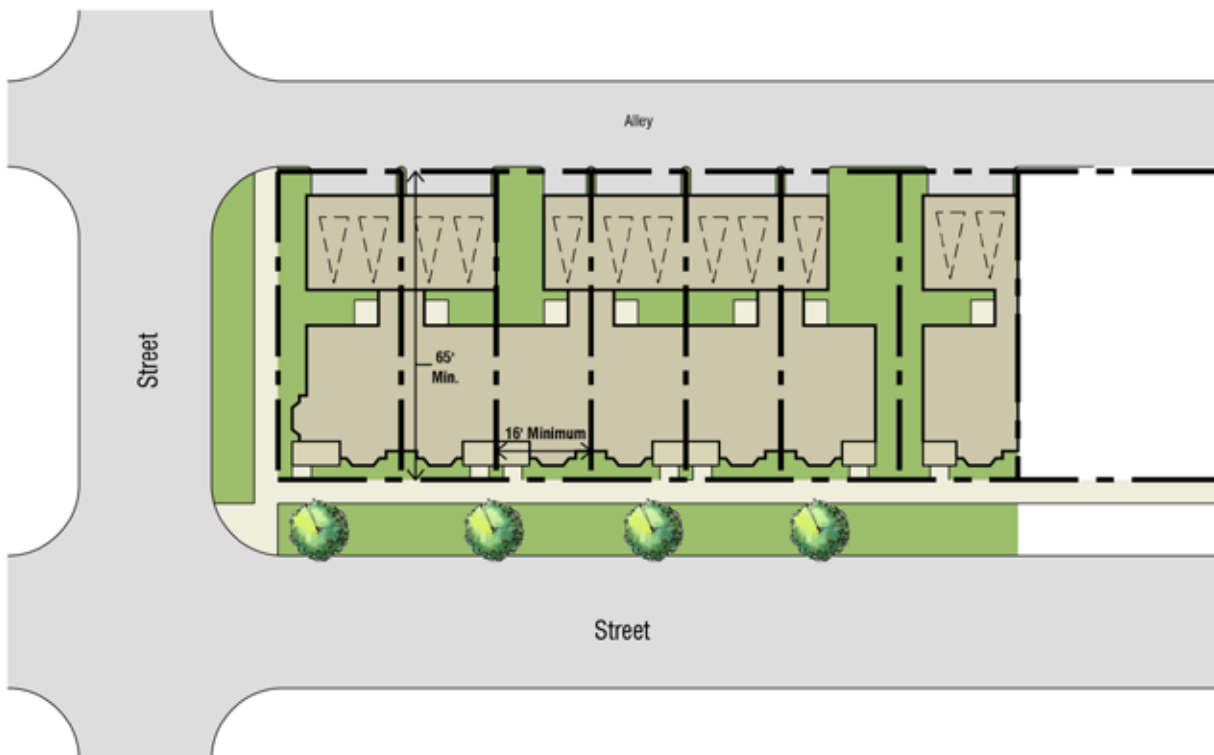
Lot standards and form types for Row Houses and Shop Houses include the following planning and design elements:

- » Lot sizes and dimensions
- » Common green (If provided)
- » Building setbacks
- » Building setback encroachments
- » Building height
- » Vehicular access and parking
- » Building variation and diversity
- » Building roofs
- » Stoops and porches
- » Garages
- » Exterior open space
- » Carriage house units

## LOT SIZES AND DIMENSIONS

- » Lots may range in size from 1,300 to 2,500 square feet, but they are not restricted to that range.
- » **Minimum lot width:** 16 feet, measured along the front building line setback line of the lot
- » **Minimum lot depth:** 65 feet, measured down a side property line. If the side property lines are unequal in length, the minimum lot depth is measured on the shorter side.

*Figure A: Row and Shop House Lot Layouts*



## COMMON GREEN (IF PROVIDED)

- » The common green should be platted as a landscape reserve that adjoins a public street.
- » The common green may have street frontage at one end, both ends, or on two streets at their intersecting corner.
- » Minimum width, separate from the individual lots, should be no less than 20 feet.
- » The common green may vary in width along its depth inward from the street, and the variation need not be equally spaced along either side.
- » Pedestrian walkway(s) at least 5 feet in width should be located within the common green to provide a convenient route from the public sidewalk along the street to each row house adjoining the common green.
- » A walkway at least 4 feet in width should connect the garden court walkway to the front door, front porch, or stoop of each home.
- » Walkways should comply with the *Texas Accessibility Standards*.
- » A pedestrian route from a public sidewalk to a row house lot facing a garden court green should not exceed 200 feet in length.
- » The design of the common green should be open and welcoming to the street, with no fencing or shrub plantings greater than three feet in height.
- » At least one shade tree per adjoining lot should be planted within the common green, and trees should be preferably placed informally.

## BUILDING SETBACKS

- » **Minimum front yard facing a street or common green:** 6 feet, but no greater than 10 feet
- » **Minimum side yard to a street right-of-way line:** 6 feet, but no greater than 15 feet
- » **Minimum interior side yard:** 0 feet, but a minimum separation of 10 feet should be provided at least every 200 feet or every 8 units, whichever is less. This separation should be used as a common green that is part of the open space network for the neighborhood.
- » **Minimum rear yard:** 5 feet; however, garage doors facing an alley should be set back at least 4 feet from the 20-foot-wide alley right-of-way.

## BUILDING SETBACK ENCROACHMENTS

- » Porches, awnings, chimneys, and roof overhangs may encroach up to 3 feet within the minimum 6-foot setback from the street or common green.
- » Uncovered steps and stoops facing the street or common green may encroach an additional 2 feet beyond the maximum 3-foot porch encroachment.
- » Bay windows may encroach up to 3 feet into the minimum 6-foot setback from the street or common green.
- » No encroachments are permitted within an easement or right-of-way.

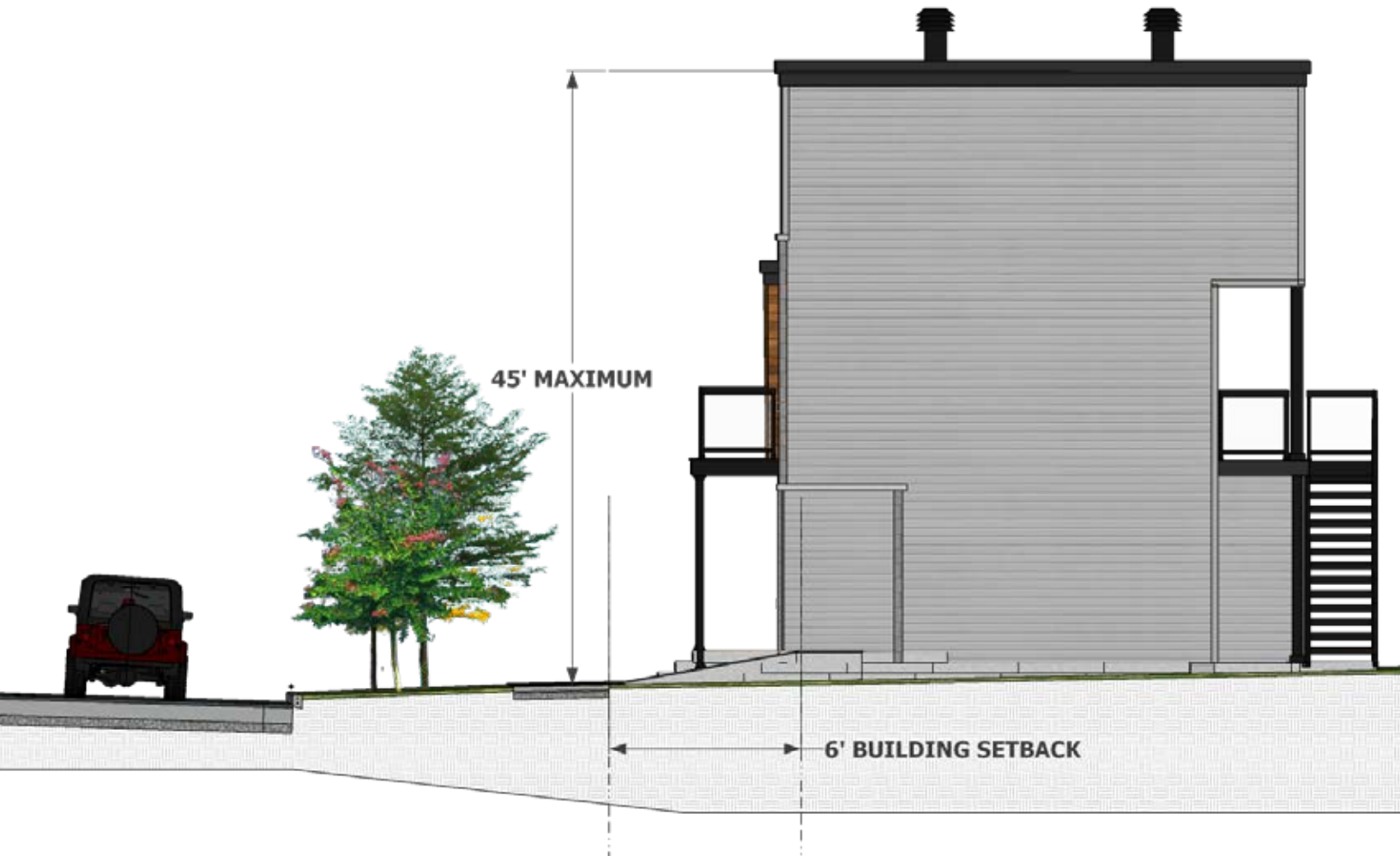
## BUILDING HEIGHT

- » Row and Shop Houses should be at least two stories in height, but not exceed a total height of 45 feet, measured from the finish floor elevation of the ground floor, or four stories.
- » For houses facing the street, the finish floor elevation of the ground floor must be at least 1.5 feet above the adjacent sidewalk elevation within the street right-of-way. Finish floor elevation must also comply with Harris County floodplain regulations.
- » For houses facing a common green, the finish floor elevation of the ground floor must be at least 1.5 feet above the adjacent pedestrian walkway elevation within the common green.

## VEHICULAR ACCESS AND PARKING

- » Row and Shop Houses will be accessed by rear or side alleys (20-foot R.O.W.'s) with paved driveways connecting the alley to the garage.
- » If a common green is provided, the alley should be substantially screened from the common green through the placement of buildings and landscaping.
- » No more than two parking spaces are permitted on each lot.
- » No individual parking space may exceed an area of 12 x 24 feet.
- » At least one parking space should be located within a garage.
- » No required parking space is permitted within a front or side yard facing the street or garden court green.

*Figure B: Row and Shop House Building Setback and Height*





## BUILDING VARIATION AND DIVERSITY

- » Diversity of floor plans are encouraged along the same residential blockface.
- » Each residential blockface should contain at least four different front elevations (facades) and in no event should the same front elevation (façade) be adjacent to another.
- » Where practicable, the blockface should include a mix of home heights ranging from two-story to four stories. A two-story home should not be located next door to a four-story home.

## BUILDING ROOFS

- » Row and Shop House roofs must have at least a minimum of 1/4" per foot slope for positive drainage and to minimize roof leaks. Parapet walls may be used to architecturally portrair a flat-roofed building.
- » For pitched roofs, south and west-facing slopes should be optimized to provide opportunity for rooftop solar panels and/or solar water heating.
- » Mansard and false roofs are not permitted.
- » Rooftop equipment such as HVAC units and satellite dishes should not be visible from the public street or common green.

## STOOPS AND PORCHES

- » Row Houses 28 feet in width or more should have a covered entry stoop or porch fronting the street or common green.
- » The front stoop or porch should have a clear and unobstructed minimum area of 35 square feet with no dimension less than 5 feet.

**Figure C: Row and Shop House Stoop and Porch**



## GARAGES

- » Garages may be attached to the main structure or may be a semi-attached or detached from the main structure in order to enhance site design and provide greater usable open space. Whether a garage is attached, semi-attached, or detached is subject to the governing regulations under which the home is designed.
- » A garage should have a minimum dimension of 10 feet by 20 feet for each parking space enclosed within the garage.
- » Tandem garages are permitted in which one vehicle is parked behind the other within the enclosed space.
- » Single or tandem garages should have a minimum door width of 10 feet; double garages should have a minimum door width of 18 feet.
- » Garage doors and/or garage walls may include windows to provide natural light.

