Go to 2033

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## A Teaching Manual for the General Plan of Knoxville-Knox County

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Prepared for Study in the
Public Schools of Knoxville-Knox County

BY

SUZANNE WEDEKIND

**2009-2010**

# Acknowledgements

Suzanne Wedekind

# About the Author

Suzanne Wedekind is one of the charter teachers at West Valley Middle School.  As a 16-year veteran art teacher in the public schools of South Carolina, she returned to her hometown of Knoxville in 1999.   Her teaching assignment brought her to a site that is within a mile of her childhood home in West Knox County.

She received a B.S. at the University of Tennessee in Knoxville and pursued graduate studies in secondary guidance and in art at UTK.  Her commitment to education includes studies at the Gibbs Studio in Charleston, SC, Arrowmont School of Crafts in Gatlinburg, Tennessee, the Tennessee Arts Academy, and Penland School of the Arts in North Carolina where she was the recipient of the 2008 Wingate Scholarship.

She has been a member of the National Art Education Association since 1984.  As a practicing artist, she exhibits with **Source**, a group of Knox County Art Teachers and also with the Tennessee Art Education Association in Nashville and in Humboldt, Tennessee.  She frequently exhibits student artwork in local exhibitions and national competitions.  Her students have received numerous awards and recognition for excellence in the arts.

Suzanne's collaboration with volunteers from the East Tennessee AIA (American Institute of Architects) launched the study of Barkitecture (the design of doghouses) at West Valley Middle School.  In 2006, Suzanne represented the East Tennessee Chapter of the American Institute of Architects at the inaugural conference of the Architecture and Design Education Network (A+DEN) in Chicago.  She presented a collaborative and interdisciplinary program, *Knoxville Bound*, to design professionals from the United States, Great Britain, and Japan.  The program offers literature selections from the anthology, *Knoxville Bound,* and engages students in artistic creations with architectural themes.

The teaching manual*, Go to 2033,* is the result of Ms. Wedekind's collaboration with Knoxville's architects and planners who share a vision of inspiring students to be resourceful, respectful, and responsible citizens.

# National Visual Arts Standards

**Standard 1.  The student understands and applies media, techniques, and processes related to the visual arts.**

**Standard 2:  The students will learn about and apply elements and principles of art.**

**Standard 3:  The students will critically select and use images from a variety of subject matter and ideas to communicate meaning in art works.**

**Standard 4:  The students will relate the visual arts to history and cultures.**

**Standard 5:  The student will reflect upon, analyze and make judgements about the characteristics and merits of their work and the work of others.**

**Standard 6:   The student will perceive connections between visual arts and other disciplines.**

**Standard 7:  The student will develop and demonstrate a commitment to excellence through production and presentation.**

**Standard 8:  The student will develop critical and creative thinking skills.**

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# Introduction

The history of urban planning dates back three thousand years, yet the Tennessee state legislature has only recently mandated the need for planned growth of cities and towns.  The concern for city planning is a response to an expanding global economy and to the blight caused by insufficient planning: sprawl, traffic congestion, pollution, and depletion of our natural resources.  Knoxville, like many of the nation's great cities, has addressed these concerns with a vision for a greener and more pedestrian-friendly approach.  The World's Fair Park and 500,000 square foot Knoxville Convention Center is an impressive development that links the west edge of downtown to the University of Tennessee campus and historic Fort Sanders neighborhood. The fountains plus a meandering stream among native dogwoods, maples and ash trees serves to enhance Knoxville's identity as a gateway to the mountains. Plans to remediate the South Waterfront and Cumberland Avenue corridor offer form-based development guidelines that encourage a healthy mixed-use style of growth.  Today, as always, the growth and development of a great city requires the effort of a team of professionals—architects, planners, engineers, politicians; and it requires the support of all citizens.



*"Make no little plans; they have no magic to stir men's blood."*

*Daniel Hudson Burnham*

One of the most significant events in the history of city planning is the adoption of  Daniel Burnham and Edward Bennett's **Plan of Chicago** in 1909 which became a prototype for many subsequent city plans.  It was Burnham's aesthetic that laid the foundation for twentieth-century Chicago's beauty and convenience.  The plan was summarized in the textbook, **Wacker's Manual of the Plan of Chicago**, and was taught to eighth-graders who were (at the time-1911) in the terminal grade in Chicago.  Consequently, at least a generation of Chicagoans understood and appreciated their role in fulfilling the plan.  Many historians credit Walter Moody, the author of the **Wacker's Manual of the Plan of Chicago**, with the successful implementation of the plan.  In the 1920's, after former students became voting age, 86 bond issues were passed and contributed to the redevelopment of the central city.

It seems fitting that the American Architectural Foundation should support the adoption of a teaching manual for Knox County Schools on the centennial anniversary of the Plan of Chicago.  Likewise, the Knoxville-Knox County Metropolitan Planning Commission and the East Tennessee Chapter of the American Institute of Architects share a vision in this publication that allows the citizens to participate in the realization of the plan.

*Urban design helps to define a community's public and private spaces.*

# History of Urban Planning

City planners guide the local government and real estate developers on ways to improve cities, towns and communities. Some plan entirely new neighborhoods or cities. The process of city planning is complex because it involves the professional city planner and the work of many people including architects, engineers, and citizens.

Many of our current environmental problems are the result of a lack of adequate city planning. The urban sprawl of the latter half of the 20th century created a commuter culture where many homes were far from work and shopping areas. The consumption of gas and oil has contributed to pollution. Uncontrolled growth leads to inefficiency, a lack of aesthetic appeal and a lower quality of life for its citizens. Cities that expect to grow and thrive in 21st century will insist on zoning and urban planning for creating an attractive environment.

The history of city planning dates back to Babylon during the 18th to the 6th centuries B.C. and Jericho in about 8,000 B.C. The site selection of the city, like most ancient cities, was based on its natural fortification from enemies. For example, the design of Babylon included a massive wall with a square perimeter of 60 miles.

The ancient Egyptians relied on the natural defenses provided by the surrounding deserts. The Great Pyramids and temples have been declared one of the wonders of the world for over nine centuries.

Machu Picchu is an archaeological site of the Inca city built on a steep mountain. The plan included temples, storehouses, a series of thatched-roof houses built of stone along a ridge, and houses for the royalty. A system of stairways and narrow paths lead to the garden terraces at a distant river valley.



*Machu Picchu in the Andes of South America.*



*Pyramids of Giza, 2554-2531 B.C.*

The ancient Greek passion for civic beauty is exemplified by Athens, the capital city.   The ruins of the Parthenon (447-432 B.C.) rests on the Acropolis (see photo below), a hillside above the city.





*photo of the Acropolis: George Dodds, Ph.D.*

A PART OF THE ROMAN FORUM

The enduring vitality of Rome, as a healthy environment, can be attributed to its early design of public green spaces used primarily for running and exercising.  As early as the third century, Rome boasted eighteen public squares as well as gardens and parks, cemeteries with marble monuments, sacred temples with colonnades and porticos, and the great baths, both public and private.   The Romans believed that every citizen had a responsibility to contribute to the health and beauty of the city.

The Europeans of the Middle Ages borrowed ideas from ancient Greeks and Romans in the design of the *bastide*, a fortified town that included a grid system of streets and high walls.  This was a transition between a castle with a walled community at its base and the more expansive cities of the Renaissance.



*Briancon is the ruins of a bastide*

During the Renaissance, Italian architects planned cities with broad streets, harmonious facades and a formal layout. This design doctrine of Andrea Palladio and Leon Batista Alberti directed the urban extensions of Rome in the fifteenth and sixteenth centuries. It was during this time that the Vatican, the headquarters of the Roman Catholic Church, was designed by Bernini, Maderno, and Michelangelo.

The new printing press brought books which reference the ideal layout of cities. These pattern books were inspiration for most European plans. The model of Vitruvius (Marcus Vitruvius Pollio, c. 80 B.C.-c.15 B.C.) influenced designs of town squares and plazas with streets and boulevards. New books by military engineers included plans for a fortress with twelve sides, a *bastion* at each angle, and moats that surrounded the town. Both architectural models included a layout of straight, wide streets in a grid pattern.

Few European cities of the time were entirely new, but thinkers and designers influenced the growth of cities. Town extensions in 17th-century France, for example, followed a simple grid pattern that is followed today.



THE WATER SCREW
(From the edition of Vitruvius by Fra Giocondo, Venice, 1511)

*Illustration from Vitruvius: The Ten Books on Architecture*



PLAN OF KNOXVILLE

*The plan of early Knoxville illustrates the grid pattern of European cities.*

American city planners were influenced by the traditions of European cities as well as other historical trends. Most planners continued the tradition of grid-patterned streets and fortification.  Charleston, South Carolina and Yorktown, Virginia are examples of the grid design.

Early urban plans were based on the aesthetics of the home country.  Dutch colonial settlements resembled the redesign of Holland in the seventeenth-century.  These rectangular extensions followed an infrastructure of canals that were used for drainage and for transportation.  New Amsterdam (now New York)  was laid out in long rectangular plots surrounded by ditches that resembled the Dutch pattern of irrigation canals.

The New England settlements were called towns or townships.  The term "town" today, as always, describes the entire urban-rural community including the farms. The center of the town usually included an open space, called a common, and a meeting house. Large strips of land were surveyed and settlers would draw lots for the farmland. These strips of farmland, called "common fields," were not open to newcomers.  Both the New England town and the Spanish colonial pueblo resembled the practice of "European land tenure systems as they had evolved from feudalism."[1]



*Castello Plan, New Amsterdam in 1660*

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[1] John Reps, *The Making of Urban America* (Princeton: Princeton University Press, 1965), 54.

