



6.0 Design Guidelines



### Intent

These Design Guidelines are intended to define the foundation for a more detailed and formal form-based code for the Cumberland Avenue area. Form-based codes address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks. The regulations and standards in form-based codes, presented in both diagrams and words, are keyed to a regulating plan that designates the appropriate form and scale (and therefore, character) of development rather than only distinctions in land-use types. The regulating plan also defines a set of street frontages from which the code is organized. This is in contrast to conventional zoning's focus on the segregation of land-use types, permissible property uses, and the control of development intensity through simple numerical parameters (e.g., floor area ratio, dwellings per acre, height limits, setbacks, parking ratios). The City of Knoxville has validated the concept of form-based codes with the adoption of the Knoxville South Waterfront District Code.

This section establishes general concepts that can be refined to create an enforceable form-based code for the Cumberland Avenue area. The general elements addressed are identical to those in the Knoxville South Waterfront code, and it is anticipated that the process would be similar for adoption, implementation and interpretation of this code.

The details of building height, setback, use, frontage requirements, etc. will certainly require more detailed discussion and analysis as part of the development and adoption of a form-based code the Cumberland corridor.

### General Principles

#### Buildings Form the Space of the Street

Buildings are in essence walls that, with the street, create a shared public "room". The character and scale of the walls determine the character of the room. Continuous building frontage with active uses on a street creates a welcome and attractive space that supports pedestrian and economic activity. Property lines should be physically defined by buildings or street walls in order to clearly define public and private space and ensure that parking lots are located either behind buildings or buffered by street walls.

#### Building Height

The street will have a more cohesive, pedestrian feel if contiguous buildings are of similar heights. Buildings taller than those that have typically been built in the corridor are encouraged. However, relative uniformity in height will create a more cohesive, comfortable place. In other words, it is better to have two five-story buildings next to each other than a two-story building next to an eight-story building. The current C-7 Pedestrian Commercial District allows building heights of 8 stories or 90 feet. It will be difficult to ultimately create a consistent built form of 90 foot high buildings therefore, these guidelines recommend a lowering the building height with the goal of achieving a more consistent urban form.

#### Environmental Sustainability

In addition to environmental benefits, "green" buildings can cost less, improve worker productivity, enhance marketing efforts, and help to create a district identity. Buildings should respond to the site, be efficient in water and energy use, be constructed of sustainable materials, and create healthy environment for the occupants. The Leadership in Energy and Environmental Design (LEED) Reference Guide for New Construction and Major Renovation, Version 2.2 is a valuable resource for guidance on green building techniques, practices and standards.

#### Parking & Access

Parking, and access to parking, should be located off of the side streets or alleys. Curb cuts along White Street, Cumberland Avenue and Lake Street should be discouraged. Surface parking lots should be screened and separated from public rights-of-way. Surface lots should be located behind or beside buildings. All surface lots should be landscaped and shading maximized.

#### Service

Service and delivery should be accommodated on side streets, alleys or in designated pull-out locations along Cumberland Avenue. All dumpsters and refuse collection areas should be located off the alley, and screened from public rights-of-way.

#### Lighting

Building and site lighting should be designed in such a way as to eliminate light trespass and minimize light pollution. The best lighting schemes will generally lower lighting levels, maximize uniformity and eliminate glare. Lighting for pedestrians is an important consideration and should be designed to maximize visibility and comfort. These considerations can decrease first costs, have marked value in life-cycle costs and create a more attractive and comfortable nighttime environment. The Illuminating Engineering Society of North American (IESNA) Recommended Practice Manual: Lighting for Exterior Environments (IESNA RP-33-99) is a valuable resource for guidance on best lighting practices.

