

CHAPTER 5

Urban Development and Planning

The Research Triangle metro area has two distinct physical characteristics. First, most metro areas have at their cores high-rise office and residential towers, public buildings such as courthouses and city halls, major theaters, and retail shopping opportunities. The core of the Research Triangle metro, however, is mostly open space. It is made up of a state park, an airport, and a collection of low-rise office buildings inhabited by research and development firms, hidden behind trees on large campuses. This low-density, monoculture of uses in the heart of the metro has its advantages but it also poses significant challenges in terms of serving the area with public transit and creating the type of mixed-use development that helps to reduce commuting and its related problems of congestion, air pollution, and cost burdens. Second, the development pattern of the Research Triangle metro area is one of the most sprawling in the country. The area is characterized by low-density development, a separation of land uses—such as homes and offices—poor connectivity of streets, and dispersed activity centers.

This chapter will discuss these distinctive characteristics of the Triangle and the challenges they present. It will also describe the actions being taken to address those challenges as well as the obstacles to doing more to maintain the area's high quality of life.

THE TRIANGLE'S DISTINCT DEVELOPMENT PATTERN

The distinct physical characteristics of the Research Triangle metro have been influenced by both historical and geological factors. As discussed in [Chapter 1](#), the three towns that define the Research Triangle have very different histories and reasons for being. Raleigh was developed as a state capital, Chapel Hill as a university town, and Durham as a center of manufacturing. The area between the three major towns was largely farmland and forests with scattered hamlets such as Cary and Morrisville. Thus, the middle of what is now the Research Triangle metro area was largely, from a development point of view, hollow. It was the outskirts of all three cities and thus it was a logical place to put a five-thousand-acre airport, a six-thousand-acre state park and, later on, the seven-thousand-acre Research Triangle Park. At the time those development decisions were made, no one envisioned this hollow area between the three towns as the center of a future large metropolitan area.

Moreover, those early decisions have had staying power. The idea of swapping more peripheral land for William B. Umstead State Park was proposed in

the 1970s as it stood in the way of Raleigh's westward expansion toward the RTP. Open-space advocates mobilized in defense of the park, however, and this proposal was summarily rejected. The relocation of RDU Airport is very unlikely, given its convenience and the cost of replicating the infrastructure. Finally, although it is conceivable that some parts of Research Triangle Park could be redeveloped into an area of higher density and mixed use, most of it will likely retain its low-density campus character due to existing building investments and the desires of its landowners. Thus, it is very unlikely that the Triangle will ever be structured like most other metropolitan areas where the highest densities and most intensive uses are found in the centers. The Research Triangle metro area's largely low-density core, for better or worse, will remain a distinctive characteristic of the area's spatial structure.

This is not to say that there are no opportunities for creating higher-density areas in the Triangle's core. In fact the gravitational pull of the RTP has drawn development toward it, distorting what would have likely been a more conventional suburban development pattern around the individual towns. If we examine the pattern of urbanization from 1950 through 2000 and a projection for the year 2035,¹ maps for 1970 and 2000 show evidence of urbanization on the sides of Durham and Raleigh closer to the RTP. (The southwest corner of the park abuts Jordan Lake watershed lands and thus it has development restrictions.) The main reason it took so long for urbanization to reach the eastern side of the RTP was the lack of available water and sewer services. The originally developed section of the RTP relies on Durham County's water and sewer system so trunk lines were extended to the west side of the park. Other developers could then tap into those lines. No such lines, however, were run from Raleigh. The lines on that side of the park were extended bit by bit as development moved westward. It was not until the late 1990s that Cary's water and sewer lines reached the eastern edge of the RTP. With the availability of water and sewer, the privately held land around the RTP is being developed at much higher densities. An analysis of development conducted in 2007 by the Research Triangle Foundation indicates that a total of forty thousand units of housing and 13 million square feet of commercial space have been developed within a four-mile radius of the RTP.²

Historical and geological factors also account for another distinct feature of the Research Triangle's development pattern: urban sprawl. The agrarian roots of the early populace of the three towns, combined with the low wages paid by manufacturers, meant that many town residents wanted lots large enough to have substantial gardens. Raleigh's original plan, for example, contained one-acre lots and Chapel Hill's plan contained two-to four-acre lots. Moreover, the fact that the Research Triangle area has no natural geological constraints, such as mountains or large bodies of water, helped keep land prices low, which allowed people to afford larger lots. Low-density development was also favored because the area's soils are rich in clay and not well

suited to on-site septic systems. Building lots not served by sewer systems had to be large in order to accommodate both the initial septic systems and “repair areas.” Thus, for most of its history low-density development has been the norm in the Research Triangle.

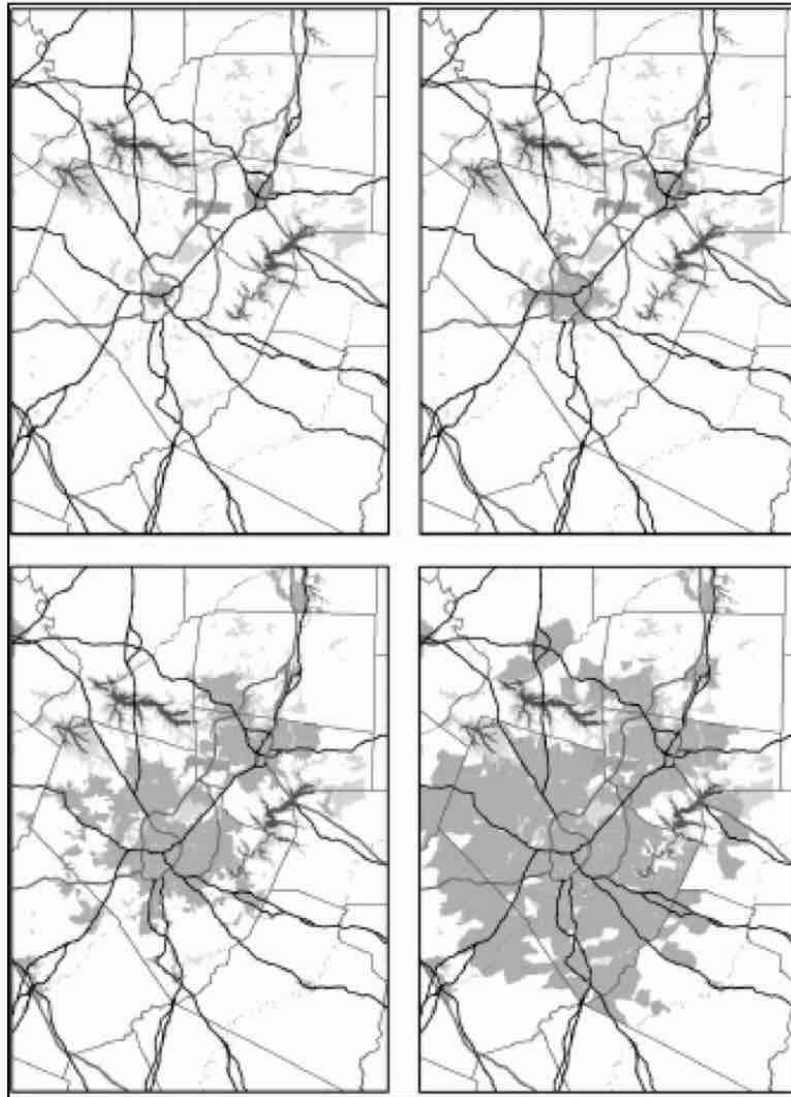


Figure 30. Urbanized areas of the Triangle in 1950 (top left), 1980 (top right), and 2000 (bottom left) with a forecast for 2035 (bottom right) (courtesy of the Triangle J Council of Governments).

Taken together these historical factors have resulted in a development pattern that might be considered a poster child for urban sprawl. A 2003 analysis of sprawl in eighty-three metropolitan areas across the country found that the Raleigh-Durham MSA was the third most sprawling metro area, behind Riverside-San Bernardino, California, and Greensboro.³ This ranking was based on the combination of four indicators of sprawl: residential density; the mix of homes, jobs, and services; the strength of activity centers; and the ac-

cessibility of street networks. The Raleigh-Durham area ranked lowest on the mix of homes, jobs, and services (remember that the RTP has no homes and little in the way of services), and it ranked third lowest in the measure of residential density. The Raleigh-Durham area ranked the sixteenth lowest on the strength of activity centers and the twenty-second lowest on the accessibility of street networks. It is not surprising then that some have begun to refer to Raleigh as "Sprawleigh."⁴ Sprawl combined with lack of attention to amenities for pedestrians has resulted in the Raleigh-Cary metropolitan area being ranked as the sixth most dangerous for pedestrians among the country's fifty-two largest metropolitan areas.⁵

The Research Triangle area's historic low-density, sprawling development pattern has continued in recent years as land prices have remained relatively inexpensive and residential developers have largely catered to upper-income households interested in purchasing single-family homes in traditional residential neighborhoods. The total number of building permits issued in the Triangle increased steadily from approximately 6,000 in 1990 to a high of over 18,000 in 2005 before the recession slowed construction in the area.⁶ During the 1990s the total number of multifamily building permits issued in the seven Triangle counties increased from under 100 to a high of 427, or approximately 3 percent of all approved permits.⁷ During the 2000s, however, this modest number fell. In 2005, for example, 99.2 percent of all residential building permits were for single-family homes. Moreover the lion's share of those homes was built in subdivisions that were 100 percent residential.

Sprawling development patterns have been associated with a variety of urban problems.⁸ First, low-density development patterns necessitate a heavy reliance on automobiles to access employment and shopping opportunities and, at the same time, make public transportation less feasible. The heavy reliance on autos, in turn, adds to both air and water pollution and to the generation of greenhouse gasses. It also leads to traffic congestion as major arterials become overcrowded, and to reduced physical activity, such as walking or bicycling, which, in turn, contributes to obesity and its related health problems. Sprawl has also been associated with the loss of open space, including agricultural land and important wildlife habitat, while at the same time drawing people and investment out of central city areas which furthers social divisions and results in inefficient use of public infrastructure. Research has also found that traditional sprawling suburban development is "costly to create and costly to maintain."⁹ Finally, sprawling development has been criticized for being aesthetically unpleasing and for undermining the sense of community and psychological health of area residents.

The negative impact of the Triangle's sprawling development pattern has not been lost on the area's planners, politicians, and conservationists. Since 2000 they have pursued several strategies for containing it including the promotion of higher density, mixed-use activity centers, open-space preserva-

tion, downtown revitalization, and the development of a commuter rail system.