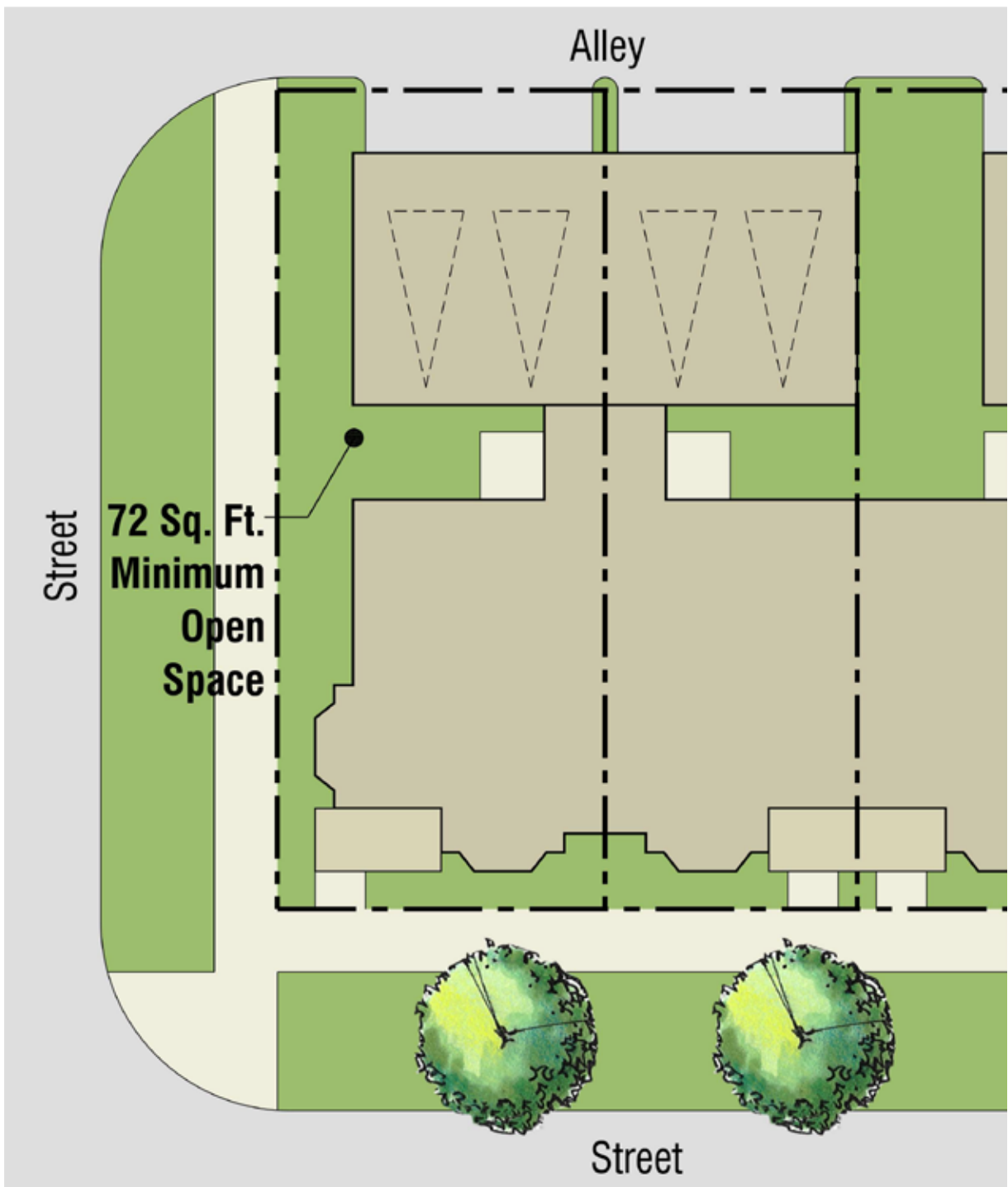
## CARRIAGE HOUSE UNITS (Accessory Dwelling Unit - ADU)

- » A carriage house unit is an accessory dwelling sharing a lot with a main residential structure and typically located above the garage.
- » They must be on lots at least 90 feet in depth.
- » They are intended to accommodate smaller families (or individuals), promote housing diversity and affordability, and provide live-work opportunities.
- » Maximum size of a carriage house is 1200 square feet
- » Maximum height of carriage unit is two stories, but no greater than 25 feet.
- » Building facades and roofs should be similar in design to the main building.

## EXTERIOR OPEN SPACE

- » All Row and Shop Houses should have a minimum of 72 square feet of private exterior open space adjacent to the principal interior living space of the home.
- » Open space may include courtyards, patios, terraces, and balconies.
- » Minimum width of the open space should be 6 feet.
- » Row Houses 28 feet in width or more and a lot depth exceeding 80 feet should provide a courtyard or patio area between the garage and main building that is at least 250 square feet and open to the sky.
- » The courtyard or patio area for the larger lots should have a minimum dimension of 12 feet, as measured from one building wall to another.
- » On corner lots, the courtyard or patio should be oriented to the street with a gated wall or fence up to six feet in height.

Figure C: Row and Shop House Exterior Open Space





## COTTAGE HOUSING – A VARIATION ON GARDEN COURT HOUSES



A *Cottage Housing* development is a collection or cluster of small, detached homes, often less than 1,000 square feet each but no larger than 1,500 square feet. Similar to *Garden Court Houses*, the cottages are arranged around and oriented toward a common open space enjoyed by all residents. In contrast with *Garden Court Houses*, cottages may be built on a single large common lot, like condominiums, instead of on separate individual lots. Since the cottages are not oriented toward a public street, the *Cottage Housing* development may have limited street frontage with only a private street, alley, or driveway connection to a public street. Consequently, Cottage Housing can be accommodated on a wide variety of properties and linked to any type of street. With their smaller building size and common open space, the overall density for *Cottage Housing* is usually greater than *Garden Court Houses* or *Yard Houses*.

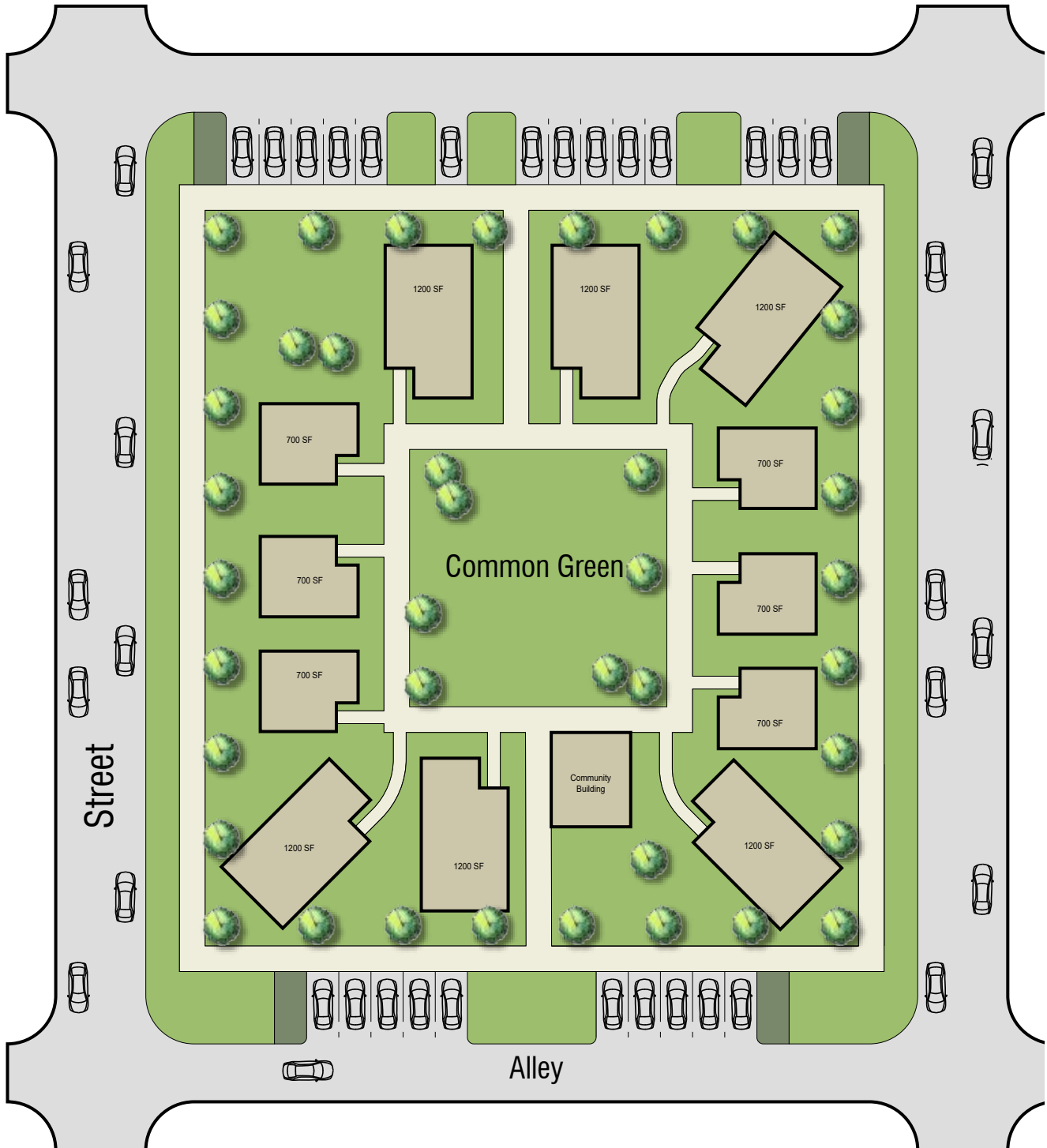
Development standards for *Cottage Housing* include the following planning and design elements:

- » Development scale and home sizes
- » Common open space
- » Community building (optional)
- » Ownership
- » Building setbacks
- » Building setback encroachments
- » Building height
- » Vehicular access and parking
- » Pedestrian access
- » Building variation and diversity
- » Building roofs
- » Covered porches
- » Garages and carports

### DEVELOPMENT SCALE AND HOME SIZES

- » *Cottage Housing* shall be clustered with a grouping of five to 15 cottages arranged around a common open space.
- » Typical development cluster is less than two acres in size.
- » Development may be comprised of more than one cluster in accordance with a master land development plan.
- » The ground floor footprint of each cottage shall not exceed 1,000 square feet, excluding porches and attached garages.
- » The total square footage of each cottage shall not exceed 1,500 square feet, excluding porches and attached garages.

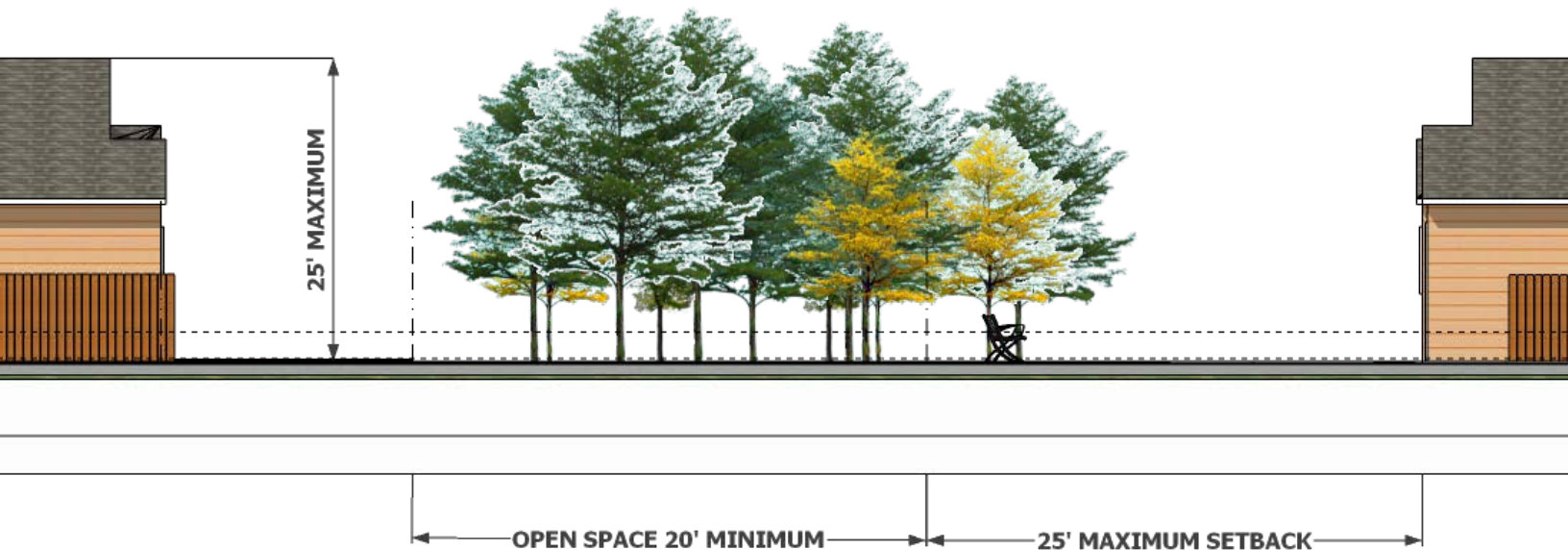
Figure A: Cottage Housing Layout



## COMMON OPEN SPACE

- » Each cluster of cottages shall have a shared open space area to provide a sense of place and community for residents.
- » The area shall be improved for passive recreational use or gardening. Active recreational uses such as basketball or volleyball are not desired.
- » At least 400 square feet of open space is required for each cottage with a minimum square footage of 3,000 square feet per cluster.
- » Common open space shall be provided in a defined and contiguous area with a minimum width of 20 feet.
- » At least two sides of the common open space shall have cottages along its perimeter.
- » Parking areas, driveways, and required cottage setback yards do not qualify as common open space.
- » At least one shade tree for every two cottages should be planted within or near the common open space.
- » Green infrastructure to manage stormwater, as outlined in *Residential Green Infrastructure Standards – Imagination Zones*, is encouraged in the common open space.
- » Maintenance of the common open space should be accomplished by Harris County, a utility district, or another entity with sufficient dedicated funding and capabilities.

**Figure B: Cottage Housing Common Open Space**



## COMMUNITY BUILDING (OPTIONAL)

- » Community buildings are permitted as an optional amenity in a *Cottage Housing* development.
- » A community building could serve more than one cluster of cottages in accordance with a master development plan.
- » The building shall be located adjacent to the common open space.
- » The building shall be one-story and incidental in use, scale, and size to the cottages.

## OWNERSHIP

- » Each cottage, and attendant lot if lotted, shall be privately owned and occupied by the owner.
- » Community buildings, driveways, parking areas, and common open space shall be owned and maintained commonly by the *Cottage Housing* residents, through a condominium association, a homeowners' association, or other similar mechanism.
- » Common community improvements shall not be dedicated to Harris County or other local government for ownership and maintenance.

## BUILDING SETBACKS

- » Minimum setback for all structures including cottages, community buildings, and parking carports or garages shall be 10 feet from any public street or alley right-of-way.
- » Minimum separation between all structures shall be 10 feet.
- » Cottages shall be no more than 25 feet from the common open space area as measured from the façade of the cottage to the nearest delineation of the common open space.
- » Garage doors facing an alley should be set back at least 3 feet from a 20-foot-wide alley right-of-way or 20 feet from a 15-foot-wide alley right-of-way.
- » No part of any structure shall be more than 150 feet from a fire apparatus access road as measured by the shortest clear path on the ground.

## BUILDING SETBACK ENCROACHMENTS

- » Porches, awnings, bay windows, fireplaces, chimneys, and roof overhangs may encroach up to 2 feet within the minimum 10-foot setback from the common open space and within the 10-foot separation between structures.
- » Entryway steps and stoops facing the common open space may encroach an additional 2 feet beyond the maximum 2-foot porch encroachment.
- » No encroachments are permitted within an easement or right-of-way.



