



**Northwest Fluvanna /  
Southwest Louisa Corridor Study**

Framework Plan

June 1, 2007

**DRAFT**



RENAISSANCE PLANNING GROUP

## INTRODUCTION

The Northwest Fluvanna / Southwest Louisa Corridor Study Guidelines are intended to provide a resource for local, county, and state planners, citizens, and the development community of best practices for placemaking and preservation.

# CONTENTS

## 1 DEVELOPMENT PRINCIPLES

### INCLUDING

Section 1, Development Principles, outlines several fundamental recommendations for development along the corridor. The Principles are the foundation of the design guidelines document and serve as a framework for assessing the appropriateness of development. Because these are principles, not prescriptive standards, they provide a simple context for understanding the choices involved when considering new development in the region.

- A. Connectivity*
- B. Site Design*
- C. Land Use*
- D. Open Space*
- E. Rural Development*

## 2 DEVELOPMENT SCENARIO

### INCLUDING

Section 2, Development Scenario, describes potential growth strategies. The presented scenario focuses growth around mixed-use centers of varying scale. The center-based development pattern Community Elements, which are models for mixed-use, pedestrian-oriented development, serve as building blocks for the larger centers in the study area.

- A. Preferred Development Model*
- B. Walkable Mixed Use Centers*

## 3 DEVELOPMENT GUIDELINES BY COMMUNITY ELEMENT

### INCLUDING

Section 3, Development Guidelines by Community Element, provides recommendations for six distinct place types. The Community Elements vary in development intensity, from urban (Regional Mixed-Use Center) to rural (Rural Cluster). Each type has a unique mixture of uses, street types, frontages, and open space based on its development intensity and relationship to rural surroundings. The Community Elements and related guidelines emphasize the importance of center-based development.

- A. Regional Mixed Use Center*
- B. Regional Employment Center*
- C. Neighborhood Mixed-Use*
- D. Neighborhood Residential*
- E. Village*
- F. Rural Cluster*

## 4 DESIGN ELEMENTS & STANDARDS

### INCLUDING

Section 4, Design Elements & Standards, presents design standards for essential elements in the design of new and infill development. The elements and standards range from those appropriate in urban settings to those specific for rural areas. The standards are intended to be general guidelines for design and implementation, assuring appropriate application while providing a degree of flexibility.

- A. Buildings & Frontage Types*
- B. Signage*
- C. Parking*
- D. Open Space*

## 5 TRANSPORTATION FRAMEWORK

### INCLUDING

Section 5, Transportation Framework, describes the transportation projects, strategies and guidelines to complement the preferred scenario. This section makes an important distinction between transportation in the urban context versus the rural context.

- A. Transportation Projects*
- B. Design Context*
- C. Street Types*
- D. Transitions*
- E. Intersections*
- F. Networks and connectivity*
- G. Transit*

## 1 DEVELOPMENT PRINCIPLES

The following Development Principles set a framework for considering development within the Northwest Fluvanna / Southwest Louisa Corridor Study Area. Although these are arranged under separate headings, it is important to consider these as five interrelated pieces, contributing to and reliant on each

other for successful placemaking. New and infill development should strive to realize these principles to ensure walkable places that minimize land consumption, balance pedestrian and vehicular traffic, foster a vibrant mixed-use environment, and protect and enhance the existing qualities of the region.

### A CONNECTIVITY

Despite its importance, street connectivity is often overlooked when assessing new development. Advantages of an interconnected street network include: enhanced access, reduced congestion, and more responsive emergency services. Well-connected residential areas promote pedestrian activity and encourage walking in place of driving for local trips. Additionally, this framework promotes mixed-use development patterns with smaller block sizes and a greater diversity of building types within close proximity. Small blocks are an important element within a walkable area. Small blocks help to create a comfortable scale for pedestrians by creating an increased sense of location and direction, breaking down the space between intersections and destinations, and providing increased visibility for businesses and offices.

### COMPARATIVE DIAGRAM



encouraged

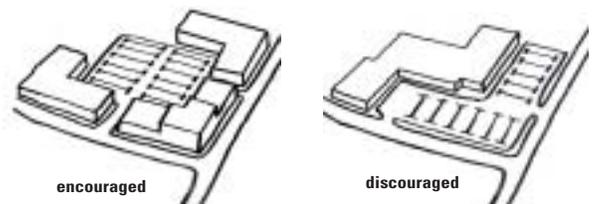
discouraged

*Contemporary development patterns often reduce or eliminate connections to surrounding centers and roadways, limiting all traffic to one outlet. Creating a more interconnected network allows for more transportation choices, in turn making it possible to reduce lane widths and reduce vehicle speeds. Doing so also fosters the connected, pedestrian-friendly environment needed to create walkable communities. In commercial areas, an interconnected street network allows all buildings to have a street presence while reducing the scale of required parking areas in favor of actual roadway connections.*

### B SITE DESIGN

Successful site design balances car and pedestrian accessibility and creates a presence that is welcoming to both. A key factor is the organization of buildings and parking relative to adjacent streets. Frequently, single-story buildings are set far back from the road, leaving a large, open expanse of parking visible to visitors from the roadway. In this case, the treatment of the building frontage is a critical component of site design. A more desirable alternative reverses this placement, drawing the building to the street edge and moving parking to the rear, in turn providing a more intimate pedestrian-friendly frontage along the roadway. In this way, buildings are used to frame the street and enhance the pedestrian environment with storefronts and entrances along the sidewalk. Multi-story buildings can add to this effect by increasing the intimacy of the street, while also limiting the overall building footprint. Additionally, the visual impact of parking is minimized, as it is shielded to the rear of the buildings. It is important to note that standard parking requirements can lead to an oversupply of parking spaces and vacant expanses of asphalt. Reducing minimum off-street parking requirements and setting average-usage standards in place of peak-usage standards reduces parking needs and required development area.

### COMPARATIVE DIAGRAM



encouraged

discouraged

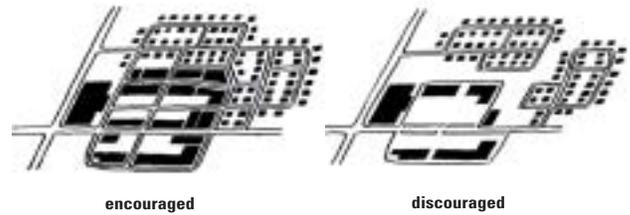
*The primary determinants in Site Design are parking and access. To meet these needs, parking is frequently pulled to the street edge, leaving buildings at the back of the site. As a result, parking dominates the street edge and the building can do little to welcome pedestrians. An alternative approach reverses this convention, moving the building to the street edge where it contributes to the pedestrian environment by framing sidewalks and allowing for storefronts and entrances at the actual street edge. By turning the building towards the street and shifting parking away from it, a street-friendly and pedestrian accessible result can be realized without compromising parking needs. Multi-story buildings provide a strategic means for gaining density while limiting building footprint and adding to the intimacy of the pedestrian experience.*

# 1 DEVELOPMENT PRINCIPLES

## C LAND USE

Walkable centers typically include a careful balance of land uses, combining jobs, living, and shopping within close proximity. Mixed-Use development provides a diverse range of commercial stores, shops, restaurants, and housing within a compact, walkable area. To be successful, mixed-use development must provide strong connections between different uses, allowing residents, employees, and patrons to naturally overlap and cross between uses. Creating a compact and interconnected street network also enhances opportunities for pedestrians and cyclists and also allows users to park once and walk between several uses in a single trip. Additionally, the diversity of uses balances activity between the daytime, nighttime, and weekend hours, fostering a busier, safer, and more exciting environment for all residents, employees, and visitors and at all times of day.

## COMPARATIVE DIAGRAM

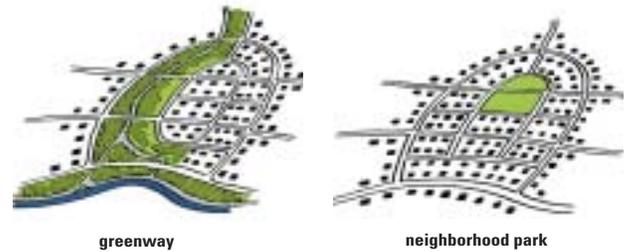


A fundamental part of Mixed-Use development is the integration of land uses. Often this is done by locating one use on the ground floor with different uses on upper stories. In lower density scenarios, the integration relies on a strong street network to connect diverse uses. The above illustrations show the use of connections to draw together residential and commercial blocks into a unified center.

## D OPEN SPACE

Carefully planned open space is necessary to maintain the richness of rural areas over time. Open space is a broad classification for public spaces ranging from community recreational areas to town squares. Formal civic spaces, such as town squares, should be located in urban settings serving areas of highest intensity, while recreational facilities, greenways, and preserved open spaces should be strategically placed to serve the community at large. Often, environmental and natural features are integrated into open space planning. Viewsheds and natural features, including waterbodies, wetlands, and steep slopes, should be preserved as open public space wherever possible.

## COMPARATIVE DIAGRAM

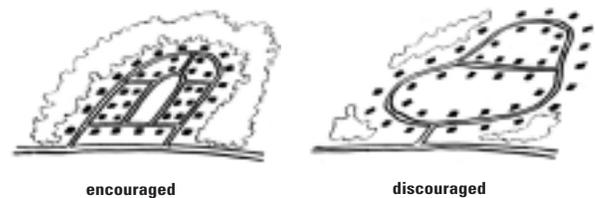


Open spaces serve a variety of uses as connectors - such as greenways - and community spaces - such as a neighborhood park. Open spaces and parks should be located to serve a broad population and provide maximum access to natural features.

## E RURAL DEVELOPMENT

Development in rural areas presents a unique set of challenges. Paramount among these challenges is the efficient use of land area. In rural settings, compact development strategies are encouraged to minimize land consumption and allow for a percentage of preserved open space. Through compact development, connected open spaces may be protected as shared parks and greenways, rather than divided between large, private lots. Additionally, compact development allows scenic viewsheds to be preserved without prohibiting development altogether. At a broader level, implementation tools such as Transfer of Development Rights, may be considered to achieve high-density development within urban areas in exchange for the permanent preservation of land within rural areas.

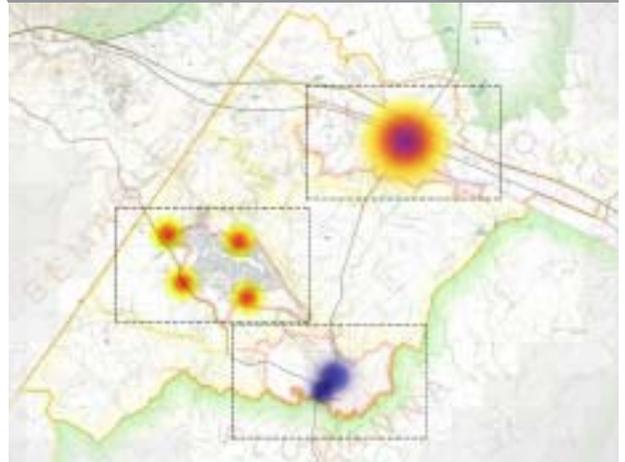
## COMPARATIVE DIAGRAM



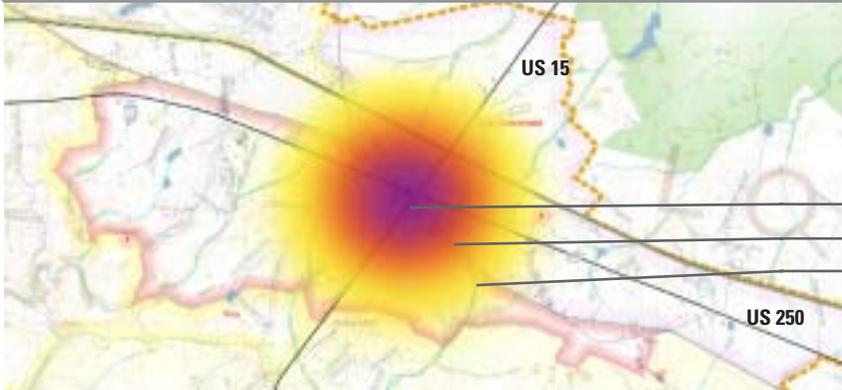
The contrasting development strategies above illustrate the difference between large-lot rural zoning and higher-density cluster development. Large-lot zoning distributes open space evenly among large residential lots, whereas cluster development draws development into a compact center, preserving an untouched ring of open space at the perimeter and a shared park at the center.

The Preferred Development Scenario for the study area focuses growth within and around existing centers using a model of walkable mixed-use centers. Most new growth occurs at Zion Crossroads, which develops into a large regional mixed-use center featuring employment centers as well as a diverse mix of retail opportunities and housing options. The current retail centers surrounding Lake Monticello develop into neighborhood mixed-use centers with smaller scale retail opportunities & housing options. Growth in Palmyra is limited to the area immediately surrounding the current village. Developments in currently rural areas are limited to rural housing clusters.