HIGH-DENSITY MIXED-USE ACTIVITY CENTERS

In recent years, the Triangle's major municipalities have been promoting higher density, mixed-use activity centers by revising their comprehensive plans. The City of Raleigh, for example, undertook a two-and-one-half year planning process beginning in 2007 to aid in the transition "from Mayberry to Metro."¹⁰ This process resulted in the 2009 adoption of a new comprehensive plan for the city, which seeks to transform its development pattern from one characterized by sprawl to one characterized by high-density, mixed-use nodes along transit corridors. Anticipating both high speed-intercity and regional rail and bus service, the plan calls for a multimodal transit center in downtown Raleigh. It also calls for eleven transit-oriented development nodes around the anticipated stations of the fixed guideway transit systems. These nodes are designated for high-density residential development (twenty-eight dwelling units per acre), neighborhood mixed-use development (forty dwelling units per acre along with neighborhood-oriented commercial development), and community mixed-use development (seventy dwelling units per acre along with community retail, office space, hotels, and theaters). These densities are substantially higher than what was allowed under the old plan and development ordinance.

For its part, the City of Durham adopted a new comprehensive plan in 2005 designed to encourage mixed-use development; promote the use of transit, walking, and biking; discourage auto-intensive uses; and provide an "enhanced street level experience."¹¹ The plan defines five development tiers: rural, suburban, urban, compact neighborhood, and downtown. The compact neighborhood tier is intended for areas around the proposed regional transit stations and along major arterial roads. It allows mixed-use development and densities as high as 60 dwelling units per acre. The downtown tier allows for densities as high as 150 dwelling units per acre.

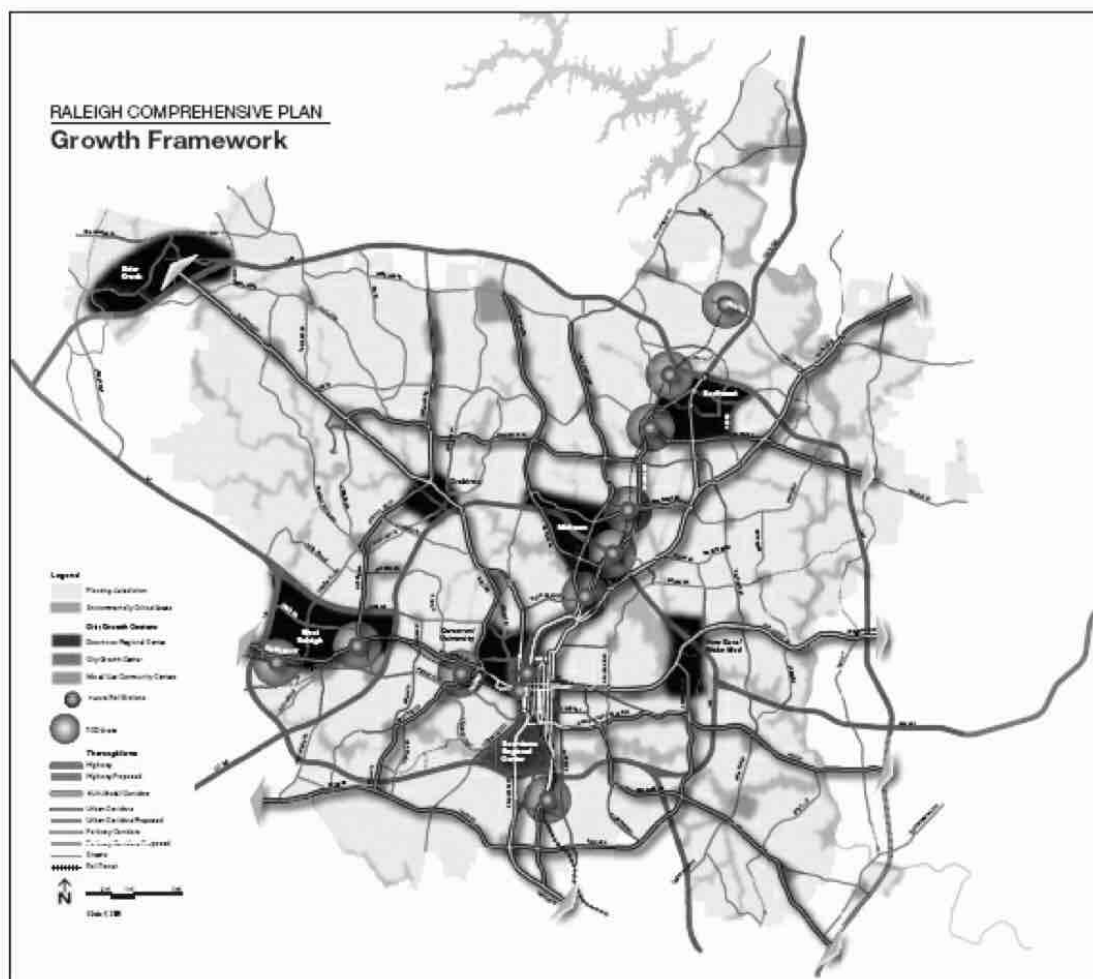


Figure 31. The City of Raleigh's 2009 land-use plan showing growth centers and transit-oriented development nodes (courtesy of the Raleigh Department of City Planning).

Even Cary, which has been characterized as the archetype of a low-density, sprawling town, has taken measures to create higher-density, mixed-use areas. The town's land-use plan calls for eighteen neighborhoods, thirteen communities, and four regional mixed-use activity centers located along current and proposed thoroughfares and transit corridors. The town has also committed to capping the number of lanes on its thoroughfares and collector streets as a means of maintaining community character.¹²

Another way some Triangle communities have been addressing the urban sprawl is by promoting neotraditional developments characterized by a mix of uses, moderate to high densities, a commercial core, homes with front porches or balconies, and access to mass transit.¹³ As of 2010 there were more than a dozen neotraditional communities in the Triangle including Carpenter Village in Cary, Meadowmont in Chapel Hill, Bedford at Falls River in Raleigh, and the Green at Scotts Mill in Apex.

Southern Village in Chapel Hill is a good example of a neotraditional neigh-

borhood. The original idea came out of the Southern Small Area Plan, developed by a task force composed of area residents and members of the Chapel Hill Planning Board between 1989 and 1992.¹⁴ At that time large sections of the southern portion of Chapel Hill were either undeveloped or sparsely developed. The area has many steep slopes and is adjacent to Morgan Creek, which flows into Jordan Lake. In developing a plan for the area, the task force sought to avoid suburban sprawl, preserve the environmentally sensitive areas, and promote the use of public transit. Its proposed plan called for large-lot zoning for much of the area, while concentrating development in a mixed-use village on a 312-acre site under single ownership.

Soon after this plan was adopted by the Chapel Hill Town Council, developers D. R. Bryan and Jim Earnhardt purchased the site and designed a neotraditional village around a village green and central core of commercial and civic properties. The downtown area includes a movie theater, restaurants, retail shops, office space, a church, and an elementary school. The central green is used for live entertainment, including a yearly appearance by the North Carolina Symphony, a weekly farmers' market, and other community gatherings. There was initial concern that the commercial core would not do well since it is located off the main highway, but the movie theater, Weaver Street Market, and several popular restaurants have made Southern Village a destination not only for local residents but for others in the broader community.

The remainder of the developed area of Southern Village is composed of 1,150 residential units including 250 apartments, 230 condominium units, 140 townhouses, and 530 single-family homes on small lots. The village also has ninety-two acres of open space, park land, and greenways. The area is served by Chapel Hill Transit, which offers free bus service throughout the town. Judging by the completed construction after eleven years, this development is quite a success, although some have criticized it for not being built densely enough to absorb potential growth in the surrounding areas. The overall density is only 3.7 units per acre.¹⁵

LAND PRESERVATION IN THE TRIANGLE

Between 1997 and 2002, more than fourteen thousand acres of open space was developed each year in the Triangle.¹⁶ Thus, it is not surprising that many area residents have become concerned about the loss of open space. Residents are concerned that "many of the region's special places are rapidly disappearing, along with the essential green infrastructure upon which Triangle residents depend for their health and quality of life."¹⁷

One of the manifestations of the concern over the loss of open space was the creation of the Triangle Land Conservancy (TLC) in 1983. The TLC's mission is to protect important open space in five of the seven counties that make up the Research Triangle metro area (Franklin and Person Counties are

not included, while Lee County is). It does this by identifying the most critical forests, farms, and natural areas in the area and either purchasing them outright or negotiating conservation agreements. It also manages much of the land it protects.¹⁸ TLC has identified forty-five thousand acres of what it considers critical land for preservation and, as of 2009, it had preserved eleven thousand acres or about one-quarter of the total. The designation of critical land for preservation is based on its importance in maintaining clean water, supporting wildlife, preserving local farms, and connecting people to nature. Much of the funding for land purchases has come from North Carolina's Clean Water Fund, with other support coming from foundations and individual donations.

Concern for open-space preservation also led to the Triangle GreenPrint Project. Sponsored by the Triangle J Council of Governments, the TLC, and the N.C. Department of Environment and Natural Resources, the GreenPrint Project brought together more than 140 "green space experts" from the area to identify the most important land to preserve for parks and greenways, native plant and animal habitat, water quality protection, and historic heritage and farmland preservation. These experts identified about 486,000 acres of land in the Triangle with particularly important green-space value. Much of that land abuts the major streams and rivers in the Triangle that supply water to Triangle and downstream communities. Of that total, a more manageable 158,000 acres was identified as a "backbone" that could "establish a linked network of green space throughout the region."¹⁹ An analysis of the land preservation trends in the Triangle suggests that the current rate of land preservation would have to be doubled in order to preserve this backbone over the next twenty years.²⁰

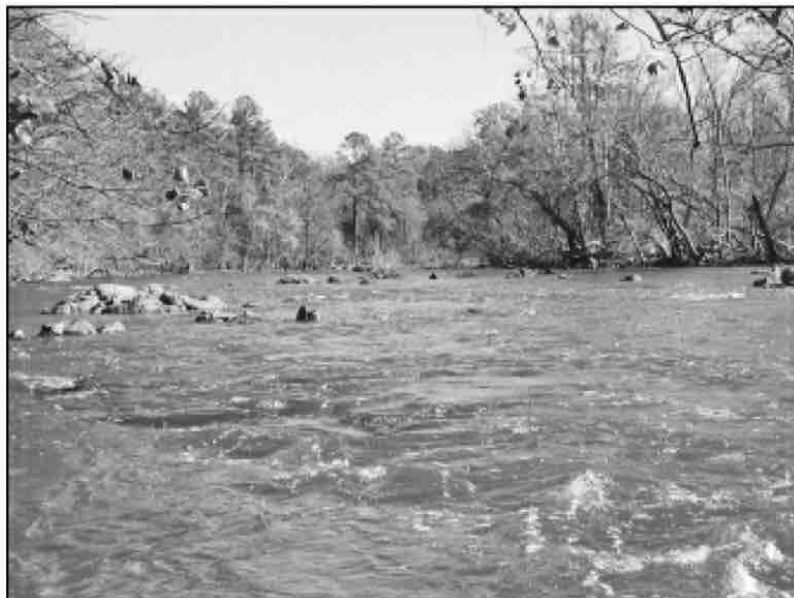


Figure 32. Lower Haw River State Natural Area, a thousand-acre parcel acquired by the state with assistance from the Triangle Land Conservancy (courtesy of Triangle Land Conservancy).