## BUILDING HEIGHT

- » Cottages should not exceed 25 feet in height as measured from the finish floor elevation of the ground floor, or two stories.
- » The finish floor elevation of the ground floor must be at least one foot above the highest elevation within the common open space. Finish floor elevations must also comply with Harris County floodplain regulations.

## PEDESTRIAN ACCESS

- » A network of outdoor pedestrian walkways shall connect each cottage with other cottages, the common open space and parking area(s). The walkway network shall be connected to nearby sidewalks within public street rights-of-way.
- » Walkways shall be at least five feet in width and comply with the *Texas Accessibility Standards*.

## BUILDING VARIATION AND DIVERSITY

- » No *Cottage Housing* cluster shall include more than two homes with the same front façade elevation.
- » Cottages with the same front façade elevation shall be separated by at least two cottages with different facades.
- » Cottages with the same floor plan model should not directly align or face each other across common open space unless they have different front façade elevations.

## VEHICULAR ACCESS AND PARKING

- » Parking areas and/or garages for *Cottage Housing* will be accessed by a public alley or private driveway. No parking area or garage shall take direct access from a public street.
- » Private driveways shall be 20 feet to 25 feet in width with sufficient corner radii to accommodate emergency and delivery vehicles.
- » Minimum number of resident parking spaces per cluster shall be calculated as follows:
  - One space per cottage up to 1,000 square feet in total size, plus;
  - 2 spaces per cottage more than 1,000 square feet in total size
- » Required resident parking may be provided in surface parking areas, individual garages or carports connected to the cottage, or shared garages and carports.
- » Guest parking is required in addition to resident parking at the rate of one space for every two cottages, rounded up to the next whole number. Guest parking spaces shall include signage reserving them for visitors.
- » Parking rows shall be limited to no more than five contiguous spaces.
- » Parking shall be separated from public streets and common open space by landscaping and/or architectural screening other than solid wood fencing.
- » Requirements for resident and guest parking may be reduced if transit or adjacent on-street parking is readily available.

## BUILDING ROOFS

- » Cottages should have sloping roofs employing generous overhangs, awnings over windows, gables, hips, and dormers.
- » Simple roof forms with minimal breaks are preferred to lessen the likelihood of roof leaks over time.
- » South and west facing roof slopes should be optimized to provide opportunity for rooftop solar panels.
- » Flat roofs with slopes of less than 2:12 are prohibited except for covering exterior porches, terraces, or decks.
- » Mansard and false roofs are not permitted.
- » Rooftop equipment such as satellite dishes should not be visible from the common open space.

## COVERED PORCHES

- » Each cottage shall have a covered ground-floor porch that is oriented toward the common open space.
- » Covered porches shall have a minimum area of 60 square feet with a minimum depth of 6 feet.

## GARAGES AND CARPORTS

- » A one-vehicle garage or carport may be attached or semi-attached (by means of a breezeway) to the main structure. In certain instances, a garage or carport may be a detached accessory structure separate from the main structure in order to enhance site design and provide greater usable open space. Whether a garage or carport is attached, semi-attached, or detached is subject to governing regulations under which the cottage is designed.
- » A garage parking space should have a minimum dimension of 10 feet by 20 feet. A carport parking space should have a minimum dimension of 9 feet by 18 feet.
- » A shared garage or carport shall have no more than five contiguous spaces.
- » The design of garages and carports, including sloped roof lines, shall be similar to and compatible with the associated cottages they serve.
- » Detached individual and or shared garages with automatic door openers should include a separate pedestrian door for alternative access in case of malfunction or loss of power.
- » Garage doors for automotive or pedestrian access and/or garage walls may include windows to provide natural light.

**Figure C: Cottage Housing Porches and Roofs**



## BAYHOME HOUSING – A VARIATION ON COTTAGE HOUSING



A BayHome is a clustered home typology that ties interior living space with exterior adjacent greenspace with panoramic views. It was originally designed so that the greenspace formed undulating fingers of open space. The term BayHome came from the ‘bay-like’ common space- hence the term ‘BayHome’.

A *BayHome* neighborhood can be part of mixed housing or the only type of housing in a development. They are a good perimeter solution to have homes fronting on an arterial roadway, on parks, or any other premium view. It is a great way to transition from multifamily to more traditional single family lots.

There is no particular size of a BayHome. They can range from modest income/high density small homes to expensive/high density large mansions. For example, along Lake Michigan there are BayHomes that sell for over \$1 million each. However, most BayHome developments are associated with modest income housing. They are also ideal for the emerging Single Family rental market.

A BayHome is a single family detached townhome that has the following core design elements:

- » Garages in the rear.
- » Full front porch (not a stoop) and living areas opposite of the garage side.
- » Internal floor plan to orient living space to a view internally from the front and a side. Typically, a great room layout with the focal point being from the kitchen.
- » The homes will be parallel to each other in groups in a way that is staggered so that there is a panoramic view from the main living area to the front and at least one side of the living space.
- » Generally, the homes will be oriented to a greenspace or common area but can also be oriented to a street.
- » Emphasis should be on focusing views onto common greenspace and views of landscaped areas- not of paving and parking.
- » A sidewalk from the porch to the main pedestrian system must be included with every home.
- » The pedestrian walkway system should be designed to reduce monotony and repetitiveness and include adequate width of 5’ minimum.
- » The design should minimize the volume of street and replace it with common greenspace as much as practical.
- » Generally designed on a townhome lot that can have the lot line centered between the units but more preferred to have a zero lot layout. They could also be built on a single large lot, like a condominium.

There are three types of BayHomes- Series One, Series Two and Series Three.

### *BAYHOMES, SERIES ONE:*

The first true BayHome development was “The Greens’ in Hutchinson, Minnesota which opened in 1999. The homes were staggered and had rear parking with mostly 3 car garages. These first homes were 40’ wide on 50’ wide lots.

At the grand opening a woman overlooking through the side window in the model home said, *“Great view, but what happens when the home next door gets built?”* We said, *“The home next door is built!”* It’s the panoramic view of space that sets a BayHome apart from others.



***The Greens, Hutchinson, Minnesota***

### *BAYHOMES, SERIES TWO:*

The advent of New Urban and TND (Traditional Neighborhood Design) with narrow homes on narrow lots gaining market momentum allowed builders to have more of a comfort level on developing higher density narrow lot designs such as BayHomes. From 2004 through 2008 thousands of BayHomes on hundreds of developments were designed and approved – just in time for the recession at the end of 2008 to interrupt the momentum.

At the time the standard configuration of a BayHome neighborhood was a house 20’ to 28’ wide with a side loaded 2 or 3 car garage, or a rear facing 2 car garage, with homes along an access lane using the local townhome standards. So for example, to compare BayHome to Townhome lots is an easy analysis. If the townhome standard access lane was 20’ wide, the BayHome access lane would be 20’ wide. If 24’ width was the townhome standard, then the BayHome access lane would be 24’ wide.

Note in the figure above, the staggering of lots allow panoramic views. And note how homes are grouped to eliminate monotony. Coved single family homes have lots, streets, and homes all forming individual organic shapes to create the perception of lower density and eliminate monotony.

Because BayHomes can be either HOA maintained or maintenance free and generally do not have a large yard attached, they offer a competitive advantage over duplex homes, attached townhomes, and condominium housing. Those buyers demanding a large private yard can continue to buy a more traditional single family home with views.

BayHome lots can have side lot lines extend to the edge of the public roadway easement, public access easement, or street right-of-way. Building setback lines may also be established from the front or rear of a BayHome. Typically, series two BayHomes were designed with 5’ side yards (10’ minimum between buildings).



*Remington Coves, Otsego, Minnesota*



*Luxury BayHomes, Orno, Minnesota*



Above is a site plan example of a BayHome development in Western Michigan. Typically, the interior floor layout of the BayHome is included in the site plan.



Same area as seen in a Virtual Reality system

Because of the staggering of the BayHome lots, architectural detail (façade) should wrap around the home with the same attention to detail given to the front where the side is exposed. This design requirement creates a 360 degree home design making the entire community visible and open to the whole neighborhood.

### *BAYHOME, SERIES THREE:*

The problem with all forms of housing is to provide a significant amount of parking to serve the housing and guests without having to build additional streets with parallel parking. The traditional way to design single family detached rear loaded housing is to have enough driveway depth to serve two extra cars (or more) behind the typical two car garage. Thus, the distance from garage door to opposite garage door is typically between 60 to 70 feet along the access lane. This sacrifices the open space between fronts of the homes where residents dwell.

The Series Three BayHomes use the side yard between the homes to park allowing the typical vast distance of garage to garage in a traditional design to be reduced, and the space between homes is increased. Though it is preferable to have adequate distance to park a car behind a garage, as a minimum there needs to be enough distance between the garage door and edge of the access lane to allow a car to back up without blocking traffic flow of the lane. This distance is subjective to the designer and the reviewing authority. With more cars having cross traffic alerts and rear vision cameras, a distance as low as 4 feet might be reasonable. The

staggering of the homes will also cause a variation in the distance between garage face and access lane. On modest priced homes, the additional parking behind the garage can replace the need to have additional driveway along the sides of the home which reduces home prices for work force housing.

Because parking is allowed along the side of the home, Series Three BayHomes require a zero-lot line side. The zero lot line can also allow a side yard patio area, either enclosed or exposed to the commons. In general, a Series Three BayHome will have slightly more paved driveway surface because of the paving beside the garage added to the paving behind the garage.

Essentially, other than parking and perhaps a private patio area on the side of a BayHome, there is little difference between a Series Two and Series Three BayHome.



Above is a **luxury** Series Three BayHome development in Texas at 6.5 homes per acre density with guest parking at a total of 6 cars per home (average) including the two car garage



Above is a **medium priced** Third Series BayHome in Minnesota. The homes have two bedrooms on the main floor and are 26 feet wide. The zero lot side yard has 13 feet between buildings to easily park boats, motor homes without being squeezed





Above is a Series Three BayHome development that is on the **more affordable** scale. The 24' wide units are 10 feet apart and have all of the advantages of the middle market and luxury BayHomes



# THE VIEW FROM WITHIN THE BAYHOME IS WHAT IT'S ALL ABOUT

Above is the interior of the 24' wide home

## Can BayHomes be attached?

**No.** However, you can attach townhome units and stagger them to gain much of the benefits offered in the BayHome on attached units to gain a little density, but the units are attached, and thus may be perceived to be slightly less desirable.

Below are townhomes that essentially are an attached BayHome design that offer panoramic views and allow for extra parking.



Development standards for *BayHome Housing* include the following planning and design elements:

- » Development scale and home sizes
- » Common open space
- » Community building (optional)
- » Ownership
- » Building setbacks
- » Building setback encroachments
- » Building height
- » Vehicular access and parking
- » Pedestrian access
- » Building variation and diversity
- » Building roofs
- » Covered porches
- » Garages and carports

## DEVELOPMENT SCALE AND HOME SIZES

- » *BayHome* Housing shall be sited within a common open space
- » Typical development area is greater than two acres in size but less than 12 acres.
- » The ground floor footprint of each BayHome shall be a minimum of 750 square feet but shall not exceed 1,500 square feet, excluding porches and attached garages.
- » The total square footage of each BayHome shall be a minimum of 1000 square feet but shall not exceed 2,500 square feet, excluding porches and attached garages.

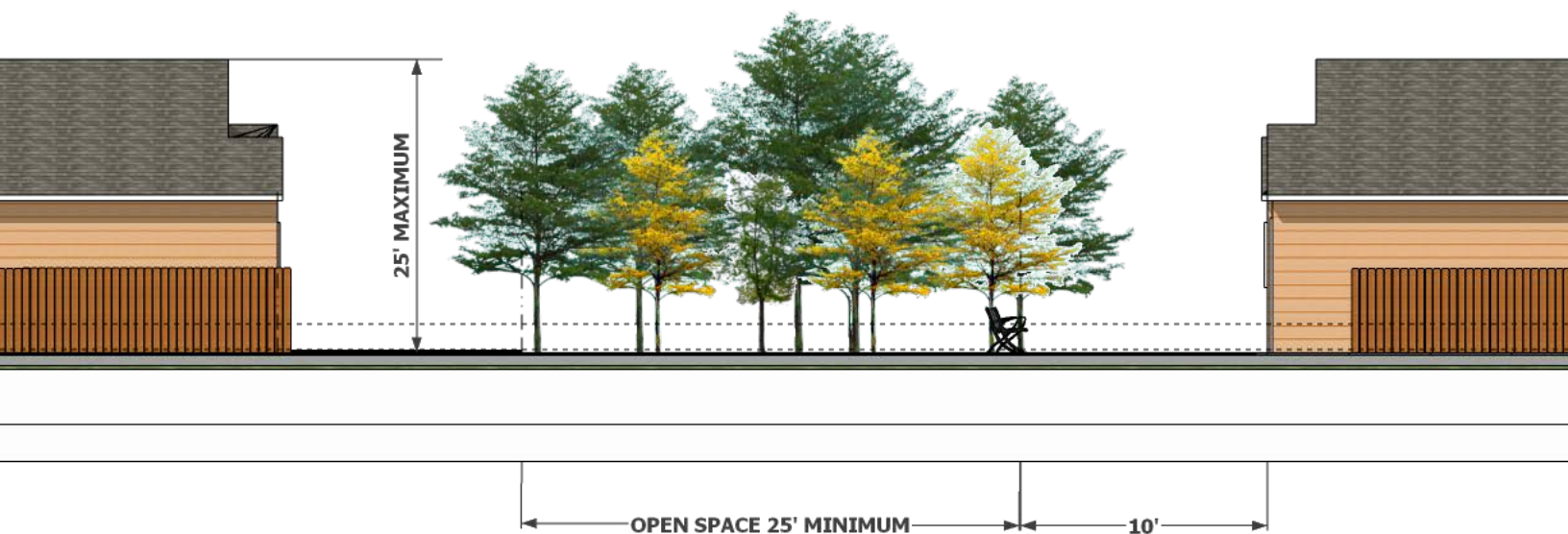
*Figure A: BayHome Housing Layout*



## COMMON OPEN SPACE

- » Each BayHome shall have a shared open space area to provide a sense of place and community for residents.
- » The area shall be improved for passive recreational use or community gardening. Active recreational uses such as basketball or volleyball are not desired.
- » At least 400 square feet of open space is required for each BayHome.
- » Common open space shall be provided in a defined and contiguous area with a minimum width of 25 feet.
- » At least two sides of the common open space shall have BayHomes along its perimeter.
- » Parking areas, driveways, and required BayHome setback yards do not qualify as common open space.
- » At least one shade tree for every two BayHomes should be planted within or near the common open space.