The rebuilding of London after the fire of 1666 influenced the development of the later English settlements. Christopher Wren and and John Evelyn, English architects, designed a system of diagonal boulevards that lead to monumental plazas. Wren's work influenced the design of colonial Williamsburg and William and Mary College in Virginia.



*The French Quarter of New Orleans is an example of early American French planning. Note the public square in the front of the cathedral.*
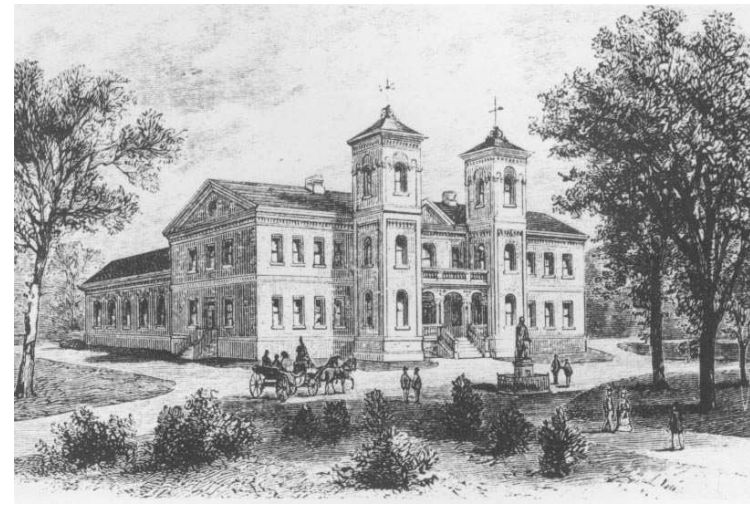


*Wren Building , shown here in 1859, is on the campus of the College of William and Mary.*

In the construction of towns during the pre-colonization of America, French towns resembled the bastide; but the addition of the town square at the center of four main streets is an example of Renaissance planning. The square could function as a gathering place for troops or as a site for civic buildings. The central axis of four main streets creates a symbol for a place of importance. These French influences on the American design were produced nearly a half a century before the arrival of French colonists.

The development of American gardens was patterned after the geometric arrangements of the early Renaissance. Major paths followed a grid pattern while minor paths conformed to a rectilinear pattern. Open spaces at intervals provided interest and variety. These features were shared by both urban and garden design.

Garden design reached its peak in 17th-century France with the design of Versailles by Andre Le Notre.   In addition to the garden proper, a great royal park included bold tree-lined diagonal paths radiating from the rond-points, or circular clearings.   Champs-Elysées is the eastern end of a thoroughfare that links Versailles to Paris.  The grand scale of Versailles influenced the redesign of Paris, and other cities such as Washington, DC (1790) and New Delhi in India (1912).  Paris was renovated during the era of Napoleon Bonaparte (1798) with focus on the monuments, parks, plazas, and bridges and with streets radiating from the Arc de Triomphe at the center of the Place d'Etoile.
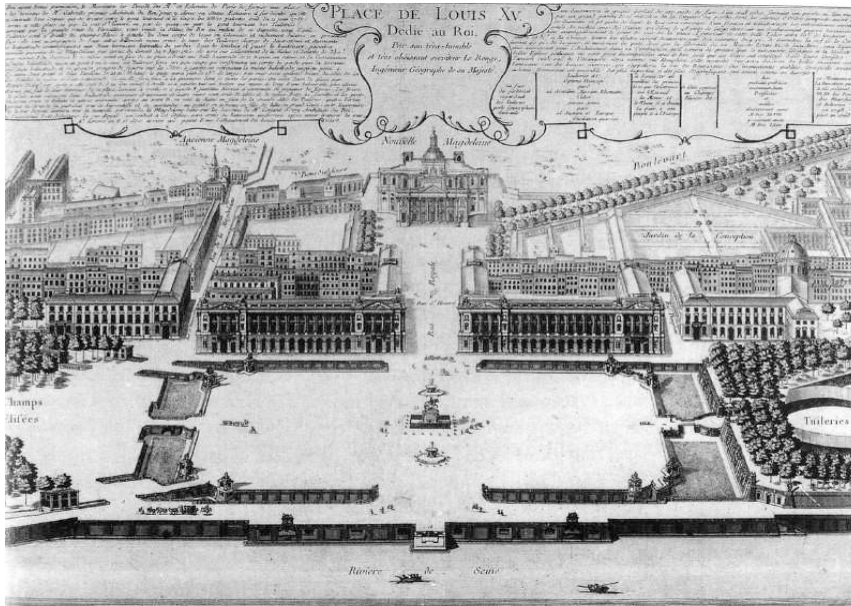


*Versailles is linked to Paris in the diagonal formation of paths and streets.*

The influence of French design is evident in early American urban planning, particularly in the nation's capitol.   The Residence Act of 1790 gave President Washington the authority to plan the Capitol City in a ten-mile area between Georgetown and Alexandria.  Washington selected Major Pierre L'Enfant (1754-1825), who had served with him during the Revolution.   In his memorandum to Washington, L'Enfant recommended a grand plan of broad avenues--- 80 feet in width with 30 feet on each side for "a walk under a double row of trees".[2]  He also planned for a canal connecting the

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[2] Reps, John.  *The Making of Urban America,* page 50.

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Potomac and the East Branch to assist in the rapid growth and development of the city. In 1792, Washington dismissed L'Enfant who had refused to reduce the scale of his plan.

Washington chose a surveyor, Andrew Ellicott, to complete the project. Ellicott, a Quaker from Pennsylvania (1754-1820) had been surveying the area with Benjamin Benneker, who was the grandson of a freed slave and Ellicott's longtime assistant. President Washington was impressed with their work.

Ellicott revised the plan by changing the alignment of Massachusetts Avenue. The plan eliminated several short diagonal streets and added two more diagonals. The final plan included 15 squares for statues, obelisks and other monuments.

*The French immigrant, L'Enfant, designed Washington, DC to resemble the grand scale of Paris and Versailles.*

The design of the central portions of the U.S. Capitol, the White House porticos, and other neoclassical buildings in colonial America is the work of Benjamin Latrobe (1764-1824). Latrobe, known as the "Father of American Architecture", also designed the first Catholic cathedral in the United States, the Baltimore Basilica.

The trend of radial design with a grid system of streets continued into the early 20th century with the Burnham Plan of Chicago, published in 1909. This plan owes much of its success to Walter Moody who wrote the **Wacker's Manual of the Plan of Chicago** for study in the public schools in 1911. The manual, a primer on urban design, was part of the 8th grade curriculum for about 20 years.

CXXXVII. CHICAGO. VIEW OF THE PROPOSED DEVELOPMENT IN THE CENTER OF THE CITY, FROM TWENTY-SECOND STREET TO CHICAGO AVENUE, LOOKING TOWARDS THE EAST OVER THE CIVIC CENTER TO GRANT AND LAKE MICHIGAN.
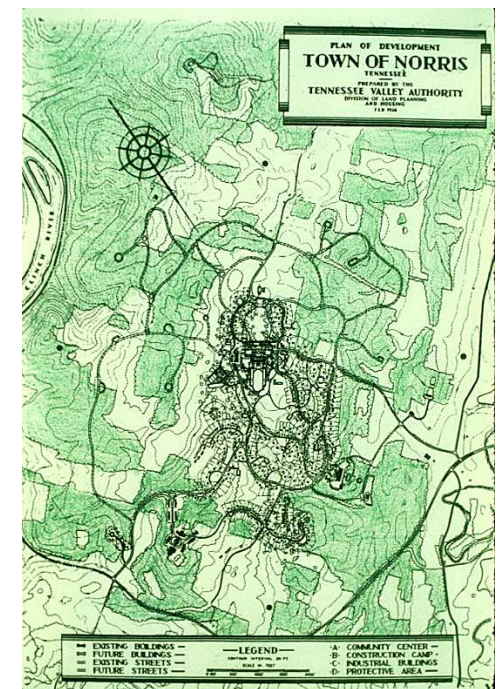Painted for the Commercial Club by Jules Guerin.
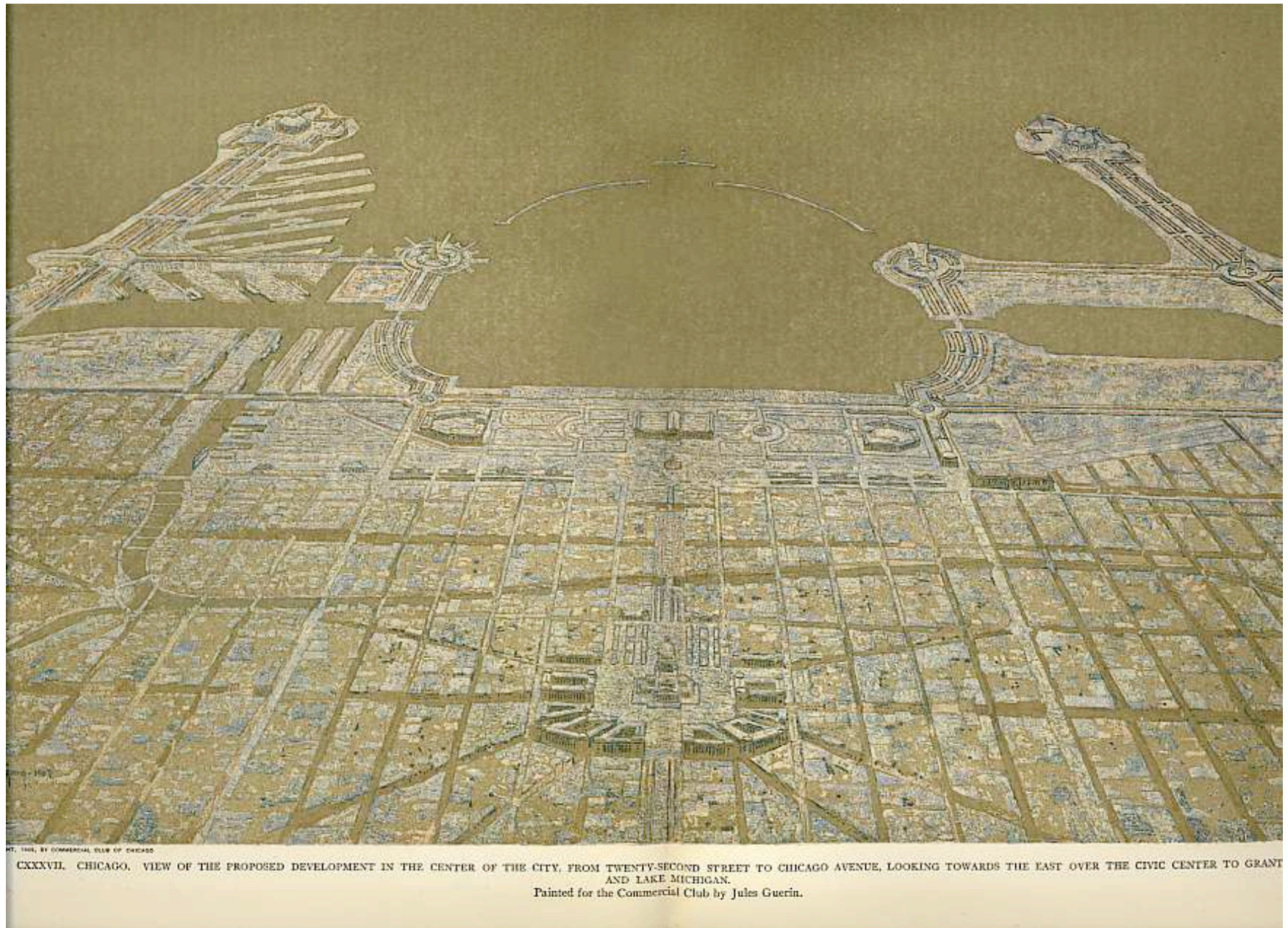
*Burnham and Bennett, Plan of Chicago, 1909*