In addition to the preservation efforts of the TLC, many of the Triangle's counties and towns have adopted regulations designed to preserve open space. The results of a survey of growth controls and land-preservation practices adopted by the area's counties and larger municipalities show that all of them have adopted regulations protecting stream corridors and all but three permit or require cluster zoning that allows developers to increase development densities on a portion of a site in order to leave the other portion of the site in its natural state. All of the municipalities require the developers of residential properties to dedicate land, or make a payment in lieu, for recreation. All but four jurisdictions also reported having purchased land for recreation within the past six years.

DOWNTOWN REVITALIZATION

Another strategy for containing sprawl is to revitalize downtown areas such that they attract businesses and households that would otherwise settle on the periphery of urbanized areas. Given the rapid growth and development of the Triangle over the last several decades, it is easy to overlook the declines that have taken place in many of the area's downtowns. Unfortunately, the Triangle has not been immune to forces that have spurred the out-migration of both people and businesses from downtowns to their suburbs. This was certainly the case in both Durham and Raleigh from the 1960s to the 1990s. In recent years, however, the public and private sectors in both those cities have been actively pursuing downtown revitalization and they have made significant progress bringing their downtowns back to life, drawing both businesses and residents.

THE FALL AND RISE OF DOWNTOWN DURHAM

As in many American cities, the decline of downtown Durham began in the 1950s as people, with the aid of federal programs such as the Federal Housing Administration, began to favor living in new, single-family suburbs rather than in the central cities. Shopping centers and later malls sprung up to serve the retail needs of these new suburbanites. Forest Hills Shopping Center was Durham's first, opening south of town in 1955. Shortly after, Lakewood Shopping Center opened southwest of town and in 1960 Northgate Shopping Center, later converted to an indoor mall, opened on the north side of town. This dispersion of retail businesses continued with the opening of South Square Mall in the early 1970s.

As discussed in [Chapter 1](#), Durham's main industries were tobacco and textiles. In the early 1970s many of the textile mills in and around the down-

town closed as companies either went out of business or moved overseas to take advantage of less expensive labor. Then, starting in the 1980s, the tobacco industry began to leave town. American Tobacco shut down its operations in the city in 1987, vacating its million-square-foot cigarette manufacturing complex on the south side of downtown. Then in 2000 Liggett & Myers moved out of the city, vacating other large manufacturing and warehouse buildings on the west side of downtown. The sweet smell of curing tobacco that once hung over downtown was gone.

Another important contributor to the decline of downtown Durham was the ring of dilapidated homes encircling it. Most of those homes were built in the late 1800s and early 1900s for mill workers and had been poorly maintained over the years. These homes were described in a 1966 newspaper article: "To get from Durham's Main Street to some of the most attractive parts of the city it was necessary to drive through a jumble of grimy houses, many falling down, and many streets that were merely paths. Within the area south of Main Street were 1,900 structures of all types. Of these 1,720 were blighted."²¹ This ring of blight left visitors with a highly negative impression of downtown and contributed to a sense that it was unsafe.

Finally, traffic congestion due to the unplanned, "medieval warren" of downtown streets discouraged people from patronizing downtown retail stores.²² As discussed in [Chapter 1](#), unlike neighboring Chapel Hill and Raleigh, downtown Durham grew piecemeal, without a formal plan. Its streets were very narrow and through traffic competed with local traffic on the poorly planned roadways. The Five Points intersection was a particular nightmare for drivers.

Misguided Strategies

In the late 1950s Durham's public and private leaders decided to take bold action to reverse the declining fortunes of their downtown. Their two-pronged strategy was, first, to improve access to downtown and, second, to remove the worst of the blighted housing surrounding it. The main access improvements included a new east-west freeway that would eventually connect Interstates 40 and 85, passing just south of downtown. This was to make it easier to get in and out of downtown and to link it to the newly created Research Triangle Park. Phase one of the east-west freeway—now called the Durham Freeway—ran from downtown east to I-40. It was begun by the state DOT in 1967 and opened in 1970.

The second project designed to improve access was a ring road—the now-infamous Loop—that circled downtown. This idea, first presented in the 1960 Downtown Development Plan, was designed to reduce congestion by allowing through traffic to bypass downtown. The two-lane, one-way Loop was constructed in the late 1960s. Although there is some disagreement as to the impact of the Durham Freeway on the health of downtown, it is hard to find

anyone who thinks the Loop helped. In fact, most consider it a disaster. Jim Wise comments that the Loop “further surrounded the inner-city warren with a confusing and frustrating one-way [road] that served more as moat than thoroughfare.”²³ A local developer has described it as “a noose rather than a loop.”²⁴ In addition, building the Loop required razing Union Station, which today would be considered an architectural gem.

A second set of downtown renewal strategies focused on removing both the dilapidated housing surrounding downtown and part of downtown itself. Beginning in the late 1950s, with the help of federal funding the city pursued an aggressive urban renewal agenda. In a phased strategy the worst of the dilapidated neighborhoods were razed while new public housing developments were constructed to house displaced families. The black business district, called Hayti, located on the south side of downtown was also demolished and its businesses relocated to other areas where most quickly failed.²⁵ Over the years a variety of attempts have been made to redevelop Hayti but all have ended in failure. The destruction of Hayti sowed great mistrust of renewal strategies among Durham's African American population. As Wise notes, urban renewal's legacy was “a wealth of vacant lots and bad will.”²⁶

Small Successes

During the 1970s and 1980s public and private leaders continued their efforts to turn the tide of downtown decline. The city and county constructed new buildings downtown including a new city hall, a new judicial building, and a new public library. In 1977 the Historic Preservation Society of Durham was successful in having most of the downtown designated as a federally recognized historic district, thus qualifying properties for historic-preservation tax credits. This was crucial in promoting the adaptive reuse of Durham's vacant textile and tobacco factories. One of the first such projects was the conversion in the early 1980s of two tobacco warehouses located west of downtown into Brightleaf Square, a combination of shops, restaurants, and second-floor offices. Several years later, the West Village project turned another set of warehouses into 240 loft-style rental units, and thirty-six thousand square feet of retail space. This project single-handedly raised the residential population of downtown Durham from 180 to 560.

For its part, the City of Durham bought and renovated the historic Carolina Theater and the adjacent civic center, which is used by the Durham Arts Council for a variety of exhibitions and performances. Meanwhile, the city developed plans to build a new civic center and hotel on an adjacent site. The voters approved a bond referendum for this project in 1982 and the center opened for business in 1989. The first new office tower in decades was built at this time across the street from the Carolina Theater and the new Civic Center.²⁷

In 1989 the city released a Downtown Durham Revitalization Plan, which was developed with substantial public input, calling for the expansion of

rental housing, creating a set of distinct districts, making parking improvements, building a new central park, enhancing the streetscape, and creating a downtown development organization.²⁸ This last recommendation was realized in 1993 when Downtown Durham Inc. (DDI) was incorporated as a 501(c) 6 nonprofit organization. With funding from both the public and private sectors, DDI's mission is "to serve as a catalyst for downtown revitalization."²⁹ Since its creation DDI has garnered public and private support for the revitalization of the downtown, defined as a .751-square-mile area including the traditional central business district plus the surrounding commercial and industrial properties.

An event of particular importance to the revitalization of downtown Durham was the reactivation of the Durham Bulls baseball team franchise in 1980. The class A Durham Bulls had not played a game since 1968, when the Bulls merged with a Raleigh team to form the Raleigh-Durham Mets, which played half their games in Durham Athletic Park and half in Raleigh. The Mets owner suspended play before the 1972 season, and no professional baseball was played in Durham for the remainder of the decade.³⁰ In 1980 new team owner Miles Wolff decided to give it another try with games being played in the old Durham Athletic Park just north of downtown. The resurrected team was an immediate success and provided another reason to come to downtown Durham. In spite of these individual projects, however, "downtown remained a realm of vacant storefronts and plywood-faced windows."³¹ They were not enough to change the negative image that most people had of downtown Durham.

The Turning Point

The turning point for the revitalization of downtown Durham came in the early 1990s when the city agreed to build a new baseball park for the Durham Bulls. The popularity of the Durham Bulls baseball team shot up after the 1988 release of the movie *Bull Durham* starring Kevin Costner, Tim Robbins, and Susan Sarandon, which was filmed in and around the 1939 Durham Athletic Park. Wanting to capitalize on this popularity, team owner Miles Wolff asked the city to build a new baseball stadium with a capacity of ten thousand to twelve thousand seats to help him recruit a Triple-A—highest minor league level—baseball franchise. During those discussions, Jim Goodman, CEO of Capitol Broadcasting, secured an option to buy the team with the intention of moving it to a new Triangle sports complex that he envisioned building between Raleigh and Durham, close to the RDU airport.

The prospect of their iconic Durham Bulls moving out of downtown Durham was of great concern to local leaders. The city responded by offering to build a new ballpark downtown but the original financing strategy relied on general obligation bonds that required a referendum, which failed by a slim margin.³² Undeterred the city gained state approval to use certificates of

participation that did not require public approval. Goodman then dropped his idea for a new sports center in favor of having the Bulls play in a new \$16 million, ten-thousand-seat stadium to be built just south of the central business district, adjacent to the then-vacant American Tobacco complex.

