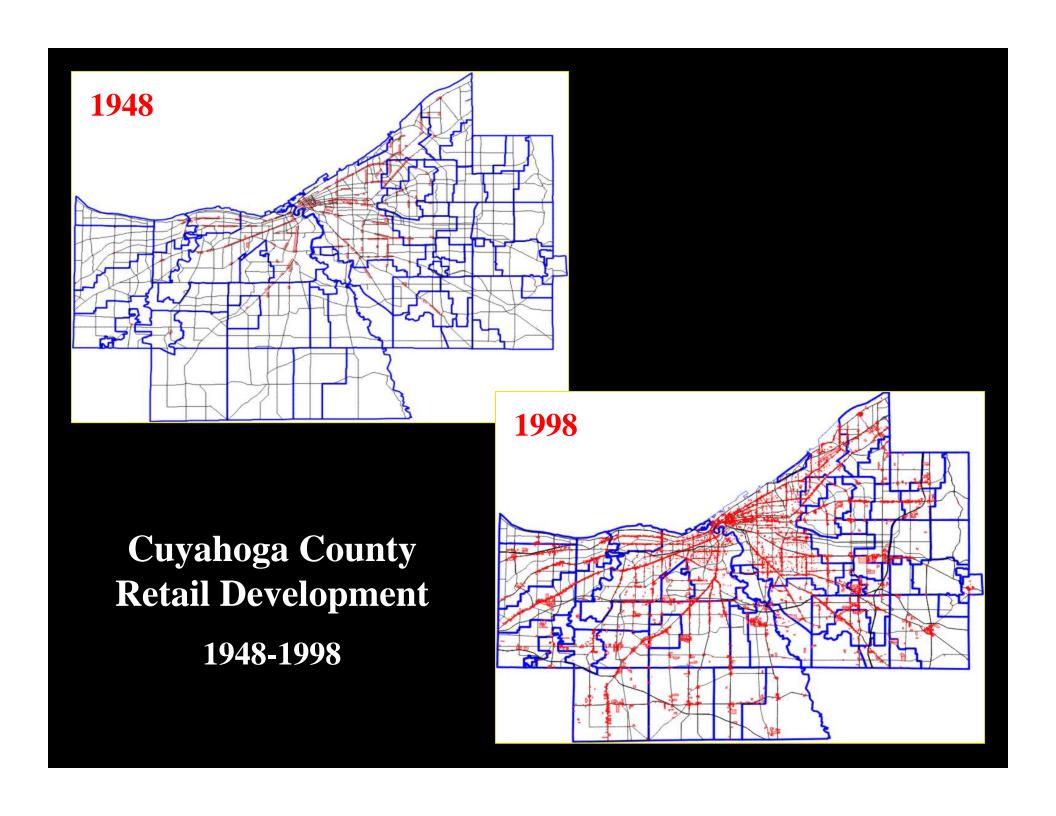
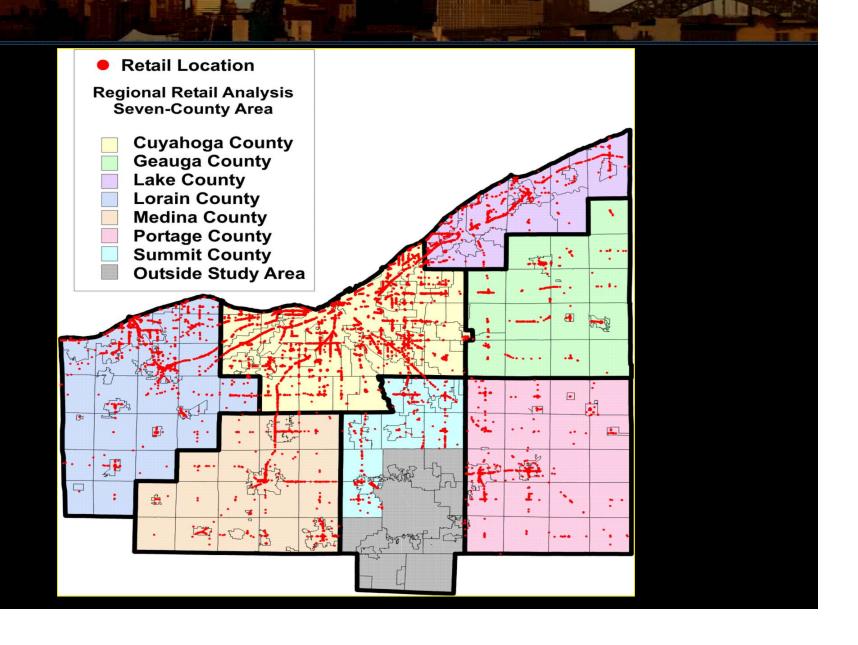


Northeast Ohio Retail Development Impacts: Policy Implications for a Sustainable Commercial Future

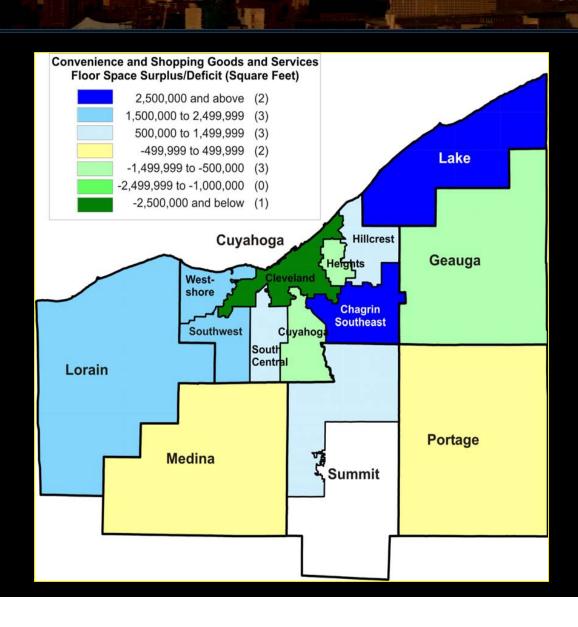
611 Capstone Spring 2007



Northeast Ohio Retail Development - 1999



Retail Surplus/Deficit Ratio - 1999



Study Methodology

Phase I - inventory of retail establishments in Northeast Ohio

- Retail establishments 5,000 square feet or greater; shopping or convenience goods
- Documented changes in use, type of retail, store names, and occupancy/vacancy status, and noted any demolitions
- Identified new or proposed retail establishments > 5,000 square feet
- Conducted a trade area analysis
 - Identifies a surplus or deficit of retail based on existing space and buying power of households

Phase II – analysis of the impacts of retail development

- Watersheds
- Transportation systems
- Buildings
- Economic development
- Municipal finances