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During the industrial era, people left farms for the city. This led to a need for communities that combined the features of town and country.  Urban Americans longed for the landscaped cemeteries in rural America that were frequently visited for recreation.  Only a few towns, such as Savannah, had planned for parks to meet the needs of the population; therefore, there was a demand for more city parks.  This trend for landscape design contributed  to the development of "romantic suburbs" with large lots and meandering, curvilinear streets.[3]  Llewellyn Park at Orange, New Jersey is an example of an early and enduring suburb with a park and house sites of 3 to 10 acres.

In the 1930's, some architects and planners were designing models that combined the aesthetic of town and country.  Norris, Tennessee is a local example of this style as is Reston, Virginia, designed in the 1970's.  Cities of Columbia, Maryland and Seaside, Florida are other communities that serve as a transition to the trends of new urbanism and of *form-based development.*  South Waterfront and Cumberland Avenue plans of the Knoxville-Knox County Metropolitan Planning Commission are form-based development plans for areas of Knoxville.



*Norris, Tennessee: general plan*

In the form-based development, the form defines the urban corridor where the buildings are on the street rather than the traditional pattern of a building *set-back* policy.   New urbanism and form-based development are based on pedestrian-friendly principles where wide sidewalks allow foot traffic, rollerblades and bicycles.  These mixed-use plans are structured like a traditional neighborhood where people can walk from home to work in about ten minutes.  The new urbanism concept encourages diversity of residents by the proximity of affordable housing for a range of ages, incomes, racial and ethnic groups. High-density housing with quality architecture and attention to human-scale design also enhances the pedestrian experience. Infrastructure includes a hierarchy of a streets, boulevards and alleys connected in a grid system and a network of quality trains.  New urbanism is a sustainable approach to maintaining the quality of life in the 21st century. The American concept of new urbanism, as we have seen in previous growth trends, has followed the European trend.  The growth policy of the Knoxville-Knox County Metropolitan Planning Commission is based on the principles of new urbanism.  At least one of the corridor studies has suggested light rail as a mode of transportation and every city sector plan offers a more pedestrian-friendly and sustainable design.

[3] *Reps, John.  The Making of Urban America, p. 325.*

Contemporary architects and planners are advocates for the preservation of historic neighborhoods and buildings.  This environmental design also addresses concerns of constricted areas that should be open to better arrangements for community amenities such as shopping and parks.  Many of America's great cities have experienced decay and abandoned places which were later restored.   Knoxville follows in the trends of New York, Baltimore, San Francisco, Boston and other great cities that have experienced the planned restoration of historic sections of the city.

Environmental concerns of clean air, pure water and fertile soil have always been issues of architects and planners because a healthy city is matter of survival.  The conveniences of life in the 21st century--- such as world travel or comfortable homes in any climate---bring an increased interest in the health of the entire planet.

*Planners, engineers, architects and others believe that the plan of cities should be a vital concern to everyone.  The rapid growth of the world population contributes to an increasing inadequacy in most cities.   Current demographic trends*



*Several HIstoric houses have been maintained along the western edge of the World's Fair Park.*



*Restoration of the Tennessee Theater followed other historic restorations in downtown Knoxville.*

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*predict an increased migration to the metropolitan areas of the Southeastern U.S. and a growth of the senior population in the West and in the Southeast. With the anticipated population increase, **The Knoxville-Knox County Metropolitan Planning Commission's General Plan** is prepared to accommodate this growth while maintaining environmental quality of life.*

*Discussion Questions*:
Is architecture and city planning a form of art?  Can a park or a building be considered a work of art? You have seen functional objects such as Native American pottery or Adinkra- designed fabric that are valued for their aesthetic appeal. Can large-scale buildings or a city be considered a work of art?  Why or why not?

What are some of the problems of cities of the twenty-first century?



*Greenways and preserved neighborhoods helped to maintain the aesthetic appeal of several areas of Knoxville.*

# Knoxville/Farragut/Knox County Growth Policy Plan

*In 2001, Knoxville, Farragut and Knox County adopted the Growth Policy Plan. "Adopted" means that the City Council or County Commission recognized a plan or new standard for development through a law, usually called an ordinance, or resolution to follow the measures of the plan. The Growth Policy Plan identifies specific areas for urban and suburban growth as well as a rural area. The designation of Knox County's Rural Area helps to avoid sprawl. Its purpose under state law is:*

- "Identify territory that, over the next twenty [20] years, is to be preserved as agricultural lands, forests, recreational areas, wildlife management areas or for uses other than high density commercial, industrial or residential development, and

- Reflect the county's duty to manage growth and natural resources in a manner which reasonably minimizes detrimental impact to agricultural lands, forests, recreational areas and wildlife management areas."

The plan protects a rural area in Knox County by limiting housing density, saving farmland from development and keeping large scale commercial uses, like shopping centers, away from agricultural and forested areas.

In the plan (see page 17), lines are shown outside of Farragut and Knoxville's city limits called the "Urban Growth Boundaries" and a "Planned Growth Area." Within the boundaries, land can be added to the city limits through a process called annexation, which allows for development for future housing, shops, offices and industries. The Planned Growth Area is created so that the county government has room to meet its needs for future neighborhoods and space for shopping and employment in places like Halls, Powell, Carter, Gibbs and South Knox County.