*Figure B: BayHome Housing Common Open Space*



## COMMUNITY BUILDING (OPTIONAL)

- » Community buildings are permitted as an optional amenity in a *BayHome Housing* development.
- » The building shall be located adjacent to the common open space.
- » The building shall be no more than two-stories and incidental in use, scale, and size to the BayHomes.

## OWNERSHIP

- » Each BayHome shall be privately owned and occupied by the owner.
- » Community buildings, driveways, parking areas, and common open space shall be owned and maintained commonly by the *BayHome Housing* residents, through a condominium association, a homeowners' association, or other similar mechanism.
- » Common community improvements shall not be dedicated to Harris County or a local municipality for ownership and maintenance.

## BUILDING HEIGHT

- » BayHomes should not exceed 25 feet in height as measured from the finish floor elevation of the ground floor, or two stories.
- » The finish floor elevation of the ground floor must be at least one foot above the highest elevation within the common open space. Finish floor elevations must also comply with Harris County floodplain regulations.

## BUILDING SETBACKS

- » Minimum setback for all structures including BayHomes, community buildings, and parking carports or garages shall be 10 feet from any public street, alley right-of-way or access lane.
- » Minimum separation between all structures shall be 10 feet.
- » BayHomes shall be no more than 25 feet from the common open space area as measured from the façade of the BayHome to the nearest delineation of the common open space.
- » Garage doors facing an alley should be set back at least 10 feet from a 20-foot-wide alley right-of-way or 20 feet from a 15-foot-wide alley right-of-way.
- » No part of any structure shall be more than 150 feet from a fire apparatus access road as measured by the shortest clear path on the ground.

## BUILDING SETBACK ENCROACHMENTS

- » Porches, awnings, bay windows, fireplaces, chimneys, and roof overhangs may encroach up to 2 feet within the minimum 10-foot setback from the common open space and within the 10-foot separation between structures.
- » Entryway steps and stoops facing the common open space may encroach an additional 2 feet beyond the maximum 2-foot porch encroachment.
- » No building encroachments are permitted within a utility easement or street right-of-way.

## VEHICULAR ACCESS AND PARKING

- » Parking areas and/or garages for *BayHome Housing* will be accessed by a public alley, public roadway easement, or public street.
- » Public roadway easements shall be 22 feet to 28 feet in width with sufficient corner radii to accommodate emergency and delivery vehicles.
- » Minimum number of resident parking spaces shall be 2 spaces per BayHome more than 1,000 square feet in total size.
- » Required resident parking may be provided in surface parking areas, individual garages or carports connected to the BayHome, or shared garages and carports.
- » Guest parking is required in addition to resident parking at the rate of one space for every two BayHomes, rounded up to the next whole number. Guest parking shall include signage reserving them for visitors.
- » Parking rows shall be limited to no more than five contiguous spaces.
- » Parking shall be separated from public streets and common open space by landscaping and/or architectural screening other than solid wood fencing.
- » Requirements for resident and guest parking may be reduced if transit or adjacent on-street parking is readily available.

## PEDESTRIAN ACCESS

- » A network of outdoor pedestrian walkways shall connect each BayHome with other BayHomes, the common open space and parking area(s). The walkway network shall be connected to nearby sidewalks within public street rights-of-way.
- » Walkways shall be at least five feet in width and comply with the *Texas Accessibility Standards*.

## BUILDING VARIATION AND DIVERSITY

- » BayHomes with the same front façade elevation shall be separated by at least two BayHomes with different facades.
- » BayHomes with the same floor plan model should not directly align or face each other across common open space unless they have different front façade elevations.

## GARAGES AND CARPORTS

- » A one-vehicle carport may be attached or semi-attached (by means of a breezeway) to the main structure. In certain instances, a garage or carport may be a detached accessory structure separate from the main structure in order to enhance site design and provide greater usable open space. Whether a garage or carport is attached, semi-attached, or detached is subject to governing regulations under which the BayHome is designed.
- » A garage parking space should have a minimum dimension of 10 feet by 20 feet. A carport parking space should have a minimum dimension of 9 feet by 18 feet.
- » A shared garage or carport shall have no more than five contiguous spaces.
- » The design of garages and carports, including sloped roof lines, shall be similar to and compatible with the associated BayHomes they serve.
- » Detached individual and or shared garages with automatic door openers should include a separate pedestrian door for alternative access in case of malfunction or loss of power.
- » Garage doors for automotive or pedestrian access and/or garage walls may include windows to provide natural light.

*Figure C: BayHome Housing Porches and Roofs*



## BUILDING ROOFS

- » BayHomes should have sloping roofs employing generous overhangs, awnings over windows, gables, hips, and dormers.
- » Simple roof forms with minimal breaks are preferred to lessen the likelihood of roof leaks over time.
- » South and west facing roof slopes should be optimized to provide opportunity for rooftop solar panels.
- » Flat roofs with slopes of less than 2:12 are prohibited except for covering exterior porches, terraces, or decks.
- » Mansard and false roofs are not permitted.
- » Rooftop equipment such as satellite dishes should not be visible from the common open space.

## COVERED PORCHES

- » Each BayHome shall have a covered ground-floor porch that is oriented toward the common open space.
- » Covered porches shall have a minimum area of 60 square feet with a minimum depth of 6 feet.



# 4

## MULTI-FAMILY TYPOLOGIES & LOT STANDARDS



# Multi-Family Typologies & Lot Standards

- » **Multiplex Houses**
- » **Apartment Houses and Mixed-Use Buildings**

## MULTIPLEX HOUSES



*Multiplex Houses* combine two to six living units in one building designed to appear as a large single-family home. The units may be configured in both one-story and multi-story buildings. Each building has a singular principal entrance facing the street with each unit having a separate entry that is either accessible from the street or is accessible from a common internal foyer. Entries can be located either on the front or side of the building. Side yards are larger than those required for single-family homes in order to accommodate side entrances. Each unit also has direct covered access to its own one- or two-car garage that is located off a rear or side alley. Front entry and/or street-facing garages are located within the rear 50% of the lot.

Within an Imagination Zone, *Multiplex Houses* are intended to provide an attractive, higher-density option to Yard Houses, Garden Court Houses and Row/Shop Houses. Densities may range from 10 to more than 20 units per acre. *Multiplex Houses* can also serve as a transitional use between proposed single-family homes and existing adjacent apartment buildings.

Lot sizes generally vary from 8,000 (three-units) to 12,000 square feet (six-units) with a minimum lot width of 80 feet (measured at the front building setback line) and a minimum lot depth of 100 feet. At least 25% of each lot should be pervious open space.



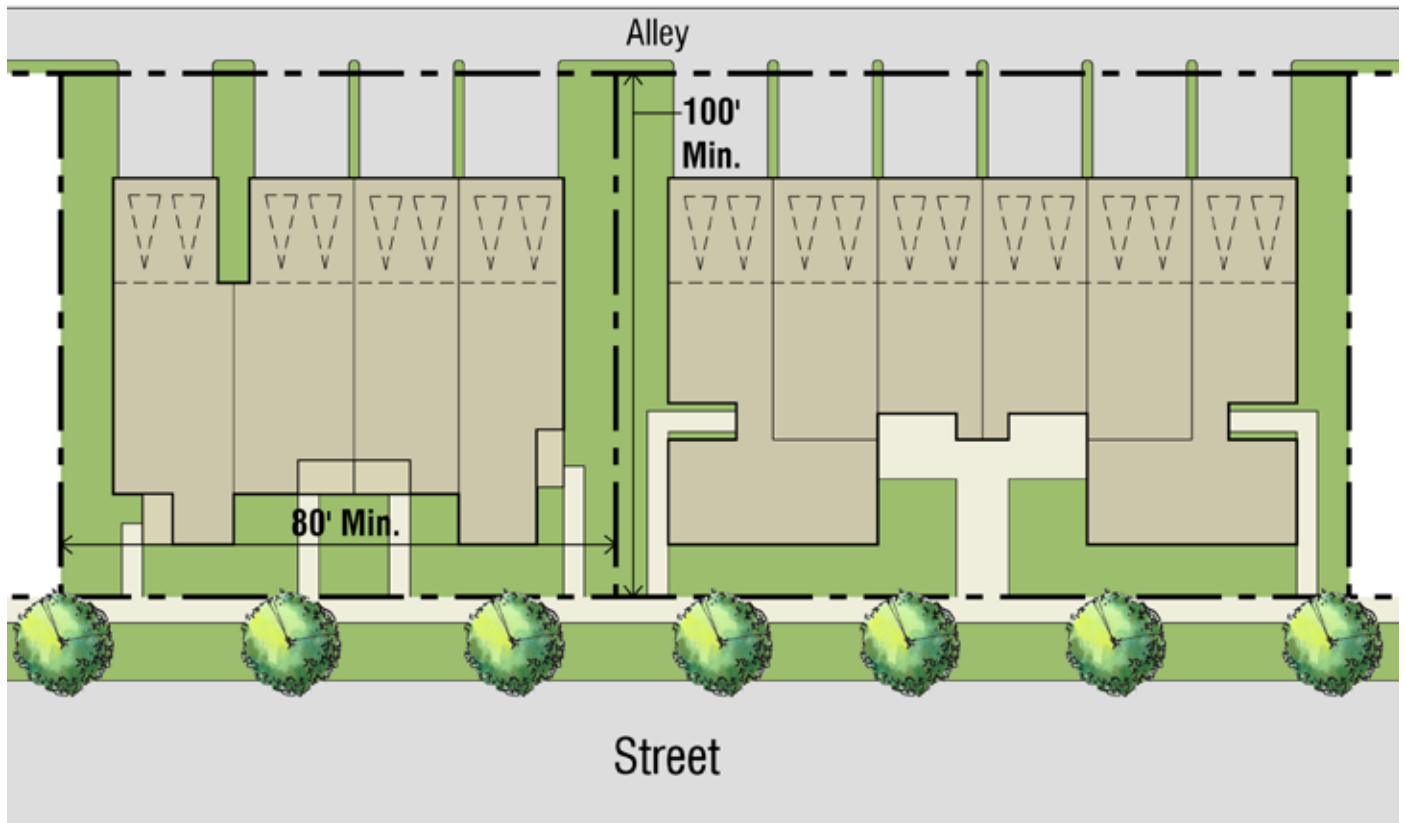
Lot standards and form types for *Multiplex Houses* include the following planning and design elements:

- » Lot sizes and dimensions
- » Building setbacks
- » Building setback encroachments
- » Building height
- » Vehicular access and parking
- » Pedestrian access
- » Building variation and diversity
- » Building roofs
- » Porches and other exterior open space
- » Garages

## LOT SIZES AND DIMENSIONS

- » Lots may range in size from 8,000 to 12,000 square feet but are not restricted to that range.
- » **Minimum lot width:** 80 feet, measured along the front building setback line of the lot
- » **Minimum lot depth:** 100 feet, measured down a side property line. If the side property lines are unequal in length, the minimum lot depth is measured on the shorter side.

*Figure A: Multiplex Lot Layout*



## BUILDING SETBACKS

- » **Minimum front yard facing a street:** 10 feet
- » **Minimum side yard:** 10 feet to another lot, an alley, or a side street (i.e., corner lot)
- » **Minimum rear yard:** 5 feet; however, garage doors facing an alley should be set back at least 20 feet from a 15-foot-wide alley right-of-way or 3 feet from a 20-foot-wide alley right-of-way.

## BUILDING SETBACK ENCROACHMENTS

- » Porches, awnings, chimneys, and roof overhangs may encroach up to 5 feet within the minimum 10-foot front yard setback.
- » Uncovered steps and stoops no greater than 10 feet in width may encroach an additional 2 feet beyond the maximum 5-foot porch encroachment.
- » Bay windows may encroach 3 feet into the minimum 10-foot front or side yard setback.
- » No encroachments are permitted within an easement or right-of-way.

*Figure B: Multiplex Building Setback and Height*



## BUILDING HEIGHT

- » *Multiplex Houses* should not exceed a height of 40 feet, as measured from the finish floor elevation of the ground floor, or three stories.
- » The finish floor elevation of the ground floor must be at least 1.5 feet above the highest sidewalk elevation within the adjacent street right-of-way fronting the house. Finish floor elevation must also comply with Harris County floodplain regulations.

## VEHICULAR ACCESS AND PARKING

- » *Multiplex Houses* may have front entry or rear entry garages and/or surface parking. Front entry houses will be accessed by a driveway that is no wider than 10 feet and may be wider in the rear 50% of the lot. Rear entry houses will be accessed by alleys with paved driveways connecting the alley to the garage.
- » Each unit should have a least one parking space that is enclosed within a garage.
- » Surface spaces should be covered.
- » Surface parking is not permitted within the front yard setback.

## PEDESTRIAN ACCESS:

- » A paved pedestrian walkway, at least 4 feet in width, should be provided from the sidewalk within the public right-of-way to the front entrance of each unit.
- » Walkways may be shared between units; a separate walkway need not be provided to every unit.

## BUILDING VARIATION AND DIVERSITY

- » Diversity of floor plans are encouraged along the same residential blockface.
- » Each residential blockface should contain at least four different front elevations (facades) and in no event should the same front elevation (façade) be adjacent to another.
- » Where practicable, the blockface should include a mix of home heights ranging from one-story to three stories. A one-story home should not be located next to a three-story home.