PREFERRED DEVELOPMENT SCENARIO



ZION CROSSROADS FOCAL POINT



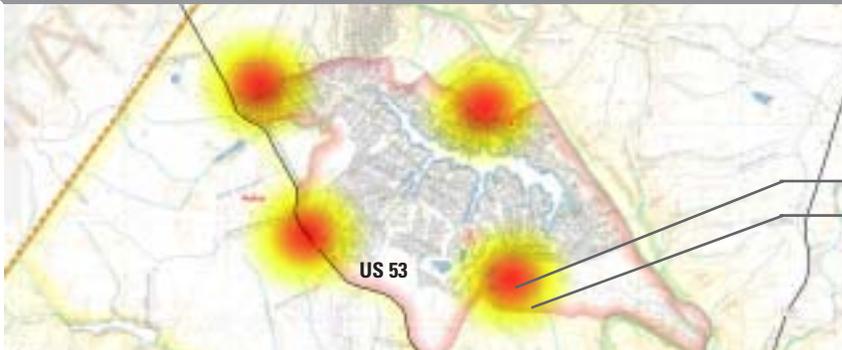
LEGEND

Growth target area is in compact core approximately 1/2 mile radius of the intersection of US 15 & US 250

COMMUNITY ELEMENT COMPOSITION

- Regional Mixed-Use at center
- Regional Employment Uses around center
- Neighborhood Mixed-Use & Neighborhood Residential at periphery

LAKE MONTICELLO FOCAL POINT



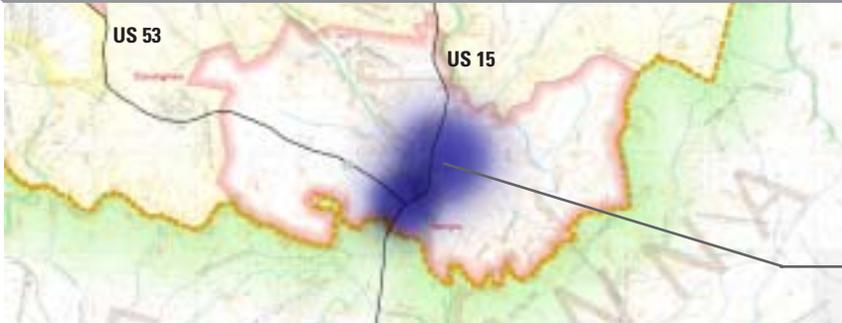
LEGEND

Enhance and expand existing commercial centers

COMMUNITY ELEMENT COMPOSITION

- Neighborhood Mixed-Use
- Neighborhood Residential

PALMYRA FOCAL POINT



LEGEND

Enhance and expand existing village while maintaining same scale and character

New 'south' village that draws from the scale and character of the existing village

COMMUNITY ELEMENT COMPOSITION

- Village

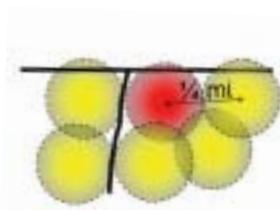
The preferred development scenario for the Northwest Fluvanna / Southwest Louisa Corridor proposes a regional strategy which both emphasizes its rural heritage and embodies a collection of unique

places. These places are pedestrian-oriented by design and vary in character and intensity of development across a spectrum ranging from regional-scale centers to smaller villages and rural clusters.

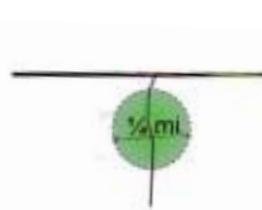
All centers are predicated on notions of walkability and mixed-use. Pedestrian-oriented placemaking involves creating strong centers that accommodate a variety of uses. Critical to this approach is the arrangement of residential uses in relation to commercial and employment areas. To ensure walkable centers and provide optimal accessibility, residential areas must be closely linked with their commercial counterparts. In the most integrated centers, there should be a woven fabric of residential and commercial uses. When it is not possible or desirable to integrate uses so intensely, it is still important to maintain strong connections between different uses - for instance a Main Street and surrounding single-family residential areas. This emphasis on interconnectedness is the essence of walkable, mixed-use development.



**Proposed mixed-use center integrated with a neighborhood in Lake Monticello.**



**large-scale focal point**



**isolated, outside focal point**

#### **Walkable Mixed-Use Centers achieve the following objectives**

- Provide connections and accessibility between multiple uses
- Provide a range of transportation options, which distributes vehicle trips more evenly and reduces congestion along roads and at intersections
- Encourage pedestrian activity, cycling and access to transit as alternative modes of transportation
- Provide a variety of employment options, dwelling types, and lifestyle options
- Preserve agricultural land and provide opportunities for shared open space

#### **Example Application of Walkable Mixed-Use Centers Model**

- Focus is a compact, interconnected design that integrates multiple uses and provides a strong network for cars and pedestrians
- Residential occurs in combination with nonresidential uses, such as civic, office, and retail
- Always maintain walkable radius of centers - this is further defined in the Design Guidelines by Community Element Section

May grow to become a large-scale focal area with multiple interconnected centers (a regional center)

*or*

A single stand-alone center (an isolated rural cluster for instance)

*but*

Each building block must maintain its walkable radius of centers - this is further defined in the Design Guidelines by Community Element Section

The following Development Guidelines provide specific design recommendations for six distinct Community Elements. The Community Elements vary in density, block structure, and land use composition. Each element, approximately 30 acres in size, has a unique mixture of uses, street types, frontages, and open space based on its development intensity and relationship to natural features. The Community Ele-

ments and related guidelines emphasize the importance of center-based development and serve as building blocks for larger walkable, mixed-use centers. In most applications, several elements are combined to form a larger center - for example combining Neighborhood Mixed-Use and Neighborhood Residential elements into a single, interconnected center.

		COMMUNITY ELEMENT MATRIX					
		urban ←					→ rural
							
		<b>Regional Mixed-Use</b>	<b>Regional Employment</b>	<b>Neighborhood Mixed-Use</b>	<b>Neighborhood Residential</b>	<b>Village</b>	<b>Rural Cluster</b>
Connectivity	<b>Street Types</b> (p 20)	Commercial Street Main Street Neighborhood Street	Commercial Street Main Street Neighborhood Street	Commercial Street Main Street Neighborhood Street	Neighborhood Street	Commercial Street Neighborhood Street Rural Road	Neighborhood Street Rural Road
	<b>Block Size</b>	400'-800'	400'-800'	300'-600'	200'-600'	200'-600'	200'-varies
	<b>Building Height</b> (p 22)	2-6 Stories	2-6 Stories	2-4 Stories	1-3 Stories	1-3 Stories	1-2 Stories
Site Design	<b>Frontage</b> (p 22)	Commercial Storefront	Commercial Storefront	Storefront Porch	Storefront Porch Residential Yard	Storefront Porch Residential Yard	Porch Residential Yard
	<b>Parking</b> (p 25)	Structured On-Street Surface	On-Street Surface	On-Street Surface Residential	On-Street Surface Residential	On-Street Surface Residential	Residential
	<b>Mix of Uses</b>	Large Commercial (25-40%) Storefront Retail (25-40%) Civic (10-25%) Office (10-25%) Restaurant (10-25%) Multi-Family Res (5-20%)	Office (25-75%) Health/Medical (10-25%) Light Industrial (10-25%) Storefront Retail (5-20%) Multi-Family Res (5-20%)	Storefront Retail (25-75%) Civic (10-25%) Office (10-25%) Restaurant (10-25%) Multi-Family Res (10-35%) Single-Family Res (5-20%)	Single-Family Res (25-75%) Multi-Family Res (25-50%) Limited Retail (10-25%)	Storefront Retail (10-25%) Civic (10-25%) Office (10-25%) Restaurant (5-20%) Multi-Family Res (25-50%) Single-Family Res (25-75%)	Single-Family Res (50-100%) Multi-Family Res (25-50%) Limited Retail (10-25%)
Land Use	<b>Density</b>	Commercial FAR: 2.0 Residential DUA: 10-15	Commercial FAR: 2.0 Residential DUA: 10-15	Commercial FAR: 1.0 Residential DUA: 8-10	Commercial FAR: .5 Residential DUA: 4-10	Commercial FAR: .75 Residential DUA: 4-8	Commercial FAR: .5 Residential DUA: 2-6
	<b>Open Space</b> (p 27)	Town Square Pocket Park	Pocket Park	Town Square Pocket Park Neighborhood Park	Neighborhood Park Recreational Park	Neighborhood Park Recreational Park Passive Open Space	Neighborhood Park Recreational Park Passive Open Space

### 3-A REGIONAL MIXED-USE CENTER

The Regional Mixed-Use Center is a focal point for the larger region and reinforces this through its scale of development, and rich range of land uses. Regional mixed-use development is characterized by a higher intensity and mixture of land uses than surrounding areas.

Larger scale commercial uses, such as big box stores, are situated along the main arterial roadway, with slower-speed streets and smaller block sizes pulled off of the busy arterial. Compact blocks oriented around a mixed-use Main Street define the core of the Regional Center. The Main Street must provide a comfortable pedestrian environment between small shops, stores, and offices. Higher-density residential areas are encouraged within close walking distance to the Main Street.



The emergence of a potential regional mixed-use center along US 250 in Zion Crossroads. Pedestrian improvements such as sidewalks, and street trees, and furniture begin the transformation. Over time, mixed-use development fills in, bringing the Regional Center to life.



Proposed regional mixed-use center at the southwest corner at the intersection of US 250 and US 15 in Zion Crossroads.

**1 CONNECTIVITY**

**Street Types**

The Regional Mixed-Use Center focuses its attention onto a pedestrian-friendly Main Street providing wide sidewalks, shade trees, and safe crosswalks. When larger scale Commercial Roads pass through Regional Mixed-Use Centers, the cross-section should be scaled to balance vehicular traffic with the presence of pedestrians. Large commercial uses may front onto the Commercial Street with smaller retail uses lining the Main Street and surrounding streets set back from the higher-speed Commercial Street.

**Connectivity & Block Size**

Because of the building density and desire for walkability, small block sizes are appropriate in the Regional Mixed-Use Center. Block sizes for commercial uses must be expanded to accommodate large retail stores without disrupting the overall block network. Buildings should line the perimeter of blocks, with the center of the block being used for surface parking and courtyards. The tight street network provides many routes for pedestrians, connects parking lots, and joins the residential and mixed-use areas.

**2 SITE DESIGN**

**Building Height & Frontage**

The tallest buildings making up the Main Street should provide a sense of spatial enclosure, creating an ‘urban room’ for pedestrians. Setbacks should be minimized, with no setback along primary streets, particularly those with retail uses. Residential uses towards the edge may have lower building heights and small setbacks.

**Parking**

On-Street parking is encouraged along both commercial and residential streets. Surface parking should be placed to the rear of buildings, shielded from the sidewalk and Main Street setting. As density increases over time, structured parking may become a feasible option.

**3 LAND USE**

**Mix of Uses**

The Regional Mixed-Use Center has the largest diversity of uses, combining retail and office in close connection to residential and other varied uses. This mixed-use quality is important to the vibrance of downtown, creating an energized streetscape for residents, patrons, and workers.

**Density**

The Regional Mixed-Use Center is the highest-density Community Element. Large parking areas should be minimized in order to optimize the potential density of the center. Residential uses are primarily multifamily, taking form as apartments and townhouses.

**4 OPEN SPACE**

**Integration of Open Spaces**

Due to its development intensity, the Regional Mixed-Use Center has limited opportunities for open space. A Town Square is the most appropriate type of open space and is encouraged to establish a public civic space at the core of the downtown area. Greenways may provide connections to downtown from surrounding areas.

Regional Mixed-Use Center Summary	
<b>Street Types</b> (p 20)	Commercial Street Main Street Neighborhood Street
<b>Block Size</b>	400'-800'
<b>Building Height</b> (p 22)	2-6 Stories
<b>Frontage</b> (p 22)	Commercial Storefront
<b>Parking</b> (p 25)	Structured On-Street Surface
<b>Mix of Uses</b>	Large Commercial (25-40%) Storefront Retail (25-40%) Civic (10-25%) Office (10-25%) Restaurant (10-25%) Multi-Family Res (5-20%)
<b>Density</b>	Commercial FAR: 2.0 Residential DUA: 10-15
<b>Open Space</b> (p 27)	Town Square Pocket Park

### 3-B REGIONAL EMPLOYMENT CENTER

The Regional Employment Center is predominately devoted to employment uses, but still maintains a small mixed-use component to serve employees and surrounding residents. Employment uses may include professional office space, research facilities, storefront offices, and warehouse and light-industrial uses. Office uses are recommended at the core while warehousing and light industry are appropriate at the periphery. It is important to link larger single-use areas with adjacent mixed-use development. Live-work units are recommended to maximize the residential capacity of Regional Employment Centers. Although some uses may require large block sizes, smaller block sizes should be maintained wherever possible.