Knoxville-Knox County
**GROWTH POLICY PLAN**

**Legend**

**Growth Plan Categories**

- Urban Growth Boundary
- Planned Growth Area
- Rural Area

KNOXVILLE

FARRAGUT
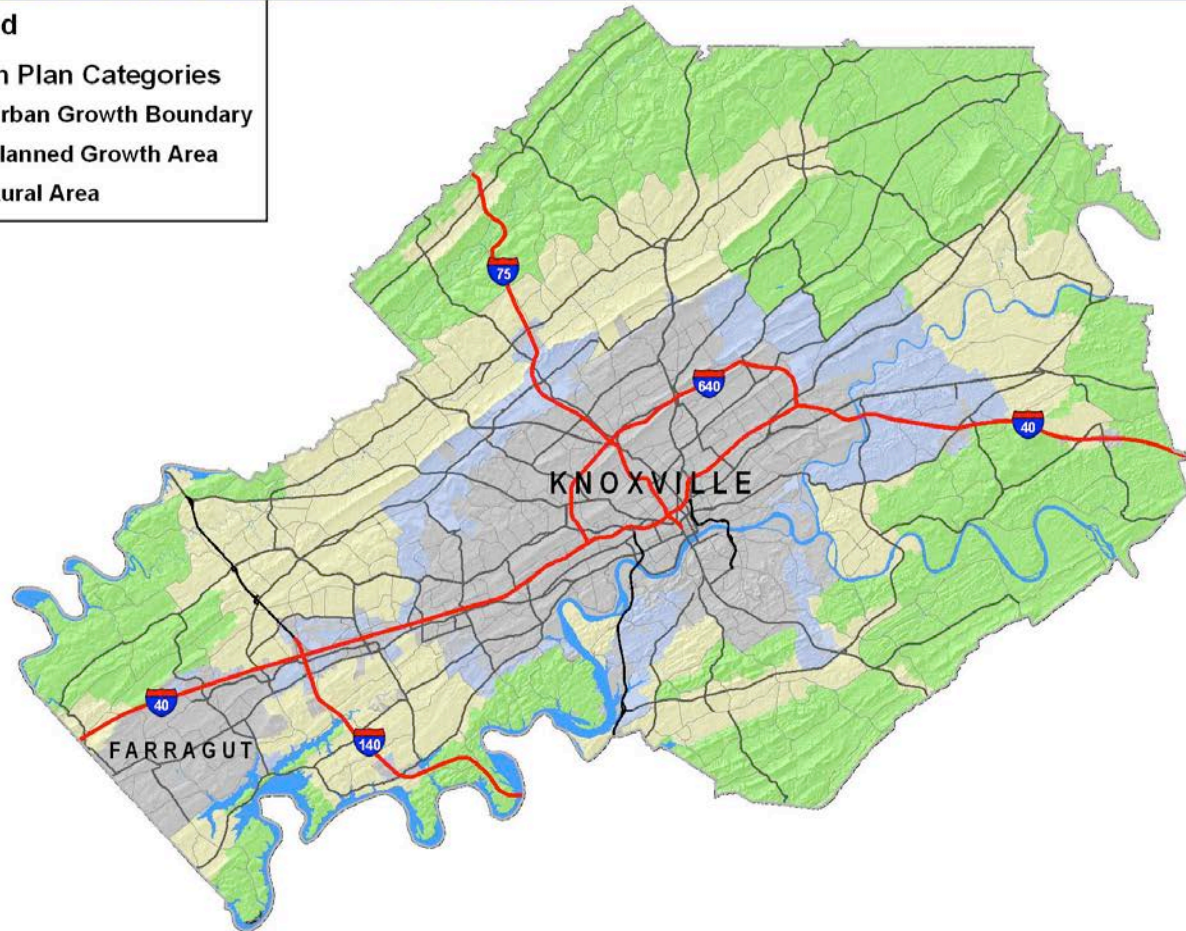
# Development Policies

*The development policies support these ten ideas for Quality Growth.  The written and graphic policies advocate actions that help fulfill the communities' vision for Knoxville and Knox County.*

## Develop a Strong Economy.

• Provide incentives for new industrial development and for redevelopment or rehabilitation of older industrial facilities.
• Reserve an adequate supply of sites for industrial growth.
• Provide government assistance in land purchase, financing, and industrial recruitment
  when rehabilitating the city's industrial areas.
• Establish Knoxville and Knox County as a center for technological research and development, building upon the
  existing base of technological industries and personnel.

## Provide Transportation Choices for All Citizens

• Integrate pedestrian, bicycle, transit and automobile modes in developing a comprehensive transportation system.
• Acquire rights-of-way for future transportation projects well in advance of construction.
• Develop a transit system, including trolleys, buses and potential light rail.
• Review development plans to ensure pedestrian needs are being met and that the sidewalk network's continuity is
  being achieved in the school parental responsibility zones.
• Create transportation corridors and centers that can efficiently handle the movement of goods, including truck, rail,
  water, and air transportation.

## Understand the Building Blocks: Neighborhoods, Districts, Corridors and Communities in the Region

• Use schools and parks as foundation in planning neighborhoods and communities.
• Require vehicular and pedestrian connections between subdivisions to encourage safe access to community facilities
  and to reduce reliance on the automobile.

- Continue to develop new ways for citizens to receive information and to voice opinion regarding neighborhood and community issues.
- Enhance the quality of special districts such as the university, the Old City, Emory Place and Bearden Village.
- Encourage housing and employment growth downtown to expand the market for retail, restaurants, and other services.
- Enhance highway corridors by landscaping, creating attractive architecture, providing pedestrian-friendly atmosphere and eliminating visual clutter.

## Make Strategic Community Investments

- Coordinate new utility services with development of roads, schools, employment centers, shopping aresas and recreation sites to encourage efficient development patterns and limit sprawl.
- Plan far in advance for land acquisition, financing and design of neighborhood-serving community facilities: roads, schools, parks, utilities, and public buildings.
- Use greenways to link parks, schools, and other public facilities.
- Emphasize park acquisition along potential greenways.
- Meet the needs of individuals who are physically challenged.  Locate and design facilities for athletic competition in such a way that they do not detract from nearby neighborhoods.
- Establish school-park complexes and acquire park land next to future school sites.

## Respect and Nurture Our Heritage Areas

- Encourage flexible, planned development zones to protect hillsides, woodlands, wildlife habitats, and stream corridors.
- Provide trees and minimize impervious surfaces when developing parking lots.
- Meet state and federal standards regarding all air pollutants, particularly ozone and toxic air emissions.
- Develop land use patterns and infrastructure that encourage trip reduction.

## Encourage Growth in the Existing Urban Area.

- Develop "infill" housing on vacant lots and redevelopment parcels.  Infill housing should be compatible with neighboring residences in scale, design, and size layout.
- Focus on design quality and neighborhood compatibility in reviewing development proposals.
- Protect residential areas from encroaching commercial development and other incompatible uses.

- Promote crime prevention through design that emphasizes visibility and neighborhood protection.
- Support the efforts of government, neighborhoods, and nonprofit organizations to address housing issues, particularly housing rehabilitation.
- Encourage redevelopment of obsolete commercial strip space by providing incentives for "infill" rather than Greenfield development.
- Allow clustered development in rural areas to preserve farms, open space and rural character.
- Use historic zoning and conservation districts to protect neighborhoods.
- Protect the scenic vistas of ridges and valleys.
- Develop a metropolitan forestry program to conserve and reestablish trees and woodlands.

## Reclaim Our Rights to Clean Air and Water

- Protect water resources by reducing pollution and retaining trees and ground cover on ridges and near streams, rivers, lakes and sinkholes.
- Create wetlands and naturally landscaped retention basins to slow down rapid runoff and reduce pollution.
- Restrict development on slopes greater than 15% and along streams and rivers.  Housing densities on 15-25% slopes: 2 dwellings per acre.  Housing density on slopes greater than 25%: 1 dwelling per acre.   Nonresidential uses on slopes over 15%: through a planned development zone. Floodplains: limit uses to 50% of flood fringe areas.
- Improve the appearance of existing commercial strips by encouraging better landscaping and fewer signs.

## Build Sustainable New Neighborhoods

- Encourage development practices that respect and fit the natural landscape, minimizing the loss of trees, woodlands and wildlife habitat.
- Provide incentives for conservation subdivisions, to set aside large portions of open space and protect natural resources.
- Reduce visual clutter by improving sign regulations and encouraging underground utility lines.
- Encourage village centers as the preferred form of retail development, and use neighborhood commercial zones to provide day-to-day services near residential areas.    Encourage the form and function of traditional "strip" development patterns.

## Development Decisions Should Be Predictable, Fair, and Cost Effective

- Facilitate better communication and offer technical assistance and arbitration between neighborhood organizations, government offices and developers where needed.
- Involve school, police, and fire officials in land use planning.
- Provide site design flexibility to developers who provide amenities such as recreation areas, trails, sidewalks, streetlights, underground utilities or exceptional architectural or landscape design treatments.
- Base land development policies and regulations on awareness of the ever changing character of the housing market.

## Additional Development Policies

- The density of residential development will be based upon the amount of usable acreage, excluding areas which are under water, in floodways, have steep slopes, or are otherwise unsuited for development.  Rural, planned growth and urban growth boundaries also influence density.
- Discourage environmental nuisances near residential development, including rundown commercial development, noxious industrial uses, railroad tracks, noise and fumes from heavy traffic volumes, large storage tanks of gas, oil and other flammable materials, smoke, noise, offensive odors, vibrations, dust or glare from nearby or distant use.
- Create gradual zoning transition patterns by placing medium intensity zones and uses such as offices, condominiums, and community buildings in between single-family residential areas and higher intensity uses.
- Office developments meeting the following standards should be allowed in buffer zones between residential neighborhoods and more intense uses in conventional suburban developments:
- Residential architectural style
- Building height limited to 35 feet
- Parking areas well landscaped and screened from any abutting residences
- Landscape screens or architectural quality walls or fencing along any property line abutting single-family residences
- Low, monument style or wall-mounted signs
- Mid-rise office building (four to eight stories) should be allowed next to commercial or light industrial area, along freeway corridors, on or around the University of Tennessee campus, on or around major hospital sites, and in the Central Business District
- High-rise office buildings (nine stories or more) should be limited to the Central Business District.
- Locate new industrial development primarily in industrial parks, business parks or other suitable planned settings of ten acres or greater, with locations for technology-based industry less restricted than general or heavy industry

# Land Use

The ways that buildings and areas of open land are organized has an impact on the aesthetic quality of a city.

The laws of the state and the federal government affect the local and national land-use plans.  Many city government officials, developers, and citizens contribute to the planning process.