## BUILDING ROOFS

- » *Multiplex House* roofs must have at least a minimal slope for positive drainage and to minimize roof leaks. Parapet walls may be used to architecturally depict a flat-roofed building.
- » For pitched roofs, south and west-facing slopes should be optimized to provide opportunity for rooftop solar panels and/or solar water heating.
- » Mansard and false roofs are not permitted.
- » Rooftop equipment such as HVAC units and satellite dishes should not be visible from the street on which the house faces.

Figure C: Multiplex House Porch



## PORCHES AND OTHER EXTERIOR OPEN SPACE

- » Each *Multiplex House* should have a first-floor front or corner porch with a minimum area of 80 square feet and a minimum depth of 6 feet.
- » Most, if not all, of the porch should be covered by an eave or structural element integral to the house that provides shade and allows greater use under varying weather conditions.
- » Each unit within a *Multiplex House* should have a minimum of 72 square feet of private exterior open space.
- » Private exterior open space may include porches, courtyards, balconies, patios, and terraces.
- » The minimum depth of the exterior open space should be 6 feet.
- » A side courtyard, patio, or terrace fronting a street should be screened by a gated wall or fence (either masonry or ornamental iron) up to six feet in height.

## GARAGES

- » Garages may be attached or semi-attached (by means of a breezeway) to the main structure. In certain instances, garages may be a detached accessory building separate from the main structure in order to enhance site design and provide greater exterior open space. Whether a garage is attached, semi-attached, or detached is subject to the governing regulations under which the home is designed.
- » A garage should have a minimum dimension of 10 feet by 20 feet for each parking space enclosed within the garage.
- » Tandem garages are permitted in which one vehicle is parked behind the other within the enclosed space, but only for garage parking that serves the same unit.
- » Single or tandem garages should have a minimum door width of 10 feet; double garages should have a minimum door width of 18 feet.
- » Garage doors and/or garage walls may include windows to provide natural light.

## APARTMENT HOUSES AND MIXED-USE BUILDINGS



*Apartment Houses* and *Mixed-Use Buildings* accommodate medium to high density residential uses that are intended to create walkable activity centers within a community. Buildings should provide an appropriate transition in scale and character to nearby single-family typologies. As referenced herein, *Mixed-Use Buildings* are predominantly comprised of residential units with local-serving retail stores, restaurants, professional offices, and community-oriented “accessory” uses at the street-level fronting an *Activity Center Street*. *Apartment Houses* and *Mixed-Use Buildings* also easily provide “age in place” opportunities with single-floor units (i.e., flats) accessed by interior elevators. These types of multifamily residential buildings typically include the following:

- » **“Walk-up”** and **“tuck-under”** buildings (20 to 35 units per acre), where apartments and flats are constructed around surface parking courts and/or above individual garages.
- » **“Wrap”** buildings (40+ units per acre), where housing is constructed around and against one or more levels of structured parking with limited, if any, surface parking.
- » **“Podium”** buildings (40+ units per acre), where housing is constructed on multiple levels directly above one or two levels of structured parking, and where the roof of the parking garage may provide an interior courtyard and common open space for residents.



Tract sizes for *Apartment Houses* and *Mixed-Use Buildings* can greatly vary but generally should be at least one acre but no greater than five acres in a single block location. At least 10% of each tract should be pervious open space.

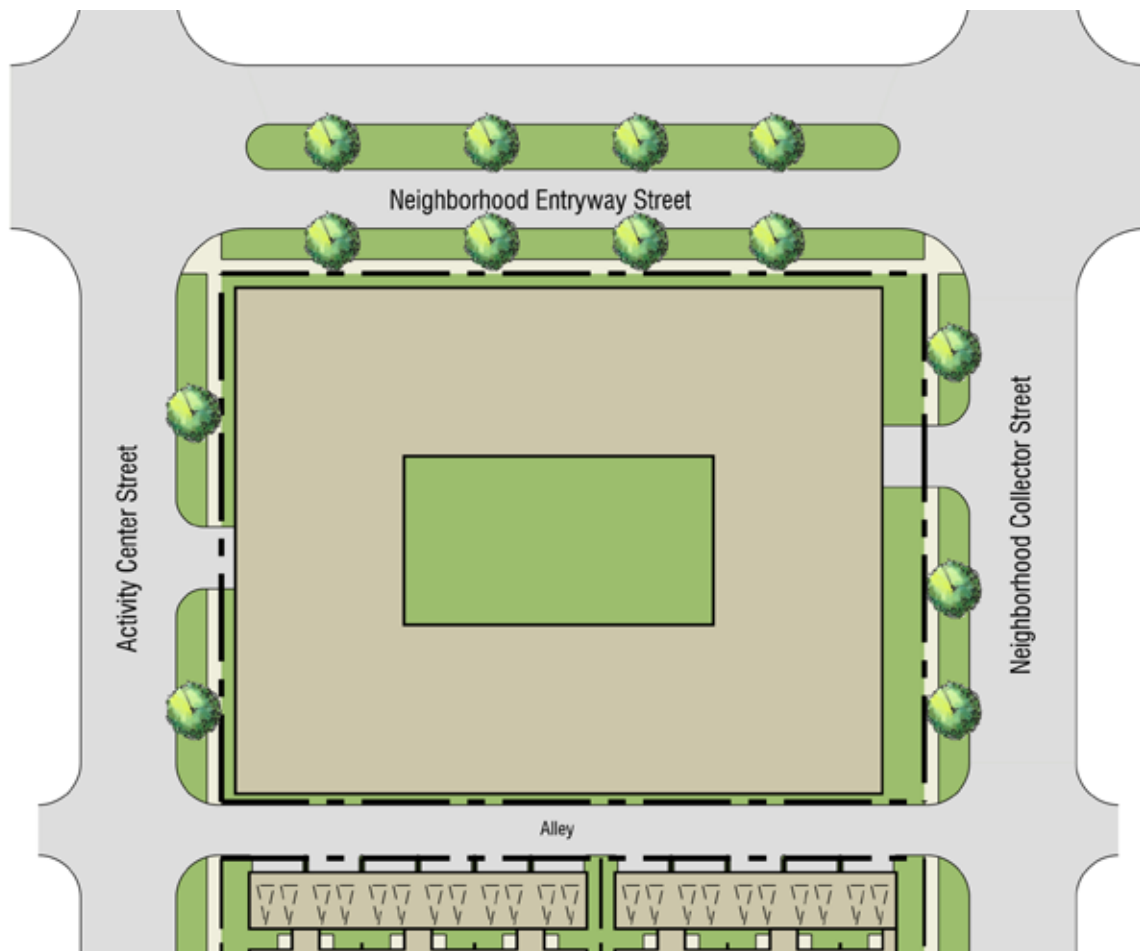
Development guidelines for *Apartment Houses* and *Mixed-Use Buildings* include the following planning and design elements:

- » Site location
- » Ground-level commercial and community-oriented uses (*Mixed-Use Buildings* only)
- » Building setbacks
- » Building setback encroachments
- » Building height
- » Building roofs
- » Vehicular access and parking
- » Pedestrian access
- » Common exterior open space
- » Private exterior open space
- » Service areas and ground-mounted equipment

## SITE LOCATION

- » Housing sites should preferably front an Activity Center Street but may also front a Neighborhood Collector Street or Neighborhood Entryway Street.
- » Sites should not front a Primary Residential Street or have any frontage on a Secondary Residential Street.
- » Sites should not have abutting side yards, rear yards, or shared alleys with Yard Houses, Garden Court Houses, or Zero-Lot Line Houses.
- » Sites may share alleys with Row Houses, Shop Houses and Multiplex Buildings.
- » Sites should have convenient proximity or connectivity to a transit stop.

**Figure A: Apartment House and Mixed-Use Building Lot Layout**



## GROUND-LEVEL COMMERCIAL AND COMMUNITY USES (MIXED-USE BUILDINGS ONLY)

- » Commercial and community uses within Mixed-Use Buildings are limited solely to the ground-level floor but should not comprise the entire ground-level.
- » Commercial or community spaces should be designed with high-bay storefronts having a minimum floor-to-floor height of 15 feet.
- » Commercial storefronts should have their primary entrances oriented to the adjacent pedestrian realm within the Activity Center Street right-of-way, with the storefront entrance generally level with the pedestrian realm.
- » At least 50% of street-facing walls should have transparent windows in order to permit visibility between indoor occupants and outdoor pedestrians and vehicles.
- » Blank exterior walls should be architecturally treated to create interest and detail along the street front and should not exceed 20 feet in length.
- » Front yard landscaping and hardscape with planting and seating areas is encouraged within the front yard building setback and adjacent Activity Center Street pedestrian realm.

## BUILDING SETBACKS

- » Minimum front or side yard facing an Activity Center Street: 5 feet
- » Minimum front or side yard facing a Neighborhood Collector Street or Neighborhood Entryway Street: 15 feet
- » Minimum side yard facing a Primary Residential Street or interior lot line: 10 feet
- » Minimum rear yard: 10 feet
- » Maximum building setback facing an Activity Center Street should be 10 feet (as measured at the building setback line). However, a setback greater than 10 feet is permitted to provide the following site elements:
  - Pedestrian walkways, courtyards, porches, or patios
  - Civic and community-gathering spaces
  - Outdoor cafes and restaurants (covered or uncovered)
  - Public art
  - Landscaped open space
  - Bicycle parking
  - Vehicular access to a parking court or garage.

**Figure B: Ground-Level Commercial and Community Storefronts**





## BUILDING SETBACK ENCROACHMENTS

- » Covered porches at ground level, awnings, and roof overhangs may encroach up to 3 feet within the minimum-required front yard setback.
- » Uncovered steps and stoops no greater than 10 feet in width may encroach an additional 2 feet beyond the maximum 3-foot porch encroachment.
- » Bay windows and “Juliet” balconies may encroach 2 feet into the minimum-required front, side, or rear yard setback.
- » No encroachments are permitted within an easement or right-of-way.

## BUILDING HEIGHT

- » Apartment Houses and Mixed-Use Buildings should not exceed a height of 75 feet, as measured from the finish floor elevation of the ground floor, or four stories.
- » Multifamily buildings across the street from single-family homes, other than Row Houses and Shop Houses, should step down in height so that the building portion within 25 feet of the street right-of-way line does not exceed a height of 40 feet, or three stories.
- » Multifamily buildings adjacent to Row Houses and Shop Houses less than 3-stories in height should step down in height so that the building portion within 25 feet of the common property line does not exceed a height of 40 feet, or three stories.
- » The finish floor elevation of ground-level residential units must be at least 1.5 feet above the highest sidewalk elevation within the adjacent street right-of-way fronting the building. Finish floor elevation must also comply with Harris County floodplain regulations.

*Figure C: Building Setback and Height for Apartment Houses and Mixed-Use Buildings*



## BUILDING ROOFS

- » Apartment House and Mixed-Use Building roofs must have at least a minimal slope of 1/4" per foot for positive drainage and to minimize roof leaks. Parapet walls may be used to architecturally portrait a flat-roofed building.
- » Mansard and false roofs are not permitted.
- » All rooftop mechanical equipment should be architecturally screened, so that is not visible from an adjacent public street, alley, or open space.

## PEDESTRIAN ACCESS:

- » Ground-level residential units fronting an Activity Center Street should have their front doors oriented to the street with stoops elevated at least 1.5 feet to provide separation and privacy.
- » On streets other than an Activity Center Street, a paved pedestrian walkway, at least 4 feet in width, should connect the building entrance(s) to the public sidewalk.
- » Residential units not fronting an Activity Center Street or above ground-level should take access from interior hallways or breezeways.

## COMMON EXTERIOR OPEN SPACE

- » Each Apartment House or Mixed-Use Building should provide common exterior open space in one or more areas that total at least 40 square feet per unit within the complex.
- » Common open space should include pools, pool decks, terraces, terraces, outdoor kitchens, gardens, courtyards, etc. that are available to all residents and their visitors.
- » A fenced dog-friendly outdoor space or dog run, including pet station(s) is encouraged.
- » Provision for shade and relief from the Texas summer climate should be a key factor in the design of exterior common open spaces.

## PRIVATE EXTERIOR OPEN SPACE

- » In addition to common exterior open space, each residential unit should have a minimum of 60 square feet of private exterior open space adjacent to the principal living space of the unit.
- » Private open space should include porches, balconies, patios, and terraces with a minimum depth of 6 feet.
- » Up to 50% of units within a building or complex may be excluded from this provision if an equivalent area is added to the common open space requirement.

