

PROJECT

Introduction to Crime and the Built Environment

DATE

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PRESENTER

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Lecture Outline

- ✿ What is the Built Environment
- ✿ Importance of Built Environment to Crime
- ✿ Important issues in the Built Environment
- ✿ Issues class will cover

Built Environment

What is the Built Environment?

The built environment refers to the part of the environment that is man-made.

Includes:

Buildings: Residential and commercial

Neighborhoods

Streets: Neighborhood, connectors, highways.

Public space: parks, open space, trails.

Built Environment

From a crime prevention perspective we are largely concerned with the following aspects of the built environment:

1. How and where to build buildings:

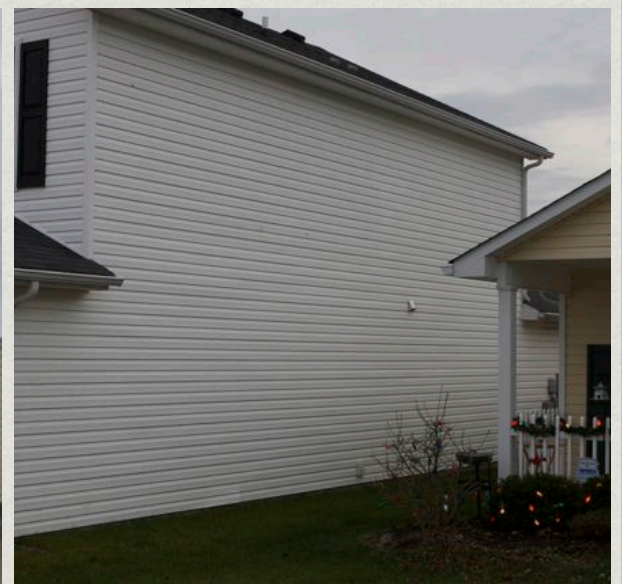
Single and multi-family residential, commercial, retail

2. Street networks and connectivity:

Permeability, public transportation, trails and ped-ways

3. Types of land use:

Residential only, mixed use, parks, density of uses



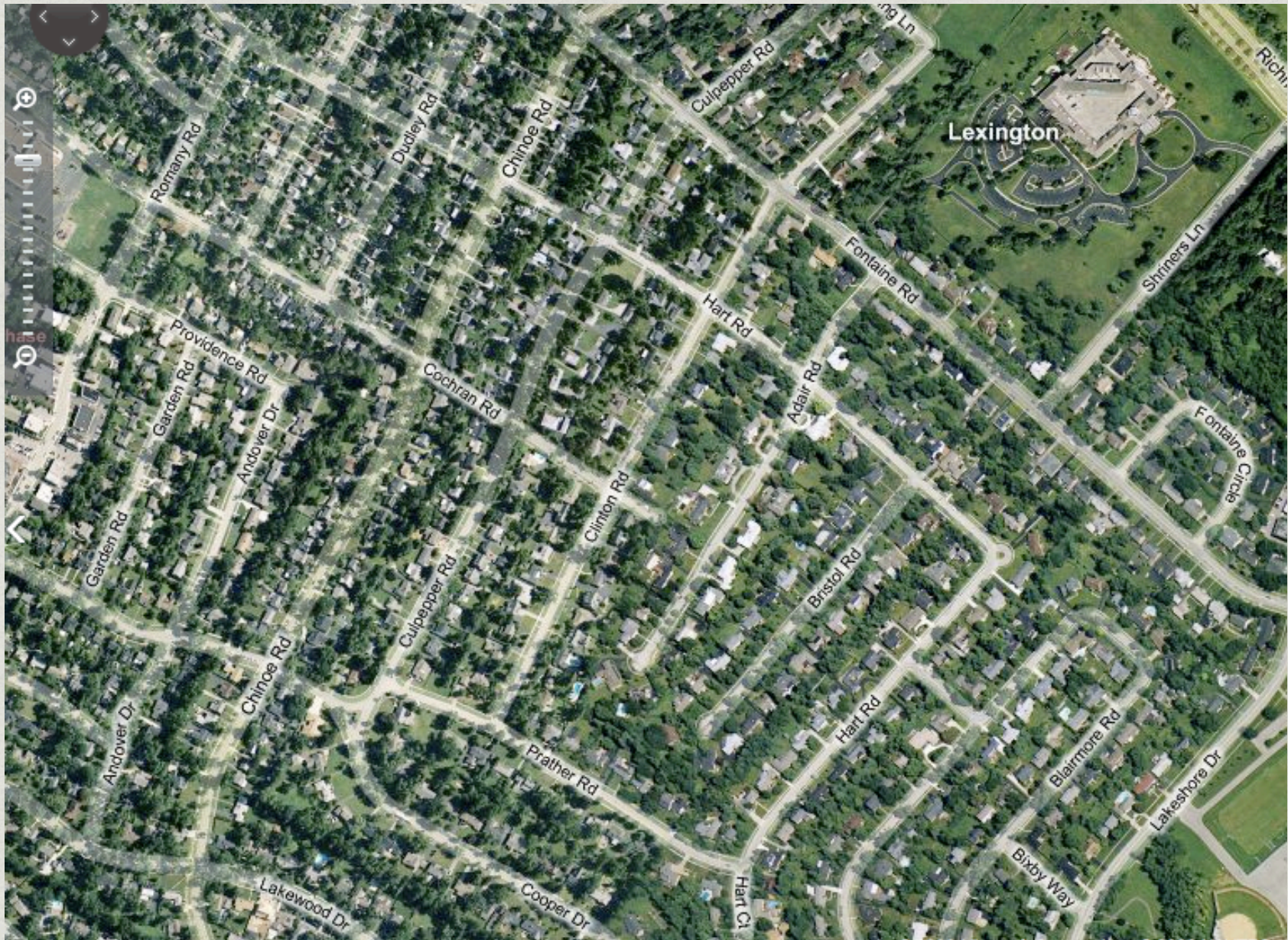
Safe?