The new stadium, which opened in 1995, was designed by the Freelon Group, based in Research Triangle Park, and HOK Sports Facilities Group, the same architecture firm that designed Camden Yards in Baltimore and Coors Field in Denver. Three years later Goodman was successful in securing a Triple-A franchise, which further increased the team's popularity and attendance. Throughout the 2000s over half a million fans a year have come to watch the Bulls play baseball. Building on the popularity of the Durham Bulls, Goodman continued investing in the immediate area by building the Diamond View I Office Building behind the right field seats and the Diamond View II Building behind the center field seats.

Gathering a Head of Steam

In response to the advocacy of both DDI and the city's office of Economic and Employment Development, the city and DDI hired a consultant to create a new economic-development-based Downtown Durham Master Plan.³³ Completed in 1999, that plan called for converting the Loop to two-way traffic, creating better linkages between the area within and outside the Loop, creating a new central park, developing a multimodal transportation center, and revitalizing the vacant American Tobacco complex. To fund many of these proposed projects the city created a Downtown Revitalization Fund capitalized by general tax revenues. The city sets aside one cent of the tax rate for downtown projects. It has also provided a variety of grants, low-interest loans, and tax incentives to recruit new and expand existing downtown businesses.

In the same year the new downtown plan was released, Jim Goodman purchased an option on the million-square-foot American Tobacco complex located just south of the Loop and west of the Durham Bulls Athletic Park.³⁴ After fits and starts in securing financing for the first phase of the project, he turned the complex into a mix of office space, retail, and restaurants. This was the largest historic renovation project in the history of North Carolina. The largest leaseholders are Duke University and the marketing firm McKinney, which moved to American Tobacco from Raleigh. The city and county governments invested \$43 million in the construction of two new parking decks to support this and future development in the area, while the private sector invested about \$200 million in the project. Several years later, the second and third phases of the project converted other buildings in the complex into condominiums and additional office space. The American Tobacco complex, with its restaurants, historic architecture, man-made river flowing 130 yards down the old rail line that ran between the two main buildings, and concerts underneath the restored Lucky Strike water tower, has become a major

destination for people in the metropolitan area. Bill Kalkoff, president of Downtown Durham Inc., considers American Tobacco to be “the first significant public private partnership in Durham and the key for all future projects.”³⁵

About the time the renovations were begun on the American Tobacco complex, plans were floated for the city to build a performing arts center just north of the Durham Bulls Athletic Park. This project met initial resistance from some residents and owners of small businesses within the Loop who felt that their interests were being ignored in favor of large, new, corporately owned projects in the American Tobacco District. The Arts and Business Coalition of Downtown was created to advocate for these interests and it lobbied hard to have a smaller performing arts center built on a site within the Loop. The city, however, decided on the bigger venue in the American Tobacco district. Thus, in 2006 the city broke ground on a theater seating twenty-eight hundred and contracted with Nederlander Productions to book a variety of national touring music and theater productions. The Durham Performing Arts Center opened in 2008 and offers approximately 120 shows per year.³⁶ It sold out 25 shows during its first six months and its success has led Raleigh's Broadway South Series to cede “most high profile touring Broadway shows to the Durham Performing Arts Center.”³⁷



Figure 33. The American Tobacco Campus and the Durham Bulls Athletic Park are centerpieces of Durham's American Tobacco Historic District. The American Tobacco Campus contains a mix of offices, shops, and restaurants (courtesy of American Tobacco).

Building on the success of the American Tobacco District projects, the city turned its attention to other areas in and around downtown. Within the Loop, the city undertook a \$16 million street improvement program that involved the realignment of north-south streets, the restoration of two-way traffic on the major east-west streets, a new central plaza, sidewalk widening, and new landscaping and lighting. On the north side of the Loop, the city and a new nonprofit organization created by DDI also developed the new five-acre Central Park, which contains a permanent facility for the Durham Farmers' Market, an amphitheater, and other amenities. The city has also refurbished the original Durham Athletic Park, which is now the home field to the North Carolina Central University baseball team. To support public transit the city built the Durham Transportation Center, a \$15 million, 11,000-square-foot bus and taxi center just west of the Loop, and a new Durham Train Station in the historic West Village development just across the street. The train station supports the current Amtrak service and would support the proposed regional rail system. Future plans call for a sky bridge to connect the bus and train stations.

With the success of the projects in the American Tobacco district and the additional public investments in other parts of the downtown, private-sector investment is increasing in and around the Loop. Within the Loop numerous new restaurants, retail shops, and a 150-room hotel recently have opened. In the Bright-leaf area just west of the Loop, West Village II is adding an additional 375 residential units, 164,000 square feet of office, and 58,000 square feet of retail space in renovated tobacco warehouses. East of the Loop, Scientific Properties transformed one of Julian Carr's original textile factories—Golden Belt—into artist studios, residential lofts, retail shops, and performance space. A new “Bull City Connector” free circulator bus that links many of these developments was introduced in the summer of 2010.

As the economy picks up and with many more projects on the drawing board, the revitalization of downtown Durham will likely continue. The biggest challenge may be to establish a healthy retail sector downtown. A 2010 retail market study indicates that of 122 ground-level retail stores within the Loop, 39 were occupied by retail establishments, while the other 83 were either vacant or dedicated to nonretail use. According to the study's authors, “Existing retailers are essentially marooned in a sea of vacancies.”³⁸ Development of more downtown housing will certainly help create additional demand for retail.

THE DEMALLING OF DOWNTOWN RALEIGH

Like Durham, downtown Raleigh was affected, first negatively then positively, by larger social forces. After World War II both new and existing residents began moving to the outskirts of Raleigh and retail and other businesses followed. Cameron Village, Raleigh's first shopping center, was opened in 1949,

and North Hills Mall, Raleigh's first enclosed mall, was opened in 1960. Being home to the state, county, and city governments, however, downtown Raleigh had both a location-based asset and a large, captive workforce that, first, dampened its decline and, then, spurred its revitalization.

Early Missteps

In the early 1970s the loss of customers to the malls led the downtown business community to ask the city for help. In response the city hired the consulting firm Olden and Associates to prepare a downtown development plan that included several major development projects such as turning Fayetteville Street into a pedestrian mall and building a new convention center. It also recommended creating a state government complex north of the Capitol and restoring City Market, a public market building built in 1914 but closed since the early 1950s.³⁹ These and other projects were seen as the answers to the decline of the downtown.

Acting on the Olden plan's recommendation, in 1975 the city began closing sections of Fayetteville Street and converting them into a pedestrian mall with benches, plantings, and other amenities. Although most property owners were in favor of the mall, one commented: "It's the first time I ever heard tell of expecting to improve business by letting grass grow on the town's main street."⁴⁰ At this time many of downtown's two-way streets were converted to one-way pairs, to facilitate through traffic. The result was similar to the experiences of many other cities: The mall was not the solution to downtown Raleigh's problems. Office workers ate lunch on the mall but the rest of the day the primary users were street people. One journalist commented that "there are no people about. Were it not for the occasional cobblestones and concrete barriers, you could roll a bowling ball from the capital [*sic*] end of the mall all the way down to the Civic Center any night of the week and never endanger a human."⁴¹ Most of the retail establishments along Fayetteville Street either fled to one of the malls or simply went out of business. About the same time the city also built a new convention center which cut across the south end of Fayetteville Street, blocking the historic vista between the Capitol and the classically designed Memorial Auditorium. On a more positive note, the state government complex of new large office buildings and eventually three museums was constructed and City Market was restored and reopened in the late 1980s. Overall, the Olden plan projects were not sufficient to stem the tide of businesses out of downtown.

Two additional blows to downtown Raleigh came during the 1980s and 1990s: the North Carolina Museum of Art decided to move from downtown to a fifty-acre site on the western edge of the city, and the City of Raleigh chose the western edge of the city for its new sports and entertainment arena, now called the RBC Center. Community activists advocated for these facilities to be built downtown, believing that they would spur its revitalization, but the

lure of larger and less expensive land on the periphery won out.

Yet during this time several corporations, wanting a significant presence in the state capital, decided to construct new office buildings along the lower section of the Fayetteville Street Mall. In the late 1980s, One Hanover Square (now called the Bank of America Building), a fifteen-story office and retail structure, was built. Soon afterward One Exchange Plaza, a ten-story office building, and the Wachovia Capital Center, a thirty-story retail and office tower, were constructed. The development of large office towers on the southern end of Fayetteville Street continued in the early 1990s with the twenty-nine-story Two Hanover Square office building. Several years later the North Carolina Museum of History moved into a large new facility in the state government complex and in 2000 the North Carolina Museum of Natural Sciences opened there as well. That same year, Progress Energy—the only Fortune 500 company headquartered in the Triangle—announced its intention to build a new headquarters building downtown. Two Progress Plaza, a nineteen-story mixed-use building, was opened on Wilmington Street in 2004, followed in 2006 by One Progress Plaza, a twenty-one-story mixed-use building.

The Turning Point

The development of these major office buildings and museums, however, did little to transform downtown Raleigh from a nine-to-five to a twenty-four-hour-a-day downtown as it lacked a healthy mix of office, retail, and residential uses. To address these impediments to revitalization, in the late 1990s the city and the Downtown Raleigh Alliance—formed in 1996 to advocate for downtown business interests—undertook an eighteen-month planning process that resulted in the 2002 Livable Streets Plan. The process that produced this plan included consulting a wide range of interest groups including faith-based organizations, neighborhood associations, arts organizations, and, of course, developers and downtown business groups. Co-chaired by a member of the City Planning Commission and the Downtown Raleigh Alliance, and partially funded by Progress Energy, the planning group held a series of meetings and charrettes to garner community input.

This planning process generated five key action strategies that its sponsors hoped to implement within a five-year period. First, the plan called for a “Fayetteville Street Renaissance” that included opening Fayetteville Street to vehicular traffic. After years of indecision on whether to fix the mall up or tear it up, the tide of opinion had turned toward tearing it up. Other planned actions of the renaissance were to develop an outdoor festival and performance space along the street and open the historic vista between the Capitol and Memorial Auditorium by razing the outdated civic center. Second, the plan called for the construction of a new convention center “to attract more national conventions and trade shows and improve the business environment.”⁴² Third, the plan called for improving the pedestrian environment by

widening sidewalks, converting one-way streets to two-way streets, developing a way-finding system, and promoting the active use of ground floors of downtown buildings. The fourth and fifth strategies were to cut down on “red tape” through regulatory reform and to improve downtown management.

