

City of Alexandria

# HOUSING MASTER PLAN

## DESIGN IMPLEMENTATION TOOLS

December 2, 2010

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# Design Issues from the AHIWG

## Constraints in Master Plan

- **Requirements for consistency with existing patterns of development**
- **Constrained density**

## Best Practices for Urban Form

- **How can affordable housing continue to be seamlessly integrated into the fabric of varying neighborhoods, corridors & districts?**
- **Must find a series of best practice strategies & tools to address a variety of contexts & opportunities**

# Outline of Strategies & Tools

- 1. Accessibility**
- 2. Accessory Dwelling Units**
- 3. Transit-Oriented Development**
- 4. Maximizing Mixed-Use Opportunities**
- 5. Infill & Redevelopment**
- 6. Adaptive Reuse**

# Accessibility

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# Accessibility

## **Types of Accessibility**

- **Visitability**
- **Adaptability (Type B)**
- **Full Accessibility (Type A)**
- **Universal Design**

# Accessibility - Visitability

**Visitability is based on the principle that all new homes should include basic features that make them accessible to people regardless of their physical abilities. A visitable home has a main level that is easy for both residents & guests to enter & exit with ease.**

*Source: Center for Housing Policy*

# Accessibility - Visitability

## Visitable

**A house is visitable when it meets three basic requirements:**

- **one zero-step entrance.**
- **doors with 32 inches of clear passage space.**
- **one bathroom on the main floor you can get into in a wheelchair.**

*Source: Center for Universal Design at North Carolina State University*

# Accessibility - Adaptable

## Adaptable

- **Adaptable housing refers to dwellings with design features that are easily adapted at a later date to flex with the changing needs of the occupants. This means the adaptations require less work at less cost.**

Source: e-Bility.com

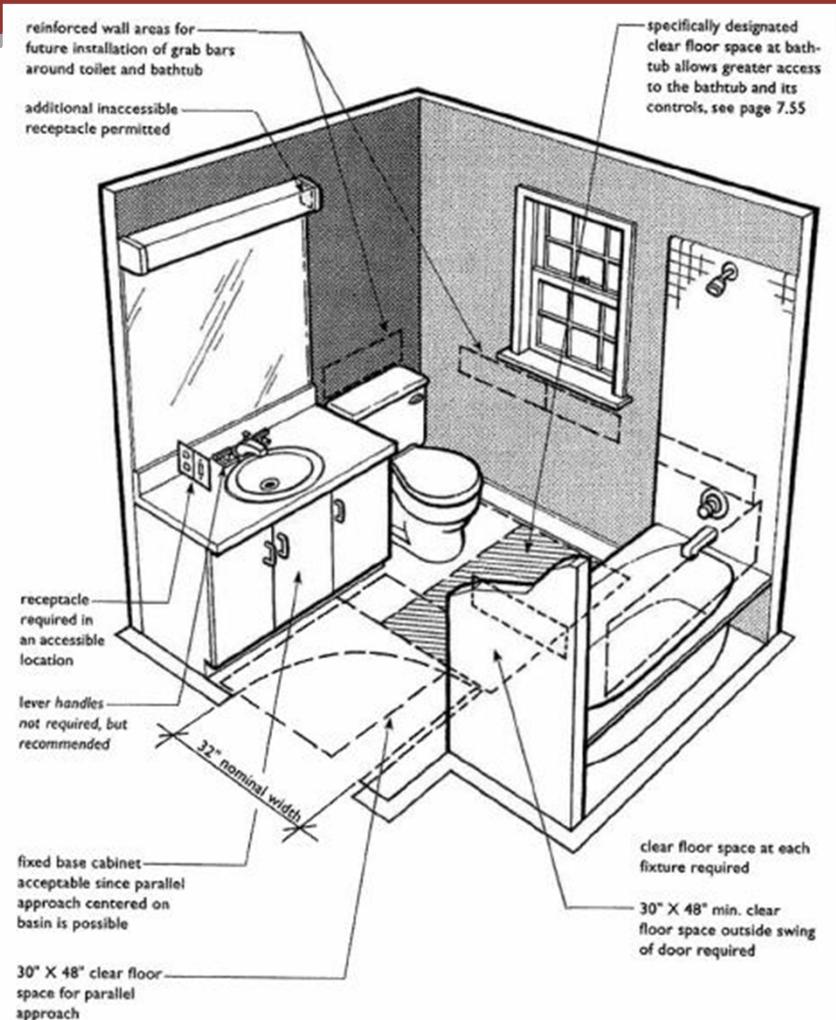


Figure 101. Type B Dwelling Unit Option "B"