Safe?



Safe?



Safe?



Safe?

Crime Patterns

The built environment is highly important to where crime occurs and crime patterns in general.

Crime and Built Environment Facts:

- Crime is NOT uniformly distributed across a city.
- Even in high crime areas, crime is concentrated within pockets.
- Crime is concentrated where opportunities for crime are highest.
- Opportunities for crime are highly dependant on built environment factors.

Crime Patterns

In this class we are concerned mostly with property crime, although violent crime can also be highly impacted by the built environment.

Importantly, the vast majority of all crimes committed are property crimes.

Moreover, the most commonly occurring violent crimes (robbery and assault) are the ones most influenced by the built environment.

Crime Patterns

	<u>2005</u>	<u>2005 Rate</u>		<u>2006</u>
<i>Property Crimes</i>	9,843,481	3,263.5	9,767,915	3,212.5
Burglary	2,179,140	722.5	2,222,196	
Larceny	6,568,572	2,177.8	6,588,873	2
Auto Theft	1,095,769	363.3	956,846	314.7
<i>Violent Crimes</i>				
Robbery	445,125	147.6		441,855
Aggravated Assault	855,856	283.8	834,885	274.6

Crime Patterns

2006 Crimes

% in Residential Areas

Property Crimes

Burglary	2,184	70%
Larceny	7,550	49%
Auto Theft	703	46%

Violent Crimes

Assault	1,070	61%
Robbery	505	34%
Homicide	9	89%

Crime Patterns

Hot Spots

An important aspect of understanding crime patterns is the idea of Hot Spots.

This is the idea that a large percentage of crimes occur in a small percentage of places.

- 50% of all CFS in Minneapolis were from 3% of all places.
- Domestic Violence in Minneapolis was in only 8.6% of all places.
- Robbery was in only 2.2% of all places.
- Auto Theft was in only 5% of all places.

Crime Patterns

2006 Crimes

% of Places

Property Crimes

Burglary	2,184	3.2%
Larceny	7,550	7%
Auto Theft	703	4.4%

Violent Crimes

Assault	1,070	5.1%
Robbery	505	2.1%
Homicide	9	100%

Costs of Crime Victimization

The Built Environment is the biggest single factor in property crime patterns.

Importantly, property crime victimization has a HUGE impact not only on individual victims but on Neighborhoods as well.