Over the next seven years each of these strategies was realized. The phased “demalling” of Fayetteville Street began in 2005 and was completed in 2007. An opening celebration drew over forty-five thousand people, who crowded the newly opened street. The mall was replaced by a two-lane, two-way street with parallel parking on each side. The street has thirty-foot sidewalks: fifteen feet for through-pedestrian traffic plus fifteen feet for street plantings, street furniture, and outdoor café seating. The Fayetteville Street improvements cost the city \$12 million, which came from special county-wide hotel and prepared-food taxes passed in the 1990s and 2000s.⁴³ The opening of the RBC Plaza in 2008 has added to the livelihood of Fayetteville Street. This thirty-three-story, mixed-use tower has been called “the most iconic symbol of Raleigh's renaissance.”⁴⁴

The City Plaza was also created with the intention of creating “a new active heart of downtown hosting music, parades, markets and special events.”⁴⁵ The original design for the plaza was developed by Jaume Plensa, a Barcelona artist with public art in Chicago and many other cities, and was to be paid for by Capitol Broadcasting to commemorate its fiftieth anniversary.⁴⁶ Capitol CEO Jim Goodman offered to donate \$2.5 million to fund Plensa's creation. Plensa's design called for a raised grass plaza with an overhead grid of LED lights that would flash pictures, and a wall of water emanating from an overhead source. This avant-garde design ran into problems, however, when the Raleigh City Council, which was ostensibly concerned about the obstruction of the newly re-created vista from the Capitol to Memorial Auditorium, asked for major changes. Plensa refused and Goodman said that “Plensa gave his very best in the design, and he wouldn't ask him to change it.”⁴⁷ He was not willing to fund a project that wasn't Plensa's vision and he withdrew his offer to fund a sculpture in the plaza.⁴⁸ The plaza that was built opened in 2009 and is framed by four fifty-five-foot stainless steel light towers that contain a projection system. It also has four glass pavilions that house small restaurants and shops, and a programmable fountain. Although it is open to through traffic the roadway is closed off during concerts and other events. The city has contracted with the Downtown Raleigh Alliance to manage and program the plaza.





Figure 34. Two views of Raleigh's Fayetteville Street: as a pedestrian mall circa 1980 (courtesy of the *Raleigh News and Observer*); opened to traffic, 2010 (photo by author).

On a Sunday morning in 2006 those who were willing to get up early and go downtown witnessed the implosion of the old convention center. Once the rubble was cleared, ground was broken for a new \$200 million convention center, which was set back so that the view from the Capitol to Memorial Auditorium could once again be enjoyed. Opened in 2008, the Raleigh Convention Center's 500,000 square feet of space includes a 150,000-square-foot exhibit hall, a 32,000-square-foot ballroom, 30,000 square feet of meeting space, and a 9,284-square-foot LED "shimmer wall" made up of over seventy-nine thousand light and dark aluminum squares that as they are moved by the wind depict a shimmering oak tree, the city's symbol. A public-private deal was negotiated to build a hotel across the street and the city invested an additional \$20 million for the Marriott Corporation to construct a sixteen-floor, 290,000-square-foot hotel. Just west of the convention center the city built an outdoor amphitheater, which can hold five thousand people and which opened in the summer of 2010. Again, most of the public funds for these projects came from the hotel and prepared-food tax fund.

Gaining Momentum

Beyond Fayetteville Street, the city improved the pedestrian environment in other areas of downtown. To assist people in finding their way around downtown, for example, the city defined five districts and developed signage to direct people to them: the Glenwood South and warehouse districts, both on the west side of downtown; the Capitol area north of Fayetteville Street; Fayetteville Street; and Moore Square on the east side of Fayetteville Street. With

city support, the Downtown Raleigh Alliance provides “ambassadors” who patrol the downtown area to give directions, answer questions, pick up trash, and summon police or social service providers as needed. In 2009 the city created the R-line bus, a free downtown circulator that connects the different areas of downtown. The bus runs every ten to fifteen minutes until 11:00 P.M. Mondays through Wednesdays and until 2:15 A.M. Thursdays through Saturdays.

Over the last decade downtown Raleigh also has seen a significant increase in residential units. In 2000 there were less than 1,000 downtown residential units. By 2007 this number had grown to 3,277 with another 1,000 units either under construction or planned. The Glenwood South district is home to a number of new midrise condominium buildings: the fifteen-floor, 170-unit West at North Building; the seven-story, 117-unit 222 Glenwood Building; and the five-story, 179-unit 712 Tucker Building. With a rise in residential units, Glenwood has seen a jump in the number of new restaurants and bars. A smaller number of new residential units also have been built in the Moore Square area, on the east side of Fayetteville Street, and around Nash Square on the west side of Fayetteville.

Looking forward, the city recently developed a new comprehensive plan that includes a chapter on the downtown area. That plan focuses on expanding the amount of downtown green space, developing transit stations for the anticipated light rail system, and continuing the expansion of downtown housing choices. Large new projects are also under development. One example is the Green Square complex that will include the four-story, 95,000-square-foot Nature Research Center affiliated with the adjacent North Carolina Museum of Natural Sciences; a 170,000-square-foot office building that will accommodate approximately 615 N.C. Department of Environment and Natural Resources employees; and a 60,000-square-foot central office for the State Employees Credit Union.⁴⁹ And a new contemporary art museum is scheduled to open in the warehouse district in 2011.

THE TRIANGLE RAIL SAGA: TWENTY YEARS AND COUNTING

Another way Triangle planners and public officials have been trying to tame sprawl and its associated problem of traffic congestion is by investing in public transportation. As the Triangle's population rapidly grew in the 1980s, key roads became congested and population projections suggested many more people and cars were on their way. This led planners and public officials to begin talking about the need for regional public transit. At the time, Raleigh, Durham, and Chapel Hill had bus service, but no regional bus service was available and the main arteries between the three towns were becoming increasingly congested.⁵⁰ This led local leaders in 1989 to create the Triangle Transit Authority (TTA), now rebranded as Triangle Transit.⁵¹ TTA's mission was and is to “plan, finance, organize and operate a public transportation sys-

tem for the Research Triangle area.” A stable, though modest, source of funding for the TTA was approved by the N.C. General Assembly in 1991 when it allowed the authority, subject to county approvals, to levy a vehicle registration tax of up to five dollars, and in 1997 to levy a rental vehicle tax of up to 5 percent of gross receipts. In 2009, the General Assembly passed legislation allowing counties to increase the vehicle registration fee to eight dollars.

TTA's three main program areas are regional bus service, ride-sharing services, and transportation demand management and regional transit planning. As of 2009 TTA provided intercity bus service either directly or via contract to Apex, Cary, Chapel Hill, Durham, Garner, Hillsborough, Pittsboro, Raleigh, Wake Forest, RDU International Airport, and the Research Triangle Park. In 2006 over eight hundred thousand trips were made on TTA's buses. TTA also operated sixty-two car pools that served thirteen counties and it has taken the lead in planning for a regional rail system.⁵² But as discussed below that effort has run into many obstacles.

The Triangle has a chicken-and-egg problem. On the one hand rail transit is not economically feasible without substantially greater development densities along the proposed lines. On the other, without a transit system there is limited interest among developers in building high-density, transit-dependent developments outside the core areas of Raleigh, Durham, and Chapel Hill. While rail advocates believe that if the system is built redevelopment will occur around the transit stations and eventually justify the cost of the system, rail opponents believe that the area will never be dense enough to generate the ridership needed to justify the cost. Opponents have argued that the funds would be better spent both on road construction and on expanding bus service in the area. Over the past twenty years, however, rail advocates have been tenacious in pushing for the development of commuter and light rail systems in the Triangle.

Soon after it was created in the late 1980s, the TTA helped organize a conference on the relationship between land use and public transportation. At that conference a Portland, Oregon, transportation official gave a presentation on the success of the Portland light rail system which stirred the imaginations of community leaders in the Triangle.⁵³ That same year, the N.C. Department of Transportation released a study by Barton-Aschman Associates that provided estimates of the density needed to make light rail feasible in the Triangle. It also identified four alternative rail corridors.⁵⁴ The study concluded that commuter or light rail was only feasible if development densities could be substantially raised within a quarter mile of the proposed transit corridors.

Some expressed serious doubts, however, as to whether the density required for rail transit would be accepted by Triangle residents: “We treasure our half acre subdivision lots, we enjoy the comfort and independence of our personal cars, and, so far at least, the commute isn't too awful or too expen-

sive most days. Many Triangle residents either grew up with this way of life or moved here...because they wanted a piece of it.... [Light rail would] require a level of density that—judging from our development standards and home-buying habits—few people in the Triangle want.”⁵⁵ In spite of these misgivings an intergovernmental committee urged Triangle leaders to embrace rail transit and select a rail corridor by January 1994.⁵⁶

Attention quickly focused on the prospect of employing self-propelled coaches, referred to as diesel multiple units (DMUs), on the existing rail line that runs from Raleigh through Cary and the Research Triangle Park to Durham—the same North Carolina Railroad line that was responsible for the development of Durham and Cary back in the mid-1800s (see [Chapter 1](#)). Using the existing tracks was seen as the quickest, least disruptive, and least expensive strategy for providing rail service to the Triangle. This view was supported by a 1994 TTA study that assessed the cost and benefits of three transit options: commuter rail using the existing rail corridor, bus ways and high-occupancy vehicle (HOV) lanes, and light rail on new rights-of-way.⁵⁷ Commuter rail on the existing tracks was projected to cost a third to a fifth of the cost of light rail, although it would attract substantially fewer riders.⁵⁸ Based on this report, the TTA proposed a mixed strategy: commuter rail from North Raleigh to Durham, light rail from Durham to Chapel Hill, and bus ways and HOV lanes along I-40 and other major arterials. Phase 1 of the plan was the development of commuter rail using the existing track from Raleigh to Durham, which was estimated to cost \$100 million. Phase 2 of the plan was the development of light rail on newly acquired right-of-way from Durham to Chapel Hill. Phase 3 of the plan would provide service to the RDU Airport. The later two phases were estimated to cost an additional \$300 million.