# Accessibility - Adaptable

**Adaptable - Certain design features are built-in for future accessibility**

- **Blocking for grab bars**
- **Adjustable countertop height**
- **Tiling before fitting cabinetry, so knee-space clearance & accessible cabinetry can be installed later**
- **Adjustable height bench/counters that can be moved up & down to suit each user in the home**

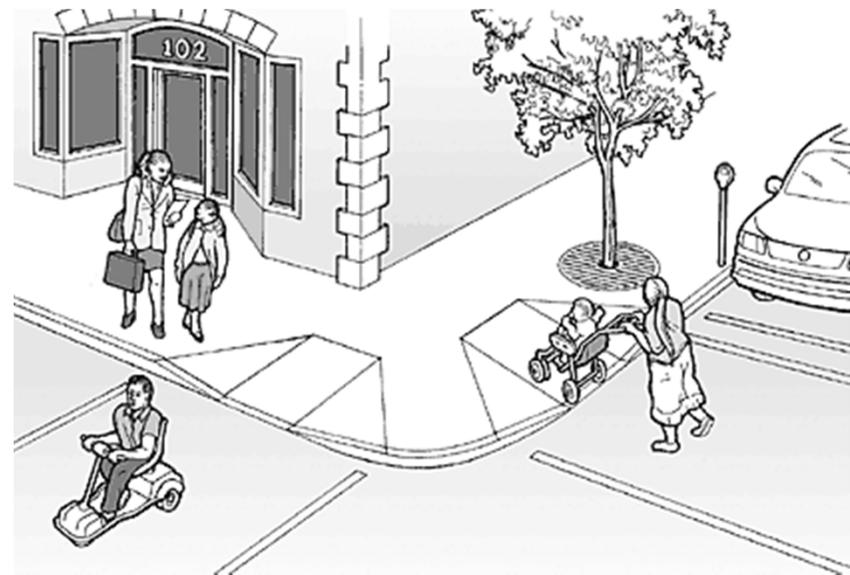
# Accessibility – Accessible (UFAS)

***ACCESSIBLE:* Describes a site, building, facility, or portion thereof that complies with these standards and that can be approached, entered, and used by physically disabled people.**

*Source: Uniform Federal Accessibility Standards (UFAS)*

# Accessibility – Universal Design

**The intent of Universal Design is to simplify life for everyone by making products, communications, & the built environment more usable by as many people as possible at little or no extra cost. Universal design benefits people of all ages & abilities**



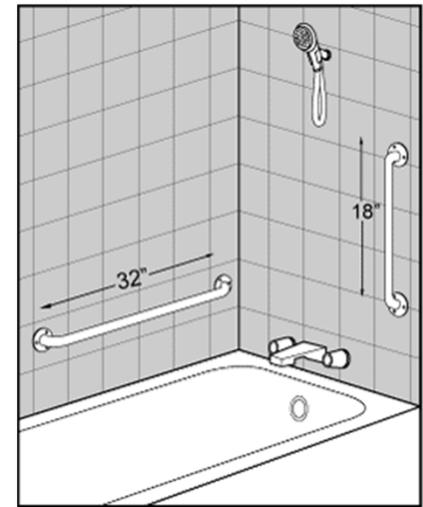
Source: [LAWalks.org](http://LAWalks.org)

Source: *Center for Universal Design at North Carolina State University*

# Accessibility – Universal Design

## The Principles of Universal Design

- **Equitable use**
- **Flexibility in use**
- **Simple & intuitive**
- **Perceptible information**
- **Tolerance for error**
- **Low physical effort**
- **Size & space for approach & use**



# Accessibility

## Implementation of Accessibility

- **State code requirement for 20+ apartment complexes**
  - **All units adaptable (Type B)**
  - **Between 1-2% units fully accessible (Type A)**
- **Determining the percentage of units at different levels of accessibility**
- **Cost Implications**