Traditionally, the local government may create zones for land use.  A land use plan is a map of the different uses for buildings and spaces and it may indicate plans for growth in each category.  Buildings may be assigned to particular land-use categories.  The land-use categories (see map next page) are represented by different colors:

**Commercial – Red**  *A market place where people buy and sell goods: e.g., clothing store, gas station, pharmacy, sports arena, restaurant*
**Office - Pink**  *A place where business transactions occur*
**Residential –Yellow (low-density) or Orange (high-density)**   *A place where people live; e.g. family home, apartment, townhouse, mobile home, duplex*
**Civic Institutional- Blue**  *A place where people learn, receive services, or get help; e.g. hospital, library, police station, city hall, museum, government building*
**industrial – Purple**  *A place where people make things, process or dispose of things: e.g. recycling center, power plant, transportation facilities such as a train station, airport, or bus station*
**Public parks and other open spaces – Green**  *A place people use for recreation, exercise, and enjoying nature*
**Mixed Use - Stripes or combined colors**  *A place that serves two or more functions.   For example, a building may have stores on the ground floor and apartments on the top floors.*

Mixed-use developments encourage the use of public transportation and allow people to live near shopping and other services that they want.

Traditional zoning often restricts development and inadvertently encourages sprawl with its pedestrian unfriendly streets. Conservation of the landscape is best achieved by increasing the density of nearby development, thus preserving more of the ecosystem.

# Map 8:  Land Use Plan

**Legend**

- Regional Mixed Use Center
- Community Commercial
- General Commercial
- Neighborhood Commercial
- Mixed Use
- Light Industrial
- Office
- Civic/Institutional
- Low Density Residential
- Medium Density Residential
- Agricultural
- Other Open Space
- Public Parks and Refuges
- Hillside/Ridge Top Protection
- Stream Protection Areas
- Major rights-of-way
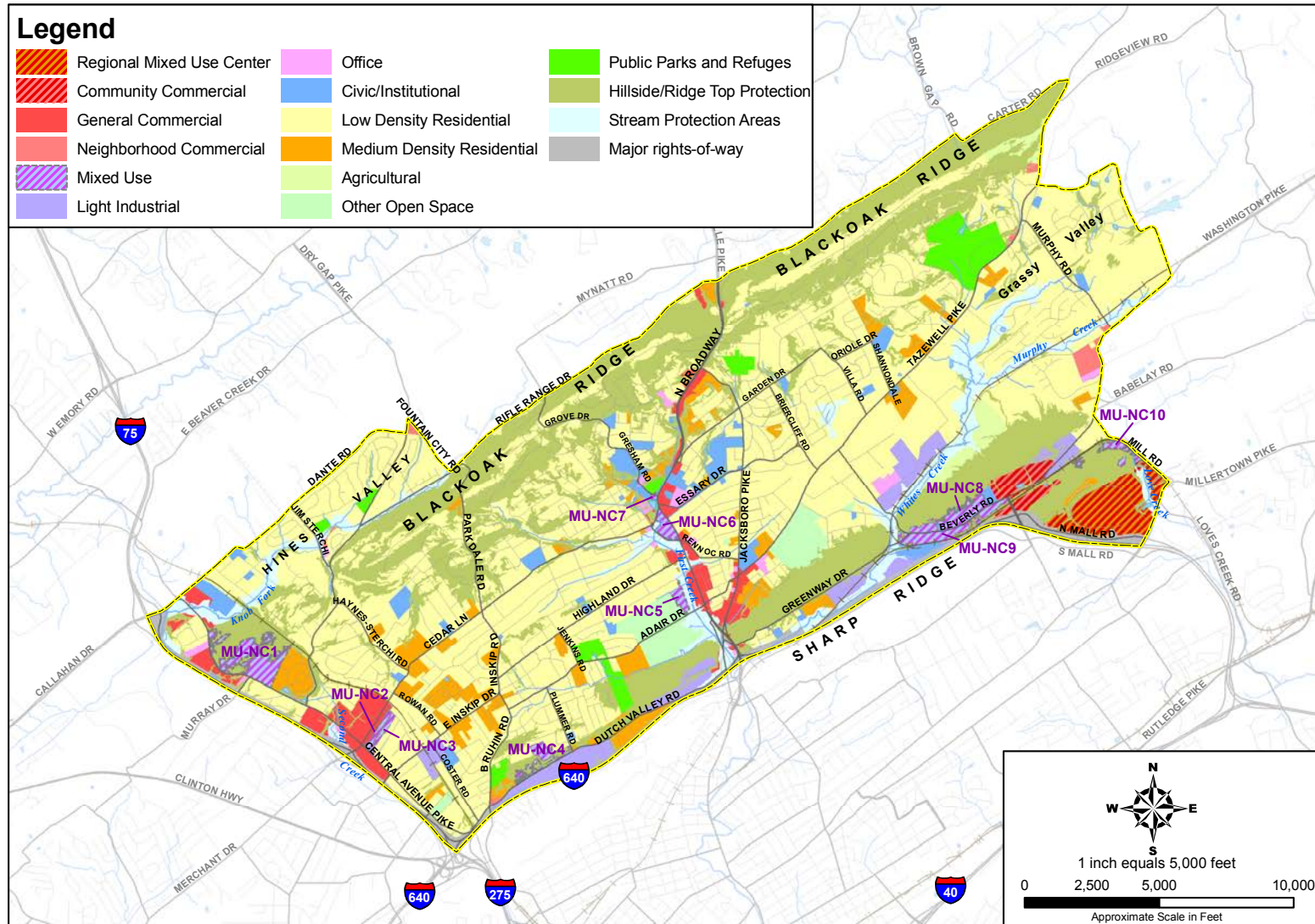
*An example of a land use plan: this one covers the area around Fountain City.  Note the plan calls for parks and conservation of forested ridges (see the green areas) and development of neighborhoods (see the yellow areas).*

Form-based development codes are legal documents that emphasize building form and housing types.  It also encourages greater public participation because it is easier to understand than traditional zoning.  The graphics illustrate the parameters for block layout, building sites and configurations, outdoor spaces, off-street parking and loading, and storm-water systems.



*A form-based development code for the South Waterfront will emphasize more how a project looks rather than the use of the land.  In this example, the park spaces along the river are shown as are the future buildings (outlined in light brown).*

The plans for Cumberland Avenue and the Knoxville South Waterfront offer form-based development codes as a blueprint for growth and development.  The South Waterfront has been divided into seven districts, each with an opportunity for orderly growth that will maintain a distinct pedestrian-friendly community.

## Student Activity:

Go to the Knoxville South Waterfront plan on the MPC website (www.knoxmpc.org).  Study the color-coded map of the area and select an area for your project/development.  Your research must address any issues such as:  block layout, building sites and configurations, outdoor spaces, off-street parking and storm-water systems.  Write a research paper about your specific area and explain why you selected that area.  Draw a façade of your proposed building, or alternatively, a landscape plan of your park or marina.  Explain how you created unity in your design.



*Here's an example of how the development may look along the river.*

# Design Team: Introduction to Urban Design

*This lesson will encourage students to explore Knoxville-Knox County, Tennessee and will help them to understand their choices about where they live. Students will increase their awareness about the built environment and the planning process. This unit provides an opportunity for students to use found objects for their projects and to apply the principles for environmental conservation: "reduce, reuse, and recycle".*

## Goals and Objectives

The design of a city is a reflection of the values of its citizens. A city plan is the creation of its citizens and a team of urban planners, architects, economists, and engineers. Students will identify the services of the city as well as the problems such as pollution and traffic. While constructing their own model city, the students will gain an understanding of the complexity of urban planning and how they can contribute to the improvement of their own community. Students will use the skills of identification, analysis, individual and group problem solving, experimentation with art media, and application of art techniques.

## Goals

Upon completion of the unit, the students will:

• Have a better understanding of the community where they live.
• Have an increased understanding of how the use of buildings and land affects the environment.
• Understand how transportation choices impact the environment and the quality of life in the community.

## Objectives

 The students will:

• Identify the needs of the community in terms of functions and land use;

- Identify issues of our city such as sprawl, pollution, transportation;
- Propose solutions for a sustainable community;
- Participate in a cooperative learning group by volunteering for at least one role: e.g., scribe, facilitator, draftsperson;
- Participate in a mock Review Board or Planning Commission.
- Design an infill project and construct a scale model;
- Identify ways that cities can change and develop over time;
- Identify transportation options and explain their impact on the environment.
- Write a report about their design decisions.

**Resources**

MPC website:  http://www.knoxmpc.org   Find *Plans and Studies* on the left column of the home page.
Look for specific city sector plans, e.g. *North City Sector (for a list of sector plans, see page 53),* and Historic Preservation: http://www.knoxmpc.org/historic/edu/styles.htm and *Old North Knoxville Historic District Design Guidelines.*
New Urbanism website:
http://www.newurbanism.org/newurbanism/smartgrowth.html
NEXT.cc  is an eco Web learning site with information used by artists, designers, scientists and environmentalists

**Materials**

Any recycled cardboard: paper towel rolls, toilet paper rolls, oatmeal boxes, cereal boxes, shoe boxes;
Scraps of mat board (can be obtained from frame shops);
String or yarn; buttons and bottle caps;
Glue, scissors, craft knives (for mat board),
Kraft paper or butcher paper on large rolls, construction paper, newsprint (for rough drafts)
Choice of drawing media: crayons, markers, etc.

*Note: Prior to the lesson, send a letter to the parents about the collection of recycled boxes for the activity.  Explain that recycling and reusing is an important aspect of the Smart Growth plan to conserve our environment.*

**Procedure**

*Session 1*
Show the CD (visual) presentation on Knoxville-Knox County's Plan. Tell students that they will be working in groups to design a building for a specific (vacant) site in Knoxville. Later, they will construct a model of the building and place it in the environment/site from a selected sector plan* designed by the Metropolitan Planning Commission.