Costs of Crime:

- Direct Costs
- Indirect Costs
- Engine for Neighborhood Decline

Direct Costs of Crime

Crime

Average Loss

Total Loss

Nationally

Burglary (National)	\$2,079	\$4.6-\$7.3 billion
Larceny (National)	\$925	\$6.1-10.3 billion
Auto Theft (National)	\$6,751	\$6.4-\$8.4 billion
Total costs		\$17.1-26.0 billion

Lexington

Burglary (Lexington)	\$2,079	\$4.6-\$7.5 million
Larceny (Lexington)	\$925	\$6.3-10.8 million
Auto Theft (Lexington)	\$6,751	\$3.9-\$4.7 million
Total costs		\$14.8-\$23 million

Indirect Costs of Crime

Indirect costs include a wealth of different areas, including police expenditures, insurance costs, and housing values.

Police expenditures: Over \$150 billion a year nationally

Insurance Costs: Estimated \$45 billion paid to victims in 1999 study.

Estimated costs now are around \$85 billion annually.

Property Values: One of the least talked about, but most significant results of property crime victimization.

Indirect Costs of Crime

- Increases in crime cause increases in mortgage defaults.
- Increases in crime in one year have been found to reduce property values and rental prices in a neighborhood the following year.
- Increases in crime in one neighborhood can cause property value to decline in surrounding neighborhoods.
- Research indicates an increase in crime rates from 20 per 1,000 on year to 25 per 1,000 the next results in a 3.5% decline in property value.
- This impacts not just individual owners, but city tax revenues.

Neighborhood Decline

Increases in crime have been directly linked to residents moving out of a neighborhood.

Increases in property crime or violent crime in one year, directly leads to increased housing volatility the following year.

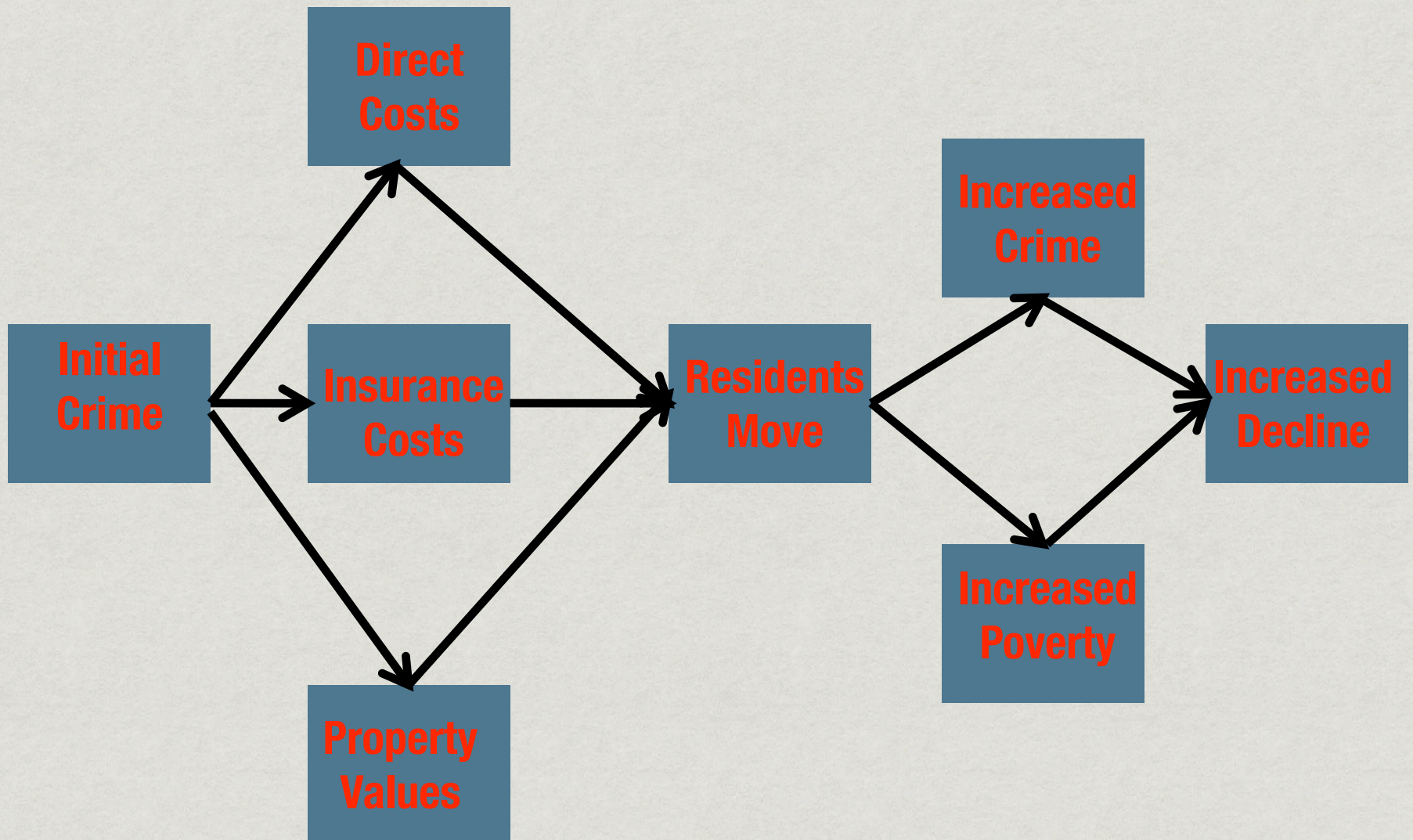
1 unit increase in property crime results in .13 increase in housing volatility.