#### Signage

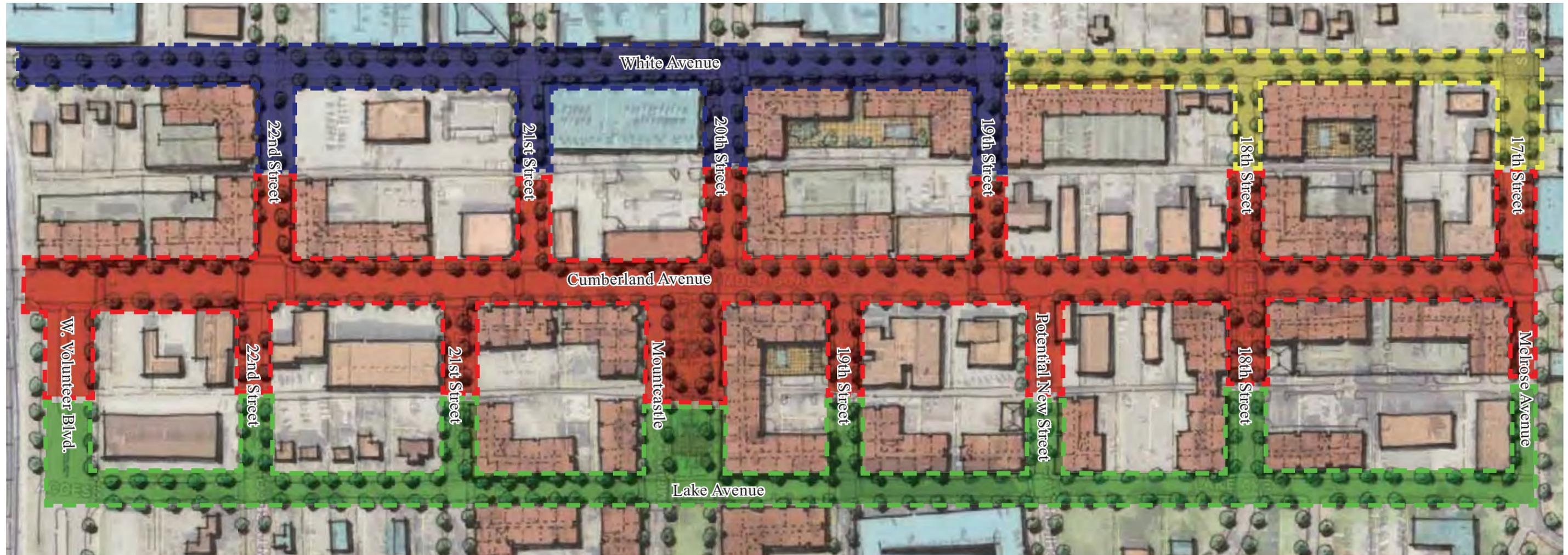
The scale of signage should be designed with pedestrians in mind. Signs on awnings, in windows, and projecting from the face of the building can help create an interesting pedestrian environment.

#### Landscaping

Street trees are encouraged to augment the public landscape plan. Landscaping should be designed to provide shade for pedestrians and generally improve the aesthetic environment of the corridor. Impervious surfaces should also be shaded to mitigate urban heat island effects. The Knoxville Street Tree Master Plan should be used in selecting appropriate species.

**Frontage Requirements**

The Cumberland Avenue area, for the purpose of the design guidelines, has been broken up into four distinct frontage areas. Depending on their context, unique frontage requirements have been set forth in the following pages. The guidelines focus on key characteristics related to development and form that encompass building heights, siting requirements, key built elements and uses. Additionally, basic street characteristics are also outlined to complement the built form and create a safe and vibrant urban environment.



*The Cumberland Area Frontages*

- Cumberland Avenue Frontage
- White Avenue-Neighborhood Frontage
- White Avenue-Hospital Frontage
- Lake Avenue Frontage

## Design Guidelines

### Cumberland Avenue Frontage

#### Height

- Maximum height for any portion of the building should be 70 feet above the highest elevation of the property line fronting Cumberland Avenue.
- Minimum height of the building frontage along Cumberland Avenue should be 2 stories or 30 feet above the highest elevation of the property line fronting Cumberland Avenue.
- Ground story finished floor elevation can be no lower than exterior sidewalk elevation in front of building.