The emergence of a proposed regional employment center south of US 250 and west of US 15 in Zion Crossroads. Pedestrian focused improvements, beginning with sidewalks and street trees produce a more desirable pedestrian environment. Through infill development, the area grows a new identity.

#### TYPICAL PLAN



#### LEGEND

- Mixed Use
- Commercial
- Civic/Institutional
- Office
- Live-Work
- Multi-Family Residential
- Single-Family Residential
- Park/Open Space
- Industrial
- ROW/Infrastructure
- Shared Parking

CIRCLE RADIUS = 1/8 MILE

## 3-B REGIONAL EMPLOYMENT CENTER

### 1 CONNECTIVITY

#### Street Types

The Regional Employment Center focuses its attention onto a pedestrian-friendly Main Street providing wide sidewalks, shade trees, and safe crosswalks. When larger scale commercial roads pass through Regional Mixed-Use Centers, the cross-section should be scaled to balance vehicular traffic with the presence of pedestrians. Large office uses may front onto the Commercial Street with smaller uses lining the Main Street and surrounding streets set back from the higher-speed Commercial Street.

#### Connectivity & Block Size

Because of the building density and desire for walkability, small block sizes are appropriate in the Regional Employment Center. In specific cases, block sizes may be expanded to accommodate large-footprint office and light industrial uses. Buildings should line the perimeter of blocks, with the center of the block being used for surface parking and courtyards. The tight street network provides many routes for pedestrians, connects parking lots, and joins the residential and mixed-use areas.

### 2 SITE DESIGN

#### Building Height & Frontage

The tallest buildings making up the Main Street should provide a sense of spatial enclosure, creating an 'urban room' for pedestrians. Setbacks should be minimized, with no setback along primary streets, particularly those with retail uses. Residential uses towards the edge may have lower building heights and small setbacks.

#### Parking

On-Street parking is encouraged along both commercial and residential streets. Surface parking should be placed to the rear of buildings, shielded from the sidewalk and Main Street setting. As density increases over time structured parking may become a feasible option.

### 3 LAND USE

#### Mix of Uses

The Regional Employment Center is primarily composed of office uses and related services. Despite this focus, the Employment Center should incorporate a fair degree of mixed-use, including restaurants, retail, and some multifamily residential. This mixed-use quality is important to the vibrance of center and its establishment as a desirable workplace.

#### Density

The Regional Employment Center should maintain a high density. Large parking areas should be minimized in order to optimize the potential density of the center. Larger uses, such as large footprint office and light industrial should be placed towards the edge of the Employment area.

### 4 OPEN SPACE

#### Integration of Open Spaces

Due to its development intensity, the Regional Employment Center has limited opportunities for open space. Pocket Parks are the most appropriate type of open space and can be distributed throughout the area to serve various functions. Greenways may be incorporated to provide connections from surrounding areas.

Regional Employment Center Summary	
<b>Street Types</b> (p 20)	Commercial Street Main Street Neighborhood Street
<b>Block Size</b>	400'-800'
<b>Building Height</b> (p 22)	2-6 Stories
<b>Frontage</b> (p 22)	On-Street Surface
<b>Parking</b> (p 25)	On-Street Surface
<b>Mix of Uses</b>	Office (25-75%) Health/Medical (10-25%) Light Industrial (10-25%) Storefront Retail (5-20%) Multi-Family Res (5-20%)
<b>Density</b>	Commercial FAR: 2.0 Residential DUA: 10-15
<b>Open Space</b> (p 27)	Pocket Park

### 3-C NEIGHBORHOOD MIXED-USE

The Neighborhood Mixed-Use place type incorporates multiple uses into a walkable, pedestrian-friendly environment with compact block sizes. Ideally, Neighborhood Mixed-Use areas will include a mix of retail and office uses at the center, with connected residential uses at the edge. A centralized public space is encouraged to establish the identity of the center as a focal point and important civic space in the community.



Through a series of steps, a conventional suburban area may be transformed into a more vibrant and diverse Neighborhood Mixed-Use center. The images above illustrate a potential transformation along Route 600, just north of Slice Road, in Lake Monticello. Beginning with a new approach to the pedestrian environment, the area develops a character of walkability. Continued improvements and infill development reestablish the site as a new Mixed-Use Center.



Potential neighborhood mixed use center at the intersection of Route 600 and Slice Road in Lake Monticello.

**1 CONNECTIVITY**

**Street Types**

Commercial areas within Neighborhood Mixed-Use elements should incorporate Main Street standards. As land use turns to residential, neighborhood streets should be incorporated. When larger, high-speed roads enter the pedestrian-oriented core of a Neighborhood Mixed-Use element, the cross-section should shift into a Commercial Street, to balance vehicular and pedestrian needs.

**Connectivity & Block Size**

Because of the building density, small block sizes are appropriate for the Neighborhood Mixed-Use element. Block sizes for commercial uses must be expanded to accommodate large retail stores without disrupting the overall block network. Where there are smaller scale storefronts, office uses, and residential, the block size should be minimized.

**2 SITE DESIGN**

**Building Height & Frontage**

The tallest buildings making up the Neighborhood Mixed-Use element should be concentrated around the Main Street to provide a sense of spatial enclosure, creating an ‘urban room’ for pedestrians. Setbacks should be minimized, with no setback along areas serving as Main Street.

**Parking**

On-Street parking is encouraged along both commercial and residential streets. Surface parking should be placed to the rear of buildings, shielded from the sidewalk and Main Street setting. Large surface parking lots should be placed within the interior of blocks and arranged to maximize sharing between multiple uses.

**3 LAND USE**

**Mix of Uses**

Although the Neighborhood Mixed-Use element has a retail bias, a diverse integration of uses, including storefront retail, office, civic, and residential is recommended. This mixed-use quality is important to the vibrance of the center, creating an energized streetscape for residents, patrons, and workers.

**Density**

The Neighborhood Mixed-Use element combines higher density retail and residential uses. Large parking areas should be minimized in order to optimize the potential density of the center. Most residential uses should be multi-family, with single-family residences only appropriate at the edges.

**4 OPEN SPACE**

**Integration of Open Spaces**

Due to its development intensity, the Neighborhood Mixed-Use element allows limited opportunities for open space. A Town Square or Pocket Park is the most appropriate type of open space and is encouraged to establish a public civic space at the core. Greenways may connect between the center and peripheral areas. Recreational Parks may be integrated at the edge of the commercial area to serve the community at large.

**Neighborhood Mixed-Use Summary**

**Street Types** (p 20)

Commercial Street  
Main Street  
Neighborhood Street

**Block Size**

300'-600'

**Building Height** (p 22)

2-4 Stories

**Frontage** (p 22)

Storefront  
Porch

**Parking** (p 25)

On-Street  
Surface  
Residential

**Mix of Uses**

Storefront Retail (25-75%)  
Civic (10-25%)  
Office (10-25%)  
Restaurant (10-25%)  
Multi-Family Res (10-35%)  
Single-Family Res (5-20%)

**Density**

Commercial FAR: 1.0  
Residential DUA: 8-10

**Open Space** (p 27)

Town Square  
Pocket Park  
Neighborhood Park

### 3-D NEIGHBORHOOD RESIDENTIAL

Neighborhood Residential areas should provide a range of residential housing types and lot sizes. Generally, this includes a balance of single-family residences and some multi-family housing. A central, neighborhood park is an excellent asset for a neighborhood center, and is strongly encouraged. Connections should be made to surrounding neighborhoods and commercial centers wherever possible. Where roadway connections are not feasible, greenway connections are recommended. Neighborhood Residential centers typically border higher-density Neighborhood Mixed-Use areas. In some cases, some small commercial and institutional uses may be incorporated into the Neighborhood Residential place type.



Neighborhood Residential elements are characterized by walkable streets, porch fronts, and shared open spaces. Natural features can be preserved and celebrated through parks and greenways.



Potential neighborhood residential area adjacent to a neighborhood mixed-use center in Lake Monticello.

## 3-D NEIGHBORHOOD RESIDENTIAL

### 1 CONNECTIVITY

#### Street Types

Neighborhood Streets are the primary street type within the Neighborhood Residential elements. Because of the residential character of these centers, commercial streets are limited.

#### Connectivity & Block Size

Block size should relate to the lot size and density of residences. Higher-density blocks allow for smaller block sizes, where lower density areas may have larger scale blocks. Connectivity with adjacent land uses, primarily nearby neighborhoods, is encouraged. Where street connections are not feasible, greenways are recommended.

### 2 SITE DESIGN

#### Building Height & Frontage

The majority of buildings in Neighborhood Residential areas are residences. As such, buildings have a reduced scale and greater setbacks in comparison to Regional Centers and Neighborhood Mixed-Use. Shorter setbacks are recommended for higher-density residential blocks.

#### Parking

On-Street parking is suggested in higher-density residential areas. Where block sizes are bigger, on-street parking may fully give way to residential driveways and garages. Where garages are present, it is important to set them to the side and rear of the residence, so that they do not dominate the residential frontage.

### 3 LAND USE

#### Mix of Uses

While predominately single-family residential, Neighborhood Residential areas should incorporate some degree of mixed-use, primarily in the way of multi-family residential. Storefront retail and office may be integrated at a residential scale.

#### Density

The Neighborhood Residential element is primarily composed of single-family residences. Residential development should strive to maintain a reasonably high density, in turn freeing green space to be retained as a shared amenity.

### 4 OPEN SPACE

#### Integration of Open Spaces

Ideally, the Neighborhood Residential element can incorporate a shared green space at their core. Neighborhood Parks may vary in scale, but are intended to serve local residents as recreational and gathering space. If possible, should be integrated greenway trails to linking the neighborhood to surrounding neighborhoods and open spaces.

### MATRIX

#### Neighborhood Residential

#### Street Types (p 20)

Neighborhood Street

#### Block Size

200'-600'

#### Building Height (p 22)

1-3 Stories

#### Frontage (p 22)

Storefront  
Porch  
Residential Yard

#### Parking (p 25)

On-Street  
Surface  
Residential

#### Mix of Uses

Single-Family Res (25-75%)  
Multi-Family Res (25-50%)  
Limited Retail (10-25%)

#### Density

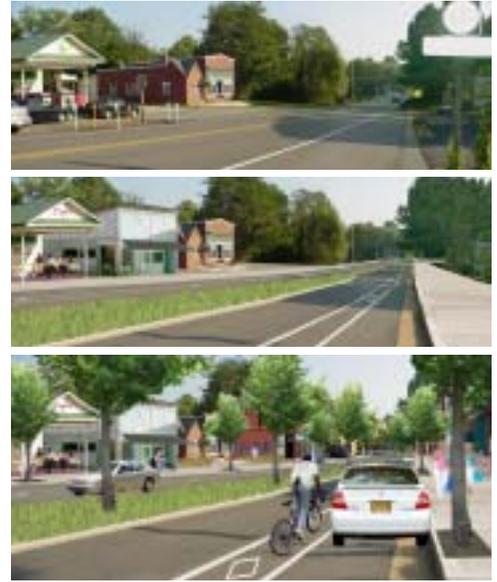
Commercial FAR: .5  
Residential DUA: 4-10

#### Open Space (p 27)

Neighborhood Park  
Recreational Park  
Pocket Park

### 3-E VILLAGE

Villages are characterized by a small, mixed-use core surrounded by residential uses. An essential component of villages is their strong connection to surrounding natural features and open spaces. Despite their small scale and limited density, villages typically have a generous amount of mixed-use, often in the form of a major civic use. Outside of a small mixed-use center, villages are generally characterized by single-family residential uses. By focusing development around the center, a green buffer may be created at the perimeter of the village, closely integrating open spaces with the developed area.



Villages provide a unique opportunity for infill development. The images above illustrate a potential transformation along US 15 north of the Rivanna River in Palmyra Village. Respecting the character of the existing fabric, new buildings may be integrated to enhance the density of a particular area. This process is not an immediate one, and instead takes place over time, beginning with pedestrian improvements and gradually leading to infill buildings.

#### TYPICAL PLAN



#### LEGEND

- Mixed Use
- Commercial
- Civic/Institutional
- Office
- Live-Work
- Multi-Family Residential
- Single-Family Residential
- Park/Open Space
- Industrial
- ROW/Infrastructure
- Shared Parking

CIRCLE RADIUS = 1/8 MILE

Potential village enhancements on US 15 in Palmyra.

1 CONNECTIVITY

**Street Types**

Main Streets and Neighborhood Streets are the primary street types within Villages. When higher speed roads approach the walkable core of a village, the street section should shift into a Commercial Street to better balance vehicular and pedestrian needs.

**Connectivity & Block Size**

The mixed-use village core should have small block sizes to accommodate a limited, but dense, collection of small retail uses. Residential block size should relate to the lot size and density of residences. Higher-density blocks allow for smaller block sizes, where lower density areas may have larger scale blocks.