1 unit increase in homicide results in .09 increase in housing volatility.

Neighborhood Decline

- Neighborhoods with high residential mobility have decreased social organization and increased crime levels.
- Residents moving out of a neighborhood acts as a **tipping point**.
 - Those who can move do move.
 - Reinforces concentrated poverty and crime.
 - Crime is a reinforcing factor.

Neighborhood Decline



Crime Patterns

✿ Vacant Properties:

- ✿ Increased perceptions and fears of crime.
- ✿ Leads to increase in crime, disorder, and neighborhood decline.
- ✿ Removing vacant buildings had a significant impact on reducing serious crimes.



Crime Patterns

✿ Land Use:

- ✿ Overall crime increases in areas of mixed use, with burglary being particularly more likely in mixed use areas.
- ✿ Fear of crime increased when non-residential land use is near or adjacent to residential land use.



Crime Patterns

✿ Transit Related Crime:

- ✿ Street robbery is concentrated near transit stations, with highest risk 1.5 blocks from station entrance.
- ✿ In some neighborhoods subway stations acted as generators of crime.



Crime Patterns

✿ Alleys:

- ✿ The POE in the vast majority of all residential burglary is the rear of the house, with alleys increasing the % that are rear entry.
- ✿ When alley gates were installed, burglary dropped upwards of 90%.



Crime Patterns

* Parking:

- * Risk of auto theft increases significantly when not parked in garage:
- * Driveway: 16 times more likely
- * Street outside the home: 20 times more likely
- * Public car parks: 200 time more likely



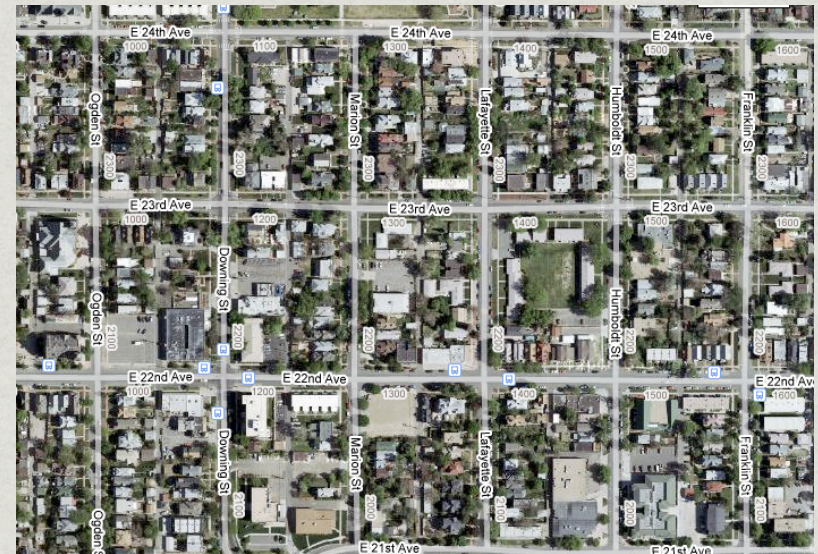
Permeability and Crime

- ✱ New Urbanism and sustainability issues
 - ✱ Congestion
 - ✱ Pollution
 - ✱ Health benefits from walkability
- ✱ Virginia cul-de-sac ruling
 - ✱ All new subdivisions must feature streets that connect to adjacent neighborhoods, schools, and shopping areas.
 - ✱ No wider than 29 feet and walkable.