#### Siting

- The building must be built to the property line fronting Cumberland Avenue for at least 80% of total lot frontage.
- Outdoor seating areas in front of a building can be counted as building frontage provided that a street wall of at least 3 feet is included and the principle structure is located no more than 20 feet from the property line for the entire width of the seating area.
- For the remaining portion of the building that does not directly abut the property line, a street wall of at least 3 feet is required along Cumberland Avenue frontage.
- Vehicle parking should be located at least 20 feet away from Cumberland Avenue (except for underground parking floors).

#### Elements

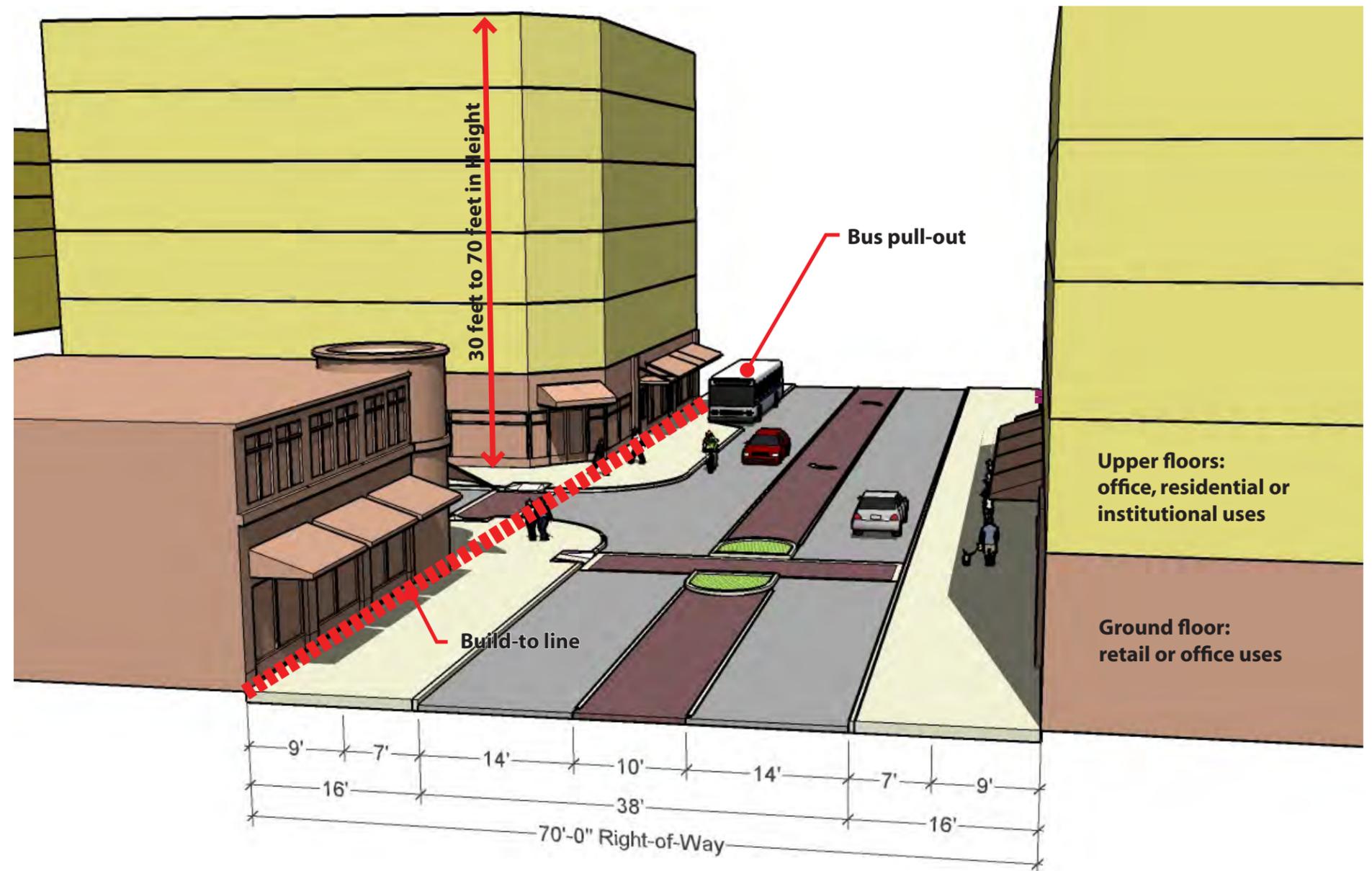
- Blank walls greater than 20 feet in length are prohibited along street frontages.
- Doors, windows and fenestrations should occupy at least 75% of the total ground floor facade area.
- On corner lots, where Cumberland Avenue intersects major streets, at least one building entrance should be located at the corner.
- Parking should be located in the rear of the property with access to parking from the alleys and side streets.
- Structured parking should not exceed the primary structure's height.