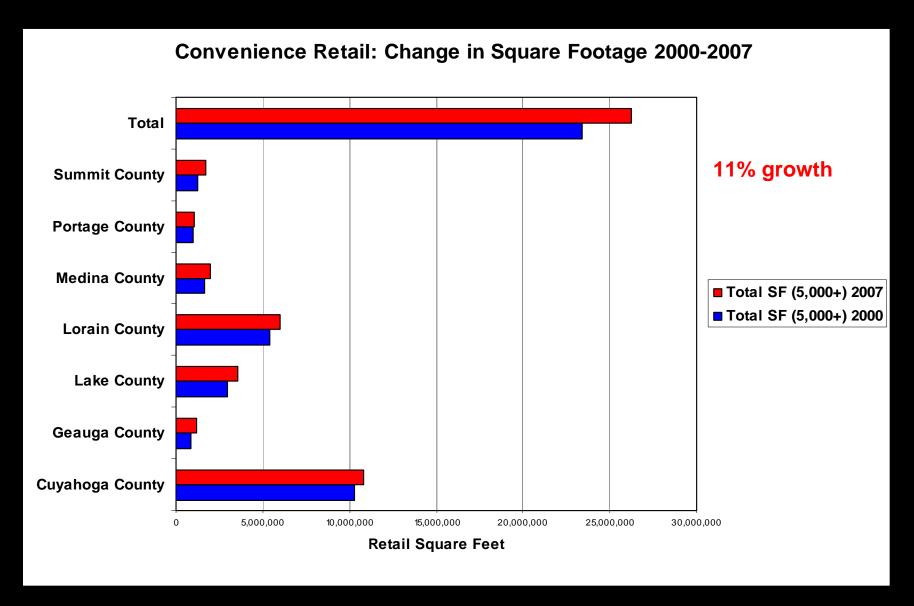
Sustainable Development

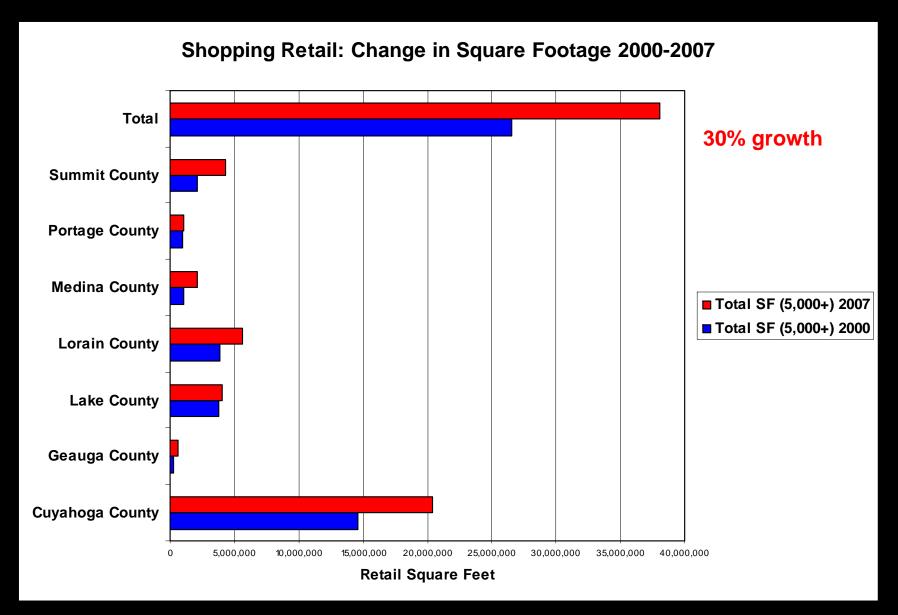
"Development that meets the needs of the present without compromising the ability of future generations to meet their own need."

Brundtland Commission (1987)

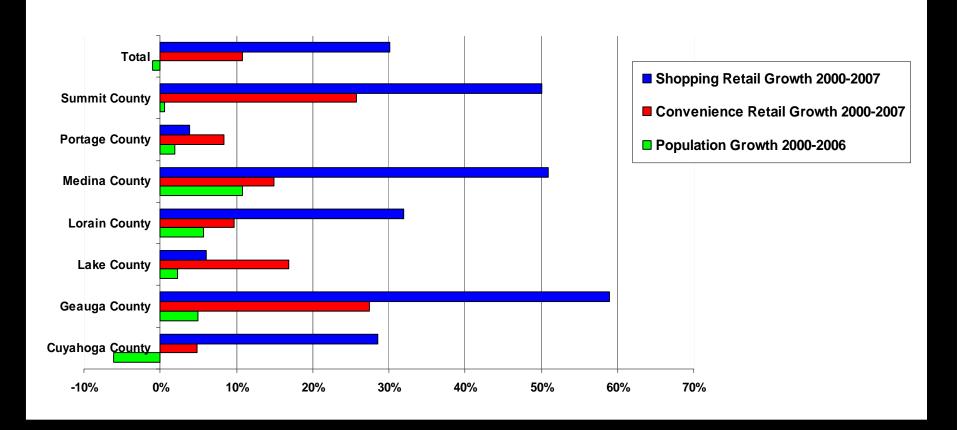
Four Pillars of Sustainability

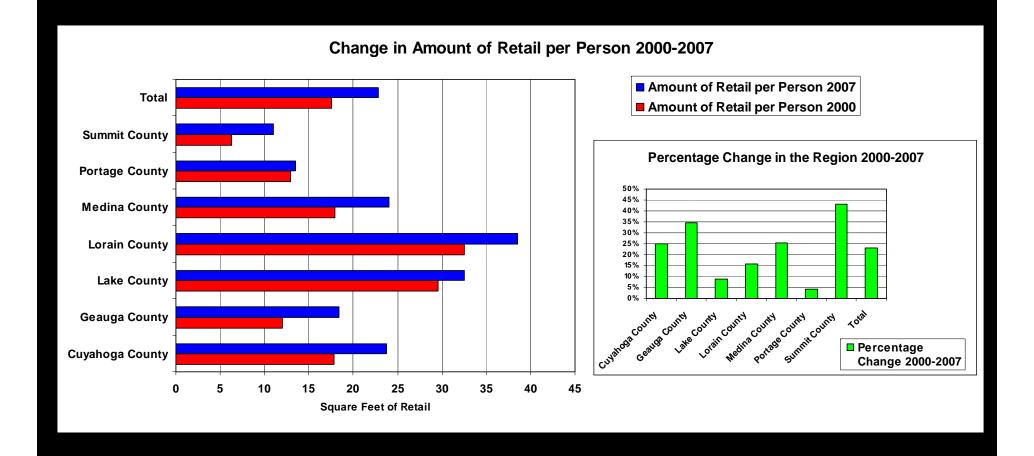
- Built Form
 - Lasting, reusable, efficient, affordable
- Economics
 - Opportunity, local wealth, affordability
- Political Participation
 - Opportunity, self-determination, collaboration
- Environmental Integrity
 - Protect ecosystem services, minimize pollution, live within earth's limits