# Costs of Accessibility

## **Costs Associated with Different Levels of Accessibility for new multi-family construction**

- **Visitability – Minimal change in construction cost/size**
  - Cost related to accessories like ramps, no loss of units at density
- **Adaptability – New space, 30-100 additional SF per unit**
  - Biggest change in halls, door swings and bathrooms
  - Additional unit cost for adaptability will range from \$15k to \$30k
  - Loss of 2-5 units on 1 acre property with 1.0 FAR (out of 20-40 units)
- **Barrier-Free – Costs of adaptability with additions for fixtures**
  - Same impact to unit delivery, costs related to specialized furniture
- **Universal Design – Costs of Barrier-Free with potential for costs for additional amenities (i.e. sensory)**
  - Same impact to unit delivery, costs related to specialized design/furniture

# Accessibility

## Benefits

- **Allow for access for all people**
- **Promote “age in place” & offer senior housing opportunities**

## Challenges

- **Additional costs**
- **Larger unit sizes, potentially fewer affordable units**

# Accessory Dwelling Units

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# Accessory Dwelling Units

## Accessory Dwelling Unit Characteristics

- **Exist in many historic communities that predate zoning**
- **Being explored in many places – built new in Traditional Neighborhood Developments (TND)**
- **Can be within the principal dwelling or semi-attached/detached**

# Accessory Dwelling Units

## Accessory Dwelling Unit Design Considerations

- **Additional revenue source for homeowner**
- **Defining the second dwelling unit – kitchen & entrance**
- **Single-family – up to four unrelated people**
- **Size limits & parking requirements**

# Accessory Dwelling Units

## Accessory Dwelling Unit Types

- **Granny flats for seniors – ground floor units, aging in place**
- **Mother-daughter duplex for extended families**
- **Multi-generational housing**
- **Family suite – caregiver for aging in place**
- **Above existing garage footprints**
- **English basement apartments**
- **“Granny Pods”**

# Historic Precedents



# Existing Conditions



# Accessory Dwelling Units

## MED Cottages – “Granny Pods”

- VA General Assembly passed legislation in May that supercedes local zoning laws to allow families to install Granny Pods on their property with a doctor's order.
- ***Defined as “temporary family healthcare structures” that can be placed only on the properties of single-family homes & occupied only by a relative who is physically or mentally impaired, as certified by a physician.***
- ***Must be less than 300 sq. feet and conform to local regulations governing sheds or garages.***
- ***Must be removed within 30 days after the occupant dies, moves or no longer needs to receive care in the dwelling.***

# Case Study: Arlington, VA

## Accessory Dwelling Unit Policy

- **The homeowner must live in the main or accessory unit & must have lived there 1 year before approval**
- **Only 1 accessory dwelling per lot, and must be a part of the main dwelling (not a separate structure)**
- **The size is limited to no more than 750 square feet**
- **No more than 2 persons may live in the unit**

# Accessory Dwelling Units

## Benefits

**Allows affordable rental housing without the necessity of local government expenditures or subsidies.**

- **Rents are generally lower than rents for comparably sized non-accessory apartments**
- **Older residents on fixed incomes have added income to offset the costs of staying in their homes.**
- **Efficient use of the existing housing stock & encourages the upkeep of older neighborhoods**

# Accessory Dwelling Units

## Challenges

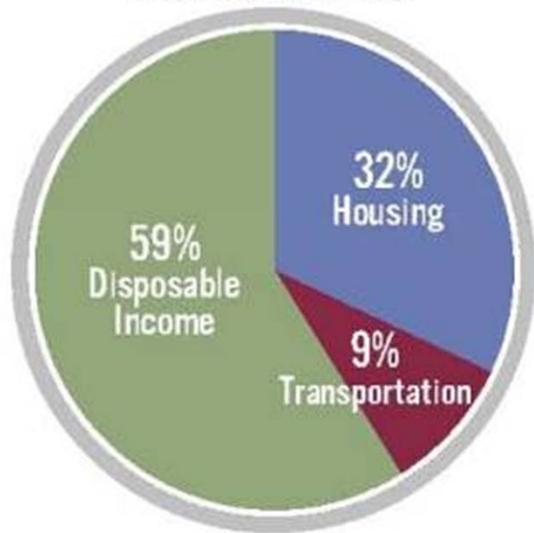
- **Concerns about declining property values**
- **Design & exterior appearance of accessory units**
- **Impacts on parking**
- **Regulatory restrictions**
- **Time consuming community process and city administration for potentially minimal return**