2 SITE DESIGN

**Building Height & Frontage**

The majority of buildings in Villages are residential. As such, buildings have a reduced scale and greater setbacks in comparison to Downtown and Commercial Centers. Due to the varying rural quality of Villages, setback requirements should remain flexible.

**Parking**

On-Street parking is suggested in higher-density residential areas. Where block sizes are bigger, on-street parking may fully give way to residential driveways and garages. Where garages are present, it is important to set them to the side and rear of the residence, so that they do not dominate the residential frontage.

3 LAND USE

**Mix of Uses**

While predominately single-family residential, Villages should incorporate mixed-use at their core, including, small-scale storefront retail and office. Multi-family residential may also be integrated at the core and within surrounding blocks.

**Density**

The village element combines a range of uses and densities. In general, development should strive to maintain a reasonably high density, in turn freeing green space for community use or for use as a natural buffer.

4 OPEN SPACE

**Integration of Open Spaces**

Villages provide a great opportunity for open space preservation, typically at the periphery surrounding the developed area. Neighborhood Parks are recommended at the core. If possible, greenway trails may be integrated to link Villages with surrounding neighborhoods and open spaces.

MATRIX

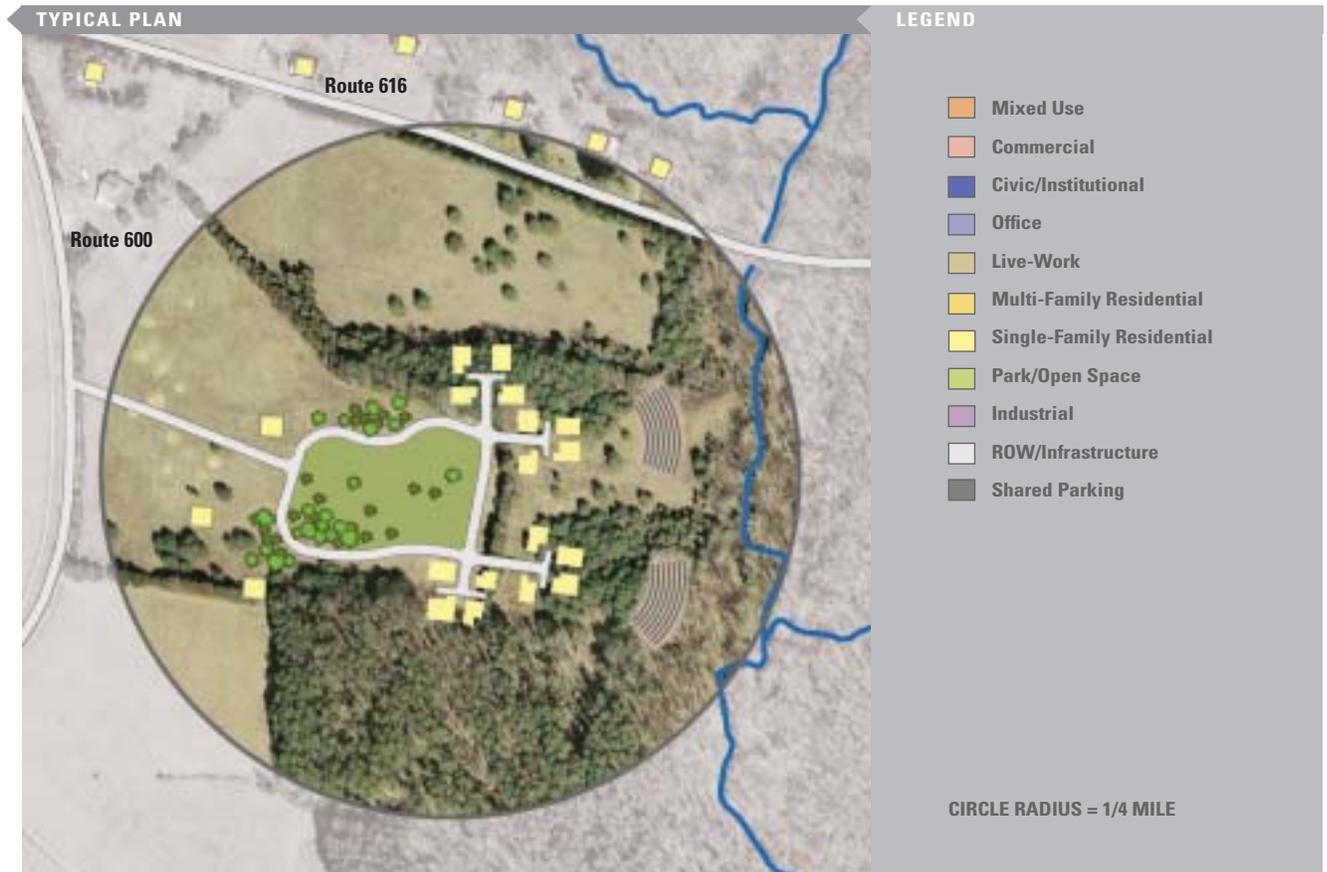
<b>Village</b>
<b>Street Types</b> (p 20)
Commercial Street Neighborhood Street Rural Road
<b>Block Size</b>
200'-600'
<b>Building Height</b> (p 22)
1-3 Stories
<b>Frontage</b> (p 22)
Storefront Porch Residential Yard
<b>Parking</b> (p 25)
On-Street Surface Residential
<b>Mix of Uses</b>
Storefront Retail (10-25%) Civic (10-25%) Office (10-25%) Restaurant (5-20%) Multi-Family Res (25-50%) Single-Family Res (25-75%)
<b>Density</b>
Commercial FAR: .75 Residential DUA: 4-8
<b>Open Space</b> (p 27)
Neighborhood Park Recreational Park Passive Open Space

### 3-F RURAL CLUSTER

Rural Clusters are small-scale residential areas surrounded by farmland, preservation zones, or otherwise environmentally sensitive land. Although they are small in scale, rural neighborhoods should strive to maintain density equal to the Neighborhood Residential placetype in order to maximize preserved land. Rural Cluster planning must be sensitive to existing natural features, agricultural land, and viewsheds when positioning development. Rural Clusters are predominantly single-family residential, but may incorporate multi-family and small scale retail and farm uses.



Rural Clusters focus development within a confined area. By focusing growth, open land is gained for preservation and community use. Cluster development provides a unique opportunity for the preservation of farms, views, and environmentally sensitive areas without eliminating development potential.



Potential rural cluster near the intersection of Routes 600 and 616.

**1 CONNECTIVITY**

**Street Types**

Within their developed area, Rural Clusters primarily use Neighborhood Streets and are connected to other places in the region by rural roads. Because of the rural character of these centers, streets do not require curbs and gutters or fixed sidewalks. Off-road paths are often a more appropriate pedestrian facility than formal sidewalks.

**Connectivity & Block Size**

When a Rural Cluster takes a compact form, block sizes should remain relatively small. However, some situations do not allow for typical, defined blocks, in which case no maximum block size is applicable. In such situations, it is still important to maintain a connected street network.

**2 SITE DESIGN**

**Building Height & Frontage**

The majority of buildings in Rural Clusters are residential. As such, buildings have a reduced scale and greater setbacks in comparison to the Neighborhood placetypes. Set-back requirements should remain flexible. Due to the varying rural quality of rural areas.

**Parking**

In a rural setting, formal on-street parking is rarely required or appropriate. For residential parking, it is important to set garages to the side and rear of the residence, so that they do not dominate the residential frontage.

**3 LAND USE**

**Mix of Uses**

While predominantly single-family residential, Rural Clusters may incorporate a limited amount of multi-family residential, typically positioned at the center of the developed area.

**Density**

The Rural Cluster element groups development into a compact area, leaving the remaining land for preservation and common use. In general, development should strive to maintain a reasonably high density, in order to optimize the opportunity for preservation.

**4 OPEN SPACE**

**Integration of Open Spaces**

Rural Clusters provide a great opportunity for open space preservation, typically at the periphery surrounding the developed area. Neighborhood Parks are recommended at the core. If possible, greenway trails may be integrated to link Rural Neighborhoods with surrounding neighborhoods and open spaces.

**MATRIX**

<b>Rural Cluster</b>	
<b>Street Types</b> (p 20)	Neighborhood Street Rural Road
<b>Block Size</b>	200'-varies
<b>Building Height</b> (p 22)	1-2 Stories
<b>Frontage</b> (p 22)	Porch Residential Yard
<b>Parking</b> (p 25)	Residential
<b>Mix of Uses</b>	Single-Family Res (50-100%) Multi-Family Res (25-50%) Limited Retail (10-25%)
<b>Density</b>	Commercial FAR: .5 Residential DUA: 2-6
<b>Open Space</b> (p 27)	Neighborhood Park Recreational Park Passive Open Space

Each Community Element requires a unique combination of streets, building frontages, and open spaces. Just as the Community Elements vary in terms of development intensity from Regional Mixed-Use Center to Rural Cluster, so to do the Design Elements that compose new development. Within the transition from urban to rural, different design elements are

appropriate at different points. For example, a Regional Mixed-Use Center may be characterized by a Main Street, shop fronts, and on-street parking. Conversely, a village typically includes mostly residential streets and yards, and less on-street parking. The following graphic illustrates this relative transition for Streets, Frontage, Parks and Open Space.



## 4-A BUILDINGS & FRONTAGE TYPES

Most modern development is oriented almost exclusively toward the automobile. By simply reconfiguring a site plan, building placement can reduce walking distances for customers and make streets more useful for pedestrians, transit users, and bicyclists. Buildings should be drawn to the street edge to create a defined edge and provide “spatial enclosure,” an important quality for a pedestrian-friendly streetscape. Building

entries should border main streets and public thoroughfares to foster a vibrant, walkable environment.

### Key Features:

Buildings should be oriented towards the primary street

Building entries enliven the sidewalk and invite pedestrians inward

Setbacks needs differ dramatically between urban and rural settings

### 1 BUILDING FRONTAGE & ENTRY

### EXAMPLE IMAGE

Buildings and frontages are the interface between the public street and the building interior. Treatment of building fronts should reflect the use of the interior space. Retail frontage (storefront) is intended to draw the public into the interior, while residential frontage (setback with raised porch) protects the privacy of the interior, yet allows the residents to observe and engage with neighbors and passers-by. The ground level should always be given the most careful consideration. Ground floor heights, facade articulation, setbacks, and entry design have a critical impact on the overall street environment. The dimensions and relationships between elements vary depending upon building types and uses, vehicle traffic, and pedestrian traffic.



Storefront along a walkable street

### 2 BUILDING SCALE & MASSING

### EXAMPLE IMAGE

Building massing describes the physical form of a building or group of buildings. In order to maintain a comfortable feeling of scale, building massing must be carefully considered in building design. Massing should be compatible with surrounding buildings to create a streetscape that maintains a consistent scale while allowing unique articulation between buildings. A single, uniform building mass should be avoided. Variations in height and horizontal divisions may be used to create façade articulation. Visual aspects of larger buildings must be detailed to maintain a sense of human scale, particularly at the pedestrian level.



Buildings forming a consistent street edge

### 3 BUILDING SETBACKS

### EXAMPLE IMAGE

Building setbacks determine a building’s relationship to the street. Drawing buildings to the edge of the street creates a human-scaled pedestrian environment with a clearly defined edge. Using buildings to transform the street into a “public room” is essential in creating an attractive, walkable streetscape. Certain elements such as parking lots and large building setbacks discourage the sense of spatial enclosure and result in an unfriendly pedestrian environment.

In rural settings, setbacks must be treated differently. To protect the rural quality of roadways, larger setbacks are often desirable. When determining rural setbacks, care should be given to the presence of viewsheds and scenic moments along the roadway. Ideally, buildings can be positioned to remain outside of viewsheds, preserving the scenic qualities of the roadway.



An urban setback defining a human scale



Rural setback with distant views

## 4-A BUILDINGS & FRONTAGE TYPES

### 4 COMMERCIAL FRONT

#### DIAGRAM OF TYPICAL FRONTAGE

The Commercial Front is used for buildings facing onto Commercial Streets. Because Commercial Streets are higher-speed thoroughfares, they provide a challenge to walkability and pedestrian comfort. Without the presence of on-street parking, landscaping takes a primary role in defining the pedestrian environment. Street trees and setbacks help to separate the pedestrian realm from vehicular traffic. Despite their setback, buildings should address the street and provide an appropriate degree of enclosure - signaling that one has entered a walkable, urban area.