There were significant obstacles, however, to running frequent passenger trains on the existing rail lines from north Raleigh to Durham. Although the right-of-way and tracks between downtown Raleigh and Durham were owned by the North Carolina Railroad, it had leased the tracks to the Norfolk Southern and CSX companies for freight service, and they had concerns about sharing the tracks with a commuter rail system. This led the TTA to propose laying new passenger rail tracks within the two-hundred-foot right-of-way. Another obstacle to the use of the existing rail corridor was that the North Carolina Railroad had private shareholders who wanted to rent the tracks to the highest bidder. This would have greatly increased the cost of the commuter rail system. This obstacle was removed in 1998 when the state bought out the private North Carolina Railroad stockholders and several years later the railroad agreed to allow the TTA to lay down its own tracks between Raleigh and Duke Hospital in Durham.⁵⁹ CSX, however, owned the right-of-way from downtown Raleigh north and it would have to sell or lease it to TTA to use for light or commuter rail service. At the time of this writing this still has not

happened.

Anticipating the resolution of rail corridor access, in 1998 the TTA identified eighteen potential stations along the route running from north Raleigh to west Durham. Duke University, however, objected to a station near its medical center, arguing that the elevated tracks and station, the diesel-powered train cars, and the continuation of an elevated line through Duke's forest lands was unacceptable.⁶⁰ The TTA general manager, Jim Ritchey, called the connection "critically important," but Duke held firm on its opposition causing the TTA to plan on ending its line one stop short of one of the region's largest employers.⁶¹ Others were critical of TTA's plan for its failure to include service to the airport in the first phase of the project. TTA officials argued that the lack of an existing rail corridor made airport service very expensive, particularly given ridership projections, and would have to come later.⁶² They instead proposed express bus service from the closest rail station to the airport.

TTA's plan for funding the rail system was to request Federal Transit Administration (FTA) funds to pay for 50 percent of the cost through its New Starts program, for the state to pick up 25 percent of the cost, and for local governments to pick up the remaining 25 percent of the cost. Local funding was to come from the tax on rental cars, which in spite of vigorous lobbying by rental car companies, was approved by the General Assembly and Durham, Orange, and Wake Counties. This led Ritchey to comment: "What this means is we've now received approval from all the primary legislative bodies to go ahead and fund this mass transit system."⁶³ Soon after the General Assembly authorized a five dollar local-option vehicle registration fee dedicated to transit, which provided additional revenue for TTA and its proposed train system. The TTA planned to begin construction by 2001 and have the trains running by 2004.

Skepticism about the cost effectiveness of rail transit in the Triangle continued to grow as the cost estimates increased with inflation. In 1998, both the mayor of Raleigh and the John Locke Foundation came out strongly against a rail system in the Triangle. Rob Christenson commented: "The Triangle is less a metropolis than an overgrown suburb on hormones. The Triangle is simply not urban in character, which is, of course, part of the area's charm."⁶⁴ Several years later a key member of the State Board of Transportation argued that constructing more highway lanes would be cheaper than rail and that rail would not appreciably improve air quality: "You can dress it up any way you want to, but this is a high-priced show dog right here."⁶⁵ In addition, the Reason Foundation, a conservative think tank, argued that in comparison to an enhanced bus system, rail would reduce vehicle miles traveled by less than 1 percent.⁶⁶ A foundation spokesperson argued that "on the 45th day after the Triangle's rail line begins operation, congestion will be back to its pre-rail levels."⁶⁷ TTA's general manager at the time, John Claflin, countered this criticism by saying that while only a small fraction of commuters

would ride the trains at first, ridership would grow over time as people and businesses locate near rail stations.⁶⁸

In 2003 TTA officials received the news that the FTA had approved funding for final design of the thirty-five-mile commuter rail line.⁶⁹ That approval allowed the TTA to begin spending federal, state, and local funds to purchase land for the stations and the tracks. It did not, however, guarantee federal funding for construction of the project. That required a separate approval process. The federal approval was enough, however, for Raleigh, Cary, and Durham to begin making specific plans for new development in the vicinity of the identified station locations and for the TTA to begin acquiring land for the first twelve stations.⁷⁰

The euphoria over this approval, however, was short-lived. The following year the soaring costs of steel-and petroleum-based products coupled with anemic growth in revenue from the rental car and vehicle registration fees forced the TTA both to scale back its plan for Phase 1 of the system and to ask the federal government to pick up a larger proportion of the total costs. The new plan lopped seven miles and four stations (three in north Raleigh and one in west Durham) off the first phase. It also anticipated asking the federal government to cover 61 percent of the total cost, 11 percent more than originally anticipated.⁷¹ Although this increase in the federal share of project costs lowered the chances of federal approval, TTA expressed confidence that rail service would begin in 2008.

The Derailment

In November 2004 TTA's plans for bringing train service to the Triangle were derailed when federal officials questioned one of the key projections underlying TTA's cost-effectiveness analysis. The computer model used to estimate the alternative bus transit option projected that by 2025 it would take four hours to commute by bus from Raleigh to Durham, a distance of twenty-five miles, and ninety-five minutes to commute between Durham and the north end of the Research Triangle Park, a distance of seven miles. Federal officials found these projections to be "unbelievable" and "beyond comprehension."⁷² Consequently, the FTA changed its rating of the project from "recommended" to "not rated," and hired a consulting firm to provide alternate travel time estimates.⁷³ Then in early 2005 the FTA adopted stricter standards for judging the cost-effectiveness of new transit projects. Despite these setbacks the TTA proceeded under the assumption that they could be overcome. It began recruiting developers to plan and build high-density development around its transit stops.⁷⁴

Another serious blow to TTA's long-term effort to secure federal funding came in October 2005 with the release of the revised computer model. Ridership projections were half those of the original model. In December that year TTA officials received a letter from North Carolina's U.S. senators, Elizabeth

Dole and Richard Burr, stating that federal transit officials did not believe the problems with the transit proposal could be overcome and that “the rail project is likely not an option for the region: we therefore believe it is time for TTA to explore other possibilities.”⁷⁵

The TTA decided, however, to continue pursuit of federal funding for the rail project, on which it had already spent \$136 million in planning and land acquisition costs—\$86 million provided by the federal government.⁷⁶ In response to TTA's requests to reconsider its decision, the FTA gave it until September 30, 2006, to meet the cost-effectiveness guidelines. As that deadline approached, however, TTA officials acknowledged that there was no hope of meeting the new, more stringent federal standards and that it would “spend the next six to 12 months building public support for transit service, talking with people about the possibility of changing the existing plan and looking for other ways to finance it.”⁷⁷ The critics felt vindicated. John Hood, president of the conservative John Locke Foundation, suggested that the rail project had been “a decades-long distraction that has consumed far too much attention in a low-density environment (where it was) never going to be practical.”⁷⁸

Back on Track

In November 2006 the policy boards of the two metropolitan planning organizations (MPOs) covering the Triangle (see discussion later in the chapter) created the Special Transit Advisory Commission (STAC) composed of twenty-nine members representing business, civic, environmental, university, and other interests to take a fresh look at transit in the Triangle. Staff support was provided by the two MPOs, the Triangle J Council of Governments (TJCOG), the Institute for Transportation Research and Education (ITRE), Triangle Transit, and the state DOT. A parallel technical analysis was also conducted to provide the technical basis both for the STAC report and for the MPOs' *2035 Long Range Transportation Plan*. After a year of study, the commission endorsed a three-part transit strategy along with a new financing mechanism.⁷⁹ The first two parts of the STACs strategy were an enhanced regional bus network to provide rush hour service to outlying communities, and circulators to provide “flexible travel options within major activity areas.”⁸⁰ The third part of the strategy involved a rail proposal similar to TTA's earlier plan.

The revived transit plan included a commuter rail line from north Raleigh to Durham using DMUs in the existing rights-of-way, and a light rail line from Chapel Hill to Durham using electrically powered cars on a newly acquired right-of-way. The STAC came to the conclusion that rail was the most effective way to shape the growth of the Triangle and reduce urban sprawl.⁸¹ Some were concerned, however, about the need to switch from commuter rail to light rail to transverse the Triangle and they urged further study of a single light rail system that would serve the entire area.

tive way to shape the growth of the Triangle and reduce urban sprawl.⁸¹ Some were concerned, however, about the need to switch from commuter rail to light rail to transverse the Triangle and they urged further study of a single light rail system that would serve the entire area.

The price tag for the full set of transit investments was estimated at \$8.2 billion through 2035. The commission proposed paying for these investments by increasing the vehicle registration fee from \$5 to \$10 per year, and levying a new half cent sales tax dedicated to transit in Durham, Orange, and Wake Counties. The sales tax alone was projected to cover 53 percent of the total cost. The remaining funding would come from state and federal governments (15 percent and 10 percent respectively), and from several other sources.⁸²

Many of the recommendations of the STAC report were reflected in the joint long-range plan presented by the two MPOs in 2009. One major change, however, was the call for a “seamless electric light rail transit service to link our regional centers to one another” rather than a mix of commuter rail and light rail.⁸³ Local transportation planners had been guided by signals that the Federal Rail Administration would not allow light rail in freight corridors due to safety concerns. They learned, however, that federal rail officials had no policy prohibiting this combination of rail service. Thus, an all light rail system seemed feasible.

The enactment of a half-cent sales tax is critical to moving forward with any rail system. Two steps are required for that to happen. First, the General Assembly had to pass a bill authorizing a local option sales tax increase for transit. Such a bill was introduced in the 2009 session of the General Assembly and, after considerable debate over whether this tax was regressive, a bill authorizing a half cent increase in local sales taxes, a three dollar increase in vehicle registration fees, and a transit tax of ten cents per hundred dollar property valuation in the RTP was approved.⁸⁴ The second step required to implement the sales tax increase is to secure the approval of the voters in each of the three counties.

At the time of this writing it is not clear when the three counties will put the transit tax proposals on the ballot. Given the down economy, it is unlikely that they will do so before the fall of 2011.⁸⁵ In the mean time, each of the three counties, and their major cities, are moving forward with more detailed plans to create sections of the rail system in accordance with the long-range transportation plan. TTA's role will be to help implement those plans by overseeing the construction of the system and working with local jurisdictions to create high-density, mixed-use, transit-friendly development surrounding the proposed rail stations.⁸⁶

Each of the three counties, however, has its own view of which parts of the system should be built first. For many Wake County officials the first priority is the development of a rail system from north Raleigh to downtown

Raleigh to relieve congestion on Capital Boulevard. For those Wake County officials, connecting westward to Cary and the RTP is not as high a priority given the RTP's current low-density development pattern.⁸⁷ The priority for most of Orange County is to connect UNC-Chapel Hill and Duke University to relieve congestion on the U.S. 15-501 boulevard. But most of that connection lies in Durham County and it is not clear if Durham would rather connect to the RTP or Chapel Hill. In any case, TTA's general manager estimates that it will take seven to thirteen years after the county referendums are approved for there to be even a partial rail system operating in the Triangle.⁸⁸

Although there have been many obstacles to developing a passenger rail system in the Triangle, there seems to be growing support among both the areas' leaders and citizens. At a debriefing meeting for the Reality Check exercise conducted in the Triangle in 2009, for example, over 90 percent of the several hundred persons present supported the development of passenger rail in the Triangle. Moreover, as described above, the major cities and towns in the Triangle are making plans to create high-density, mixed-use developments around the proposed transit stops. Over time, these efforts are likely to create land-use patterns that make passenger rail service more cost-effective. Many people have come to realize that if the population projections for the Triangle are even close to accurate, rail transit must be an essential component of the area's transportation system if severe congestion is to be avoided.