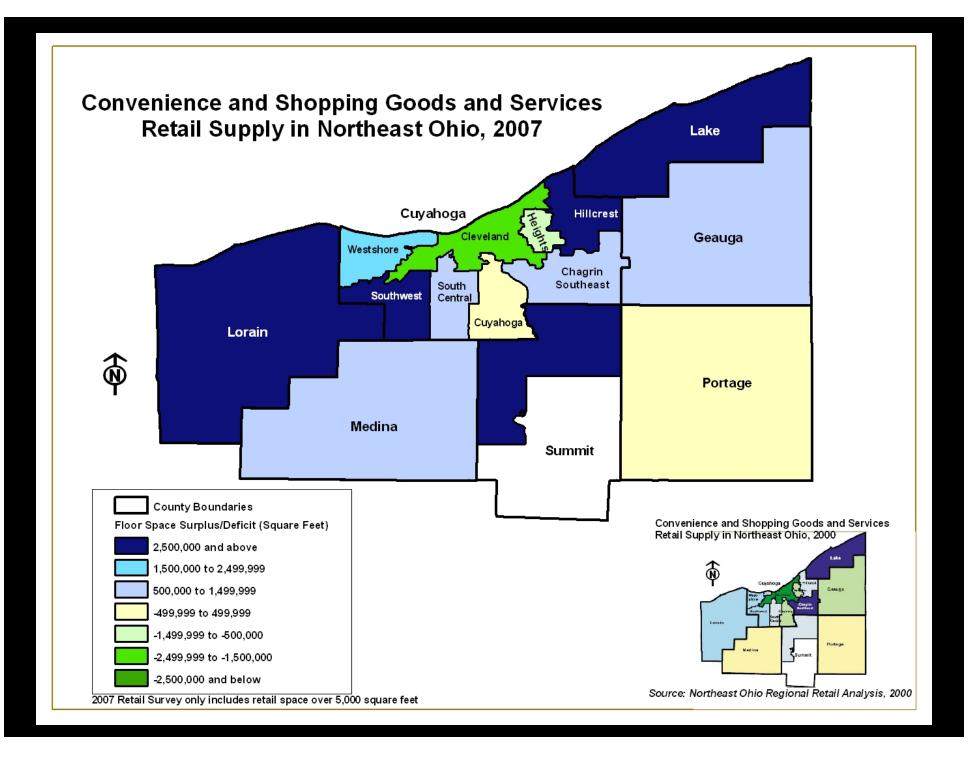
Population and Retail Growth Compared 2000-2007



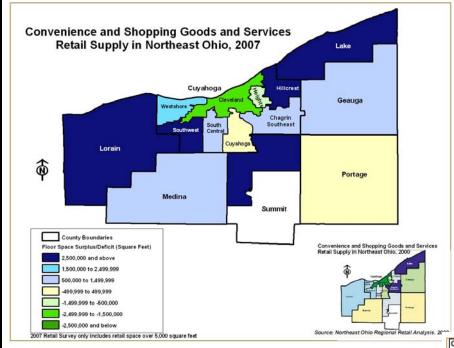


"Between 1990 and 2005 the amount of retail space per person in the United States doubled.... Because most of this development was auto-oriented in nature, for every square foot of new store space, another three or four square feet was paved for cars."

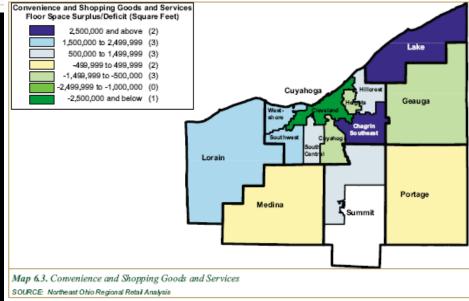
Stacy Mitchell. Big-Box Swindle (Boston, MA: Beacon Press 2006)



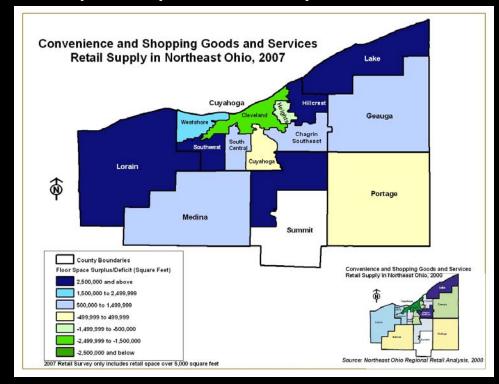
Floor Space Surplus/Deficit in Square Feet, 2007



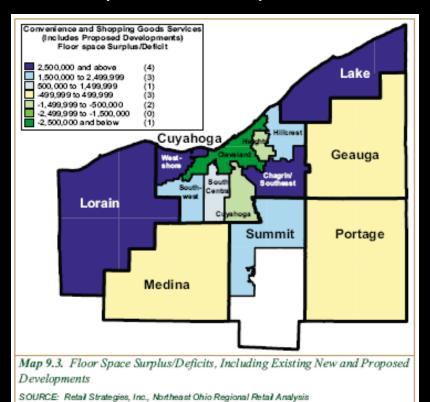
Floor Space Surplus/Deficit in Square Feet, 2000



Floor Space Surplus/Deficit in Square Feet, 2007



Anticipated Floor Space Surplus/Deficit in Square Feet based on Proposed Retail Development, 2000



Watersheds

Rosemary Giesser

Kesha Christoph

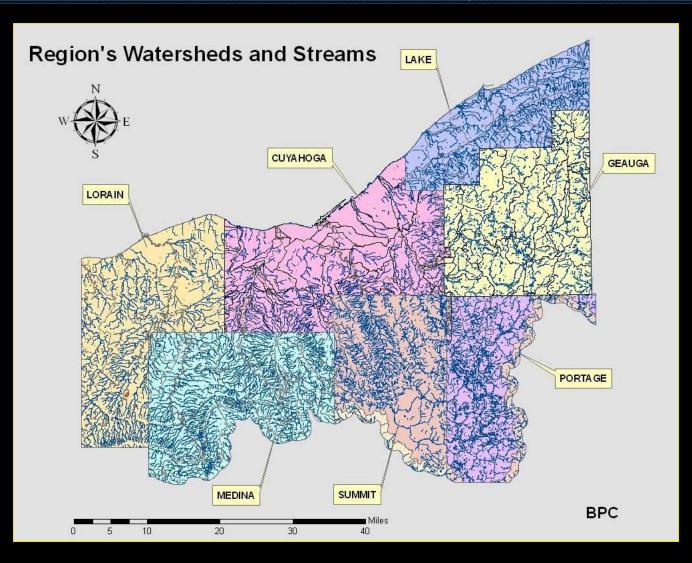
Erin Aleman

Bee Chalarat

Laurent Gloerfelt

"No matter where you live, you live in a watershed."