### 4 STORE FRONT

#### DIAGRAM OF TYPICAL FRONTAGE

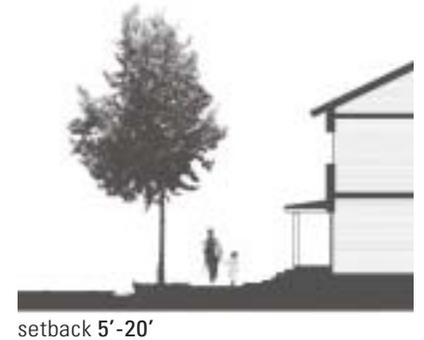
A Store Front is intended to promote retail activity. The front building facade should be at or near the edge of the right-of-way. Higher ground floor heights ensure a civic presence at street level. The ground floor often has large windows, drawing attention inward and allowing pedestrians to window shop. Awnings and signage may cantilever over the right-of-way.



### 4 PORCH FRONT

#### DIAGRAM OF TYPICAL FRONTAGE

A Porch Front is designed to promote social interaction between pedestrians and residents of individual houses without compromising the privacy of those same residents. It is typically found in American neighborhoods built between 1890 and 1940.



### 4 RESIDENTIAL YARD

#### DIAGRAM OF TYPICAL FRONTAGE

A Residential Yard uses a substantial building setback. The front yard created may be fenced or unfenced and should have similar landscaping to adjacent yards. With the deep setback as a buffer, the common lawn front can be suitable for higher speed thoroughfares.



Signage must be responsive to its context. Signs that are sensitive to nearby non-commercial uses, respect the scale and proportion of buildings, and contribute to the ambiance of a place can help secure and maintain a healthy economic climate. The character of the community, neighborhood, or in some cases the specific roadway should be reflected in the design of signage. Arterial based commercial uses are primarily accessed by car while compact mixed-use areas are easily transversed on foot. Additionally, locations that

are rich with historic buildings, must carefully locate and size signage to respect the architectural character of the area.

#### Key Features

The clearest signage uses few colors and consistent type styles and sizes

Sign size and placement is dependent on the surrounding environment (high-speed or slow-speed road) and intended viewer (motorist or pedestrian)

### 1 VISIBILITY & LEGIBILITY

Placement is critical to a sign's visibility, particularly along higher-speed roadways. As speeds increase, a driver's visual field decreases, restricting peripheral vision. Lowering speeds and placing signs close to the right-of-way helps drivers to detect and read signs from a longer distance. Signs placed outside of the driver's cone of vision are either distracting or unnoticeable. In addition to placement, the format and design of the sign are also important factors in readability. For example, using a minimal number of words allows for larger letter size and in turn increased clarity and quicker response time. Increasing letter-spacing and using mixed-case letters also help to make information more legible from greater distances. Colors may be used to provide contrast between titles and information and the background of the sign. Colors, however, should be used with restraint to limit distractions to motorists and negative effects on the surrounding visual environment.

### EXAMPLE IMAGE



Clear signage designed as part of building facade

### 2 SIZE & PLACEMENT

Signage in walkable areas should be oriented to both moving vehicles and pedestrians. Because buildings are closer to the street, signs should be smaller and placed at a lower height, preferably at the ground floor level. A variety of signs may be used, including: awnings, hung signs, storefront window signs, and signs fixed to building facades. Because movement is slower, signs may incorporate multiple colors and text types.

Many times, the primary entrance to commercial uses is from a parking lot. This presents a difficult scenario for signage. It is often necessary to place signage along the roadway, visible to motorists. Such signage that advertises all of the retail and commercial uses that the parking lot serves. The latter option should be integrated with the buildings and landscaping and incorporate clear directional information for motorists. It is recommended that a consistent text size, color, and font should be used for all businesses on the shared sign. Tall masts and multiple individual signs are discouraged. It is preferential for each store to have individual signage integrated within the building facade and elevated to ensure visibility across the parking area.

### EXAMPLE IMAGE



Pedestrian-scale signage integrated with awnings

Development is becoming oriented towards the automobile at an increasing rate. By simply reconfiguring a site, building placement can reduce walking distances for customers and make streets more useful for pedestrians, transit users, and bicyclists. Buildings should be drawn to the street edge to create a defined edge and provide “spatial enclosure,” an important quality for a pedestrian-friendly streetscape. Building entries should border main streets and public thoroughfares to foster a vibrant, walkable environment.

#### Key Features

On-Street parking reduces surface parking needs and buffers the sidewalk realm from the street traffic

Surface parking lots should incorporate landscaping to break up uninterrupted expanses of paving

### 1 PARKING LOT LAYOUT

Parking lots should be placed at the rear of buildings rather than directly adjacent to the roadway. This configuration allows the buildings to be drawn to the street edge and contribute to the pedestrian atmosphere of the street. This also provides convenient building entry access from the sidewalk and transit. This strategy reduces walking distances and enlivens the streetscape while leaving parking quantity unchanged.

Parking lots should provide clear, safe pathways for pedestrians. It is important to have direct and well-marked circulation between parking spaces and building entrances. Parking rows should be organized perpendicular to the building. This limits the number of aisle crossings and creates a clear, direct route for pedestrians. Parking areas should integrate paved paths that are comfortably separated from the parking aisles. As with streetscapes, trees should be provided to shade walkways. Buildings with both street frontages and parking lot frontages should provide two entrances, one providing access from the street sidewalk and another providing access from the parking area. Pedestrian alleys may also be provided as links between the street and parking area. New development shall provide a direct, unobstructed pedestrian access way from the public street to the building entrance. This access way should be a standard sidewalk with pavement markings at any places it crosses with parking rows or service drives.

### EXAMPLE IMAGE



A poor example of surface parking design



Pedestrian pathways considered as part of movement from parking to storefront

### 2 LIGHTING, LANDSCAPING, & PAVING

Parking, particularly surface parking lots, occupy an increasing percentage of developed land. Carefully considered landscaping, lighting, and paving can minimize parking lots effects on pedestrians, surrounding land uses, and the environment. Trees and landscaping may be used to break-up large expanses of surface parking, provide refuge for pedestrians, shade vehicles, and collect storm water runoff. Effective lighting is critical in ensuring safe and secure parking areas. As part of this role, it is important to carefully calibrate and direct lighting within the parking area to minimize potential light pollution. Two primary ways of doing this are to: integrate more, smaller (in both height and intensity) lighting fixtures; and providing light shields to direct all light downward towards the parking surface, eliminating light overflow to surrounding uses. Finally, alternative paving materials may be used to reduce environmental impacts and minimize developed area. Using pervious paving materials (such as crushed stone) reduces the volume of storm water runoff, in turn reducing or even eliminating the need for storm water retention ponds.

### EXAMPLE IMAGE



Using landscape to define zones for pedestrians within a larger parking area



Lighting, street trees, and paving can enhance the pedestrian-scale and intimacy of an environment

3 STRUCTURED PARKING

EXAMPLE IMAGE

Structured parking allows for an efficient use of space in high density areas. Garages eliminate the need for extensive surface parking and help maintain a consistent density within downtown areas. Garages should be located within block interiors with liner buildings or as stand alone structures with careful attention to facade articulation that reflects proportion, rhythm and massing of surrounding buildings.



4 SURFACE PARKING

EXAMPLE IMAGE

Surface lots should be placed in the rear of buildings or in block interiors to minimize visual impact. Landscaping is recommended to break the visual blight of large paved areas. Trees provide screening and noise reduction to help ease disruption. Well-defined pedestrian pathways can be used to break up parking rows and provide safe access to buildings. Plantings within parking lots also help to reduce storm water runoff, filter air, provide shade, and maintain property values.



5 ON-STREET PARKING

EXAMPLE IMAGE

On-street parking provides parking spaces within the thoroughfare right-of-way. It contributes to the street environment, helping to buffer pedestrian space from vehicular traffic. Spaces are distributed evenly along the street edge, helping maintain visual consistency and appeal in downtown areas. On-street parallel parking is preferred over angled parking on low speed urban streets. Parallel parking provides more space for bike lanes and wider sidewalks.



6 RESIDENTIAL PARKING

EXAMPLE IMAGE

Residential parking is a significant component of residential neighborhoods. Frequently, driveways and garages have a dominating presence along residential streets. To enhance the pedestrian-orientation of residential streets and create a stronger connection between homes and the street, it is encouraged to set residential garages back from the front entry of residences. Setting garages back separates the house volume from the garage volume, better balancing the relationship between the home and street and vehicles and pedestrians. In higher-density residential areas, residential alleys prove an effective way of providing private driveways and garages without limiting potential density.



Carefully planned open space is necessary for the richness of mixed-use centers and the vitality of the public realm. Open space is a broad classification for public spaces ranging from community recreational areas to civic squares. The scale, enclosure, and density of surrounding conditions inform the properties of the open space: formal/informal, active/passive, and open/contained. Formal civic spaces should be located in the center area, serving the area of highest intensity, while recreational facilities, greenways, and neighborhood parks should be strategically placed to serve the mixed-use communities surrounding the core. Many qualities contribute to the appeal of open spaces. Often, environmental and natural features are integrated into open space planning. Wetlands, critical slopes, drainage swales, and vegetation should be conserved as open public space wherever possible.

In urban settings, water retention systems can be rethought and formalized as landscape elements that punctuate design. Attractive civic spaces in the center, such as canals, ponds, and fountains promote gathering, interaction, and comfort. Moveable seating, tables, and elements that are multi-functional (planters that are at seat height) allow people to congregate and personally define spaces. Shade trees, greens, and cooling fountains help create a comfortable setting.

#### Key Features

Public spaces such as town squares are essential for the civic identity of commercial areas

Natural features and viewsheds provide ideal location for preserved open spaces and greenway trails

Compact residential development with preserved land and a neighborhood park is an alternative to large-lot zoning

### 1 TOWN SQUARE

#### EXAMPLE DIAGRAM

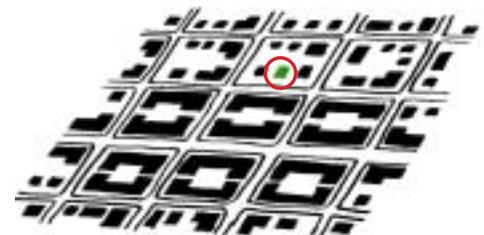
A town square is the most formal public space and is generally less than half the size of a block located at the intersection of important thoroughfares. It is devoted to civic uses and commercial activity and is surrounded by buildings on all sides. Its landscape is composed primarily of durable pavement and formally planted trees. Significant architectural features such as fountains, statues, and other vertical elements help mark the civic prominence of the square. Such features are most successful when planned in accordance with a strong visual axis, allowing the square to be visible from a distance.



### 2 POCKET PARK

#### EXAMPLE DIAGRAM

A pocket park is a small park that often occupies a 'left over' space between buildings. Typically small in scale, pocket parks provide vegetation, shade, and open space within densely built areas. Due to their size, pocket parks predominantly serve immediately adjacent buildings. These small, informal breaks in the built fabric provide alternatives to more prominent civic spaces, such as town squares, which require a greater commitment of land area and resources.



## 4-D OPEN SPACE

### 3 NEIGHBORHOOD PARK

#### EXAMPLE DIAGRAM

A neighborhood park is an open public space serving a residential area. The space may be used for civic gatherings and recreation. Neighborhood parks provide a safe open area free from moving traffic for children and neighborhood residents. Neighborhood parks may be bound by residences or small scale institutional or civic buildings to form a common green. These parks are intended to serve the local area, unlike recreational parks, which serve a larger residential population.



### 4 RECREATIONAL PARK

#### EXAMPLE DIAGRAM

Recreational parks are open public space, ranging from three to ten acres, reserved for civic gatherings and recreation. Often, recreational parks are designed around existing natural features. Its landscape consists primarily of grassy areas, paved or unpaved walks, and shade trees. Formal playing fields may be established to serve community needs. The park should be surrounded by a mix of residential, commercial, and civic buildings. Recreational parks may also serve nearby institutions, such as schools. Parking needs and other necessary facilities must also be considered and sensitively integrated with the landscape.



### 5 GREENWAYS

#### EXAMPLE DIAGRAM

Greenways provide places for recreation and help maintain the scenic quality of landscapes. It is important from a transportation mobility and access perspective that greenways function by connecting places where people want to go: neighborhoods, business centers, shopping areas, schools and parks. Additionally, greenways provide an excellent opportunity for embedded community and neighborhood parks. Greenways also provide opportunities for unique recreational activities such as mountain biking and equestrian trails.