Permeability and Crime

- Street Layouts

- Gridiron street layouts are the street patterns most statistically associated with residential burglaries.
- Single-family homes located in areas with grid networks were most likely to be victims of multiple burglary than households in other types of street layouts.



Permeability and Crime

- Cul-de-sacs
 - ✿ Non-permeable cul-de-sac layouts have been found to **reduce** both actual crime and fear of crime.
 - ✿ “Leaky” cul-de-sacs have been shown to increase crime in residential neighborhoods.



Permeability and Crime

- Corner Locations

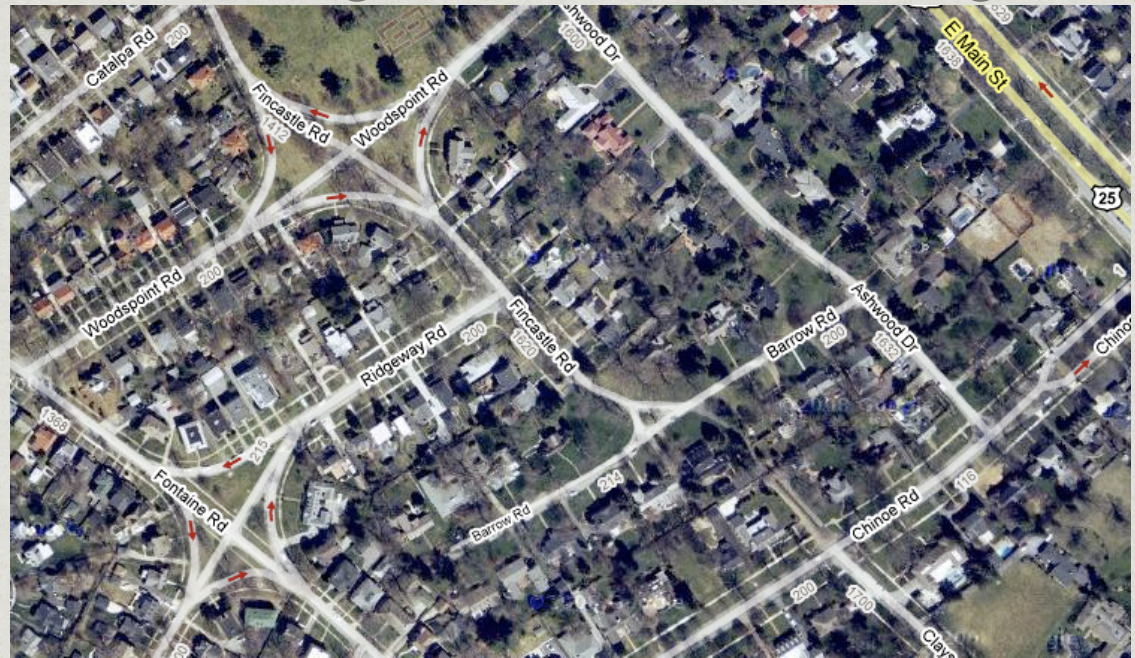
- ✿ Houses at corner locations are more likely to be burglarized.
- ✿ Commercial properties located on corner locations are more likely to be burglarized.