# Transit-Oriented Development

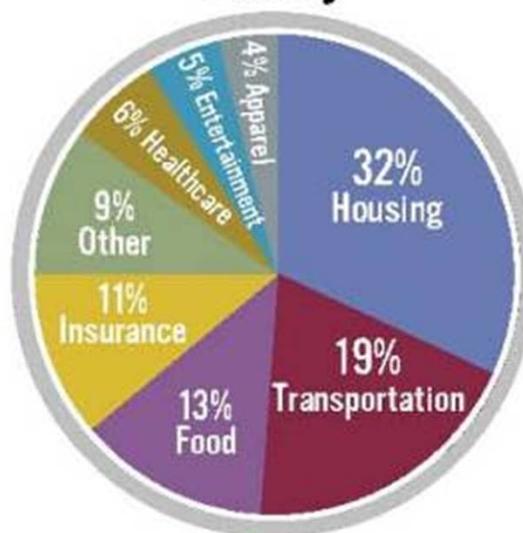
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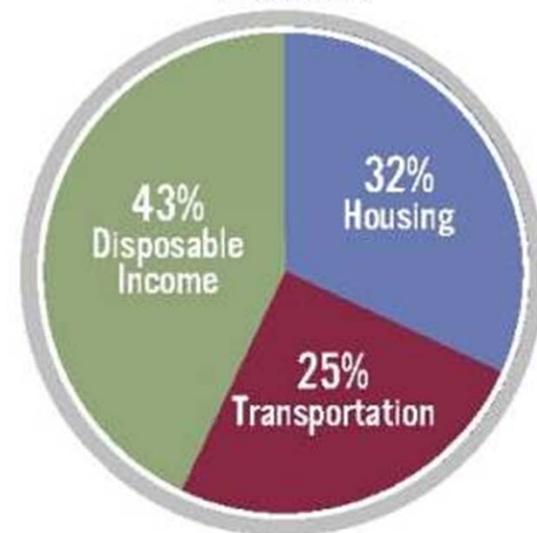
**Location Efficient Environment**