### 6 PASSIVE OPEN SPACE

#### EXAMPLE DIAGRAM

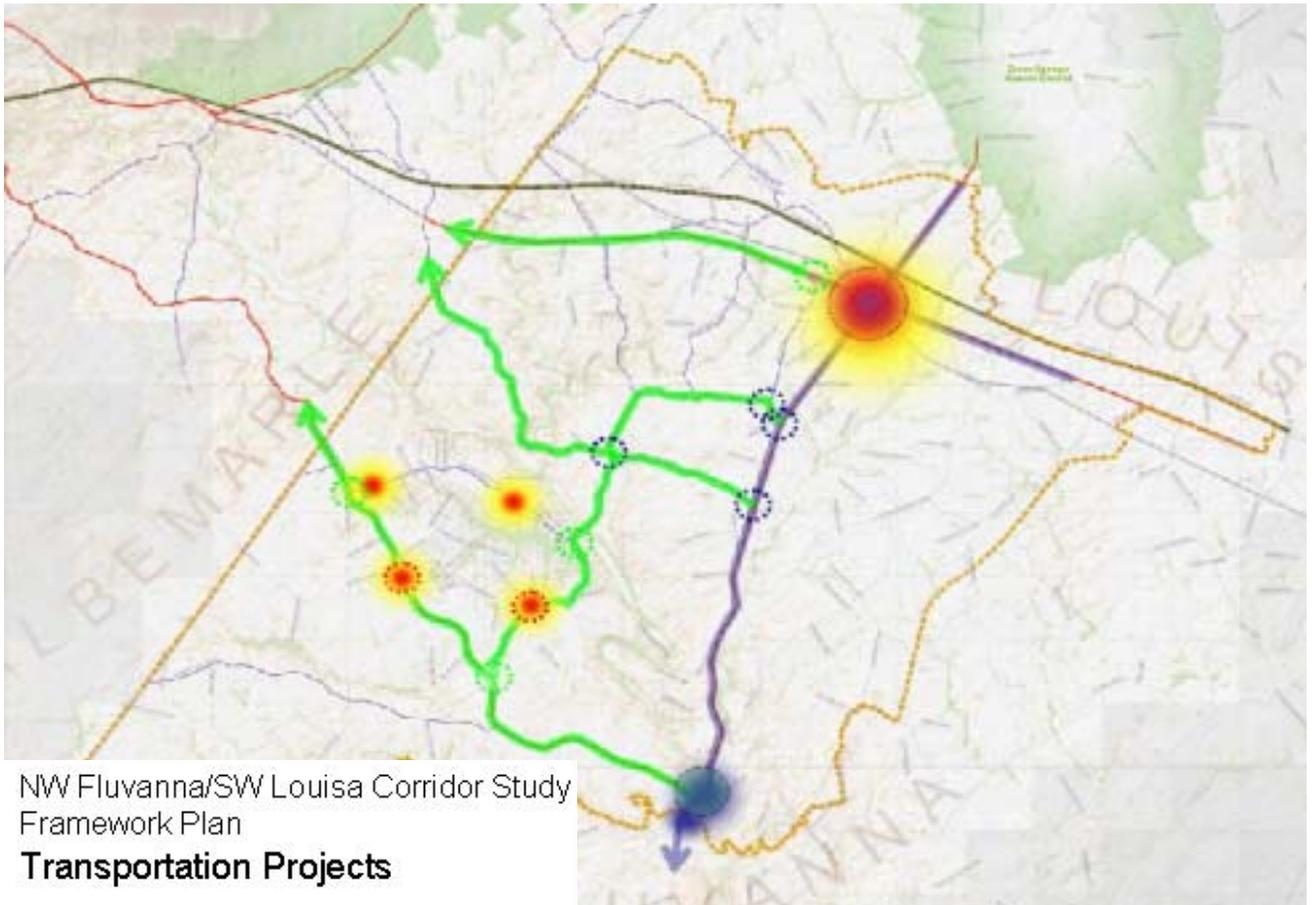
Passive open space provides scenic views and may accommodate greenway trails and walking paths. Golf courses may also be incorporated into passive open space. Recreational uses such as playing fields or courts are not typically included however. Passive open space may be retained to serve individual neighborhoods or the overall community. Rural and agricultural land may be preserved as passive open space.



Transportation plays a key role in shaping communities. If designed correctly, the transportation system can provide a multitude of choices for users, support walkable, human scale environments and help preserve and create memorable places. By the same token, the design of communities has a fundamental effect on the transportation system: the proper arrangement of land uses, activities and places can make walking, bik-

ing and transit viable while reducing demand on the regional roadway network. This integrated approach to transportation and land use planning is reflected in the transportation component of the framework plan. This section addresses projects needed to support the framework plan, street types and intersections appropriate for their surrounding context, network design and transit.

PROJECT MAP



NW Fluvanna/SW Louisa Corridor Study Framework Plan  
**Transportation Projects**

-  Widen to four lanes
-  Shoulders/spot safety enhancements
-  Rural intersection improvement
-  Urban intersection improvement
-  Gateway intersection improvement

Without the proper planning and design of integrated, well-connected places, the intersection of US 250 and US 15 in Zion Crossroads could become a bottleneck for traffic, receiving as many as 180,000 cars per day. The image to the right provides an example of what Zion Crossroads could look like under such a scenario.



## 5-A TRANSPORTATION PROJECTS

Communities within the preferred scenario have been designed intentionally to minimize demand on the transportation system by putting origins and destinations in close proximity to each other and designing at a walkable, pedestrian scale. The area already has a good network of secondary roads, such as Routes 600, 616 and 729, that provide local alternatives to travel on regional roads, including US 15, US 53 and US 250. As a result, the framework plan can be implemented with relatively minimal public investment in the transportation network.

Potential roadway projects have been identified based on anticipated travel demand at buildout within the study area. Roadway capacity projects are limited to US 15 and US 250; due in large part to growth in regional traffic passing through the study area.

Other roads in the study area can provide adequate vehicular mobility without mainline capacity additions, but some will require enhancements to maintain adequate safety and target speeds. Enhancement projects include shoulder additions and/or curve flattening and road realignment.

Intersection projects are identified at the convergence of roads that are anticipated to carry a significant amount of traffic. Projects may include turn lanes, signalization and/or pedestrian enhancements.

There may be additional projects (spot safety and/or intersection improvements) that arise over the course of the planning horizon. However, the projects identified here are integral to the framework plan and should be factored into the planning and programming of the transportation network.

### PALMYRA DETAIL

### PROJECT LOCATIONS



## 5-B DESIGN CONTEXT

An essential, overriding parameter that must be taken into consideration when considering the design of the transportation system is the surrounding context. Generally speaking, there are three context zones for the study area: rural, urban and transitions.

### 1 TRANSITIONS

### ZONE MAP

The transitional zone signals a change from a rural context to an urban context. Transitions are designed to send a cue to drivers to slow down and that the character of the surrounding environment is changing.



### 2 RURAL CONTEXT

### EXAMPLE IMAGE

Outside of the target areas, the emphasis of the transportation system is on providing vehicular mobility. The design of the transportation network should be based on higher target speeds, larger setbacks and increased sight distance.



### 3 URBAN CONTEXT

### EXAMPLE IMAGE

Within target areas, the emphasis shifts to pedestrians and the accommodation of surrounding activities. The character of the street drastically changes and is based on lower operating speeds and a more robust roadside environment.



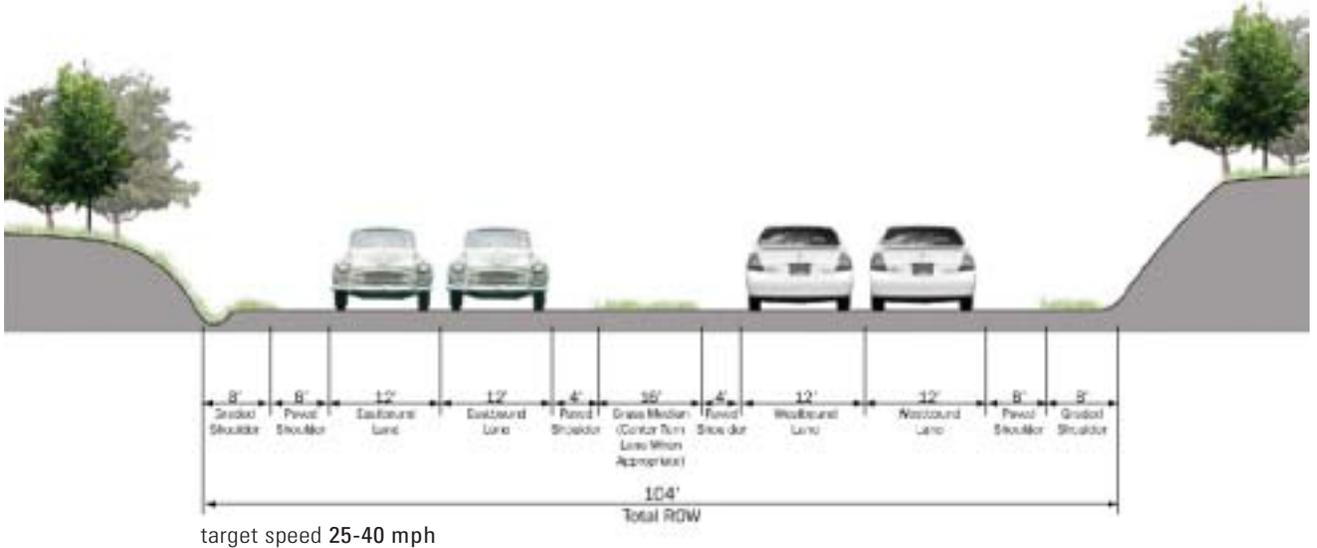
## 5-C STREET TYPES

Effective street design is critical to the viability of walkable, mixed-use areas and should reinforce the distinct differences between rural and urban contexts within the study area. The street design types presented here are prototypes intended to demonstrate the correct design parameters appropriate for the surrounding context, and should be considered whenever building a new street or improving an existing one.

### 1 PARKWAY

### EXAMPLE DIAGRAM

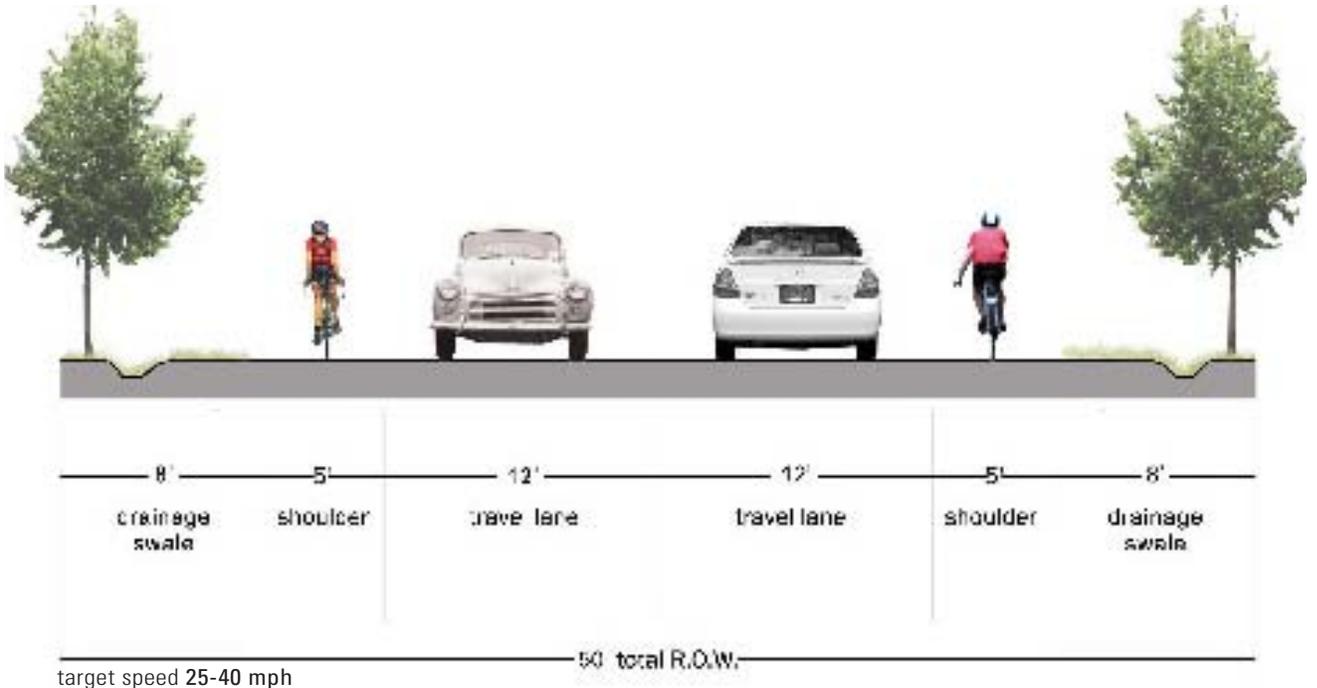
A parkway moves larger volumes of traffic long distances between concentrated centers. Parkway are characterized by their rural qualities, and are often bordered by open tracts of farmland, preservation areas, or otherwise undeveloped land. Because of the large distance between major intersections, Parkway are able to maintain relatively high target speeds. Where Parkway approach more intensely developed walk-



### 2 RURAL ROAD

### EXAMPLE DIAGRAM

A rural road is similar to a parkway in its mobility orientation, but is intended for lower volumes of traffic and/or where topography and other elements of the natural landscape limit the amount of right-of-way. A rural road is lined with soft shoulders and has open drainage. Roads may be lined with existing trees and natural vegetation and take on the profile of the surrounding landscape. Necessary facilities must also be considered and sensitively integrated with the landscape.