CHALLENGES TO CONTAINING SPRAWL

The planning efforts described above have had a positive impact containing sprawl but with another million persons forecast to settle in the area over the next twenty years, much more will need to be done if the area's relatively high quality of life is to be maintained. The adoption of additional sprawl-containment measures, however, will be inhibited by three characteristics of planning in the Triangle: jurisdictional fragmentation, lack of coordination between land use and transportation planning, and relatively weak regional cooperation and planning.

Fragmented Decision Making

One of the significant features of public planning in the Triangle is its fragmentation. There are thirty-six municipalities within the Triangle metropolitan area with the authority to develop plans and manage growth. Some of those municipalities, like Raleigh and Durham, cover a hundred square miles, while others such as, Bunn and Micro, cover less than one square mile. None of these municipalities, however, is large enough to have a significant influence on the rest of the metropolitan area as is the case in many other metropolitan areas. Raleigh is the largest jurisdiction in the Triangle, but it contains only about 25 percent of the area's population. In addition, each of the seven counties is responsible for planning and managing growth outside its munici-

palties. Although the Triangle J Council of Governments has worked hard to facilitate communication and cooperation among these various planning agencies, much planning in the area remains fragmented and disjointed. Each jurisdiction is largely focused on its own issues and concerns, with scant consideration of how its decisions affect neighboring jurisdictions and the larger metro area.

A closer analysis of the seven counties and thirty-six municipalities responsible for planning and managing growth in the Triangle reveals considerable variation in their growth management and open land preservation practices.⁸⁹ A survey of planning practices among the seven counties and sixteen largest municipalities in the Research Triangle metro finds that all have comprehensive plans to guide development, and all but three have updated those plans since 2000. Of the twenty that have updated plans, however, only eight of the plans called for an increase in development densities and only six recommended increases in allowable densities of more than 9 percent of their jurisdictions. Moreover, only six of the twenty-three counties and cities surveyed have more than 10 percent of their developable land zoned for multifamily residential development. Raleigh has the highest percentage at approximately 25 percent followed by Knightdale at 15 percent, Cary at 13 percent, and Durham city and county at 10 percent. Among the remaining seventeen jurisdictions several have no land rezoned for multifamily residential development. Thus, a discretionary hearing is needed to build any multifamily housing in those jurisdictions. The lack of land zoned for multifamily residential development suggests that urban sprawl will continue to be the dominant land-use pattern in the near future.

There is also great diversity in the use of growth policy or regulations among the twenty-three largest jurisdictions. One growth policy often adopted in fast-growing areas is the use of impact fees to help pay for new roads, open space, water and sewer systems, and schools. These fees are typically charged to developers based on a per unit basis. Among the twenty-three largest jurisdictions in the Triangle metro, sixteen charge impact fees dedicated to the building or widening of off-site roads or recreation areas. Among the seven counties in the metro area only two, Franklin and Orange, rely on impact fees to support school construction. Given Wake County's problem in keeping up with school construction, it is particularly surprising that it has not adopted school impact fees to address its unmet need.

Another way jurisdictions control growth is to establish urban service boundaries that establish the geographic limits of future water, sewer, and possibly other urban services. By establishing those boundaries the jurisdictions are limiting the density of development, since any development outside of the service area will have to rely on private services, such as on-site septic systems or privately owned and managed sewage-treatment facilities. Fourteen of the twenty-three largest jurisdictions in the Triangle metro have estab-

lished urban services boundaries for the purposes of limiting growth in the watersheds of lakes used for water supply and for maintaining rural buffers among municipalities. The towns of Chapel Hill and Carrboro, for example, have worked with the Orange Water and Sewer Authority to establish a service boundary as a means of maintaining a rural buffer between the two towns and Hillsborough.

Another means of reining in sprawl is by adopting policies that facilitate or encourage infill development or property redevelopment. Infill development is development in areas that are already served by roads, water and sewer lines, and other urban services. Such policies might include “upzoning” areas to allow higher-density development or adopting redevelopment codes that account for the different building standards in effect at the time a building was constructed. Among the twenty-three largest jurisdictions in the Triangle metro only ten have policies that facilitate infill or redevelopment.

Adequate-facilities ordinances are a means of controlling the pace of development, since they condition the approval of new development on the ability of the existing or planned infrastructure to accommodate that development. If, for example, school facilities or road capacity is found to be inadequate, development would be stalled until that capacity is achieved. Of the twenty-three largest jurisdictions in the Triangle metro area, only three, Chapel Hill, Hillsborough, and Franklin County, currently have adequate-facilities ordinances that allow the denial of development applications due to lack of school capacity. The Town of Cary adopted such an ordinance in 1999, but the Wake County School Board always supported new development even when schools were overcrowded. That and other criticisms of the ordinance led to its repeal in 2004.⁹⁰

Rate-of-growth control is another planning mechanism that has been used to control growth in fast-growing municipalities across the country.⁹¹ This involves establishing an upper limit on the number of residential permits that will be granted in a given year. This ensures that the municipality will not be overwhelmed by new development and it gives the municipality time to provide adequate infrastructure to accommodate the new growth. Given the high rates of growth in several of the communities in the Triangle one might expect to find some examples of this technique being adopted in the area. Yet none of the jurisdictions in the Triangle metro have rate-of-growth controls.⁹²

Inclusionary housing policies and ordinances are designed to ensure that households with modest income can afford to live in the communities where they work. In return for density bonuses and other benefits, inclusionary housing policies and ordinances require large developers to construct and sell a certain percentage of their units at prices affordable to modest-income households, typically defined as those with income below 80 percent of the

area's median income. Such ordinances and policies are particularly applicable in high demand markets such as the Triangle metro where developers have typically catered to upper-middle-income and upper-income households. Among all of the jurisdictions in the Triangle metro area, however, only one, Chapel Hill, has an inclusionary housing policy that allows the Town Council to consider whether developers are producing affordable units in the development approval process. The lack of new affordable housing in many Triangle communities means that many modest-wage workers are forced to commute from outlying areas, which adds to traffic congestion and air pollution and costs those workers a substantial proportion of their salaries.

In looking at the total number of growth controls utilized by jurisdictions in the Triangle, the more Democratic counties of Durham, Franklin, and Orange and the Town of Chapel Hill have the largest number of growth controls, while the more Republican counties of Johnston, Wake, and Chatham and the towns of Smith-field, Roxboro, Franklinton, and Morrisville have the fewest number of growth controls (see [Chapter 3](#) for a discussion of political differences in the Triangle). It is not surprising that the growth rates in the counties and towns with the fewest number of growth-control policies are among the highest in the Triangle. Clearly, Triangle communities have very different attitudes about growth and the extent to which it should be controlled. These different attitudes toward growth do not bode well for cooperative and coordinated efforts to control the growth of the Triangle metro.

Lack of Coordination Between Land Use and Transportation Planning

Adding to the difficulty of coordinated planning among the Triangle's forty-three jurisdictions is the separation of responsibility for land-use and transportation planning. Coordination of land-use and transportation planning is a significant challenge in most metropolitan areas, but it is particularly so in North Carolina. During the Great Depression the state took over county roads and assumed responsibility for new highway construction. Thus, North Carolina lacks a county-owned road system like most other states. This means that the counties and municipalities that are responsible for land-use planning do not have direct control over the major roads that serve their areas. Rather the state DOT has the final say on whether or not to build or widen highways, and on how those roads are designed.

Adding to the challenge, as noted earlier, is that there are two metropolitan planning organizations covering the urbanized areas of the Triangle.⁹³ In 1962, the federal government mandated the creation of MPOs in urbanized areas with populations of at least fifty thousand. Their purpose is to ensure that federal transportation funding is spent according to metropolitan plans, developed through intergovernmental cooperation. MPOs are governed by a transportation advisory committee made up of elected or appointed represen-

tatives of local government, state agency officials, and representatives of transportation modes such as public transit agencies. MPOs are responsible for developing long-range transportation plans, prioritizing specific transportation improvements, and developing annual work plans for their areas. The North Carolina Capital Area Metropolitan Planning Organization (CAMPO) covers Wake County and parts of Franklin, Granville, Harnett, and Johnston Counties. The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization covers Durham County and parts of Orange and Chatham Counties.

The reason the Triangle has two MPOs is because in the 1960s Raleigh and Durham-Chapel Hill were defined as separate urbanized areas. Over time, however, these areas have grown together. At this point, the MPOs' long-range plan indicates, the "largest commute pattern and heaviest travel volumes occur at the intersection of the MPO boundaries."⁹⁴ In the early 2000s the boards of the two MPOs discussed merging, but differences in attitudes about the roles of roads versus transit and the potential domination of Raleigh and Wake County in the combined MPO scuttled this idea.⁹⁵

The two MPOs have, however, been coordinating their planning efforts. In 2006 they created the Special Transit Advisory Committee to take a fresh look at transit options for the area and they also agreed to develop the joint *2035 Long Range Transportation Plan*, which was adopted in 2009. These collaborative efforts led the Association of Metropolitan Planning Organizations to award its 2009 National Award for Outstanding Achievement in Metropolitan Transportation Planning to the Triangle's two MPOs.

Regional Planning in the Research Triangle

There is a fifty-year history of regional planning in the Triangle area but the impact of those efforts has been modest as planners have lacked the authority to shape the physical development of the area. To the extent that they have influenced development, it has been through education and analysis and through facilitating communication among local and state decision makers.