#### Uses

- Ground floor to include retail or office uses.
- Upper stories to include office, institutional and/or residential uses.

#### Street

- One 14 foot lane, in each direction, which can accommodate both bicycles and motor vehicles.
- 10 foot left-turn lane.
- Pedestrian refuge on Cumberland Avenue crosswalks.
- Options for designated pull-out areas: transit, on-street parking or wider sidewalks.



## Design Guidelines

### Lake Avenue Frontage

#### Height

- Maximum height for any portion of the building should be 40 feet above the highest elevation of the property line fronting Lake Avenue.
- Minimum height of the building frontage along Lake Avenue should be 20 feet above the highest elevation of the property line fronting Lake Avenue.
- Height measurements are taken from the highest point of the property line fronting Lake Avenue to the mid-point of the roof.
- Ground story finished floor elevation can be no lower than exterior sidewalk elevation in front of building.

#### Siting

- The building must be built to the property line fronting Lake Avenue for at least 80% of the total lot frontage.

#### Elements

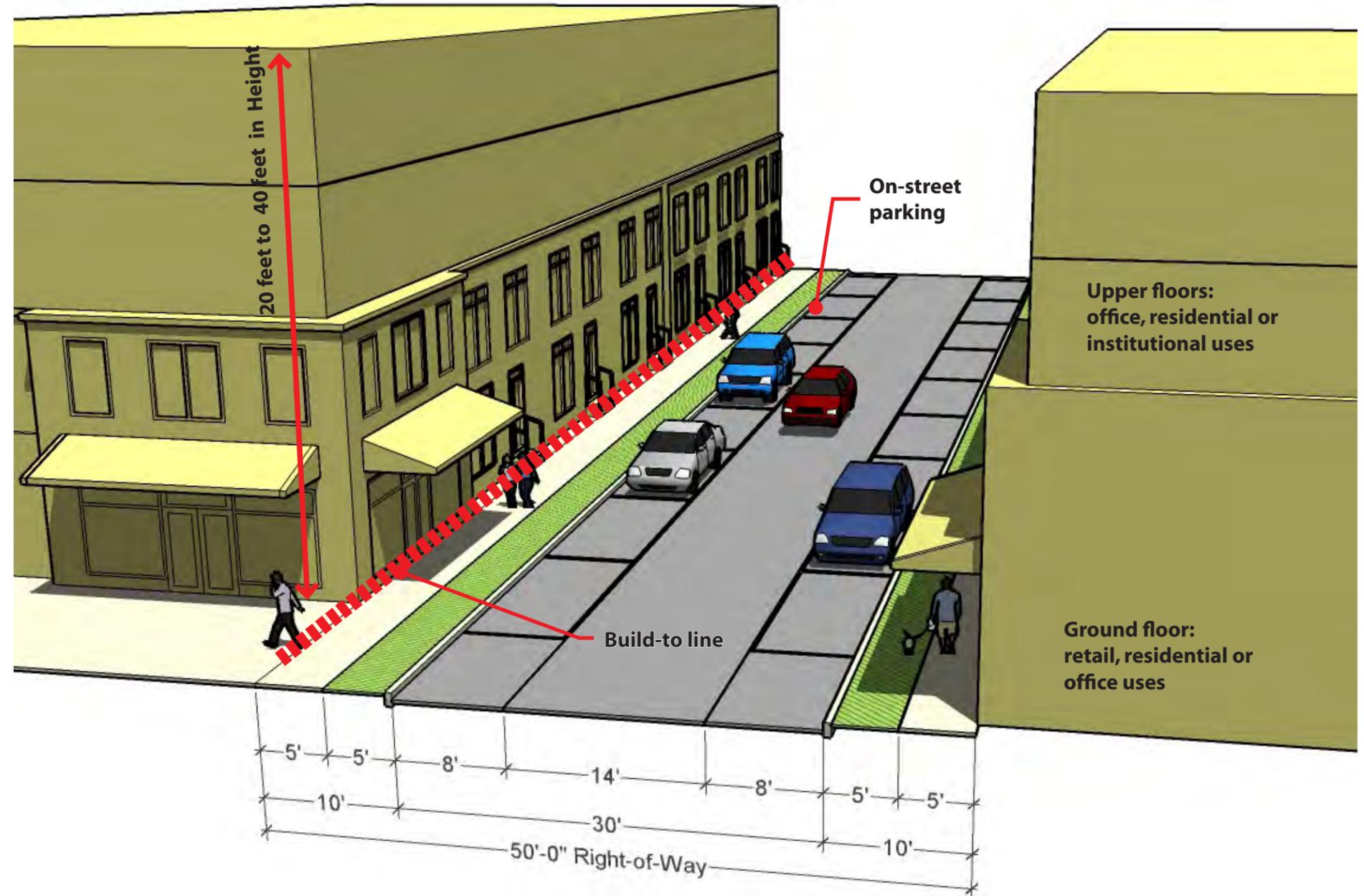
- Blank walls of length greater than 20 feet are prohibited along street frontages.
- Doors and windows should occupy at least 40% of the total ground floor facade area.
- Primary building entrances to be located on Lake Avenue.