--US EPA, Adopt Your Watershed



Ecosystem Services

- Ecosystem services -- the conditions and processes though which natural environments sustain human life
 - Watersheds provide many of these services:
 - Clean water
 - Flood control
 - Soil retention/erosion control
 - When watershed ecosystem services are lost due to development:
 - Storm water runoff pollutes rivers and other sources of water
 - Increased impervious surface area leads to increased flooding
 - Sensitive riparian and/or wetland environments may be compromised

Flooding in the Region: The Cost of Staying Above Water

Recent flooding in the region illustrates the value of wetlands and forests as natural flood control water bodies:





Protection of watersheds and the services they provide must cross political boundaries

Retail developments must be wisely sited within watersheds

Sustainable Development: Mitigating the Impact of Retail Development on Watersheds

- First step: think of retail development as having opportunity costs
- Second step: review the political decision-making process
 - Preliminary step: look at the law and assess its efficacy
 - The Clean Water Act (NPDES Permits)
 - Riparian/Wetland Setbacks

Riparian and Wetland Setbacks

Sustainable land-use regulations

- ***Setback ordinances are an effective way for municipalities to comply with Ohio EPA's NPDES Phase II requirements
 - Land in a riparian zone/wetland can be built upon, but structures must be "set back" a certain distance
 - Riparian setbacks
 - Allow storm water to slow down, collect, and filter into the ground
 - Wetland setbacks
 - Allow the wetland to provide irreplaceable services to its surrounding community, such as flood control, erosion control, ground water protection, surface water protection, and protection of essential habitat for aquatic and terrestrial organisms

Innovative Storm Water Management

Systems

Salem, Massachusetts

Portland, Oregon

Pennsylvania





Vegetation

Growing Medium

and Root Barrier

Membrane Protection

Drainage, Aeration, Water Storage

Source: www.lowimpactdevelopment.com, www.portlandonline.com

The West Creek Watershed

- History
- **Lessons Learned**
- West Creek Community Partners
 - Policy & Vision

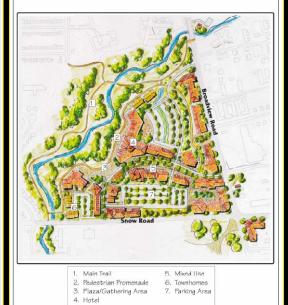


Economic Redevelopment Focus Area 1 - Alternative B



- Pedestrian Promenade 6. Main Entrance Boulevard into Shopping Center
- Expansion of Park 7. Add infill development

Economic Redevelopment Focus Area 1 - Alternative C



Short Term

Mid Term

Long Term

Local Examples of Watershed Planning and Protection

Lake County Soil and Water Conservation District

Database of headwater streams used to affect city/county policy decisions

Chagrin River Watershed Partnership

 Cities and Townships within the watershed are members partnership provides policy/zoning/ordinance assistance

Legacy Village

 Improvement of storm water management in surrounding area BEFORE development was built



Proposed Development: Boston Heights, Summit County

- Existing Conditions of Brandywine Creek Watershed Since 1997
 - Combined growth rate of the communities within Brandywine watershed has exceeded the growth rate of the entire county
 - >22% of the watershed's land-cover is impervious (when a watershed's land-cover is twenty-five percent impervious, it is considered permanently damaged, and it is extremely difficult for such watershed to recover)
 - 3 large-scale proposed developments within Boston Heights
 - Existing watershed policy within Boston Heights
 - Riparian setback ordinance
 - No community watershed partnership or collaboration between local governments within Brandywine watershed

Transportation

Diana Golob

Vetella Camper

Geoffry Brouman

Jeffery Schiffman

John Paul Kilroy

Justin Glanville

Sashank Garikapati

Land Use and Transportation

Intra-regional transportation systems that primarily cater to automobiles use more land than other forms of transportation.

Walking Bikes Rail Buses Cars

Density

Sprawl

Land Use and Transportation

Northeast Ohio can implement "Smart Growth" initiatives which will reduce the negative impacts of future retail development

- Pedestrian and bike safety and mobility
- Improving the connectivity of road networks
- Enhanced public transportation services
- Multi-modal approach to transportation

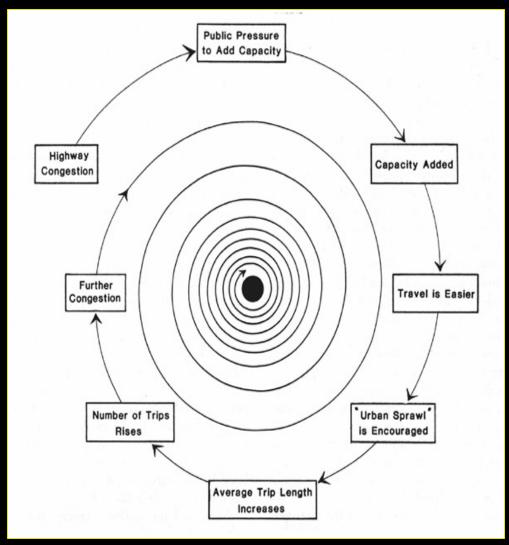
As a result, we can preserve open space, encourage the use of alternative transportation, improve public health, lessen the negative impacts on air and water quality, and make NE Ohio a more competitive region

ODOT Spending

- Ohio Constitution requires ODOT to spend all passenger vehicle license fees and gas tax revenue exclusively on highways – construction, reconstruction, maintenance and repair
- In 2006, **\$3.04 billion**, or 49 percent of the department's budget, spent directly on highways
- By comparison, \$92 million on transit or 1.5% of its budget
- State money spent on transit fell to \$16.3 million in 2006, down from \$43 million in 2001. This equals \$1.58 per capita
- By contrast, Michigan spends \$20.73 per person, while Pennsylvania spends \$63.29 and Illinois spends \$61.25

Impacts of Highway Favoritism

- Sprawl without growth
- Isolation of inner-city and inner-suburb residents
- Cleveland now ranks #2 in the U.S. in proportion of household income spent on transportation
 - Burdens low-income households
 - Siphons money out of local economy
- Decreasing population density makes transit infeasible



Susan Hanson-"The Geography of Urban Transportation"

Parking Issues

- Typically designed with impermeable surfaces--asphalt and concrete
- Most precipitation becomes runoff
- Storm water sewer systems are typically overwhelmed
- Excessive parking requirements for new developments (6 spaces per 1,000 sq ft)
- Detention ponds help to mitigate damage related with peak flow

Health Issues

- Increased risk of heart disease, hypertension, colon cancer, osteoporosis, arthritis, and insulin dependent diabetes
- Reduced weight control
- Reduced blood cholesterol levels
- High blood pressure
- Increased stress and tension, bone loss
- Reduced energy levels and bad quality of sleep

General Factors:

- More driving means more automobile crashes
- Sprawl spawns road rage
- Poor road designs are lethal for pedestrians and cyclists
- Most vulnerable citizens are impacted the most
- Urban sprawl keeps us in our cars

Air Pollution from Passenger Cars

Type of Shopping Center	Cumulative Annual Vehicle Miles Generated	Annual VOC Emissions (lbs)	Annual CO Emissions (lbs)	Annual NO _x Emissions (lbs)	Annual CO ₂ Emissions (lbs)
Large Super Regional Center	70,638,750	435,657.49	3,251,871.97	216,272.82	64,705,095.00
Small Super Regional Center	51,358,499	316,748.45	2,364,300.95	157,242.98	47,044,385.08
Regional Center	22,042,231	135,943.27	1,014,719.44	67,486.13	20,190,683.60
Community Center	8,404,578	51,834.40	386,906.78	25,732.08	7,698,593.45
Neighborhood Center	1,426,511	8,797.87	65,669.78	4,367.51	1,306,684.08
Convenience Center	472,410	2,913.54	21,747.51	1,446.37	432,727.56
Power Center	28,846,272	177,906.52	1,327,945.12	88,317.88	26,423,185.15
Big Box Retailer	10,024,065	61,822.43	461,460.26	30,690.42	9,182,043.54
Large Drug Store	115,525	712.49	5,318.22	353.70	105,820.90

Sources: Urban Land Institute, *Dollars and Cents of Shopping Centers*, 1998; Institute of Traffic Engineers, *Trip Generation*, 6th Ed. 1997; U.S. Environmental Protection Agency National Vehicle and Fuel Emission Laboratory, 2000.