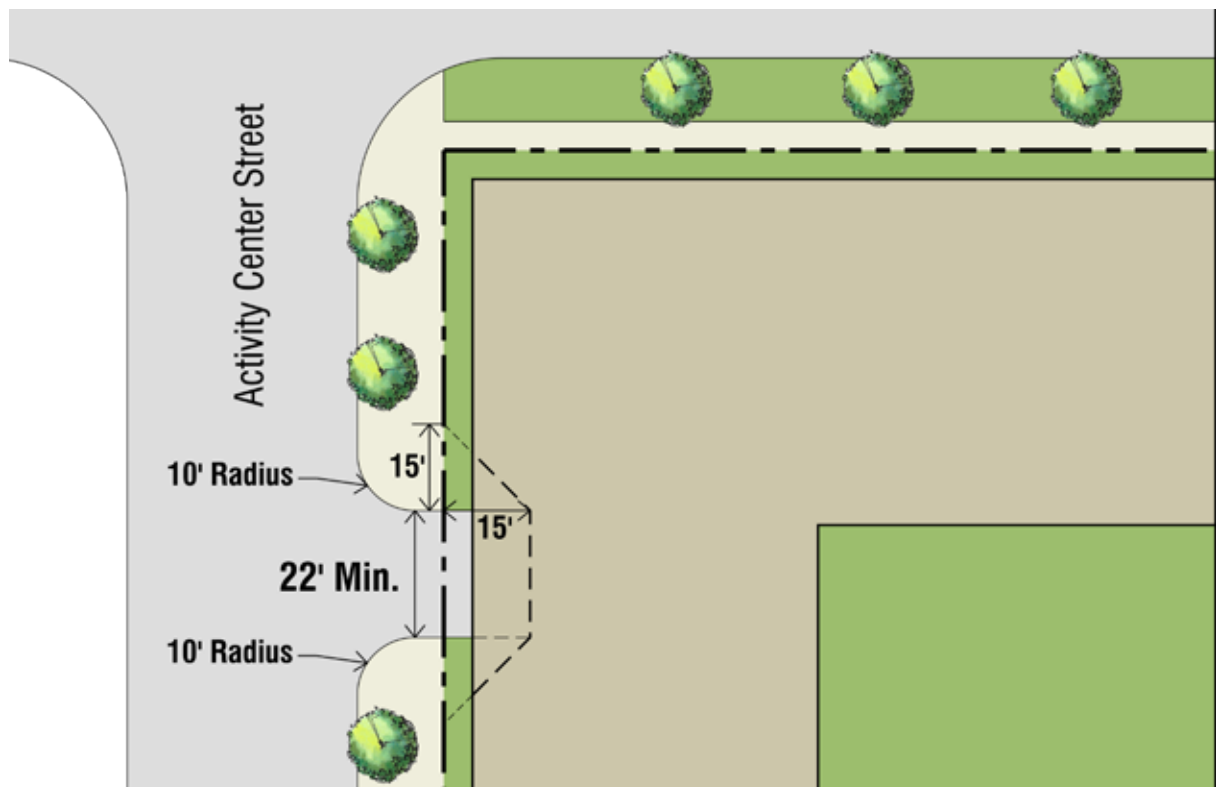
## SERVICE AREAS AND GROUND-MOUNTED EQUIPMENT

- » Trash and/or recycling collection facilities and service areas should be visually and acoustically screened, architecturally integrated into the building, or enclosed within a structure located to the side or rear of the property.
- » Transformers, utilities, and other ground-mounted equipment should be located in areas where they have the least visual prominence and where they do not interrupt the pedestrian environment.
- » Screening with walls and landscaping should be provided to conceal the ground-mounted equipment from predominant view.

## VEHICULAR ACCESS AND PARKING

- » Driveways connecting parking facilities to public streets should be at least 22 feet in width but no greater than 28 feet, with minimum 10-foot curb return radii at the driveway intersection with the street.
- » Driveways crossing an Activity Center Street pedestrian realm should provide a minimum 15-foot by 15-foot visibility triangle as measured from the edge of the driveway on one side and the edge of the pedestrian realm on the perpendicular side in order to improve sight lines for drivers exiting the building.
- » Sites may take access from an alley right-of-way that is at least 20 feet in width and does not provide access to a single-family house other than a Row House or Shop House.
- » On-site parking for multifamily residential units should be required as follows:
  - One bedroom or less: One parking space per unit
  - Two bedrooms: 1.5 parking spaces per unit
  - Three or more bedrooms: Two parking spaces per unit
- » Maximum parking for ground-level commercial and community uses should be capped at one space per 250 square feet of gross leasable area. Adjacent on-street parking is included in the parking calculations.
- » On-site parking should be largely invisible or screened from a public street with structured parking architecturally integrated and/or encapsulated within the body of the building. Surface parking should be screened with masonry walls or landscape hedges no greater than 3.5 feet in height.
- » No on-site surface parking is permitted in front of an Apartment House or Mixed-Use Building on an Activity Center Street in order to provide a better pedestrian realm along the street.
- » Parking facilities should include areas for bicycle and tricycle parking, “car share” programs if provided, and recharging stations for electrical vehicles.

*Figure D: Driveway Dimensions*





# 5

## PARKS & OPEN SPACE

# Parks & Open Space

A key component of every neighborhood and *Imagination Zone* are parks and open spaces that offer a wide variety of recreational experiences readily available to all residents. While facilities will range in size and type depending on the location and size of the community, collectively they are intended to create an integrated system that enhances livability and natural appearance. Parks and open space also present an excellent opportunity to incorporate Green Stormwater Infrastructure (GSI).

The parks and open space system outlined below includes the following classifications:

- » Pocket Park
- » Neighborhood Park
- » Community Park
- » Linear Park
- » Amenitized Stormwater Detention Pond
- » Special Purpose Parks
  - Park reserve/natural area
  - Plaza or square
  - Cultural or historical park
- » Usable Open Space

For each standard park type, a general description is given along with development guidelines to include the following:

- » Size
- » Service Area
- » Location and Access
- » Parking
- » Typical Development
- » Optional Facilities
- » Discouraged Facilities
- » Facility Setbacks

Two of the most important factors in park planning and development are location and access. They play a key role in good park visibility and the quality of the park environment. A poorly located and configured site with inadequate street frontage can result in safety and security issues as can be experienced in smaller parks. With better exposure to adjoining streets, security is enhanced, and the park becomes a more visible and appreciated asset to the community.

Also recommended are facility setbacks to establish the minimum desired distances between certain park uses and the perimeter property line or street right-of-way. Park development setbacks are specified for the following reasons:

- » **Safety** – Example: playground setbacks from streets
- » **Respect for adjacent properties** – Example: basketball pavilion setbacks from single-family homes
- » **Aesthetics** – Example: parking lot setbacks from streets
- » **Maintenance** – Example: reduce hand-mowing and trimming.



## POCKET PARK



A pocket park is the smallest park classification and should be considered as an alternative where providing a typical neighborhood park is impractical, or where closer proximity to park land is desired. Pocket parks provide a means to create open space and meet recreational needs in higher-density residential neighborhoods.

Because of their smaller size, pocket parks can focus more on their surrounding demographic characteristics. Site development should have a strong emphasis on passive uses but still allow opportunity for social gatherings. Providing shade is important. All portions of the site should be readily visible from adjoining streets to provide a more secure environment.



### SIZE

Less than 1 acre

### SERVICE AREA

Usually less than ¼ mile

### PARKING

No off-street/on-site parking. Parking, if any, limited to curbside on-street.

### TYPICAL DEVELOPMENT

- » Seating area(s)
- » Children's play area
- » Open area to encourage spontaneous play and allow for neighborhood gatherings
- » Support facilities (bike racks, trash receptacles, drinking fountains, signage, etc.)
- » Street trees along the park edge(s); shade and ornamental trees within the park
- » Safety and security lighting (full cutoff fixtures to minimize glare)

## LOCATION AND ACCESS

- » Centrally located *within* the neighborhood and not at the edge of the neighborhood
- » Easily accessed by residents
- » Frontage required on one street but preferred on two streets (Primary Residential Street or Activity Center Street, only)
- » Minimum street frontage of 60 feet
- » Prefer adjacent residences to face or side to the park site instead of backing

## DISCOURAGED FACILITIES

- » Sports court or pavilion
- » Restrooms
- » Swimming pool

## OPTIONAL FACILITIES

- » Picnic tables
- » Gazebo or similar shade structure
- » Special horticultural plantings or gardens (maintained by residents)
- » Decorative lighting
- » Dog-friendly outdoor space
- » Rain garden per GSI standards

## MINIMUM SETBACKS:

Playgrounds should be set back at least 10 feet from street right-of-way, which will also allow for shade tree plantings.

*Figure A: Pocket Park Location and Access*



## NEIGHBORHOOD PARK



The neighborhood park is the basic unit of a park system and should serve as the recreational focus and gathering space for an Imagination Zone or other residential neighborhood. Surrounding uses should be predominantly single-family or multifamily typologies. All areas of the park should be readily visible from adjoining streets in order to provide a secure environment. Opportunities for neighborhood resident input should be provided in planning the park given the diversity and evolving character of Harris County residents. Sites located contiguous to linear parks may provide the opportunity to connect with other nearby residential neighborhoods via hike and bike trails.

Neighborhood parks will typically include a variety of active and passive recreational facilities. Playgrounds, trails, and useable open space are normally high priorities. Park development should achieve a balance between active use areas such as sports fields or game courts and passive use areas intended for sitting, picnicking, and relaxing. As a general rule, no more than half of the park acreage should be planned for active uses. Such uses requiring chain link fencing should be minimized in order to create a more visually attractive park. With the possible exception of limited use by youth sports teams, neighborhood parks are not intended for programmed activities that attract users from outside the neighborhood or that create overuse, noise, glare, traffic congestion and high parking demand.



### SIZE

1 to 3 acres, but no greater than 5 acres

### SERVICE AREA

¼ mile desirable to 1-mile maximum radius, preferably uninterrupted by major thoroughfares or other major physical barriers (e.g., railroad)

### PARKING:

Street or curbside parking with limited, if any, on-site parking. Greater street frontages reduce or eliminate the need for on-site parking.

### TYPICAL DEVELOPMENT:

- » Trails and pathways
- » Shaded seating area(s)
- » Picnic tables and/or picnic pavilion
- » Children's play area(s)
- » Multi-use play lawn and space for neighborhood gatherings
- » Sports field for practice or non-league play (preferably unlighted)
- » Support facilities (bike racks, trash receptacles, drinking fountains, signage, etc.)
- » Street trees along the park edges; shade and ornamental trees within the park
- » Safety and security lighting (full cutoff fixtures to minimize glare)





## LOCATION AND ACCESS:

- » Centrally located within the neighborhood; preferably not at the edge of the neighborhood unless intended to also serve existing nearby residents
- » Easily accessed by residents
- » Frontage required on at least two streets; major thoroughfare frontage is undesirable.
- » Minimum street frontage of 200 feet per acre of park
- » Prefer adjacent residences to face or side to the park site instead of backing

## OPTIONAL FACILITIES:

- » Swimming pool or splash pad with adjacent shade structure
- » Small recreation center building
- » Basketball/multi-use court (unlighted)
- » Special horticultural plantings or gardens (maintained by residents)
- » Dog-friendly outdoor space and/or fenced dog run
- » Farmers markets
- » Rain garden per GSI standards

## DISCOURAGED FACILITIES:

- » Lighted athletic fields
- » Large recreation center building
- » Multi-use sports pavilion
- » Restrooms

## MINIMUM SETBACKS:

- » On-site parking:
  - 10' from street right-of-way
  - 25' from single-family residential properties
- » Children's play area:
  - 25' from street right-of-way or other property line
- » Multi-use court or swimming pool:
  - 25' from street right-of-way
  - 100' from single-family residential properties

## COMMUNITY PARK



A community park is typically larger in size than a neighborhood park and serves several connected neighborhoods with both active and passive recreational facilities. They can be designed for a variety of uses which could include community celebrations, concerts, outdoor theater and performances, special events, weddings, parties, outdoor dining, art fairs, festivals, and farmers' markets. Group and/or team activities are well accommodated to include highly used and programmed athletic sports fields, swimming pools and recreation centers which are less appropriate in neighborhood parks. Community parks may also contain large passive open spaces or preserve unique landscapes. Most if not all of the park should be visible from adjoining streets which could include major thoroughfares.



### SIZE

5+ acres; 10-acre minimum preferable

### SERVICE AREA

1 mile to 3 miles

### PARKING

- » On-street parking in combination with on-site parking
- » On-site parking lots located near adjoining streets; vehicular traffic prohibited within or across park
- » If desired, optional gates at parking lot entrances to limit hours of use
- » Parking lot trees with at least one shade tree per 5 spaces

### TYPICAL DEVELOPMENT

- » Trails and pathways
- » Shaded seating areas
- » Picnicking areas to include a large picnic pavilion
- » Children's play areas
- » Passive recreational open space
- » Sports fields (lighted) for practice and league play
- » Restrooms
- » Basketball/multi-use court
- » Support facilities (bike racks, trash receptacles, drinking fountains, signage, etc.)
- » Street trees along the park edges; shade and ornamental trees within the park
- » Safety and security lighting (full cutoff fixtures to minimize glare)

## LOCATION AND ACCESS

- » Primary frontage required on an Activity Street, Neighborhood Connector or Entryway Street
- » Frontage desirable on a major thoroughfare or within close proximity
- » Park access by public transit or designated bikeway desirable
- » Minimum street frontage of 100 feet per acre of park

## OPTIONAL FACILITIES

- » Swimming pool or splash pad with bathhouse and shade structure(s)
- » Recreation center with gym, multi-use meeting and activity spaces, offices, restrooms, kitchen, and optional weight/exercise room
- » Multi-use lighted sports pavilion
- » Visually screened portable toilets
- » Dog-friendly outdoor space and/or fenced dog run
- » Farmers markets
- » Rain garden per GSI standards

## PARK LIGHTING

- » Facility lighting at ballfields, pavilions, courts, etc. and associated parking
- » Security lighting at play areas, along trails and exterior perimeters of park structures
- » Avoid glare to adjoining residential uses

## MINIMUM SETBACKS

- » On-site parking:
  - 10' from street right-of-way
  - 50' from single-family residential properties
- » Children's play area:
  - 25' from street right-of-way or other property line
- » Picnic pavilion, recreation center, or swimming pool:
  - 25' from street right-of-way
  - 50' from single-family residential properties
- » Sports pavilion:
  - 50' from street right-of-way
  - 100' from any residential property

## LINEAR PARK



Linear parks are greenways of open space that offer scenic beauty and allow safe, uninterrupted pedestrian or bicycle movement along natural or man-made corridors. They are generally located along drainageways, streams and bayous but may also be located along utility corridors or paralleling streets. Linear parks can link residential neighborhoods, schools, libraries, activity centers, transit facilities, and other types of parks. They provide breaks in the urban development pattern, conserve ecological unique areas, and provide long stretches of open space. Along natural drainageways, these greenways can detain and filter stormwater before it enters the drainageway and provide a suitable habitat for birds and wildlife. Existing tree cover within natural corridors should be protected.

In Harris County, major drainageways and bayous are usually within an easement or owned in fee simple by the Harris County Flood Control District (HCFCD). Consequently, linear park development along such corridors requires coordination and agreements with HCFCD. Unencumbered additional land, outside of the floodway, should be acquired as needed to enhance the accessibility, visibility, and usability of linear parks for recreational purposes and amenities.



### SIZE

A minimum width of 50 feet; length is variable

### SERVICE AREA

Neighborhood to regional

### PARKING

- » On-street parking preferred, except along major thoroughfares
- » Off-street parking lots for trail users should be small and infrequent.