Permeability and Crime

- Street Traffic

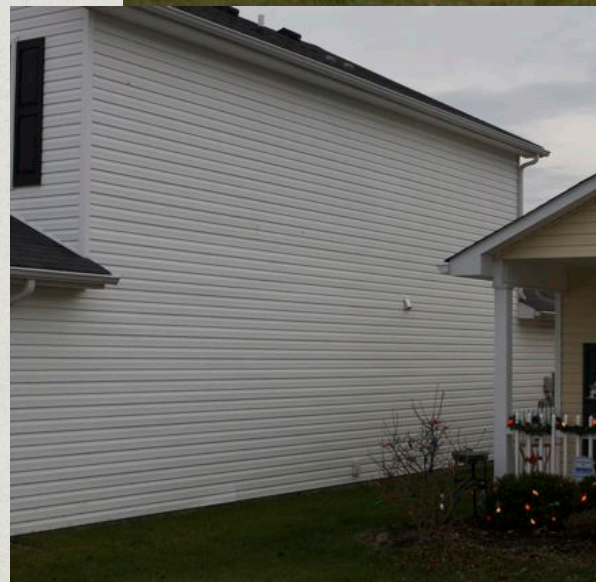
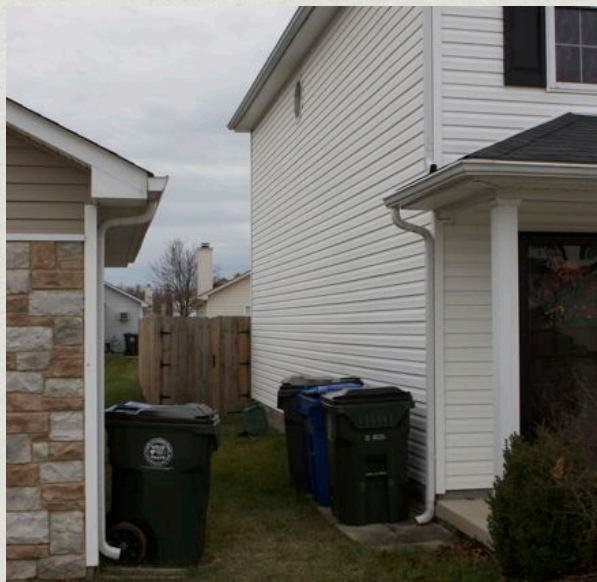
- ✿ Low-crime neighborhoods tended to have fewer major streets and more small neighborhood streets than high crime neighborhoods.
- ✿ Higher rates of commercial burglaries occurred along major streets.



House Design and Crime

Natural Surveillance

- 1/3 of all burglary victims had privacy fences.
- 41% of burglary victims had landscaping that blocked surveillance by neighboring homes.
- 67% of burglary victims had neighboring homes that either provided **NO** or very limited surveillance.
- Only 50% of burglarized homes had windows on both sides of the home. 25% had no windows at all.



Crime and Urban Planning

- ✱ Despite these empirical realities, most of those involved in design and development of the built environment have no understanding of crime.
 - ✱ Planners
 - ✱ Developers
 - ✱ Architects
 - ✱ Politicians
- ✱ Education and action are central to using urban planning as crime prevention

Urban Planning Issues and Crime

- ✱ Infill Development:
- ✱ Mixed use developments:
- ✱ Multi-family and Apartment:
- ✱ Re-development of Blighted areas:
 - ✱ Economic Development: Perceived and actual crime
- ✱ Foreclosures
 - ✱ Vacancy vs. Foreclosure
 - ✱ Neighborhood Stabilization Grants

Infill Development

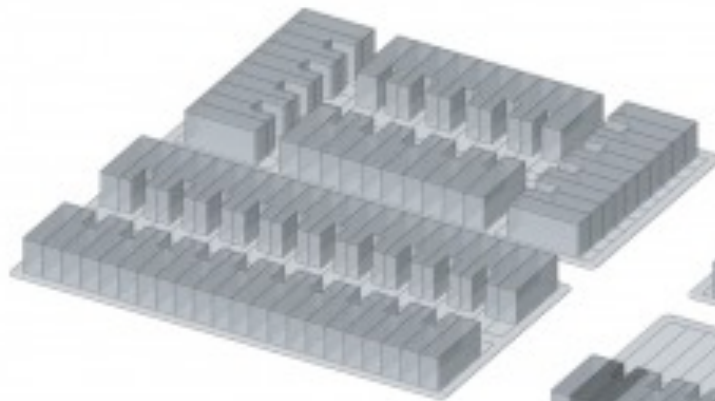
Infill Development: Development within the already established built environment.

- Considered the opposite of green field or sprawl development.

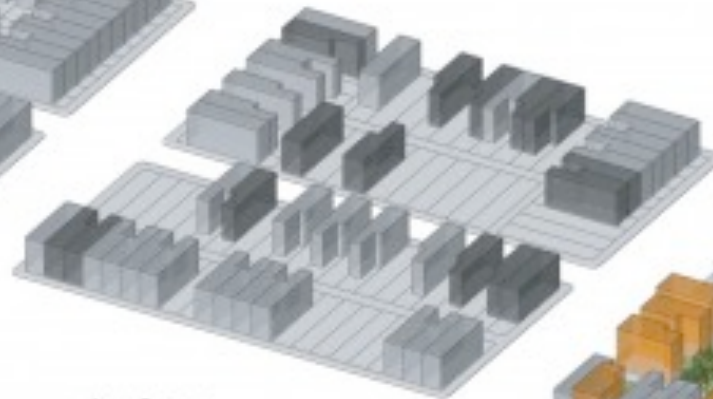
Major Issues

- Most of the areas for infill development are areas that have become run down and are higher crime areas.
- Higher fear of crime, makes success more difficult.
- Higher costs associated with development, so political and economic pressure for development to succeed.