Transit Oriented Development

 TOD are developments that are mixed use in nature, diverse, walkable, dense and close to

transit stops

Gresham Civic
 Neighborhood Plan

Montgomery
 County, MD Transit

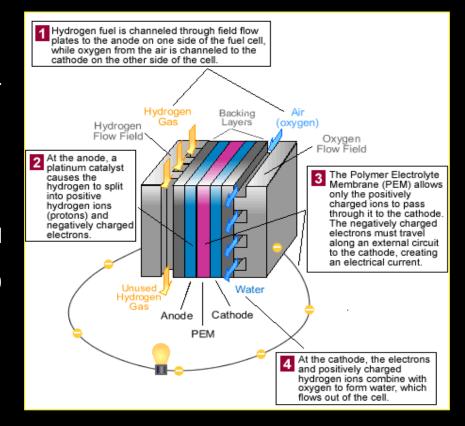
 Station Zone



Avalon Station, Shaker Heights

Fuel Cells as an Alternative Fuel

- Cleveland's role in alternative fuel
- Types of alternative fuel
 - Diesel, Ethanol, Electric, Biogas, Fuel Cell
- Challenges of fuel cell production
 - Reducing costs
 - \$1,000 per kilowatt of electric power
 - Increasing durability
 - Start-up reliability of vehicles in freezing temperatures
 - Intolerance of carbon monoxide (CO)
 - 2000: 1.93 million tons emitted
 - 2009: Federal Tier 2 emission standards will still emit 500,000 tons
- Cleveland+
- Encourage companies to Cleveland to:
 - Research fuel cells
 - Develop fuel cells
 - Distribute fuel cells



Strategies

- Land Use
 - Increase density and encourage infill
- Encourage transit oriented development
 - Moratorium on new road construction
 - Form-based zoning
 - Commuter and high speed rail service
- Impact fees on developers with proceeds going into clean air or public transportation fund

Change ODOT policies

- Revise ODOT "TRAC" system to favor reinvestment over sprawl, using NOACA's 9 scoring criteria as a model
- Boost state transit funding
- Parking: Increase bio detention basins, reduce City parking requirements, develop "shared parking" policies
- Fund alternative fuel development in the region and encourage alternative fuel use

Buildings

Chris Bongorno
Jesse Grant
Domenic Bellone
Andre Leflore
Cory Riordan

Building & Site Design Issues

- Increased energy consumption
- Materials & building design
- Quality, function & context of buildings within our neighborhoods
- Financial implications of green building

Buildings Introduction

Energy Consumption

- In 2004, residential and commercial buildings in the US accounted for more than 38% of our total annual energy consumption
 - 21% residential
 - 17% commercial
- This percentage is growing and is projected to surpass 50% in less than 20 years
- Only one-half of one percent of our these buildings' energy consumption comes from renewable sources
- These figures indicate the urgent need for sustainable design as our communities grow

Buildings Sustainable Design & Materials

What is Sustainable (Good) Design?

Functional + Comfortable + Energy Efficient

+ Healthy + Durable

- = Environmentally Responsible
- LEED (Leadership in Energy & Environmental Design) Criteria:
 - LEED-H for homes
 - LEED-NC for new construction
 - LEED-ND for neighborhood developments

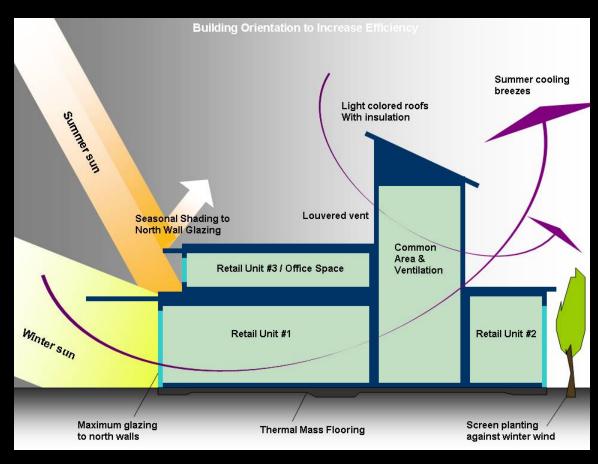
Life Cycle Awareness

We must consider the following about materials to make wise material selection & design choices:

- Quarrying & refining
- Production of raw materials
- Manufacturing of raw materials
- Manufacturing of components
- On-site construction
- Building use
- Afterlife: demolition, reuse, disposal

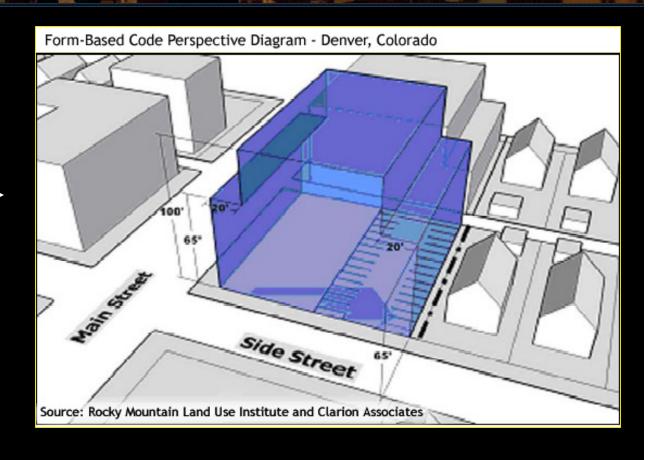
Land Use Strategies

- Use of Police Power
- Comprehensive Planning & Community Goal Setting
- Aesthetics
- Size Caps
- Energy Efficient Design



Land Use Strategies

- SmartCode
- Form-BasedCode
- TraditionalNeighborhoodDevelopment



Transit Oriented Development

Promoting Retail Development in the Right Places

How do we promote sustainable retail development in core/old cities?