### TYPICAL DEVELOPMENT

- » Pedestrian trails, paved or unpaved, of varying width
- » Shared use hiking/cycling paths, minimum 10-foot width, that accommodate both recreational and purposeful trips
- » Support facilities (benches, bike racks, trash receptacles, drinking fountains, signage, etc.)
- » Optional Facilities
- » Small picnic area(s), widely spaced
- » Small children's play area
- » Exercise stations
- » Bioswales and/or other GSI facilities per prescribed standards

## LOCATION AND ACCESS

- » Determined by resource availability, linkage opportunities, and accessibility
- » Adjacent residential development and activity centers should facilitate visibility, access, and safety. Long stretches of residential lots backing to the linear park should be avoided. Adjacency to streets is preferred to enhance visibility and access and provide a more secure environment.
- » Frontage on any type of street

## PARK LIGHTING

- » Security night lighting along trails and at picnic areas and playgrounds
- » Where adjacent to streets, make dual use of streetlight poles to supplement park lighting

## MINIMUM SETBACKS

- » Where paralleling streets, shared use paths should be set back at least 6 feet from the street curb, and preferably 10 feet to better accommodate shade tree plantings between the path and street.
- » Where paralleling drainageways, trails and paths should be set back at least 15 feet from the high bank of the drainageway.



## AMENITIZED STORMWATER DETENTION POND



Stormwater detention is required as part of single-family residential development in Harris County. Detention areas are typically constructed as part of the development project in accordance with Harris County Flood Control District (HCFCD) criteria. An amenitized detention pond is an area that has also been designed as a site amenity by being aesthetically pleasing, providing useable open space, and appearing natural (i.e., without visible concrete). Such basins have a soft edge and are intended to have a permanent water level, or small lake, in the bottom of the basin. Stormwater flood storage is provided above the normal surface level of the lake. Trails and other recreational features are provided around the perimeter of the lake. It is important to recognize that stormwater detention is the *principal use* of an amenitized detention pond. Recreational opportunities comprise a *secondary use*.



### SIZE

Dependent on overall project size and HCFCD requirements for the watershed

### SERVICE AREA

Neighborhood to community

### PARKING

No off-street/on-site parking. Parking, if any, limited to curbside on-street.

### TYPICAL DEVELOPMENT

- » Pedestrian trails, paved or unpaved, of varying width
- » Seating or picnic areas (widely spaced)
- » Support facilities (trash receptacles, drinking fountains, signage, etc.)

### LOCATION AND ACCESS

- » Centralized location preferred but will be influenced by topography, existing drainage patterns, and engineering design criteria
- » Adjacent residential development should facilitate visibility, access, and safety. Long stretches of residential lots backing to the amenitized detention pond should be avoided. All portions of the site should be visible from an adjacent street or alley.

### OPTIONAL FACILITIES

- » Shared use hiking/cycling paths, minimum 10-foot width
- » Small children's play area
- » Exercise stations

### MINIMUM SETBACKS

- » The high bank of a detention basin should be set back at least 30 feet from an adjoining property line or street right-of-way if the area above the high bank is intended for recreational use.
- » Trails and paths should be set back at least 15 feet from the high bank.

## SPECIAL PURPOSE PARK



This category addresses a wide variety of special places or facilities, which focus on locally unique or significant natural, historic, or cultural resources. They can be individual sites or part of larger parks. Special purpose parks include the following:

- » **Park Reserve/Natural Area**
- » **Plaza or Square**
- » **Cultural or Historical Park**

### PARK RESERVE/NATURAL AREA

Natural areas, wildlife preserves, and other park preserves are intended for both conservation and public enjoyment/education. Such areas may provide an excellent opportunity to incorporate GSI facilities per prescribed standards. Access to environmentally sensitive areas may be restricted to protect vegetation and or wildlife habitat. Site development is limited and strictly passive. Motorized vehicular traffic and possibly bicycle traffic are prohibited within the park. On-street parking is preferred with limited on-site parking at the park perimeter only.





## PLAZA OR SQUARE

Plazas or squares are usually highly developed, smaller sites that may be located within activity centers. Surrounding demographics will typically play a large role in site planning. Most feature intensive hardscape or softscape type development with little to no natural turf. Site use is passive with some sites functioning as venues for festivals, gatherings, and special events. The plaza or square is highly visible to the street and accessed by walking with connectivity to transit. No on-site parking is permitted.



## CULTURAL OR HISTORICAL PARK

These park sites are established primarily to present and preserve local cultural or historical themes for public education and enjoyment. They provide an opportunity to showcase the rich diversity of Harris County residents. Park use is typically passive and site development emphasizes the cultural or historical theme. Park is accessed solely by pedestrians via walkways, sidewalks, sidepaths, promenades or trails around and through the site. Citizen input during the park planning process is essential.

## USABLE OPEN SPACE



Usable open spaces are open areas or recreational facilities that are designed and intended to be used for outdoor, active or passive, recreation purposes. They are typically provided as part of a specific residential development such as a common green for garden court houses or required common exterior open space for apartment houses and mixed-use buildings. Usable open space can include public parkland, but they may be distinguished from parks when their use is limited to specific residents instead of the general public and their ownership is private or semi-private instead of public. Private or semi-private ownership could include a homeowners' association or a municipal utility district.

In an *Imagination Zone*, an area of usable open space has a minimum horizontal dimension of 15 feet with a slope no greater than 10%. Usable open spaces may include landscaping elements including trees and ground covers, walkways, trails, seating areas, children's play areas, sports courts (e.g., sand volleyball), water features and decorative objects such as art or fountains.



## USABLE OPEN SPACE STANDARDS

In an *Imagination Zone* or other residential development of 20 acres or more in size, the following standards should apply for usable open spaces:

- » At least 20% of the gross land area within the entire development should be devoted to usable open space. Open space may be satisfied by either public or private open space or a combination of thereof.
- » Usable open spaces should be conveniently located with plentiful access and visibility to motorists, pedestrians, or bicyclists.
- » Significant trees or stands of native trees and shrubs should be preserved and protected from destruction or alteration unless deemed necessary for public safety.
- » If the residential development will be multi-phased, usable open space requirements should be satisfied for each phase.
- » Stormwater detention facilities and GSI may be counted as usable open space when amenitized as discussed herein.



# 6

## STREETSCAPE & LANDSCAPE STANDARDS

# Streetscape & Landscape Standards

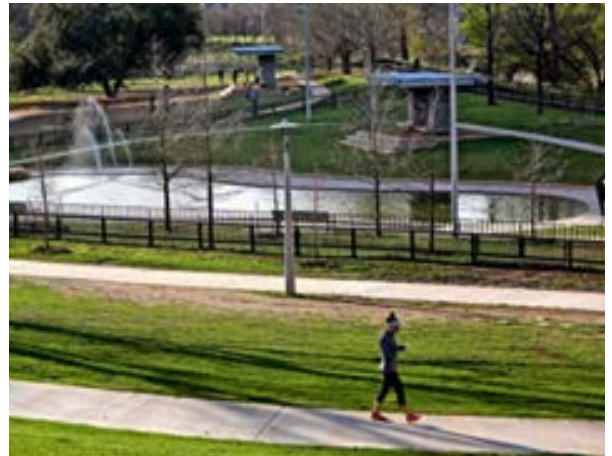
- » **Pedestrian and Transit Connectivity**
- » **Street Tree and Landscape Plantings**
- » **Fencing and Walls**
- » **Outdoor Lighting**

## PEDESTRIAN AND TRANSIT CONNECTIVITY



Pedestrian walkability, circulation, and connectivity with linkages to transit options are instrumental to a high-quality neighborhood and *Imagination Zone*. Key components to a well-planned pedestrian network as part of the streetscape include the following:

- » Sidewalks along all streets, shaded by street trees
- » Pedestrian walkways connecting sidewalks to adjacent residences and into common greens
- » Spacious, amenitized pedestrian realms within Activity Centers
- » Site furnishings
- » Pedestrian-friendly street intersections
- » Pedestrian-friendly transit stops and shelters
- » Properly placed utilities



## SIDEWALKS

- » A continuous, uninterrupted system of concrete-paved sidewalks should be provided along both sides of all streets in accordance with the *Street Plans and Cross-Sections*.
- » Sidewalk alignment should mirror the street alignment and not be interrupted. Sharp jogs and offsets should be avoided.
- » Sidewalks should be separated from the travel way of the street by a planting zone with regularly spaced shade trees.
- » Sidewalks may be located alongside the street where adjacent to on-street parking and not a designated travel lane. The planting zone will then adjoin the right-of-way line.
- » Minimum 5-foot width along right-of-way lines; minimum 5.5-foot width where adjacent to the street curb.
- » Elevation and grades for sidewalks should prevent accumulation of debris or ponding of water.
- » Sidewalks should be free of impediments such as drainage inlets, above-ground utilities, light poles, and sign poles. Such impediments are preferably located within adjacent planting zones.
- » Sidewalks adjacent to GSI facilities should include toe guards and railings if GSI depth exceeds 18" or if GSI surface is not soil, mulch, or vegetation.
- » ADA compliance is required.



## PEDESTRIAN WALKWAYS

- » A pedestrian walkway, at least 4 feet in width should be provided from the public sidewalk to the entrance of each single-family residence facing the street.
- » For homes facing a common green, a pedestrian walkway at least 5 feet in width should extend from the public sidewalk along the street into the common green. A walkway at least 4 feet in width should connect the common green walkway to each adjoining residence.
- » Pedestrian walkways crossing over GSI facilities should meet or exceed ADA requirements.
- » Acceptable walkway paving materials include the following:
  - Broom-finished concrete
  - Decorative concrete (i.e., stamped and stained)
  - Decomposed granite
  - Stone
  - Brick or other unit pavers, including permeable pavers
  - Permeable concrete or asphalt
- » Elevation and grades for pedestrian walkways should prevent accumulation of debris or ponding of water.

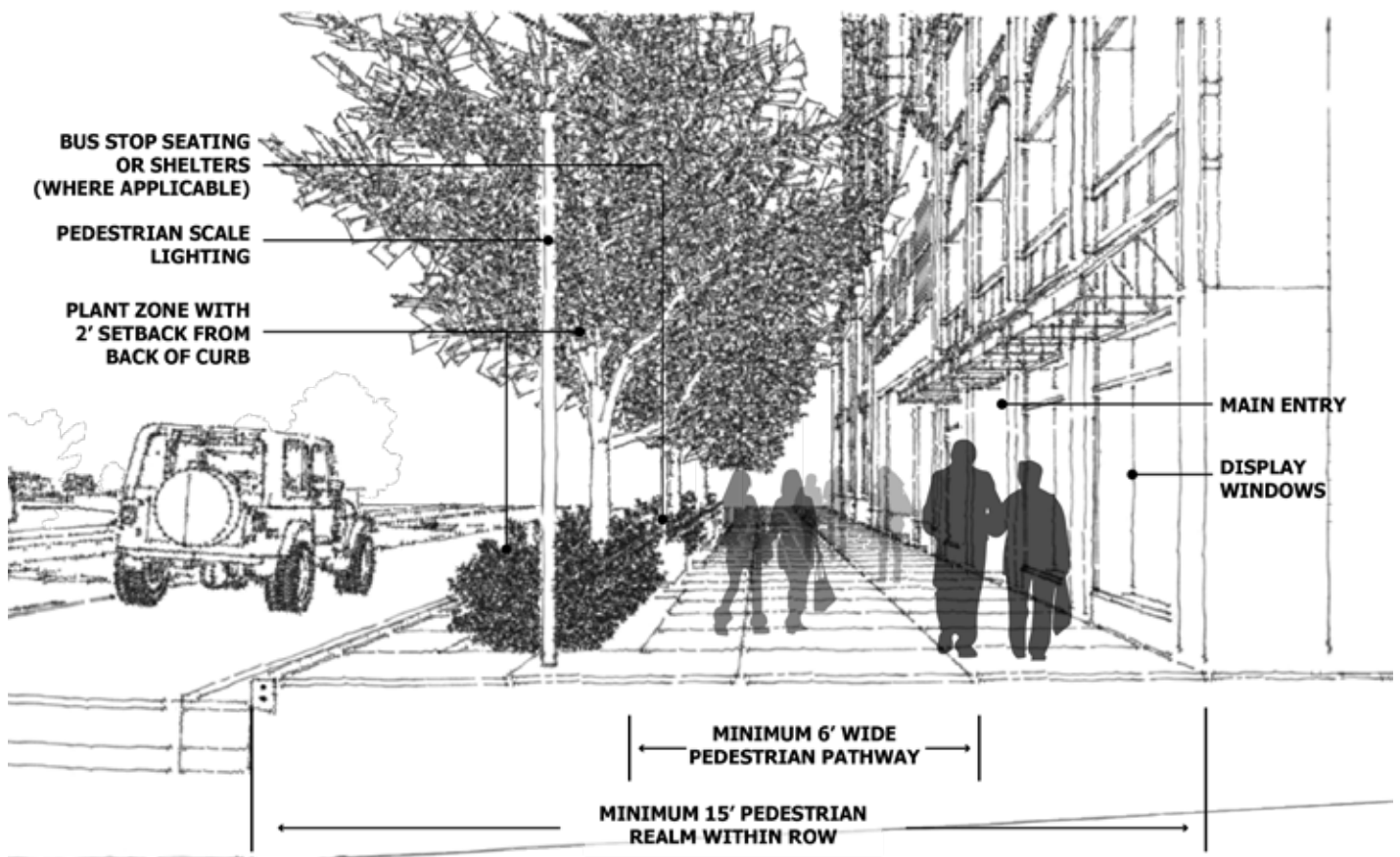
## SITE FURNISHINGS

- » Furnishings complementary to neighborhood/community design are encouraged in order to create a more inviting sense of place and enhance pedestrian connectivity.
- » Furnishings for streetscapes and common greens may include the following:
  - Seating areas
  - Trash and recycling receptacles
  - Drinking fountains
  - Bike racks
  - Tree grates
  - Bollards
  - Signage
- » Seating areas along sidewalks should be placed outside the clear path of the sidewalk, either in a parkway strip as defined below, or in a pedestrian easement adjacent to the right-of-way line.
- » Where appropriate, site furnishings should incorporate local cultural or historical themes for public education and enjoyment.
- » Opportunities to include decorative amenities or furnishings as public art installations should also be considered.