**Average American Family**



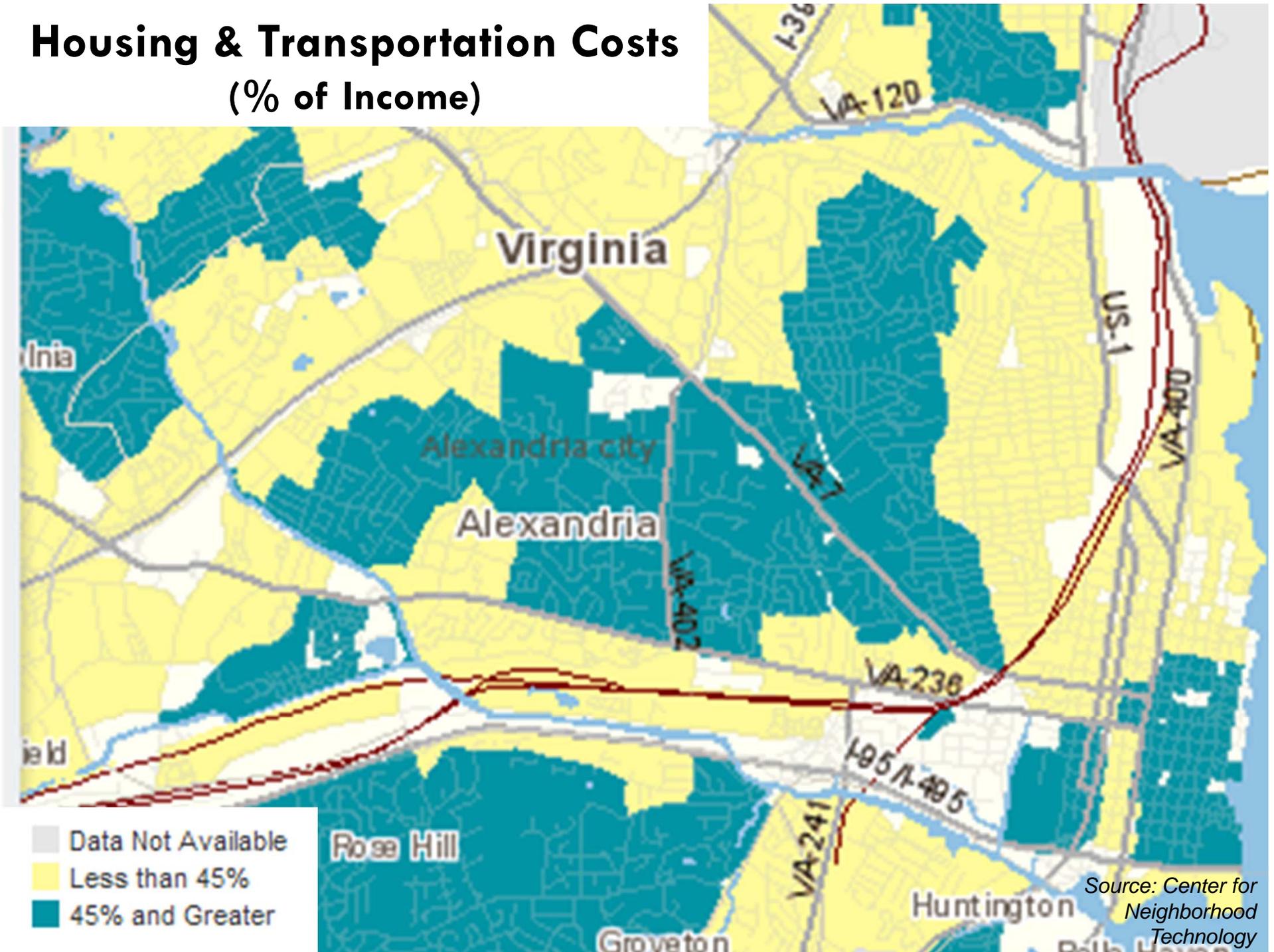
**Auto Dependent Exurbs**



- **19% of average American family income is spent on transportation**
- **55% of very low family income is spent on transportation**

Source: *Reconnecting America, Why Transit-Oriented Development and Why Now?*

# Housing & Transportation Costs (% of Income)



# Transit-Oriented Development (TOD)

- **TOD Development – e.g., Hoffman, Meridian and Carlyle**



# TOD Proximity - Bus Corridors/Contexts



**Larger-scale commercial corridors, mixed use & city facilities partnership**



**Smaller-scale infill at transition areas along bus corridors**

# Small-scale TOD Opportunities



# Transit-Oriented Development

## Universal Strategies

**Higher density near stations/stops & along corridors**

**Reduce parking requirements**

- **Consider a lower standard within 1/4-mile or 1/2-mile of transit**
- **Parking maximums “don’t build it & they won’t drive”**
- **Can be applied to Accessory Dwelling Units**

# Transit-Oriented Development

## Benefits

- **Give affordable options to all transit locations not just train stations**
- **Accommodates small scale infill opportunities**
- **Reduced parking standards**

## Challenges

- **Expensive land costs & more expensive building/construction costs in TOD**
- **Upgrades of station stop facilities & increase service demand**
- **Financial commitment to transit upgrades**

# Maximizing Mixed-Use Opportunities

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# Maximizing Mixed-Use Opportunities

**City Facilities Partnership – co-locating facilities with mixed use opportunities**

**Multi-story mixed use vs. single-story commercial**

**Ability to accommodate mixed income**

- **Enhanced Attractiveness**
- **“Eyes on the Street”**
- **Expandability in commercial uses**