- Historic preservation easements
- Historic tax credits
- Smart growth tax credits
- Enhancement of the Storefront Program, Restore Cleveland and Main Street Initiatives
- Cluster development in retail nodes in City of Cleveland
- Thinning out obsolete retail in other areas

Other Potential Strategies for Cleveland

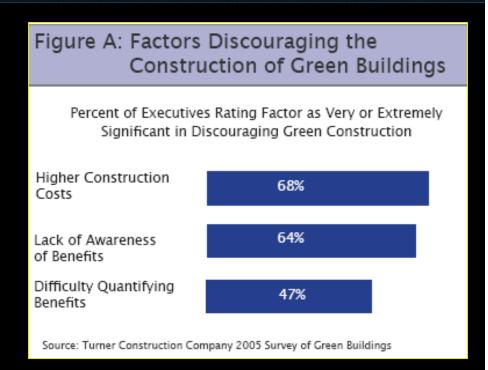
- Impact fees
- Incentives for meeting sustainable design criteria
- LEED Inspections
- Regional impact analysis & review
- Use of local and regional comprehensive planning to establish goals and land use regulations to enforce them

Where is the Market?

First Cost Premiums

- Many green techniques employed at little or no additional cost, if used early
- Economies of Scale

Quantifying Benefits



- Does green building pay off in the long run?
- How do you calculate this?

Mechanisms for Determining the Real Value of Green Building

Kats Approach: Net Present Value (NPV)

Table 1: Financial Benefits of Green Building Kats Approach							
Category	20 Yr NPV						
Energy Savings	\$5.80	per sq ft					
Emissions Savings	\$1.20	per sq ft					
Water Savings	\$0.50	per sq ft					
Operations and Maintenance Savings	\$8.50	per sq ft					
Productivity and Health Value	\$36.50 to \$55.30	per sq ft					
Subtotal	\$52.90 tp \$71.30	per sq ft					
Average Extra Cost of Building Green	(-\$3.00 to -\$5.00)	per sq ft					
Total 20-Year Net Benefit	\$50 to \$65	per sq ft					
Source: Capital E							

Pivo & McNamara Approach: Annual Savings and Capitalization Rate

Table 3: Financial Benefis of Green Building Pivo and McNamera Approach								
	Investment per sf	Rate of Energy Savings	Annual Savings per sf	Savings per 100,000 SF Office Building	Asset Value Increase at a 10% Cap Rate	Simple Payback		
Janitorial Services	\$0.01	5%	\$0.14	\$13,500	\$135,000	IMMEDIATE		
Operations & Maintenance	\$0.05	9%	\$0.20	\$19,800	\$198,000	4 MONTHS		
Lighting	\$1.04	16%	\$0.36	\$36,000	\$360,000	3 YEARS		
Heating, Cooling & Ventilation	\$1.21	9%	\$0.21	\$20,700	\$207,000	6 YEARS		
All Combined	\$2.30	40%	\$0.90	\$90,000	\$900,000	2.5 YEARS		
Source: Dr. Gary Pivo and Dr. Paul McNamara								

Economic Development

Sheetal Puthran
Takeema Gumbs
Vikramjeet Singh
Jill Taylor
Joel Wimbiscus
Mark Young

Retail Development, Economic Development, and Sustainability

- Current political environment considers retail development to be economic development
- However, is retail development sustainable economic development?
- Retail Life Cycle
 - 4 Phases
 - Innovation/birth;
 - Accelerated development/growth;
 - Maturity; and
 - Decline
 - 20 year life cycle

Retail Development, Economic Development, and Sustainability

The Retail Life Cycle Illustrated in Northeast Ohio

- "Shopping centers can either change, grow, or die."
- Change
 - Severance Town Center (Cleveland Heights)
 - Westgate Mall (Fairview Park)
- Grow
 - Great Northern Mall (North Olmsted)
- Die
 - Euclid Square Mall (Euclid)
 - Randall Park Mall (North Randall)

Location as a Factor of Economic Development

- Location is the sum of multiple parts
- Through proper placement of retail, retail can be an economic generator for a community
- Example where location Influences economic development:
 - Severance Town Center
 - Of the 50,700 Cleveland Heights residents in 2000, 18,814 are within a 1 mile radius of Severance Town Center
 - More recently, an estimated 18,171 Cleveland Heights residents are currently within a 1 mile radius of Severance Town Center (a 3.4 % decrease in population)
 - Population and income levels have changed

Location as a Factor of Economic Development

Severance Town Center

- No highway access, but located near East Cleveland, South Euclid, University Heights, and Lyndhurst
- Severance Town Center has enjoyed increased sales due to the placement of big-box stores

Steelyard Commons

- Assemblage of over 1 million square feet for retail use
- Retail spatial monopoly
- Immediate trade area: In 2000, City of Cleveland residents spent approximately \$1.3 billion on retail purchases at suburban stores (Source: First Interstate)
- Convenient access to I-71, SR 176, I-490, I-90, and I-77

Big Box Retail's Effect on Economic Development

- Is retail development economic development?
 - "A mismatch of perspectives and paradigms"
- Big box retail removes more money from local economy
- Local retail gives more back to local economy
- Provides opportunity for retail niche

Impact of Retail Development on Employment and Wages

Jobs

- Retail developments do provide some benefits to a regional economy
- Retail and sales positions—directly within community
- New developments employ high paying construction, architecture, and engineering professionals—usually within the region

Impact of Retail Development on Employment and Wages

- Temporary vs. permanent changes
- Characteristics of retail sale jobs
 - Minimum wage
 - Fixed salary/commission
 - No benefits
 - Average duration of retail employee
 - Students
 - Elderly/retirees
- Primary Jobs
 - Retail is not a primary job
 - No avenue for wealth creation

Movement of Retail 1993-2002

Job Shifts

- General merchandise stores (SIC 5300) 64% decline in Cleveland vs. 11% increase in the suburbs
- Food stores (SIC 5400) 32% decline in Cleveland vs. a constant 0.2% in the suburbs
- Apparel and accessory stores (SIC 5600) 25% decline in Cleveland vs. a constant 0.4% in the suburbs

Policy Recommendations for Sustainable Retail Development

- Realistic assessments of costs/benefits of retail
- Diversification
- Prevent over-retailing through market studies
- Force developers to have a re-use strategy prior to establishing new retail or have a demolition bond requirement
- Public/private partnerships
- Location of retail
- Strategies to limit negative impacts of big box retail
- Provide incentives for creating entertainment/retail districts
- Community Benefits Agreement (CBA)

Municipal Finance

Kathy Vislosky
Lisa Warner
Scott Muscatello
Matt Sattler
John Vang

Municipal Finance & Sustainable Development

- Sustainability and Municipal Finance
- Case study of Severance Town Center and Euclid Square Mall
 - History of Cleveland Heights and Euclid
 - Development of Severance Town Center and Euclid Square Mall
 - Trend Analysis
 - Fiscal Impact Analysis
- Best Practices
- Policy Recommendations

Sustainable Municipal Finance

- "Change, grow, or die"
- Important to maintain and attract the right types of development
- Concerned mainly with the fiscal impact of development to municipalities and school districts
 - Relates to generation of municipal property and income tax from developments

Case Study

- Case study examines and compares <u>investment</u>
 (Severance) vs. <u>disinvestment</u> (Euclid Mall) and their fiscal impacts on municipalities
- <u>Hypothesis</u>: Disinvestment has a negative effect on the fiscal impact of development on municipalities and school districts by decreasing:
 - Property value
 - Income tax base
 - Overall revenues