*Sessions 2 and 3*
Read the the text of the Knoxville-Knox County Growth Policies and of the Development Policies in small groups or aloud to the whole class. Question students for comprehension. Engage the groups in brief discussions.
*Key questions: How has the automobile contributed to current problems in Knoxville? (sprawl, traffic congestion, pollution) Do you need a car to get to get to school, work, or parks in your community? Can you find everything that you need within a 15 minute walk from your home? What does the vision of the Metropolitan Planning Commission's General Plan offer as an alternative to sprawl? How does the vision respond to the natural environment, vegetation, and views?*

Overview of the project: Tell students that their plan will reflect their choices about what to preserve and what to build. They will role play the careers of developers, architects, and planners as they carefully design a building for the city and apply to the Review Board for approval. (The class may vote on three or four representatives to fill the positions on the Design Review Board- for commercial areas-;the Historic Zoning Commission-for historic districts, or the general Planning Commission). After approval, they will construct a model of their design and place it on the approved site.
**Note: Each group member will select at least one role, i.e., draftsperson 1-completes the site plan; draftsperson 2 – completes the floor plan; etc. The roles may vary depending on how many people are in the group. (see the Activity Sheet in the Resource section.**
(optional) Homework Assignment: Each group will brainstorm a list of questions for a community survey, e.g. "What do you like/dislike about Knoxville-Knox County?" The students will survey at least 5 people- parents, classmates, teachers, neighbors- and note their responses to each question.

*Session 4 (optional)*
***Each group will compile their data*** *from the survey(s). Students will read the Agenda for Quality Growth (*[www.knoxmpc.org](www.knoxmpc.org)*) and compare survey responses that they received to the list of 10 concepts from the MPC survey.*

*Key questions: Can you place each of the concerns - stated by your survey respondents- in one of 10 concepts of the Agenda for Quality Growth?  What concern received the highest number of responses from your survey participants?*

*Session 5 (in the Media Center or a computer lab)*
**Each group will locate a site** for development. Working collaboratively, students will choose a sector plan from the Metropolitan Planning Commission's website.  If you have internet access, you may use ***google map*** to find a commercial district within the city sector.  Some of the targeted business areas are: Burlington, Cumberland Avenue, Chapman Highway, Central Avenue, and Downtown.   The group will target a vacant lot or an area that needs to be refurbished.

*Session 6 (in the media center or computer room)*
The students will consider the destinations that are reachable via sidewalks, greenways, or bike trails throughout the community.   They may also visit the website of New Urbanism (http://www.newurbanism.org) and read about "Smart Growth" under the New Urbanism tab.  Can they create appropriate building(s) for this sector/community, e.g. a "new build" in an historic neighborhood or a building in an older commercial area?  Each student will research a community in a sector plan on the MPC website and list the architectural components or the original style(s) of the buildings.

*Session 7*
The students will layout the selected area of the sector plan.  Each group will draw the site layout/plan on the butcher paper and include any lakes, rivers or streams.  Explain that downtown Knoxville, like most cities, is based on the grid layout.  They must identify the highways, streets, boulevards, corridors, etc.  They must also consider the skyline: group the taller buildings in the downtown, place medium and shorter buildings as a step-down from the taller buildings.  Question them about the parking choices such as the use of on-street parking or the placement of parking garages and/or lots.  What about parks and greenways?  Tell them to think about everyone who dwells in the city---young and old, rich and poor, visitor and resident.

*Sessions 8 and 9*
Each group will complete three scale drawings: 1) a site plan that will show the relationship of the new building to its neighbors, the position of the building on the land, the height and shape of the land, the setback and the path to the front door. 2) A floor plan on the selected site that includes the dimensions of rooms and placement of windows and doors. They must also consider who will be using the building.  3) A front elevation of their building that responds to design principles: the pattern of windows and doors, the proportion of the building in relation to the people, and the color and materials of the exterior.

*Session 10*
*Each group will write a report about their design decisions.  They must consider how the block and street are organized, the concepts that were addressed in the site plan, the floor plan and the elevation. Design problems that were addressed might include the issue of creating the proper setback and other ways that the new building maintains the rhythm and continuity of the neighborhood.  Refer to the MPC's policies as a checklist for appropriate development/documentation.*

*Session 11*
The group will present their plan to the Planning Commission, Design Review Board, or the Historic Zoning Commission. Each group must have the approval of the committee before they begin construction of the model.

*Sessions 12 through 14 (or more)*
The group will construct a model of the building from recycled materials:  cardboard tubes, cereal boxes, scrap mat board, string, etc.  They may paint the model.
The model will be placed in the designated vacant lot on the large layout of the community.
The procedure may be repeated for additional buildings.

**Closure:**
Invite an architect or a city planner to your classroom to tour your exhibition of city-sector layouts and to comment upon city plan.

Students will write a personal reflection about their learning experience…what worked, what didn't, and what they could have done differently.  How did the collaboration affect their design?
Did the student demonstrate an understanding of land use and the problems of the city?
Were the architectural drawings carefully rendered?
Was the model structurally sound?
Did the student use the appropriate design principles?
Can the student explain how the design space was used and what choices were made in the process?

**Assessment:  Model of a Commercial Building or a Residence**

The design must be constructed from recycled materials- cardboard, paper, string, etc.-and glue.  It may be painted with tempera or acrylics.

The size of the structure must be at least 5 inches in any dimension and no larger than 36 inches in height, width, or length and the scale approximates the scale of the site plan, the floor plan and the front elevation.
The structure must be sturdy enough to stand freely.
The building is aesthetically pleasing.  Braces, struts or other supportive devices must be hidden from view or designed to complement the building aesthetic.
The building must have at least one entrance, at least four rooms, and each room must have a door and windows.



*Plans for the Magnolia Avenue Corridor call for the restoration of this once vibrant urban street through the use of site design principles.*

# Think Green…Ways

## Overview
*The forests of Knox County enhance the economic and natural environment.  Trees improve the quality of the air we breathe and the water of our streams and rivers.  They provide cool canopy in the summer and enhance our property value.*

The Metropolitan Planning Commission reports a substantial decline in forested land in Knox County.  The study by the American Forests and the Knox County Engineering and Public Works Department found that over 4 percent of the county's forested areas were lost between 1989 and 1999.  A satellite image shows gray areas with few trees in the urban areas; however the canopy in urban and agricultural areas increased by 9.8 percent during the study.  This increase in the growth of trees could be due to the city's tree planting program, forest succession on agricultural land, and the homeowner's desire to plant yard trees.

*The components of the MPC plan for tree conservation are:*
• Protection of key resources, including ridges and riparian areas.
• Planting programs for specific types of developments, including parking lots and buffers between residential and other land uses.
• Planting programs on public land, particularly schools and libraries.
• Tree conservation along rural roads, local streets, cross-county arterials, and interstates
• Standards and practices for planting trees
• Programs that can be pursued to implement the plan

## Benefits of Trees

**Air Quality – Trees are responsible for the removal of carbon dioxide ($CO_2$) from the atmosphere.  A tree uses the carbon dioxide while releasing oxygen into the air.  This process, called photosynthesis, helps to reduce air pollution caused by vehicles that burn fossil fuels such as the automobile.**
Trees also remove some particulates from burning fuel such as diesel.  High levels of particulates and ozone are problems in the Knoxville area.  The U.S. Environmental Protection Agency cited the Knox region as non-compliant with

the particulate and ozone levels that are considered healthy.   The recent research indicates that ozone can damage tree leaves, thus reducing effectiveness in removing the overabundance of $CO_2$ from the air.  The conservation of trees and reforestation of the Knox area can improve the air quality.

**Economic Well-Being** – Trees are essential to the quality of life.  Places such as Asheville, North Carolina, Montgomery County, Maryland and Fairfax County, Virginia are good examples of areas that attract and keep businesses and residents due to their tree protection and planting programs.

**Physical and Psychological Well-being** - Studies indicate that walking is the favorite recreation activity of Americans.  People desire a setting of trees to separate the walking paths from the roads.

Other studies have cited the therapeutic value of trees for hospital patients and children with attention deficit disorder.  Trees also reduce the sound of traffic.

**Energy Conservation** – Trees lower the temperature by 5 to 9 degrees Fahrenheit.  Studies by the EPA show that trees can lower the cost of air conditioning by 10 to 50 percent.

**Storm Water Control and Water Quality** – The Knox County-American Forest study shows that trees reduce the flooding and erosion caused by rainfall and storm water.

The forest also reduces the sedimentation of streams and lakes because the leaves deflect the rainfall while the roots and groundcover hold the soil in place.

The MPC provides guidelines for the protection and enhancement of Knox forests with particular attention being given to hillside, ridges and stream corridors.



Nearly all survey respondents felt that trees along streams and rivers should be protected.

Conservation of hillsides and slopes are essential because the forest provides a habitat for larger and migrating animals and protects the land from erosion.

*Riparian buffers* are the natural or restored areas of forest that surround the streams, rivers and lakes. The benefits of riparian forests are: 1) water quality improves when stream banks are protected, 2) habitats of wildlife are protected, 3) flooding is reduced and 4) opportunities for public recreation are increased. Generally the buffer is 50 feet wide with an inner zone of 25 feet close to the stream edge. It is important to maintain this area with native plants and species while the outer zone of 25 feet can include grass or other natural groundcovers.