#### Uses

- Ground floor to include retail, office and/or residential uses.
- Upper stories to include office, institutional and/or residential uses.

#### Street

- Existing on-street parking should remain.
- Pedestrian amenities should be enhanced.



## Design Guidelines

### White Avenue-Neighborhood Frontage (1700 to 1900 Blocks)

#### Height

- Maximum height for any portion of the building should be 40 feet above the highest elevation of the property line fronting White Avenue.
- Minimum height of the building frontage along White Avenue should be 20 feet above the highest elevation of the property line fronting White Avenue.
- Height measurements are taken from the highest point of the property line fronting White Avenue to the mid-point of the roof.
- Ground story finished floor elevation can be no lower than the exterior sidewalk elevation in front of the building.

#### Siting

- The building must be built to the property line fronting White Avenue for at least 80% of the total lot frontage.

#### Elements

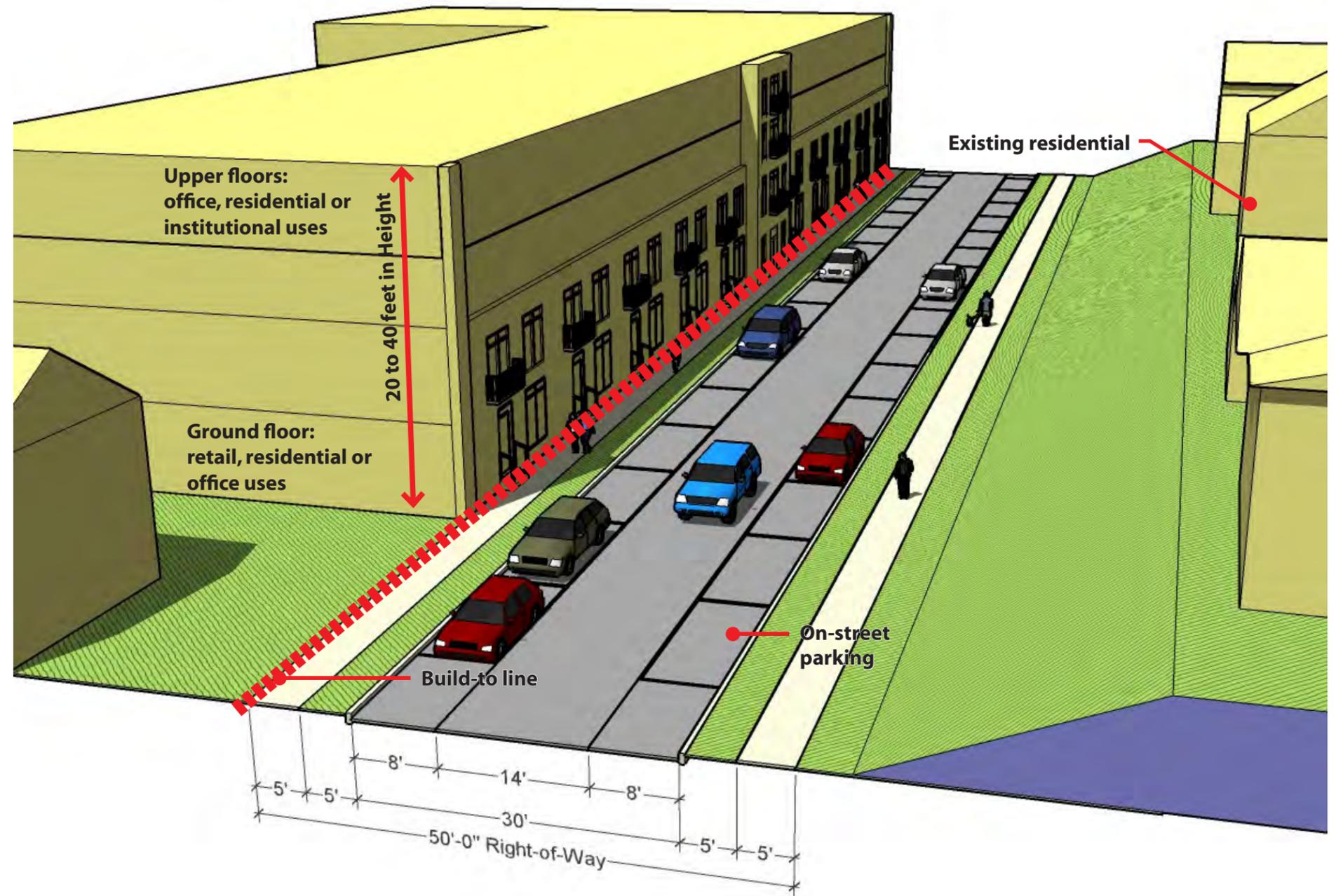
- Primary building entrance to be located on White Avenue frontage.
- Parking areas should be located in the rear of the property.
- Blank walls of length greater than 20 feet are prohibited along street frontages.

#### Uses

- Ground floor to include retail, office and/or residential uses.
- Upper stories to include office, institutional and/or residential uses.

#### Street

- Existing on-street parking should remain.
- Improve pedestrian amenities along White Avenue.
- Enhance pedestrian crosswalks.



## Design Guidelines

### White Avenue-Hospital Frontage (West of 19th Street)

#### Height

- Maximum height for any portion of the building should be 70 feet above the highest elevation of the property line fronting White Avenue.
- Minimum height of the building frontage along White Avenue should be 20 feet above the highest elevation of the property line fronting White Avenue.
- Height measurements are taken from the highest point of the property line fronting White Avenue to the mid-point of the roof.
- Ground story finished floor elevation can be no lower than the exterior sidewalk elevation in front of the building.

#### Siting

- Building must be set back 5 feet from the property boundary fronting White Avenue for 80% of the total lot frontage.

#### Elements

- Primary building entrance to be located on White Avenue frontage.
- Parking areas should be located in the rear of the property.
- Blank walls of length greater than 20 feet are prohibited along street frontages.

#### Uses

- Ground floor to include retail, office, institutional and/or residential uses.
- Upper stories to include office, institutional and/or residential uses.

#### Street

- Existing 14 foot travel lane should remain.
- Improve pedestrian amenities and sidewalk conditions along White Avenue.
- Enhance pedestrian crosswalks to institutional uses.
- Existing surface parking lots should be consolidated with structured parking.