History of Cleveland Heights and Euclid

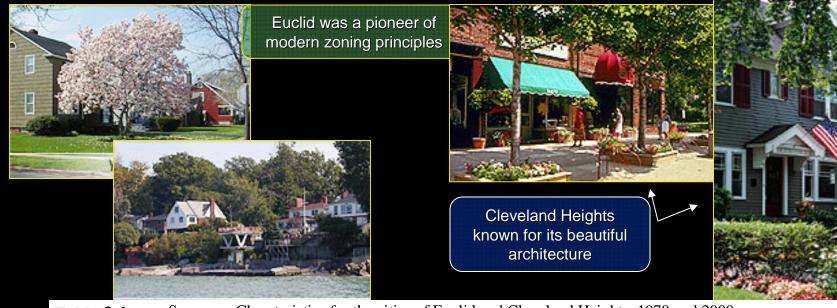


Table 3.1 Summary Charcteristics for the cities of Euclid and Cleveland Heights, 1970 and 2000

Year	City	total population	total households	total income (\$ billions)	median household income (\$)	income tax rate (%)	commercial property tax rate (%)
1970	Cleveland Heights	60,767	20,586	1.3	62,723.97 ¹	not available	not available
	Euclid	71,552	25,303	1.4	55,507.52 ¹	not available	not available
2000	Cleveland Heights	49,958	21,798	1.0	46,731.00	2.00	3.15
	Euclid	52,717	26,123	0.9	35,151.00	2.85	2.50

¹ Actual dollars: Cleveland Heights \$13,368 and Euclid \$11,830 inflated to 2000 dollars: http://www.bls.gov/

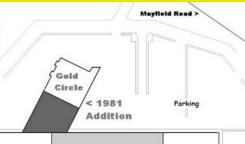
Developments

SEVERANCE TOWN CENTER CLEVELAND HEIGHTS, OH

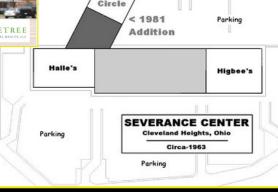


Severance Town Center

- Originally opened in 1963 as an indoor mall
- Redeveloped in 1998 into a 500,000 square foot open-air power center
- Anchored by Home Depot, Wal-Mart, Borders Books, and Marshalls



Old Severance Center--







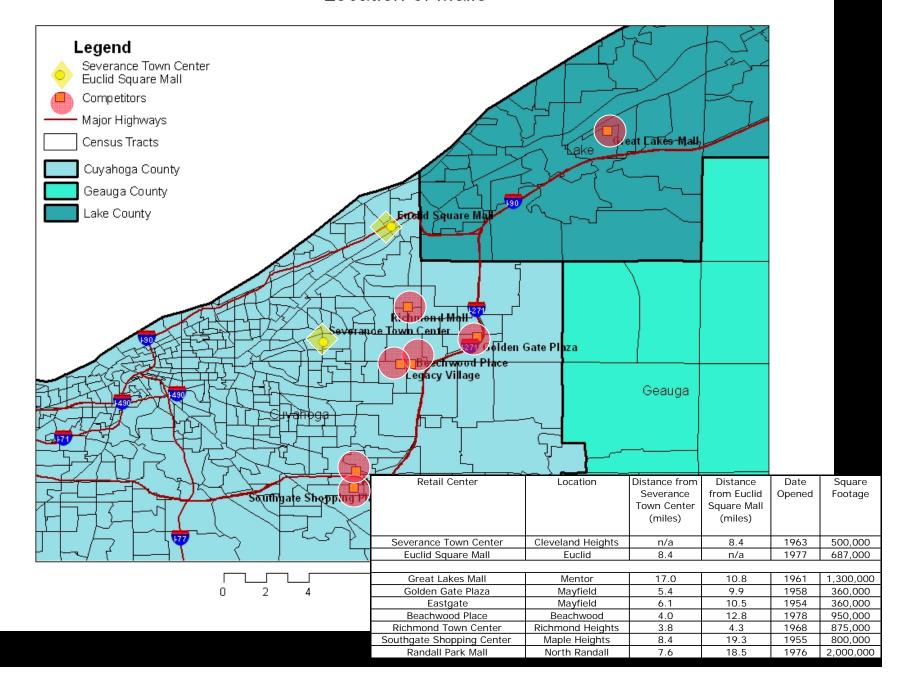
Euclid Square Mall

- Originally opened in 1977
- Comprised of 687,000 square feet of retail space
- In 1998 Kaufman's closes and relocates to nearby Richmond Mall (aka Richmond Town Center)
- In 2004 Outlets USA opens and closes a short time later
- Today Dilliard's outlet is the lone retail tenant

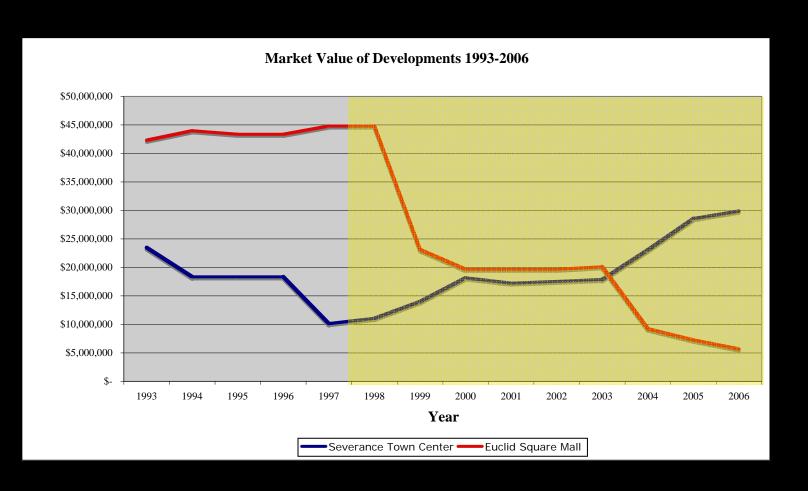




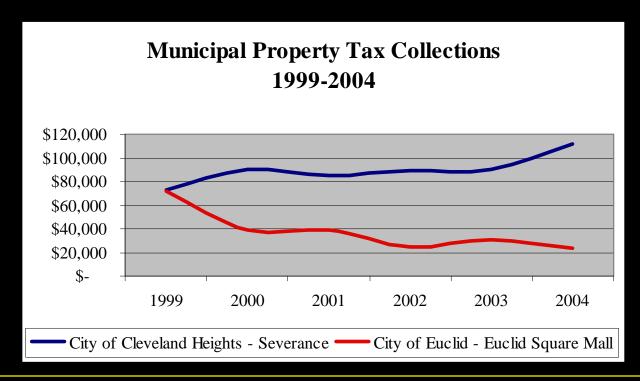
Location of Malls



Market Values 1993-2006



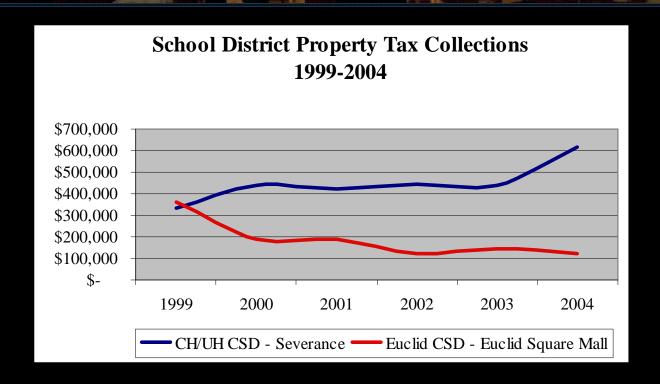
Trend Analysis Municipal Property Tax Collections