Infill Development



Once upon a time...
84 occupied homes



...today
30 occupied homes
30 vacant lots
15 vacant buildings



...tomorrow
52 occupied homes
new park + parking
space

Infill Development



Legend

 Analysis Boundary

 Proposed Projects

 Newly Constructed Projects

 Newtown Pike Extension

Mixed Use Development

Mixed use Development: Development that combines residential, retail, and commercial into one development.

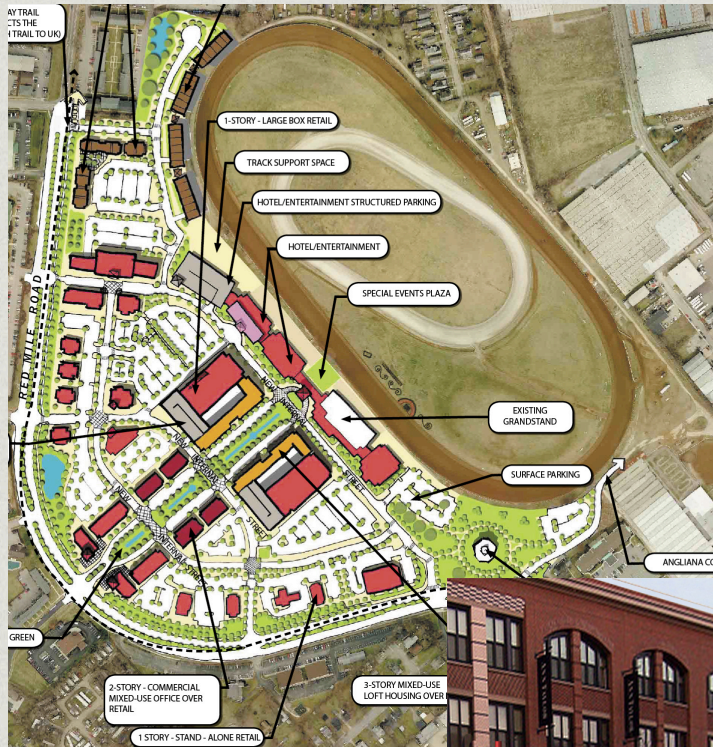
- Traditionally, development has favored single use developments, as opposed to mixed use.

Major Issues

- Mixed use has been shown in many studies to be associated with higher crime rates.
- What types of mixed use should be allowed near residential-can we restrict uses.
- Political and economic pressures for success, failure or retail/commercial lead to residential decline.

Mixed Use Development

Proposed Red Mile development



Multi-family & Apartment

Major Issues

- How do you design multi-family/apartments to be safe, while still being affordable.
- How do you locate MF/Apt. so that there are not concentrations within a city.
- How do you build safe public housing, or do we rely solely on voucher programs to provide housing.

Re-Development



Re-Development

Redevelopment of Blighted Areas: The process of redeveloping areas where neighborhoods have declined to the point of being considered blighted and unsafe.

Major Issues

- How do you re-develop areas these areas so that they are safe and economically viable?
 - Real and perceived crime are problems.
- LOTS of political pressure to succeed economically and politically as there is almost always Federal money involved.



Major Urban Planning Issues

- ✿ Increasing Urbanization
- ✿ Rapid growth of built environment
- ✿ Environmental Sustainability
- ✿ Stimulus Package and increased Infrastructure development.
- ✿ Increased Government focus on urban planning

Major Urban Planning Issues

✿ Increasing Urbanization

- ✿ The world became more urban than rural on May 29, 2007.
- ✿ Kentucky is predominantly 55% urban, with a higher person per square miles (101.7) than the U.S. in general (79).
- ✿ Impact: Increasing urbanization, increased crime concerns.