# City Facilities Partnership

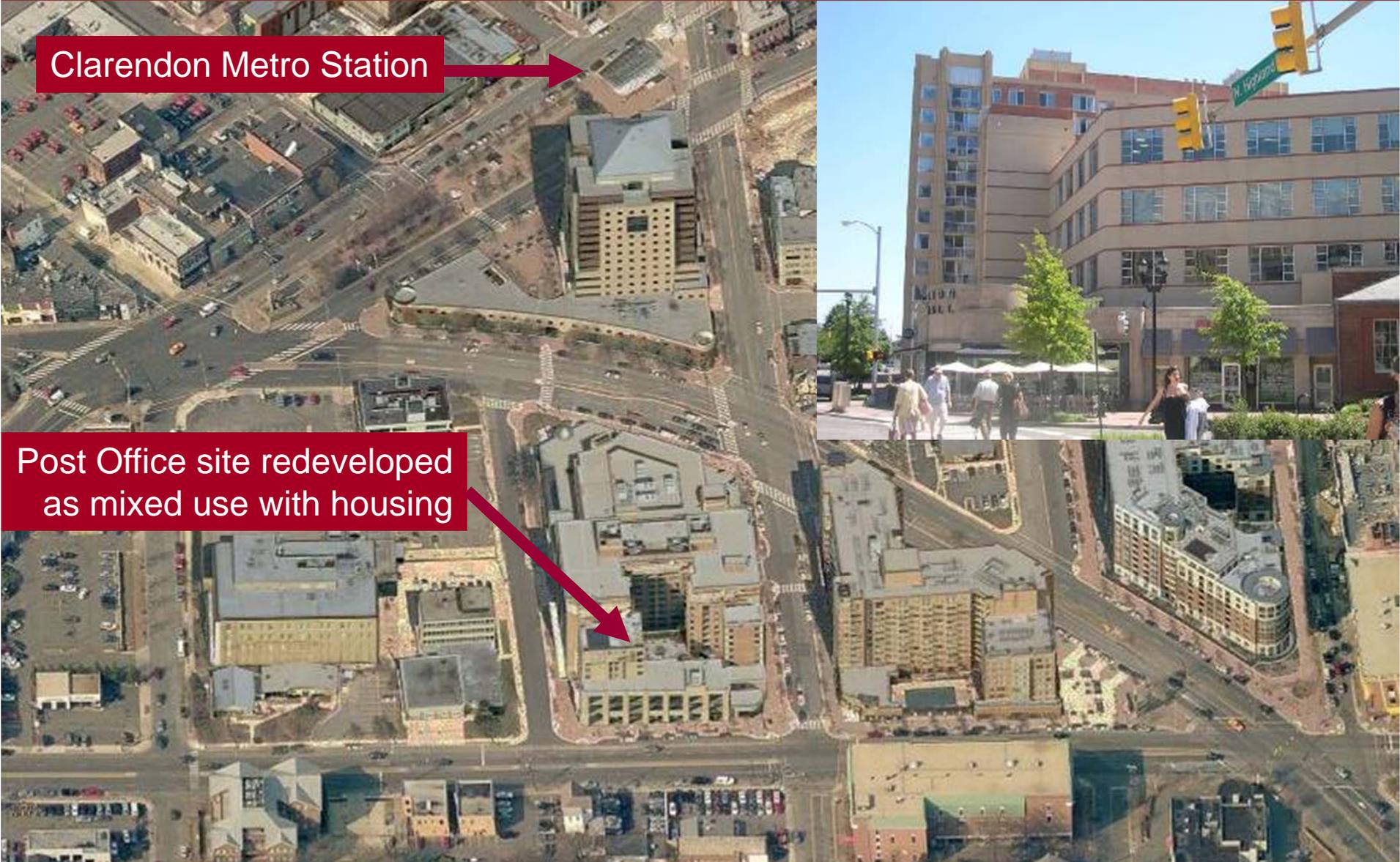


# Case Study: Arlington, VA

Clarendon Metro Station



Post Office site redeveloped as mixed use with housing



# Case Study: Princeton, NJ



# Maximizing Mixed-Use Opportunities



**Single-story commercial vs. multi-story mixed use**

# Maximizing Mixed-Use Opportunities



**Single-story commercial vs. multi-story mixed use**

# Case Study: Baldwin Park



# Case Study: Princeton, NJ



# Maximizing Mixed-Use Opportunities

## Benefits

- **More efficient use of land & infrastructure**
- **Encourages day/night & “eyes on the street” security**
- **Shared parking opportunities**
- **Improves walkability & design in commercial corridors**

## Challenges

- **Land assembly**
- **Regulatory constraints**
- **Financing of projects**
- **Marketing to commercial tenants**

# Infill & Redevelopment of Underutilized Properties

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# Infill & Redevelopment

- **Commercial corridors**
- **Religious institutions**
- **Buffer strips along Rights-of-Way (ROW)**