Municipal Property Tax Collections

- Cleveland Heights: Annual increase of \$5,500 or \$33,000 in total property tax
- Euclid: Annual decrease of over \$8,000 or \$48,000 in total property taxes

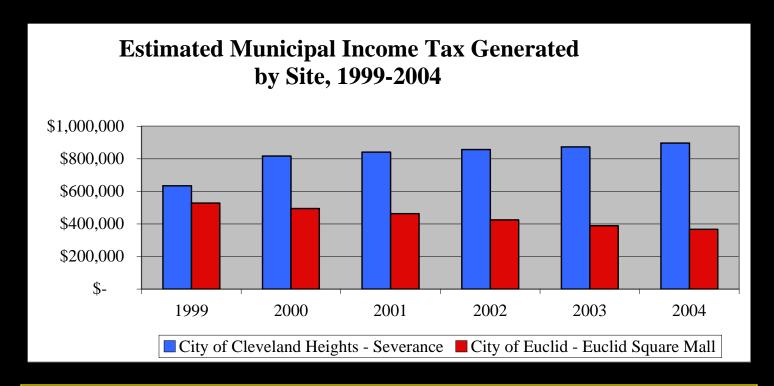
Trend Analysis School District Property Tax Collections



School District Property Tax Collections

- The Cleveland Heights/University Heights City School District: Average annual gain near \$42,000 or just under \$250,000
- The Euclid City School District: Annual decline in property tax revenue of over \$39,000 or \$238,000 in total

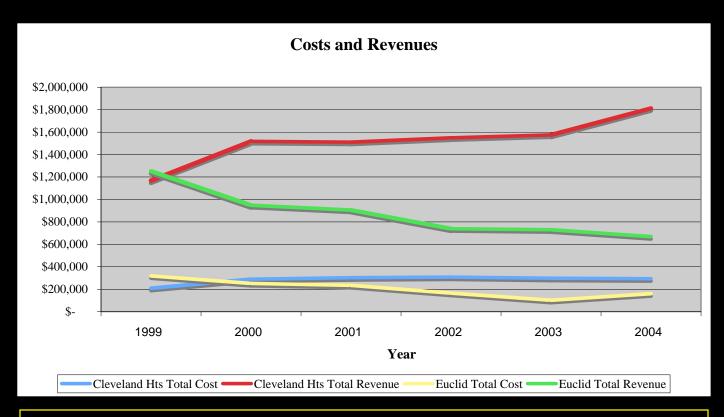
Trend Analysis Estimated Municipal Income Tax



Estimated Municipal Income Tax

- Cleveland Heights: Estimated annual increase of \$43,600 or a total of \$261,000
- <u>Euclid</u>: Estimated annual decrease of \$27,000 or a total of over \$160,000

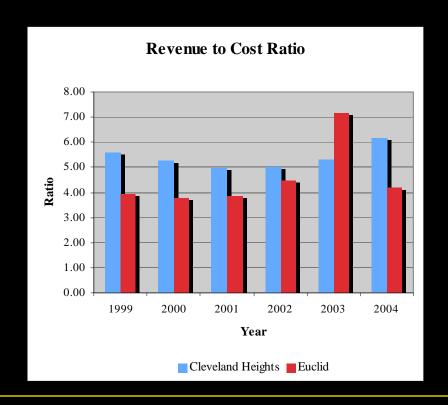
Fiscal Analysis Costs and Revenues



Cost and Revenues

- Cleveland Heights had a steady increase in revenues derived from Severance
- Euclid had a decrease in revenues derived from Euclid Square Mall

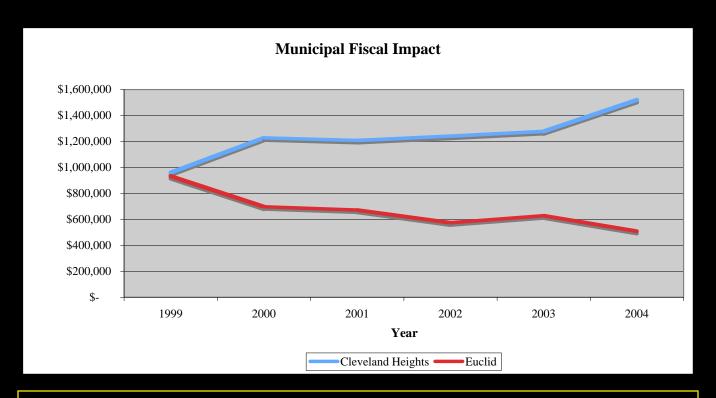
Fiscal Analysis Revenue to Cost Ratio



Revenue to Cost Ratio

- Severance provided a revenue to cost ratio of 5.60 in 1999 increasing to 6.19 in 2004
- Euclid Square Mall provided a revenue to cost ratio of 3.93 in 1999 increasing to 4.13 in 2004

Fiscal Analysis Municipal Fiscal Impact



Municipal Fiscal Impact

- The fiscal impact of Severance increased from \$989,916 to \$1.52 million
- The fiscal impact of Euclid Square Mall decreased from \$932,817 to \$508,804

Best Practices

Entertainment

- RPM Indoor Raceway--Austin, TX
- Spam Museum--Austin, TX
- Flea Markets

Institutional

- Community Center--Euclid Beach Park
- Schools, Churches, Wellness Center
- Conference Center--Mansfield, OH
- Housing
 - Apartments
 - Condominiums

Office

- Call center/back office operations
- Mail Order Centers







Policy Recommendations

- Encourage adaptive reuse and re-development of abandoned retail sites under smart growth principles
- Encourage cities to develop master plans for development that coincide with their fundamental fiscal structures
- Work towards multi-industry creation of a paradigm shift in the physical structure and layout of retail development
- Develop innovative economic incentives, through investor tax credits, for redevelopment of obsolete structures
- Integrate federal and state tax credits and incentives to create a sustainability friendly region
- Encourage additional use of TIF districts to stimulate reinvestment in existing infrastructure
- Encourage regional tax revenue sharing for new development property and income tax
- Develop a regional retail site land bank

Conclusion Conclusion

Creating a sustainable and equitable retail future for Northeast Ohio requires regional solutions that recognize the need to reinvest in our urban core, make regional land use decisions, and encourage environmentally friendly development. Serious consideration of the issues and solutions brought forth in this presentation would be a good first step.

Thank You

Questions?