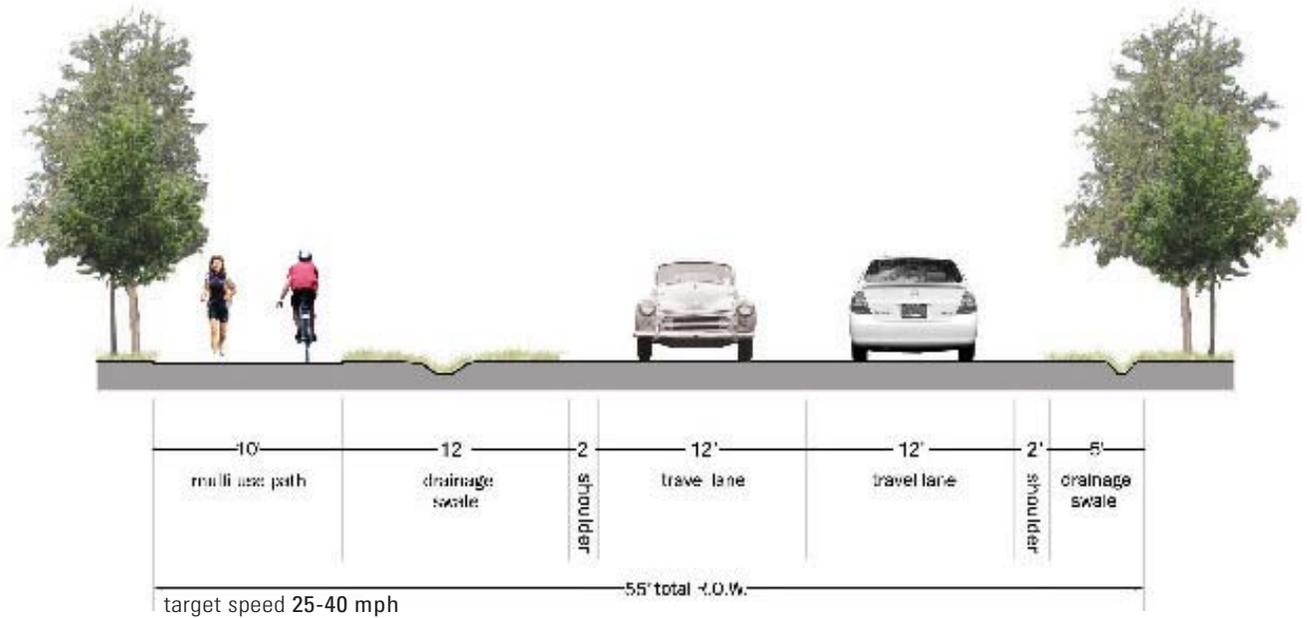


## 5-C STREET TYPES

### 3 RURAL ROAD WITH SHARED-USE PATH

### EXAMPLE DIAGRAM

A rural road with shared-use path incorporates a dedicated path to the side of the roadway for bicyclists, pedestrians, and recreational uses. The shared-use path is separated from the roadway by an open drainage swale. At points, the path can split a considerable distance from the roadway to incorporate drainage, significant natural features, and the greater network of paths and greenways. Rural roads are encouraged to incorporate shared-use paths wherever there is available ROW.



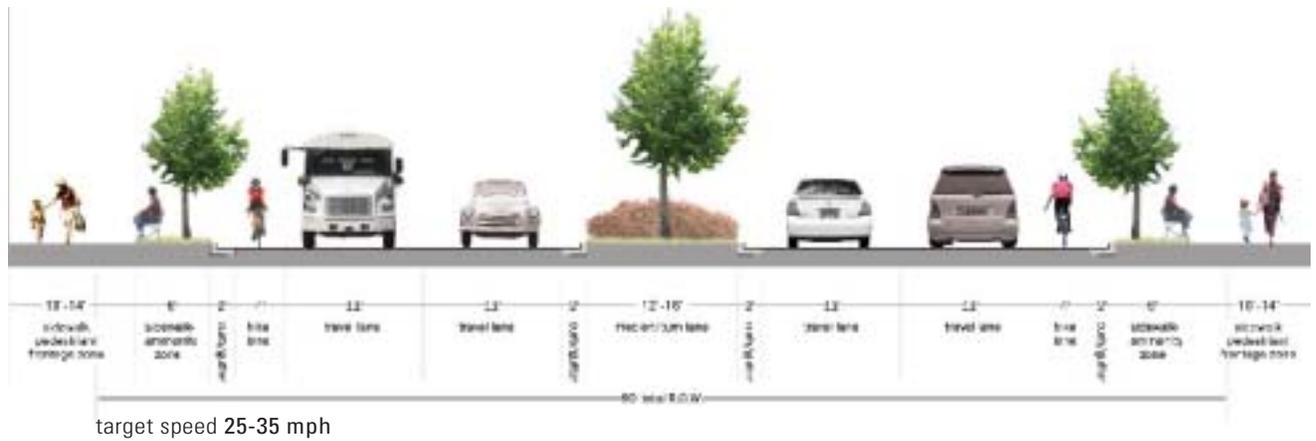
## 5-C STREET TYPES

Urban street types carry lower speed traffic and have unique requirements for balancing the mobility needs of cars and pedestrians. Streetscape elements provide a softened appearance and enhance the quality and appeal for pedestrians. Narrow road widths naturally reduce travel speeds and give greater spatial enclosure to the street environment. Street types developed for walkable urban areas include the Commercial Street, Main Street, and Neighborhood Street.

### 1 COMMERCIAL STREET

### EXAMPLE DIAGRAM

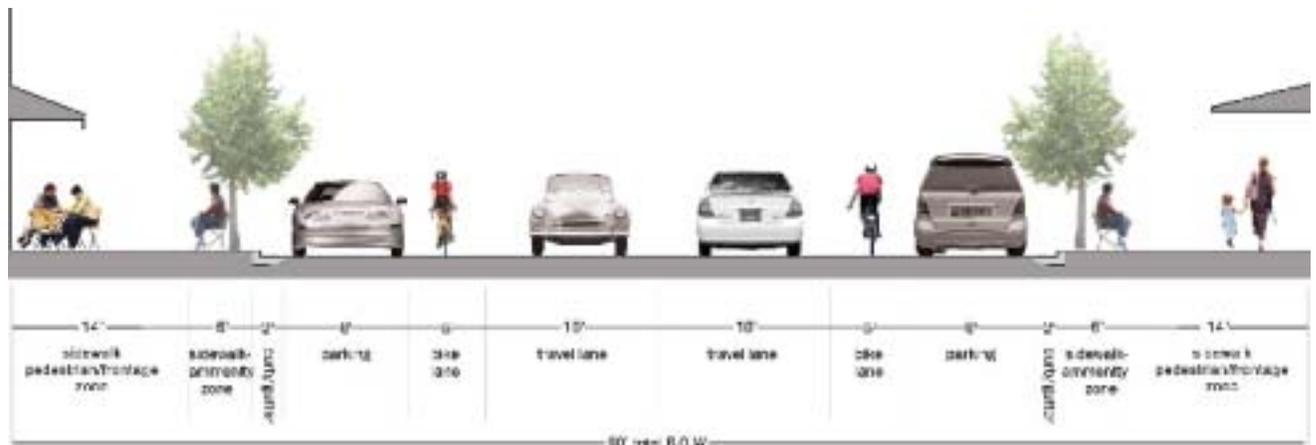
A Commercial Street provides short distance, medium speed connections through pedestrian-oriented areas. Commercial Streets often include medians and at significant points, such as a gateway, medians may be widened for special landscape treatments. In general areas, medians may be planted formally with trees or landscaped informally, depending on context. Bicycle lanes and street trees are appropriate, and emphasize the balance between cars, cyclists, and pedestrians. Commercial Street have curb and gutter drainage.



### 2 MAIN STREET

### EXAMPLE DIAGRAM

A Main Street is a low-speed, pedestrian-oriented street operating within a high density mixed-use area. Main Streets traditionally serve as a focal point for surrounding areas. The narrow street width, on-street parking, street trees, and small setbacks create spatial enclosure. Sidewalk bulb-outs may be used to minimize pedestrian crossing distances. Individual street trees are typically planted in planting wells. Main Streets have a raised curb and closed drainage.

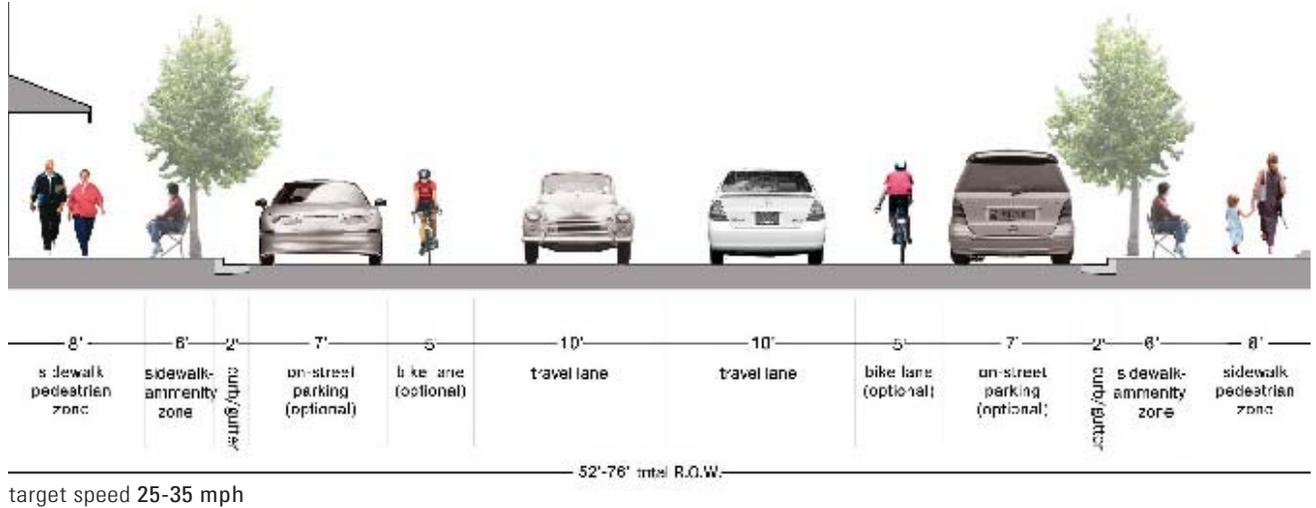


## 5-C STREET TYPES

### 3 COLLECTOR STREET

### EXAMPLE DIAGRAM

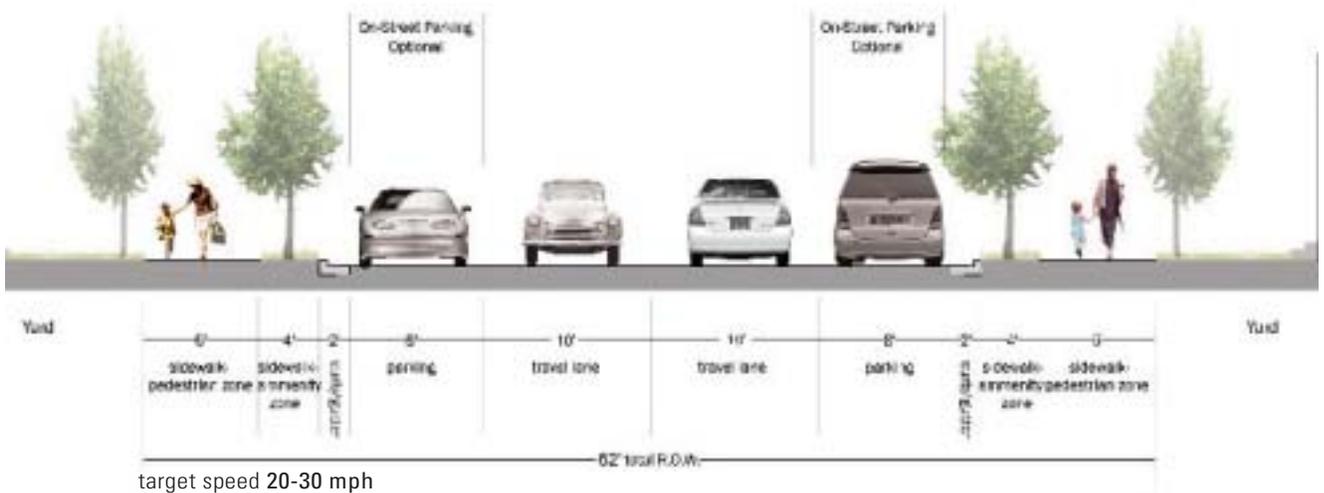
A collector streets can be found within mixed-use centers or can connect mixed-use centers to surrounding neighborhoods. These lower-speed thoroughfares are intended for less-intense surroundings than main streets.