The first regional planning effort in the Research Triangle was led by Pearson Stewart, who was hired to develop the initial plan for the Research Triangle Park (see [Chapter 2](#)). In planning the RTP Stewart realized that the development of the park would generate new residential and commercial development in its vicinity, and that the quality and attractiveness of that development would affect the park's success. Thus, Stewart and his boss, George Simpson, lobbied for state legislation to create the Research Triangle Regional Planning Commission (RTRPC), which was approved in 1959. Its mission was "to prepare, in collaboration with counties and municipalities in the area, plans which would promote the orderly and economical development of the area, to submit such plans to county, municipal, state and federal agencies having jurisdiction in the area, and to encourage the execution of such

plans.”⁹⁶ Pearson Stewart was hired as the director of the Commission, splitting his time between it and the Research Triangle Foundation. The Commission was composed of representatives from Durham, Orange, and Wake Counties, and from Chapel Hill, Durham, and Raleigh.

The following year the Commission released *Guides for the Research Triangle of North Carolina*, which offered economic and population growth projections, along with three scenarios for accommodating that growth: compact development around the existing cities, nucleated development in independent new communities, and corridor development following natural drainage courses.⁹⁷ This report contained exceptional foresight in predicting the growth of the area and in suggesting a compact development scenario. It also called for an “inter-city, inter-county organization to develop and administer utility services for the region” and suggested that “zoning and subdivision regulations be determined by regional consideration rather than by boundaries of local governmental units.”⁹⁸ Unfortunately, these recommendations were not embraced by the area's county and municipal governments.

The RTRPC continued to advocate for regional approaches to controlling development in the Triangle. In 1970 Governor Bob Scott created a council of governments system in the state and designated seventeen such councils, including one covering the Triangle area. Two years later the General Assembly approved legislation institutionalizing that system. Rather than creating a new regional organization in the Triangle, local leaders agreed to expand the existing RTRPC to include Chatham, Johnston, and Lee Counties. The new organization was named the Triangle J Council of Governments; its mission was “to serve as an intergovernmental organization for local elected officials that works proactively on regional issues in order to sustain and improve the quality of life for our citizens.” A limited amount of state funds was allocated to supporting the TJCOG. The lion's share of its budget was to come from its constituent local governments including the six counties and thirty municipalities. Pearson Stewart served as the executive director of this new organization until his retirement in 1977. In 2001, Moore County and its municipalities were added to the list of eligible members. The seven counties covered by the TJCOG are different from the seven counties that constitute the Triangle's two MSAs. Person and Franklin Counties, are part of the Kerr-Tar Council of Governments.

TJCOG is a voluntary organization whose members each have one representative on the governing board called the Board of Delegates. It also has an Executive Committee composed of one county delegate and one municipal delegate from each county. The member organizations provide financial support based on the size of their respective populations. Members can withdraw from participation, as did Wake County, Holly Springs, Wake Forest, and Cary during the mid 1990s. Wake County in particular was unhappy with having to cover such a large portion of the budget. According to a newspaper report,

“Although two Democratic commissioners argued Tuesday night that withdrawing from Triangle J would be shortsighted, the four Republican board members contended that the county got little more than reams of studies for its \$220,000 in membership dues.”⁹⁹ The county and towns all rejoined over the next several years. Local dues make up only 2 to 3 percent of the council's budget; the remainder comes mostly from contracts and grants, and fees for services provided. The voluntary nature of participation in the council means that it has to be very cautious in the stances it takes on growth and development issues. It has to be “attentive to promoting harmony” among its member governments.¹⁰⁰

Among a host of other activities, TJCOG initiated several regional planning initiatives during the 1980s and 1990s.¹⁰¹ The first of these was the *Focus on Tomorrow: Project 2000 to Maintain Quality of Life Project*, which was designed to “identify the issues [facing the region], flesh them out with facts and figures, and outline choices of possible strategies for dealing with the issues.”¹⁰² The 1982 effort was led by a steering committee composed of public, private, and nonprofit leaders and involved residents through a series of public meetings. On the topic of the built environment the final report concluded: “Developments that offer ‘homes in the country’ are not dense enough to permit effective, efficient public transportation. We live in housing patterns that simply ignore the cost of transportation.”¹⁰³ The report recommended that the region reduce its dependency on single-occupant automobile transportation.

Throughout the late 1980s and 1990s the TJCOG continued to draw attention to the region's growth projections and the need to manage that growth in a way that maintains the area's quality of life. In 1988, 1992, and 1998 it held three “World Class Region” conferences in which participants were presented with a variety of data on the challenges facing the area and on potential solutions. The 1988 World Class Region Conference was overseen by a 64-person steering committee headed by former governor Jim Hunt.¹⁰⁴ This conference and its related activities led to the creation of Triangle Transit; a Triangle-wide, toll-free telephone system; and the Triangle Area Water Supply Monitoring Project.

The 1992 World Class Region Conference was organized by a 160-member steering committee, which formed focus groups on economic competitiveness, quality of life, education, and regional leadership. Among other ventures recommended by these focus groups was the development of a regional leadership council composed of “progressive, assertive leaders from business, government, civic groups, and academia to set strategic direction for the region and consider ventures needed to achieve success, identify resources needed to undertake the ventures, and muster the teamwork to see that the ventures are implemented.” This led to the development of the Greater Triangle Regional Council described in [Chapter 4](#).¹⁰⁵

The focus of the 1998 conference, which was cosponsored by the Greater Triangle Regional Council, was on introducing the Regional Development Choices Project. That project involved the development of three growth scenarios: “suburban expansion,” “walkable communities,” and “town and country.” These scenarios were then presented at the third conference and at community meetings where participants were asked to express their preferences for the alternative growth scenarios. TJCOG staff then embarked on an extensive, multimedia community-outreach campaign to educate residents about the scenarios and solicit their preferences. The feedback received was distilled into principles—such as integrated transportation, mixed-use activity centers, and walkable communities—that were adopted by the TJCOG's Governing Board, the GTRC, and a coalition of environmental, business, and community groups, which then worked to persuade public and private actors to use the principles in guiding their development-related decisions. The actual impact of this project on the growth pattern of the area, however, is difficult to assess. Most recently, TJCOG has been organizing and managing a series of multi-sponsor partnerships to address issues including land use, transit, water quality, and air quality. The Triangle Development and Infrastructure Partnership, for example, has twenty-five public, nonprofit, and private organization sponsors, which are working to better coordinate development in the area with the infrastructure to support it.¹⁰⁶

Reality Check

Building on the lessons learned from the Development Choices Project, the most recent regional visioning initiative was the Research Triangle Regional Reality Check, sponsored by Triangle Tomorrow and the Research Triangle District Council of the Urban Land Institute. Reality Check was designed to promote region-wide awareness of growth projections, envision how these new residents might be distributed throughout the area, and create a list of “next steps to support regional planning and ensure quality growth for the region.”¹⁰⁷

On February 24, 2009, a group of 280 community leaders from fifteen counties in the Research Triangle region came together in a large banquet room in Raleigh's Convention Center. The room contained twenty-eight tables with large-scale maps of the region. Ten attendees were assigned to each table, on which were placed bins of red and yellow Legos and spools of purple, orange, and green yarn. The number of Legos in each bin was related to the projected increase in the number of people and jobs in the region by 2030. The task given to each table was to place all the Legos on the map by the end of the allotted time and to use the different colored yarn to indicate new or widened roads, new or expanded transit service, and green space to be protected. One of the key ground rules of this exercise was that the growth projects were not negotiable. Participants had to allocate all of the blocks representing the pro-

jected increase in population and jobs. Participants were not given the option of suggesting that measures should be taken to slow the projected growth.

With the help of facilitators and recorders, each group began by discussing and deciding upon the key principles that they would use in locating the new growth. With those principles in mind the groups began to place the 800 yellow bricks (representing 1.2 million new residents) and 368 red bricks (representing 700,000 new jobs) on the maps and connecting them with yarn. Throughout the process, there was considerable discussion among the participants as to the implications of the allocations being made. All twenty-eight groups completed the exercise in the allotted time. Once it was completed, the organizers captured and analyzed the patterns of development on each of the maps using special software designed for the purpose.

The results of this exercise were presented three days later in a meeting attended by about 500 local leaders and other citizens. The most frequently adopted principles used to allocate the new growth were improve transit (86 percent of the tables), encourage mixed-use development (57 percent of the tables), protect watersheds and open space (50 percent of the tables), and reinvest in urban centers (50 percent of the tables).



Figure 35. Reality Check participants plan for 1.2 million new residents and 700,000 new jobs expected in the Triangle's fifteen-county region by 2030 (courtesy of Joe Meno).

Three development scenarios were distilled from the twenty-eight versions produced, including a clustered scenario characterized by mixed-use and dense development along new and existing transit corridors, a compact scenario characterized by the concentration of growth in existing urban areas, and a dispersed scenario characterized by a more even distribution of growth in towns throughout the region. When meeting attendees were asked to vote for their favored scenario the cluster scenario received the most votes,

followed by compact and dispersed scenarios respectively. When asked to vote on the barriers to implementing this vision, the attendees most frequently identified the lack of an effective regional government followed by lack of funds for infrastructure and community resistance to higher-density development.

To implement the guiding principles and growth scenarios developed in the Reality Check visioning exercise, Triangle Tomorrow has created the Research Triangle Regional Quality Growth Initiative. At the time of this writing, the initiative has formed four action committees: one focused on transit, one on green space, one on vibrant centers, and one on obtaining endorsements of the guiding principles from local governments and on raising awareness. A year after the event, the heads of those committees—all well-respected community leaders—reported on early efforts to implement the guiding principles. It is too early to tell, however, if this effort will be any more effective than earlier efforts in changing the growth patterns of the area.

CONCLUSION

The result of historical and geological factors, the development pattern of the Research Triangle is distinctive for its “hollow” core and its sprawling layout. The area's core contains large expanses of open space, and its overall development pattern is one of the most sprawling among the country's major metropolitan areas.

Recognizing the relationship between this hollow-core, sprawling development pattern and problems including traffic congestion, air and water pollution, and loss of open space, Triangle leaders have been encouraging higher-density and mixed-use development, expanding public transit, and preserving areas of critical environmental concern. They have also focused on revitalizing the area's traditional downtowns to lure both residents and businesses to already developed areas.

Although these actions are laudable, much more will need to be done if the Research Triangle area is to accommodate future growth. Containing sprawl and its negative impacts, while maintaining a relatively high quality of life, will require overcoming three significant obstacles: fragmented decision-making authority, poor coordination between land-use decisions and transportation infrastructure investments, and weak regional cooperation. The next chapter will present ideas on how these obstacles might be addressed.