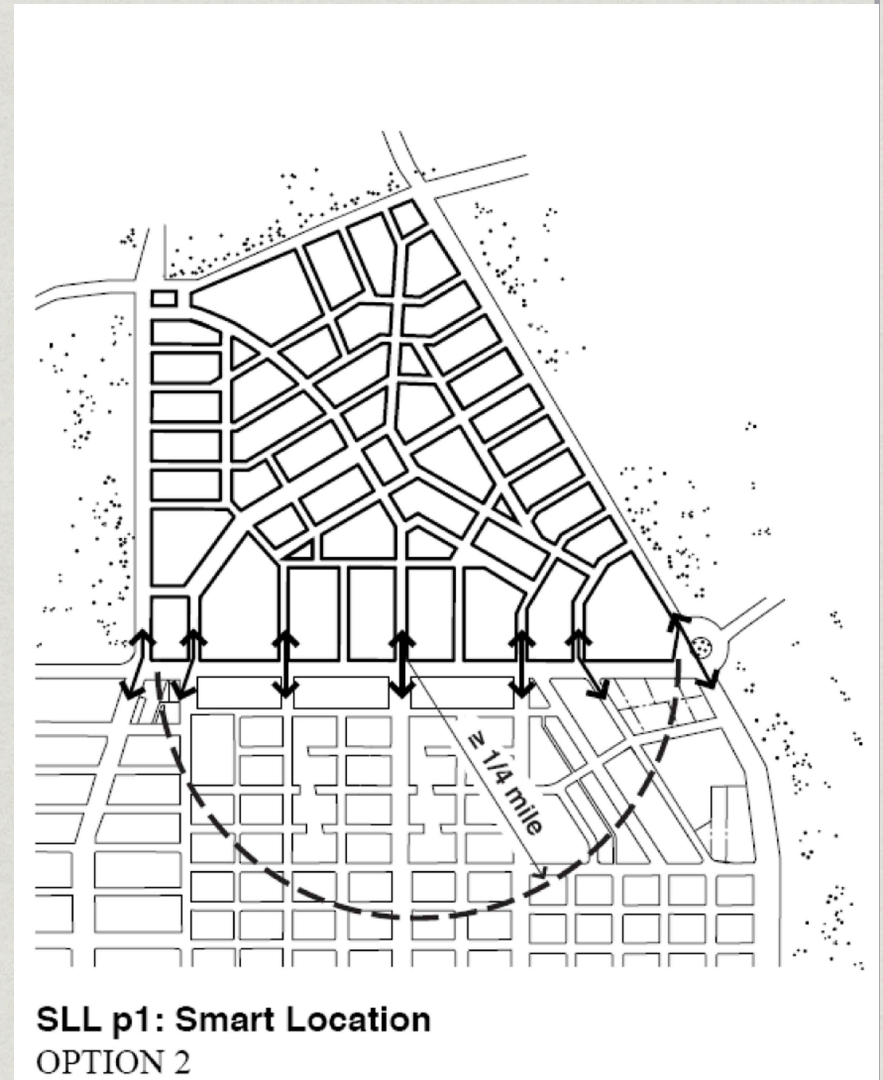
Major Urban Planning Issues

- ✱ Rapid growth of built environment
- ✱ Cities are growing despite economic downturn, with an increasing focus on TOD and MUD.
 - ✱ Transit Oriented Design (TOD)
 - ✱ Mixed Use Development (MUD)
- ✱ California SB 375: Requires land use decision be made with a goal of reducing vehicle miles traveled.

Major Urban Planning Issues

Environmental Sustainability

- ✱ Increased focus on economic and legislative changes to reduce environmental impact of development.
- ✱ California SB 375: TOD and Public Transportation
- ✱ Increased Permeability: Cul-de-sacs outlawed in VA.



Major Urban Planning Issues

- ✱ Stimulus Package and increased Infrastructure development.
- ✱ Within the stimulus bill was a large amount of funding for infrastructure development.
- ✱ Much of the money is “designed” to go towards public transportation as opposed to traditional roads.
- ✱ White House has put a big focus on urban planning with Office of Urban Affairs
 - ✱ HUD is required to work with DOT

Class Topics

- Determining design problems
- Designing out opportunities
- Sprawl
- De-concentrating public housing and vouchers
- New Urbanism: Hope or hype?
- NIMBY
- Affordable housing not cheap housing

End of Section 1