### 4 NEIGHBORHOOD/LOCAL STREET

### EXAMPLE DIAGRAM

Neighborhood streets may typically include sidewalks, street trees, and residential on-street parking. Small building setbacks, such as door-yard or stoop fronts, contribute to the street's spatial enclosure. Neighborhood Streets have curb and gutter drainage.



## 5-C TRANSITIONS

Transition areas entail design treatments to signify a change in context from rural to urban. These may include medians, signage, landscaping and/or pavement treatments. Intersections may also serve as transitions (see the next section).

### TRANSITIONS AREAS

### EXAMPLE IMAGES



## 5-D INTERSECTIONS

Intersections are critical components of the transportation network because they represent the convergence of several different vehicular movements and modes. The majority of safety issues and congestion can be attributed to intersections. There are different intersection types for each of the context zones in the study area.

### 1 RURAL INTERSECTIONS

#### EXAMPLE IMAGE

Rural intersections are located outside of the target areas. As such, the emphasis is on vehicular safety and capacity. Intersections should be designed to accommodate higher approach speeds, including an extended sight distance and deceleration tapers.



### 2 URBAN INTERSECTIONS

#### EXAMPLE IMAGE

Within the target areas, urban intersections should be as compact as possible and anticipate use by different modes, including bicycles and pedestrians. Avoid unnecessary turn lanes and excessive turning radii. By default, urban intersections should assume that a passenger car is the design vehicle and that turn movements will occur at a crawl speed. Small, compact urban intersections are most feasible when supported by a larger, connected street network (see section 5-F).



### 3 GATEWAY INTERSECTIONS

#### EXAMPLE IMAGE

Intersections located at the entrance to a target area may be treated as gateways and represent a good opportunity to create a transition from the rural to urban context. Intersection gateway treatments may include more elaborate signal mast arms with signage, pavement treatments and/or landscaping.



## 5-E INTERSECTIONS

### 4 ROUNDABOUTS

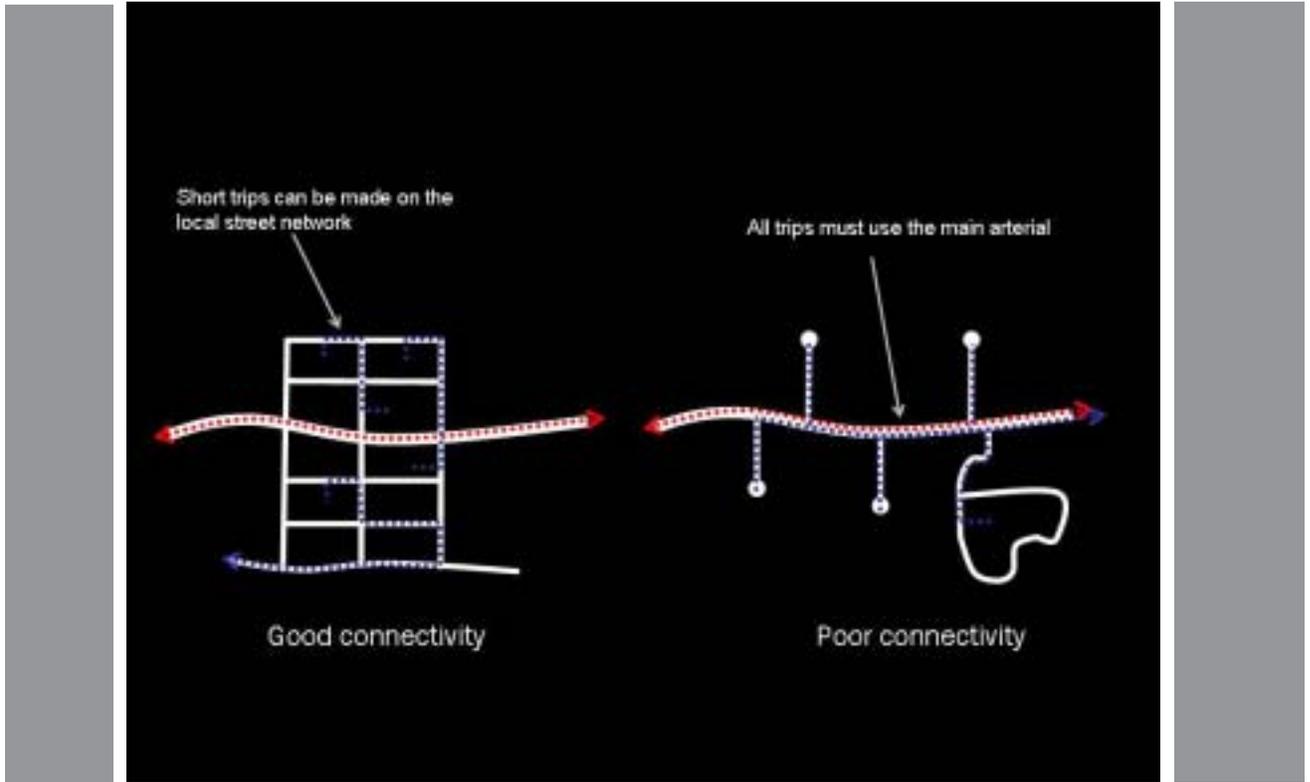
### EXAMPLE IMAGES

Roundabouts should be considered as alternatives to signalized or stop-controlled intersections. In many cases, roundabouts can offer improved safety and capacity, and offer an opportunity for landscape enhancements. Roundabouts make excellent gateway treatments, as they require all entering vehicles to reduce their speed.



Within the urban context, a good street network and connectivity is absolutely essential. Dense networks create multiple travel paths for all users. They distribute traffic more evenly and help prevent large, clogged

intersections, instead allowing the creation of compact, walkable intersections and narrow streets that can be treated at a human scale. Short blocks create pedestrian-friendly environments.

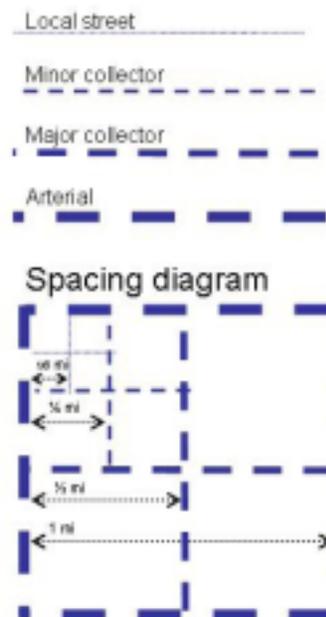


1 STREET SPACING AND HIERARCHY

EXAMPLE DIAGRAM

At a maximum, streets within the target areas should be spaced no more than 1/8 of a mile apart. Arterials, which form the backbone of the transportation network and carry most of the regional traffic, should be spaced at approximately one mile. Major and minor collectors, which carry most of the traffic within the target areas, should be spaced at 1/2 mile and 1/4 mile intervals respectively. Local streets should fill in the rest of the network.

It is important to note that this network does not necessarily have to be provided by the public sector. This network could easily be built as part of private development, and should provide connectivity to the external network.



## 5-E NETWORKS AND CONNECTIVITY

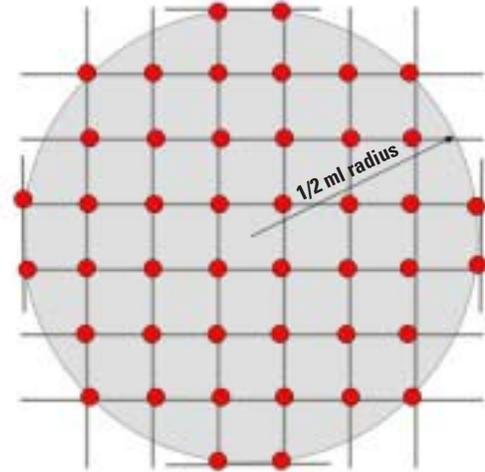
### 2 CONNECTIVITY GUIDELINES

### EXAMPLE DIAGRAM

These guidelines provide a useful of benchmarks for evaluating whether a proposed development will result in a connected street network within the target areas. They may be implemented within land development regulations.

**Block size:** 200 ft. to 800 ft.  
**Cul-de-sacs:** Limited to 10% of all street links  
**Intersection Density:** Minimum 0.8 to 1.2 intersections per 10 acres

$\frac{1}{2}$  radius = 502 acres  
 44 intersections  $\div$  502 acres =  
 0.88 intersections per 10 acres

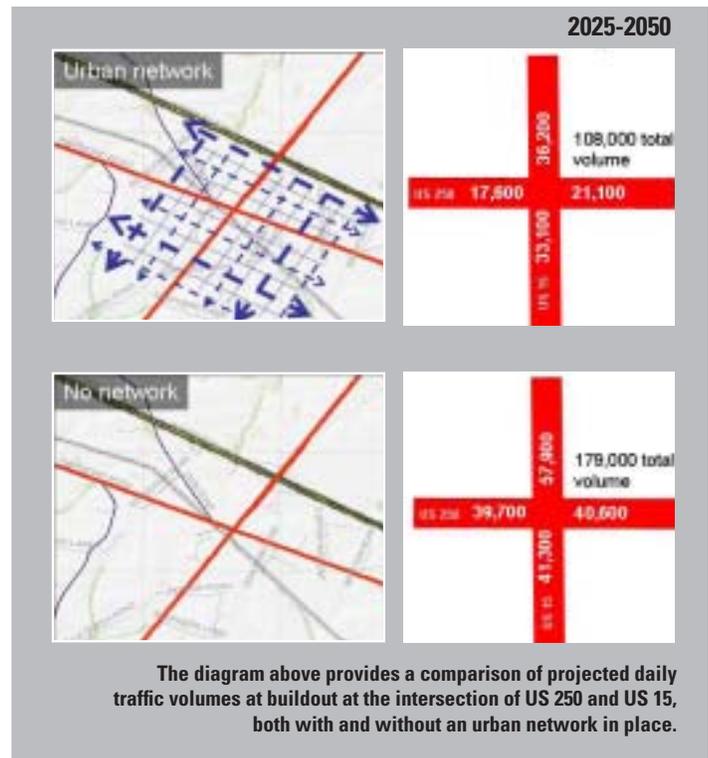


### 3 URBAN NETWORK AT ZION CROSSROADS

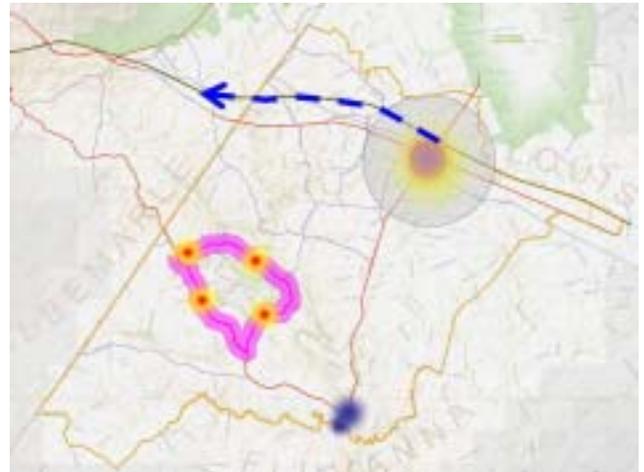
### EXAMPLE DIAGRAM

Perhaps the most critical location for the development of an urban street network is at the Zion Crossroads target area. This is the largest target area and is the focus of regional growth, yet it has no street network beyond the intersection of US 250 and US 15. The regional partners must work closely with developers (using the guidelines presented here) to develop a street network concurrent with growth at Zion Crossroads.

An analysis of traffic conditions at buildout was performed at the intersection of US 250 and US 15 in Zion Crossroads. The analysis showed that, unless an urban street network is built, traffic volumes at the intersection will be over 60 percent greater, likely requiring a flyover or some other type of grade separation.



Fixed route transit service is part of a robust transportation system by providing a viable option for people who cannot or do not want to drive. Development within the study area is ‘transit ready’ by virtue of the fact that target areas are compact and walkable. Two distinct types of service are proposed for the study area: premium regional transit service and local circulators.



1 PREMIUM REGIONAL TRANSIT SERVICE

EXAMPLE IMAGES

The recommended growth scenario for the study area places a bulk of the growth and development within Zion Crossroads. At buildout, up to 500 homes and 2,500 jobs could be located within walking distance of US 250 and US 15 and another 7,000 homes and 24,000 jobs are located within a short drive. As a result, there is sufficient critical mass to support a premium regional transit service into Charlottesville. Such a service could begin as an express bus route operating on I-64, but could ultimately evolve into fixed guideway service, such as commuter rail.



2 LOCAL CIRCULATORS

EXAMPLE IMAGES

Local circulators provide high-frequency, high access transit service within target areas. Two transit circulators have been proposed for the study area: at Lake Monticello and at Zion Crossroads. The Lake Monticello circulator would connect the mixed-use centers, while the Zion Crossroads circulator would operate with the target area as well as provide a connection to the premium regional transit service.