*Conner Creek is lined with woodlands.*

# Recommended Species

**To Establish a Riparian Buffer:**
- Cottonwood
- Box Elder
- Red Maple
- Ash (green)
- Red Osier Dogwood
- Gray Dogwood
- Silky Dogwood
- Sycamore

**To Sustain a Mature Riparian Forest:**
- Swamp White Oak
- Pin Oak
- Black Walnut
- Silver Maple
- Hawthorn
- Rusty Blackhaw
- Maple Leaf Viburnam
- River Birch
- Water Oak
- Willow Oak
- Sugarberry
- Blackgum
- Green Ash
- Persimmon



*Sycamore (white bark) is a tree that protects and maintains a riparian buffer.*
*photo: Suzanne Wedekind*

## ACTIVITY: Altered Book

Create an "altered book" as a way of keeping a journal about ecology and/or the urban environment.  Books that are outdated, worn, or otherwise discarded can be recycled and reused and repurposed.  The process of altering an old book and finding a new purpose reinforces the idea of conservation by reducing consumption (of trees)  and reusing and recycling discardable objects.

Pages can be glued together, painted, cut or folded, stamped, covered with other papers, found objects or collage material.

The altered book should have a theme or central idea.  The theme of your altered book might be "forests and trees" or a related environmental theme.  Research at least two trees on the list and include them in your book.  You may draw, paint, or collage images  that represent the foliage, bark, basic shape and/or structure of the tree(s).  You may also write poetry or include text such as quotations or words that relate to the theme.

Go to the MPC website and "Tree Conservation,"  or a website of Ohio trees:  http://www.oplin.org/tree/

## Activity: Web Search

Go to www.NEXT.cc  and click on the Forests link and /or the Tree Identification link for more ways that you can explore the forest.

One touch of nature makes the whole world kin.
*William Shakespeare*

-



*This greenway provides a pedestrian route that parallels the street.*

*photo: Suzanne Wedekind*

## Principles for Planting Trees on Public Grounds, Parks, Libraries, and Schools

• Plant a mix of shade trees, evergreens and small native trees like dogwoods or redbuds.
• Use a mix of trees to frame the edges of ball fields or playgrounds.
• Plant shade trees near playgrounds, benches or picnic areas.
• Provide trees in the parking lots with one shade tree per 10 parking spaces.
• Remove invasive plants* so that native plants aren't smothered.
• Provide trees that support wildlife.
• Do not plant trees that bear fruit and nuts along paths or parking areas.

Does your school have program for landscaping or planting trees?  The art club, PTSA, or scout groups can adopt an area for planting of native trees.

## *Invasive Plants

These non-native plants should not be planted because they tend to threaten wildlife by reducing the nut and seed-bearing plants.  The following plants should be removed:

**Trees**
• Tree-of-Heaven
• Silktree (mimosa)
• Princess tree (Paulownia)
• Chinaberry Tree
• Tallowtree (Popcorn Tree)
• Russian Olive
• White Poplar



*A Princess Tree (Paulownia), one of the region's invasive plants.*

**Shrubs**
- Silverthorn (Thorny Olive)
- Autumn Olive
- Chinese/European Privet
- Japanese/Glossy Privet
- Bush Honeysuckle
- Sacred Bamboo (Nandina)
- Multiflora Roses

**Grasses**

- Giant Reed
- Tall Fescue
- Cogon Grass
- Nepalese Brown Top
- Chinese Silver Grass
- Bamboos

**Vines**
- Oriental Bittersweet
- Climbing Yams
- Winter Creeper
- English Ivy
- Japanese Honeysuckle
- Kudzu
- Vincas (Periwinkles)



*English ivy can destroy trees.*



*Bush Honeysuckle is an invasive species found in many urban and suburban landscapes.*

A variety of native plants complements the architecture of the urban landscape.

# Landscape Design with Native Trees

## Objectives:

• To gain an understanding and awareness of the benefits of trees
• To learn to differentiate between native and invasive species of trees and plants (handout/worksheets)
• To create a preliminary sketch of an area of their school grounds, including playgrounds or parking areas
• To develop the sketch as a landscape design that includes native vegetation and a variety of native trees (minimum of two)
• To participate in a class critique with constructive criticism and positive input.

## Materials and Resources:

Handout: native and invasive species
Photos of the school grounds, focusing on areas that require reforestation and/or removal of invasive species
Photos of native species or internet access to www.arborday.org (Select "Trees", then "What Tree Is This?" and "Tree Guide" or "The Right Tree in the Right Place").
Books about trees and plants, photographs of landscape design
Large sheets of white drawing paper
Pencils, and other drawing media, pencil sharpeners, erasers
Drawing boards and tape
Viewing frame
Suggested painting supplies:
Watercolor paper, watercolor pencils, tempera or watercolor paints, palettes, brushes, water containers, paper towels

## Vocabulary:

Invasive plants – plants that are not native to an area and often very adaptable in that they have an ability to thrive in a variety of soils and environmental conditions.  They are often called exotic plants.

Landscape architect – designs parks, playgrounds, and outdoor areas around buildings or highways.  They work closely with urban planners and architects to improve the aesthetic quality and sustainability of a natural setting.

**Procedure:**

*Session 1*
Prior to class, arrange for the class to have internet access.

Survey the class by asking them to think about the school grounds and any sidewalks, play areas, parking lots, etc.  Have them brainstorm the things that they like (make a list on the board) and any improvements that could be made in the form or function of the natural environment.

Introduce the term **landscape architect.**  Discuss reasons for landscape designs: e.g. ecology, aesthetics, privacy.  Explain that they will be able to work on a landscape design for the school grounds.

Have students read the section on Tree Conservation.   Then give each student a list of the suggested native plants.  Explain that they will research (on the internet) at least three native trees and sketch them.  These preliminary drawings will be evaluated for likeness of shape and/or structure and distinguishing characteristics such as color and texture of bark, flowers, foliage.

*Session 2*
Prior to session, you may take a walk on the school campus to look for any plantings, natural areas that have remained unchanged, clearings, embankments or leveled areas where the earth was moved for sidewalks, buildings, or streets.

Take the class outside to draw the landscape or provide photos of the school landscape that focus on areas of concern.  Students should select an area that would require planting of new trees or removal of invasive species (prior to replanting).   They may use a viewfinder to select the exact view.  (This lesson assumes that students have had some instruction on basic perspective techniques such as foreground and background, overlapping, etc.)  Students should draw at least one large tree or shrub in the foreground.  Instruct them that not all trees will have to fit the format of the picture; e.g. some trees may appear to be cropped by the edges of the paper.

*Sessions 3 and 4 (or beyond):*
*Students will select the best plan and draw it on a sheet of watercolor paper; they will paint their landscape with selected media.*

**Critique**

Ask students to define the term **landscape architect**.
Can students name some native species and some **invasive species**?
Were they careful about selecting a good scene by using a viewfinder?
Did everyone draw/paint at least two native trees?
Did students use several perspective techniques in the landscape design?
Did the student demonstrate creative thinking in the selection of trees/ vegetation and the overall environmental design?

Students at West Valley Middle School interpret a city park in the style of Romare Bearden.

# Romare Bearden's Park in the Martin Luther King Corridor

## Overview of the MLK Corridor

The MPC has several areas of focus for the revitalization of the area of Martin Luther King Jr. Avenue (MLK) Corridor.  The 1.86 square-mile area is bounded by the alley south of Magnolia Avenue on the north side, Holston Court on the east side, Skyline Drive to the south, and Austin Homes to the west..  The Five Points redevelopment area, Burlington commercial district, eight parks, two schools and one recreation center are within the designated area.

In February of 2006, Mayor Bill Haslam hosted a public meeting to discuss the MLK Corridor Plan.  Volunteers from many community organizations facilitated group discussions about "the importance of the plan to maintain single-family neighborhoods, traffic-calming measures, the need to create gateways into  the community, strategically placed neighborhood banners, and ways to improve the physical environment of Burlington and Five Points commercial areas."

The plan to revitalize the MLK Corridor includes a policy for continued 1)involvement of the steering committee, 2) neighborhood input and the utilization of neighborhood resources in the implementation of projects, 3) an annual evaluation of the plan, 4) a proactive approach to neighborhood code enforcement and 5) an evaluation of budgets and programs to ensure that they are able  to implement portions of the plan.

## Historical Overview

In the late 19th century, the area known as Rutledge Pike (near the current McCalla and MLK, Jr. avenues) and Armstrong Ferry Pike (now Holston Drive) was open countryside.  In 1889, the Knoxville Electric Street Railway was founded by William McAdoo.  His company built a trolley line to the place where these two pikes split which led to the development of the Burlington area.  The area was known for its Speedway Circle, an oval race track designed for horses that was later used for car racing.  Eventually, it became the site of a residential area.  Cal Johnson, an affluent African-American businessman owned the track that welcomed Knoxville's first airplane landing in 1911.

The 1890 streetcar lines along McCalla and Park Avenues led to the development of Park City, an area known for several parks.  Park Avenue (now Magnolia) led to Chilhowee Park where 19th century Knoxvillians could swim, boat or play baseball. Park City was annexed by Knoxville in 1917.

The original (1929) park plan of Knoxville was designed at a time when most schools were considered an important aspect of the park system.  The grounds of Austin High (now Vine Middle), Fair Garden, Eastport, and Park Lowery were walking distance to most residents.   With the reduced enrollment and subsequent decline of inner city schools, the community lost its recreational parks and playgrounds.  The latter part of the 20th century saw the addition of several parks: Linden Avenue Park, Walter Hardy Park and Harriett Tubman Park.