## PEDESTRIAN REALM IN ACTIVITY CENTERS

- » A minimum 15-foot-wide pedestrian realm within the street right-of-way should be provided behind the street curb in an *Activity Center* as shown on the *Activity Center Street Plan & Cross-Section*.
  - » Pedestrian easements atop adjoining private property are encouraged in order to widen and enhance the pedestrian realm.
  - » The pedestrian realm should include a minimum 6-foot-wide sidewalk or clear pedestrian path that is continuous with the street frontage.
  - » Planting zones or GSI facilities should be set back at least 2 feet from the curb of any street area used for parking in order to accommodate: 1) driver/passenger access to a parallel parked vehicle, or 2) the overhang of a vehicle in an angled parking space.
- » Pedestrian realms may include the following elements:
    - Seating areas
    - Outdoor cafes and restaurants
    - Landscaped planting zones and/or tree wells with shade trees
    - Bicycle parking
    - Transit stops and shelters
    - Public art
  - » Planting zones or GSI facilities parallel and continuous to on-street parking should include paved breaks to allow direct pedestrian access between the parked vehicle and sidewalk or clear pedestrian path.

**Figure A: Activity Center Pedestrian Realm**



## INTERSECTIONS

- » Street and driveway intersections should be planned with respect to pedestrians and bicycles as well as vehicles. Clear sight lines should be provided for all users of an intersection.
- » Pedestrian crosswalks should be designed for safety and mobility. Crosswalks should slope to drain and be free of standing water with drainage inlets located outside of the intersection.
- » Crosswalk paths should align with approaching sidewalks and provide a flat staging area at the corner for pedestrian/wheelchair access.
- » Above-ground utilities, poles, and street trees should be located outside of visibility triangles at street and driveway intersections.

## TRANSIT STOPS AND SHELTERS

- » Optimally designed transit stops benefit transit users as well as pedestrians, bicyclists, and automobile users. With adequate visibility and lighting, a transit stop can also provide social safety.
- » A transit stop should accommodate transit users without unnecessarily interrupting the flow of pedestrians or bicyclists on nearby sidewalks and bike paths or vehicles using the street.
- » Boarding areas should be unobstructed and free of impediments with stormwater drainage inlets located outside of the boarding area.
- » Transit shelters for METRO, Harris County Transit, or any other transit provider should be of the same style, materials and color as typically used throughout their respective system.
- » Shelters should provide protection from rain, wind, and direct sun and include a bench or leaning rail and space for wheelchairs and strollers. Additional amenities such as air conditioning and heating will assist in the use of shelters

## UTILITIES

- » Planning and design for *Imagination Zones* and other residential neighborhoods should consider utility locations, alignments, and frequency with regard to pedestrian connectivity as well as aesthetics. Utilities include light poles, traffic signs and signals, fire hydrants, and drainage inlets.
- » In general, above-ground utilities within street rights-of-way should be located in landscape areas and out of sidewalks and pedestrian walkways.
- » Above-ground utilities should be minimized along streets and within common greens, and maximized along alleys, where provided.
- » At street and driveway intersections, utilities should be set back away from corners to protect visibility triangles and sight lines.
- » Stormwater drainage inlets should be located and designed with respect to pedestrians and bicycles as well as vehicles.





## STREET TREE AND LANDSCAPE PLANTINGS



The intent of these landscape architectural guidelines is to foster and aid in the thoughtful planning of outdoor spaces from streetscapes to activity centers to common greens. Woven together, well designed outdoor spaces create a “green network” that supports two guiding principles for *Imagination Zones – Neighborliness and Sustainability*. These guidelines are further intended to complement and be used in combination with Harris County’s *Green Stormwater Infrastructure (GSI) Design Standards*.



### PARKWAY STRIPS

- » Except for streets adjacent to activity centers, residential streets within *Imagination Zones* will include parkway strips ranging in width from 8.5 to 11 feet.
- » Parkway strips shall be continuously landscaped with trees and other plant materials as outlined below.
- » In specified areas, parkway strips may be used for GSI, in which case landscaping shall occur in accordance with the GSI design standards and recommended plant list.
- » In addition to trees, parkway strips should be planted with turfgrass, ornamental grasses, ground cover, and/or low-growing shrubs.
- » Use of native plants is encouraged in order to lessen the use of turfgrass which requires more water, fertilizer, and maintenance.
- » Other than trees, all selected plants should have mature heights less than 2.5 feet in order to avoid frequent trimming and impairment of visibility between the street, sidewalk, and adjacent home.
- » Care should be taken to minimize soil compaction around the critical root zone of all plants.
- » Attention should be taken to the quality of soil placed in parkway strips in order to enhance plant health and growth.
- » Parkway strips should be graded to catch and filter run-off from the sidewalks before it reaches the storm sewer system.
- » Parkway strips can be designed as bioswales as defined in the GSI standards for *Imagination Zones*.

## STREET TREES

- » Street trees should be aligned and centered within the parkway strip but located no closer than 3 feet to a street curb or sidewalk.
- » Preferred tree species are tall, high-canopied trees that grow to at least a height of 40 feet at maturity, provide abundant shade, and reduce the heat island effect.
- » Alignment of trees and selected species should be modified if overhead power lines are present.
- » Street trees should consistently be spaced apart at an equal distance, usually 30 feet but the spacing may increase or decrease depending on the selected tree species.
- » Street trees shall have a minimum 3-inch caliper at time of planting.
- » All trees should be staked at time of planting. Stakes should be placed less than 2/3rd's the height of the tree with a flexible material that allows for some movement of the trunk. All stakes to be removed after one year from planting.
- » Street trees located within GSI facilities should be planned and designed in accordance with GSI standards.

*Figure A: Street Tree Plantings*



## MEDIANS IN NEIGHBORHOOD ENTRYWAY STREETS

- » Center medians in Neighborhood Entryway Streets should be planted with street trees and a plentiful, textured mix of shrubs, ornamental grasses, ground cover and turf grass.
- » Should the median be used for GSI, the landscape design and plant material palette shall comply with the GSI design standards.
- » Plant material selections should be carefully made to avoid creating hedges and/or obstructing sight lines and visibility.

## TREE WELLS IN PEDESTRIAN REALMS

- » In lieu of parkway strips, shade trees located in pedestrian realms associated with activity centers may be located in tree wells, especially if heavy pedestrian activity is anticipated.
- » Tree wells shall be designed in accordance with Harris County's GSI guidelines.
- » Uniform decorative tree guards should be used around each of the tree wells to protect the trees and discourage pedestrians from compacting soil at the base of a tree.

## ALLEY PLANTINGS

- » Residential alleys within *Imagination Zones* will include parkway strips ranging in width from 1-foot to 2.5 feet.
- » Parkway strips should include turfgrass, ornamental grasses, dwarf shrubs, and/or ground covers.
- » Vines that grow up on adjacent walls and fences are encouraged.
- » Trees are discouraged due to the narrow parkway strip width and likely nearby presence of underground utilities.

## PLANT SELECTION AND APPROVED TREES

- » Selected plant materials are an important part of the streetscape design, providing beauty as well as significant environment benefits.
- » Plant materials will be of premium quality per nursery stock standards established by the *American Nursery & Landscape Association* and planted according to best practices and methods.
- » The natural shape of selected plants should be retained and not hedged into geometric shapes uncharacteristic to the plant's native character. Less trimming equals less maintenance.
- » Trees planted along streets and in common greens should be selected from Harris County's approved tree list which references the approved list in Chapter 33 of the City of Houston Code of Ordinances.
- » All landscape design and installation shall comply with the *Harris County Landscape Regulations for Development* and any applicable state and local codes and regulations.

## FENCING AND WALLS



Fencing and walls may serve many purposes, such as enclosing outdoor spaces, providing privacy or security, or screening unattractive views. Fencing and walls outlined herein include:

- » **Front yard fencing along streets**
- » **Front yard low-rise retaining walls**
- » **Privacy fencing along interior side yards and alleys**
- » **Corner lot fencing**
- » **Perimeter screening walls**

The color and materials of all fencing and walls should be coordinated with the design of the residences and the community. Fencing and walls with horizontal and vertical details giving scale and dimension to the residence(s) are encouraged. When installed, fences and walls shall be “finished” on the side facing the public, however, having both sides finished is preferred. All fencing and walls, whether highly visible and ornamental or merely blocking views, shall follow the standards set forth below.



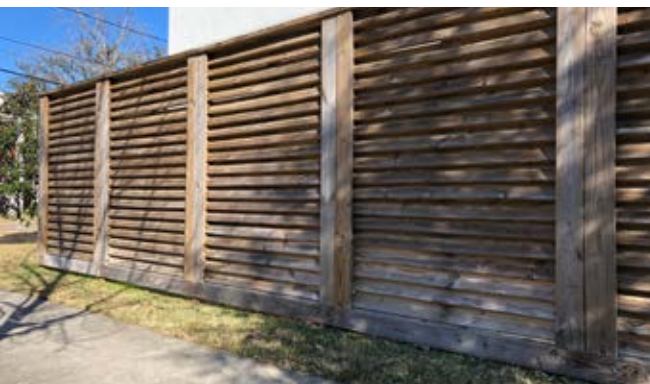
### FRONT YARD FENCING ALONG STREETS

- » Front yard fences on residential lots should have a maximum height of 3 feet.
- » Fencing should be set back at least one foot from the outer edge of a public sidewalk and preferably greater to allow more landscaping between the fence and sidewalk.
- » Acceptable front yard fencing materials:
  - Traditional picket
  - Wood (western red cedar, treated pine)
  - Tubular steel, aluminum, or other ornamental metal
  - Masonry, brick, stone, stucco, split-face concrete block with cap
  - Plastic lumber
  - Vinyl
- » Unacceptable front yard fencing materials:
  - Chain link
  - Split rail
  - Standard concrete block, plain or painted



## FRONT YARD LOW-RISE RETAINING WALLS

- » Low retaining walls are permitted along the front lot line but no closer than one foot from the public sidewalk.
- » The maximum height of the retaining wall should be 1.5 feet as measured from the finished ground elevation on the high side of the wall.
- » A front yard fence with a maximum 3-foot height may be constructed atop the retaining wall.
- » Retaining walls partly below the finished grade or used as planters should be moisture-proofed to avoid unsightly water staining.
- » Acceptable wall materials include masonry, stone, brick, stucco, split-face concrete block with cap, and architectural concrete.
- » Standard concrete block walls, plain or painted, are unacceptable.



## PRIVACY FENCING ALONG INTERIOR SIDE YARDS & ALLEYS

- » Side yard and alley fencing shall be a maximum of 6 feet, typically constructed with quality western red cedar or treated pine.
- » Solid wood fences with horizontal and vertical details giving scale and dimension to the fence are encouraged.
- » A 6-foot masonry wall is also acceptable instead of a wood privacy fence.
- » A hinged gate shall be installed in the most appropriate side or rear yard location. Double gates are not permitted.
- » Side yard fences should be set back at least 10 feet from the front building façade and extend to the rear lot line. Setbacks may vary from one lot to another including adjacent houses sharing a side yard fence.
- » Along alleys, providing some views through the fence into the back yard is encouraged.
- » Acceptable privacy fence materials:
  - Wood (western red cedar or treated pine)
  - Masonry, brick, stone, stucco, split-face concrete block with cap
  - Plastic lumber
  - Vinyl
- » Unacceptable privacy fence materials:
  - Used wood fencing
  - Chain link
  - Split rail
  - Tubular steel or aluminum
  - Standard concrete block, plain or painted

## CORNER LOT FENCING

- » Fencing along the street side of a corner lot may be either a continuation of front yard fencing with a maximum 3-foot height or privacy fencing with a maximum 6-foot height.
- » A corner side yard privacy fence should be set back at least 10 feet from the front building façade and extend less than 2/3rds the depth of the building (house and garage) except as needed to enclose courtyard spaces.
- » Parallel to the side street, fencing should be set back at least one foot from the outer edge of the public sidewalk along the street.
- » Masonry columns may be incorporated into wood fencing.
- » Masonry or wood columns (8" x 8" minimum) should be incorporated into corner lot fencing that is 32 feet or more in length.



## PERIMETER SCREENING WALLS

- » Perimeter walls may be utilized to screen adjacent land uses or major thoroughfares.
- » Walls should be made of or faced (veneered) with masonry (stone, stucco, brick, or approved equal). Plain or painted concrete masonry units (CMU) are prohibited.
- » Maximum wall height is typically 6 feet but no greater than 8 feet as measured from the finished grade elevation.
- » Perimeter walls longer than 100 feet in length should incorporate variations in three-dimensional character (i.e., columns).



# OUTDOOR LIGHTING



Lighting along streets and within common greens is important in creating a sense of safety and security as well as adding to the attractiveness of an *Imagination Zone*. Light equipment selections and lighting design should be made with the objectives of eliminating glare, light trespass, and light pollution.

## LIGHT FIXTURES

- » Light fixtures should be designed and lamped for both pedestrian and vehicular purposes and shared along streets.
- » Pedestrian-scaled fixtures and poles should be used in pedestrian realms and common greens.
- » In order to avoid glare, cut-off type fixtures are preferred with the lamp oriented in the horizontal position.
- » Lights should be directed down toward the surfaces needing light.

## LIGHTING DESIGN

- » Outdoor lighting should be designed to enhance the streetscape character while improving nighttime visibility.
- » Adequate lighting must be provided but without spillage onto adjacent residences.
- » Location and spacing of light standards and poles should be coordinated with location and spacing of street trees.
- » Standards, poles, and fixtures should be a single color and uniform in design throughout the community.
- » Wooden poles of any type are prohibited.
- » Lighting shall be of low energy consuming type such as LED
- » Solar Powered LED Fixtures are encouraged