# Commercial Corridors



**Auto-oriented, 1-story & large surface parking lots**

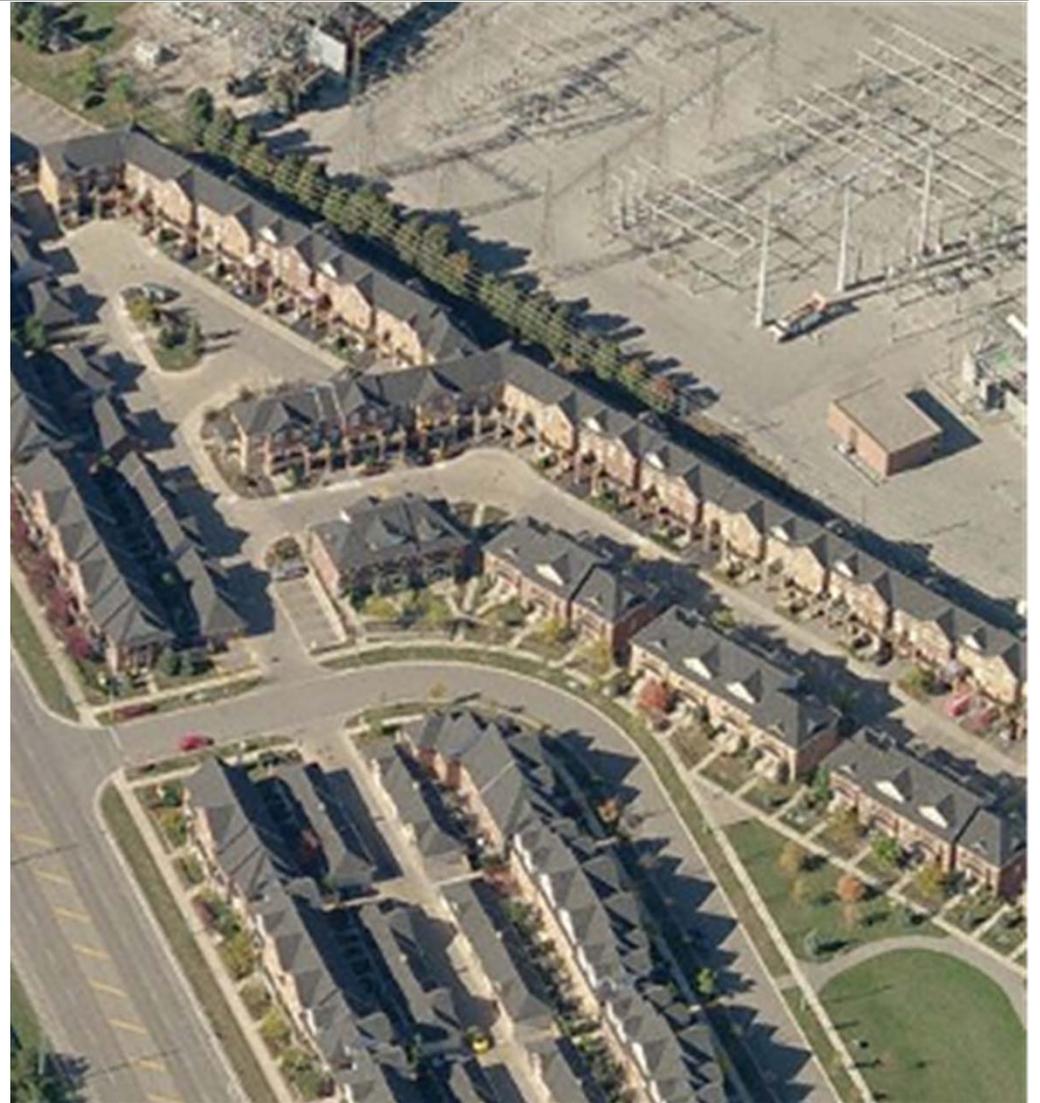
# Religious Institutions



# Case Study: Toronto

## Buffer Strips along ROWs

- Utility Corridors
- Highways



# Small-Scale Infill & Selective Redevelopment

- **Small scale & seamless appearance**
- **Under-utilized rear/side yards and alleys**
- **Transition zones b/w commercial & residential**

# Historic Precedents



**Multiple Units**



**Side yard Infill**



**Big house, little house**

# Townhouse Infill



# Carriage Houses



# Back Alley Transformed To “Living Lane”



# Back Alley Transformed To “Living Lane”



# Back Alley Transformed To “Living Lane”



# Case Study: Cabbagetown



# Case Study: Charleston, SC



# Case Study: New Orleans



# Case Study: Memphis



# Infill & Redevelopment

## Benefits

- **Context-sensitive design & scale**
- **Builds upon existing infrastructure**
- **Encourages the upkeep & revitalization of older neighborhoods**

## Challenges

- **Efficiency in design density on smaller infill**
- **Affordability**
- **Impacts on parking**

# Adaptive Reuse

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# Adaptive Reuse



# Adaptive Reuse

## Benefits

- **Preserves historic structures**

## Challenges

- **Very few unused buildings in Alexandria**
- **Underutilized buildings often have challenging configurations to make work economically**
- **Redevelopment often can yield more affordable units**
- **Accessibility retrofits**