*A park can be a quiet place, or it can include more active forms of play...or it can include both.*

**The National Recreation and Parks Association (NRPA) has standards for different types of parks.  The following is a list of the kinds of parks and examples within the MLK corridor:**
Pocket parks, greens, or squares are usually less than a few acres and may include sidewalks, gazebos, benches and landscaping with an open area for informal play.  Examples are Union Square Park and the proposed South Chestnut Green.

Neighborhood parks provide recreational space and playground equipment for children of all ages.  The area serves a ¼ mile urban area with a population of 1,000 to 5,000 people.  Examples are Linden Avenue Park, and Eastport Park.  Community parks provide recreation facilities for people of all ages.  They are located on major streets and are accessible by bicyclists and pedestrians.  The park may have a swimming pool, tennis courts, large sheltered picnic

areas, and landscaped areas.  The park serves the entire community with 5 to 8 acres per 1,000 people.  The Harriet Tubman Park adjacent to Vine Middle School is an example.

Other parks in the Park City area that require rehabilitation are Dr. Walter Hardy Park and the adjacent Odd Fellows Cemetery.  The rehabilitation of these parks could be coordinated into a trail system that would be an asset to Park City. There is also a proposed Williams Creek Greenway and Recreational Trail that starts near MLK and travels south towards KUB's Mark Whitaker Water Plant.  A greenway trail is recommended to improve water quality and flooding issues. This trail would connect the river to MLK, Jr. Avenue.

**Romare Bearden (1912-1988), like Dr. King, was a civil rights activist.**
He is a renowned African-American artist who grew up in rural North Carolina and in New York City.  His parents were friends with many leaders of the Harlem Renaissance who influenced Bearden's career focus of paintings, prints and collages of the African-American genre.  The subject matter ranges from family gatherings in the rural south to jazz musicians in the urban northern cities.  His collage style is similar to the work of the Cubists, but the theme often expresses the diaspora of the African-American experience through his use of disproportionate body parts and facial features.  Each part of the face or figure was cut from a different photo or illustration without regard to size relationships. He later assembles the seemingly unrelated parts into a new face or figure(s).

The application of parts of old magazine and newspaper photos, scraps of paper and recycled fabric or string provides easily-accessible media for student designs of a park in the Martin Luther King Corridor.

**Objectives**
**The students will**
- Gain an understanding and awareness of the historic development of the area of Knoxville known as the Martin Luther King, Jr. Avenue Corridor and its parks and green spaces.
- Study the Land Use Map for the Martin Luther King Corridor and identify existing parks, park service areas and areas for future parks; then select an area for your design of a park.
- Draw a park--either an aerial view or a traditional landscape--and provide collage elements similar to the style of Romare Bearden.
- Write a summary report about their design and tell why it is appropriate for the designated area.  Use standards of the National Park Service Association to describe the form and function of their park design.

**Resources**

Video (optional) *Romare Bearden: Visual Jazz*
Web access:  Photos of Romare Bearden's work can be found at www.beardenfoundation.org
Knoxville-Knox County MPC's land use map for the Martin Luther King Corridor (optional-photocopy one for each group)
www.knoxmpc.org , then go to "Plans and Studies", select "Corridor Studies" and "Martin Luther King, Jr. Avenue"
Visual presentation (optional) to examine the development of the city of Knoxville
Photographs, books, magazines that provide information and inspiration for the design of parks

**Materials**
Large sheets of craft paper
Newspaper
Magazines
Wallpaper
Construction paper
Scraps of string, ribbon, lace, foil, etc.
Glue and scissors
Pencils and other drawing media, erasers, rulers and /or French curves
Newsprint to sketch the park or green space

**Vocabulary**
**Collage** –originally a French word (coller) meaning "to paste."    It is a picture or a design created by adhering flat elements such as newspaper, wallpaper, illustrations, photographs, text, etc. to a flat surface.  Most of the elements of a collage are "found" objects.  The cubists were the first artists to use this technique.

**Diaspora** – the scattering of any group of people; dispersion

**Procedure:**

*Session 1:*
Begin the lesson with a brief history of the MLK Corridor and 'Park City".   Introduce the artist, Romare Bearden as a contemporary of Martin Luther King, Jr.   If possible, provide images of historic east Knoxville from the McClung Collection or the MPC's study of the MLK Corridor.  Additional information about Romare Bearden can be obtained online or with the video/DVD, *Visual Jazz.*   Provide several examples of Romare Bearden's collage technique.

Distribute newsprint for the rough draft of a park.  The scene may be drawn in perspective with foreground and background.  Alternatively, the student may draw a map of the park with symbols for the placement of trees, sidewalks, playgrounds, etc.

*Sessions 2 & 3:  Students will cut out scraps of magazines, colored paper, string, and other collage elements to complete their park.  They may include people in the the park; remind them to use the parts of several illustrations or photographs for each figure or face.*

# Vocabulary

**arcade** – an open, roofed, ground floor passageway supported by columns, piers, or pillars.

**balcony** – an exterior platform that projects from the wall of a building and is surrounded by a railing, balustrade, or parapet.

**bastion** - a projecting part of a fortification.

**canopy tree** – a tree with a wide spread of branches that can provide shade in summer.

**deck** – that element of a waterfront structure which provides the lowest floor level or platform for use, under which occur only the structural support system for the structure, and no usable space.

**façade** – the front part of a building; b) any side of a building that faces a street or an open area

**finial** – an ornament usually foliated on the top of a peak of an arch or arched structure, e.g. a spire, pinnacle, or gable

**footprint** – the area that the ground floor of a house/building covers

**gable** – that part of the wall immediately under the end of a pitched roof, cut into triangular shape by the sloping sides of the roof

**gingerbread** – heavily, gaudily, and superfluously ornamental.  Found in Gothic Revival and Queen Anne styles.

**hip(ped) roof** – a roof with four sloped sides

i**nfill housing** – the construction of new houses on vacant lots

**LEED** – Leadership in Energy and Environmental Design Green Building Rating System by the U.S. Green Building Council (USGBC) defines and measures that should qualify as a "green building".

**mass** – bulk or size

**muntin** – 1) a secondary framing member to hold panes within a window, a window wall, or glazed door.  2) a intermediate vertical member that divides the panels of a door.

**pitch** – the slope or steepness of a roof

**porch** – a covered entrance to a building

**proportion** – the relation of two things in size, number, or degree

**rhythm**  - the proper relation of parts producing a harmonious whole, especially by repeating certain forms, textures, and colors.

**scale** – a) the size of a plan, map, drawing, or model compared to what it represents; b) relative size or extent

**setback** – the distance between the front door of a house or building and the public sidewalk, alley, or street.

**shingle** – a roofing unit of wood, slate, tile, concrete, asbestos cement, or other material cut to stock length, widths and thickness, used as an exterior covering on sloping roofs and sidewalls, applied in an overlapping fashion.

**sidelight** – a framed area of fixed glass alongside a door or window opening.

**stoop** – a frontage type where the raised entry platform is on the principal frontage and the first story is above the level of the ground creating a change in elevation.

**transom** – a window or pane above a door, whether rectangular or arched, also a window that is hinged along its top edge.

**unity** - an ordering of all the elements in a design so that each contributes to a unified aesthetic effect.

**zone** – any region or area especially considered or set off;  b) an area in a town or city under special restrictions as to building.

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*Knoxville South Waterfront*
*Martin Luther King, Jr. Avenue Corridor Plan*
*Old North Knoxville Historic District Design Guidelines*
*Knoxville-Farragut-Knox County Growth Policy Plan*
*The Knoxville-Knox County Tree Conservation & Planting Plan*

**Sector Plans:**
*Central City Sector Plan*
*South City Sector Plan*
*East City Sector Plan*
*North City Sector Plan*
*Northwest City Sector Plan*
*West City Sector Plan*
*City of Knoxville One-Year Update Plan*
*South County Sector Plan*
*East County Sector Plan*
*Northeast County Sector Plan*
*North County Sector Plan*
*Northwest County Sector Plan*
*Southwest County Sector Plan*
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National Building Museum
401 F Street NW, Washington, DC 20001
Telephone: 202 272.2448
Facsimile: 202 376.3564
Website; www.nbm.org

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# Urban Planning
(place this sheet in your folder - for evaluation)

Team name_____

**Stage 1 (Every student will be a scribe, a facilitator, or a draftsperson and will work on the construction.)**

Scribe (student name)_____(types the report of the group)
Facilitator (student name)_____(leads group discussions, oversees construction)
Draftsperson 1 (student name)_____(draws floor plan to scale)
Draftsperson 2 (student name)_____(draws the front elevation to scale)
Draftsperson 3 (student name)_____(draws the site plan to scale)
Construction (everyone)_____(group effort)

## Idea Stage

**Timeline: 2 days**
Written report (guidelines)

A) SITE PLAN - Discuss the organization of the block and the street, the relationship of the new building to its neighbors, the position of the building on the lot, the height and shape of the land, the setback and the path to the front door.
B) THE BUILDING - Discuss the purpose of the building: e.g., who will be using the building, how design principles are reflected in the model: e.g., pattern of windows and doors, the proportion of the building in relation to the people, and the materials and colors.
C) Discuss any other ways that the new building maintains the rhythm and the aesthetic of the neighborhood.

All group members will research the site and write the report.  The scribe will type the report and print two copies 1) for grading and 2) for the exhibition.

Knoxville-Knox County Metropolitan Planning Commission (www.knoxmpc.org)
New Urbanism www.newurbanism.org