

Smart Growth:
Atlantic Station and Glenwood Park

Between now and 2050 50 percent of population growth and 2/3 of the nations economic growth will occur in several 'Mega-Regions.' A Mega-Region is defined by relations and a shared identity, but not by state lines. These regions are networks of metropolitan centers and their surrounding areas; they are defined by social, economic, and environmental linkages.¹ These are the same components whose intersection forms the fruitful ground for sustainable design.²⁴ The Southeastern United States (South and North Carolina, Tennessee, Alabama, Georgia, and Florida) is one such Mega-Region and has been designated the Piedmont-Atlantic Mega-Region (PAM). PAM is linked by several major transportation corridors, I-20, I-40, and I-85 among the largest. Diversity in the region is increasing rapidly. In 2000 there were approximately 34 million people in the PAM, and 40 percent, 13.3 million lived in urban cores. That equated to 12 percent of the U.S. population and 7 percent of the total land area. The six states in the PAM are all in the top 15 in the nation for conversion of land from non-developed to developed. This conversion is not a 1:1 process with regards to population increase. Between 1982 and 1987 Atlanta increased its urbanized land by 81 percent for a 61 percent increase in population size. Such sprawled growth requires automobile travel, and in this region there are a number of air-quality problems and regular non-attainment days which will only increase with further population growth. In fact, in 1998 the Federal government issued a moratorium on road construction until Atlanta demonstrated a plan for compliance with the Federal Clean Air Act.¹

While there are many issues that such rapid growth creates, with growth there comes the potential for positive development and an increase in quality of life. Growth will have a substantial impact on the built environment, and there is projected to be a 54 percent increase in total square footage over the next 30 yrs. This presents a unique opportunity to reshape communities through changes to policy, construction, and development variety. Atlanta is located directly in the middle of this region, and is both a core metropolitan city and a gateway city due to the interstate junctions, airport, and rail lines which it possesses.¹ Atlanta is the least dense metropolitan area in the country with only 1,366 people per square mile, and between 1988 and 1998 about 190,000 acres of forest around Atlanta were cleared. Atlantans also drive more than residents of any other city in the country, 34 miles per day.¹⁵ Like citizens of many traffic burdened sun-belt cities, many residents want an alternative to auto-centered suburbs.¹⁰ Therefore, while Atlanta especially feels the pressures of growth, it possesses a unique opportunity to set the pace for smart-growth within the PAM. Two recent developments in Atlanta, Atlantic Station and Glenwood Park, both demonstrate successful

application of smartgrowth principles. Indeed, a visitor to Glenwood Park noted that the New Urbanist movement to which it adheres is a revolt against the growth of suburbs and it seeks to recreate a sense of community that was more widespread in cities before the invention of the automobile.¹⁰

Atlantic Station seeks to be a vision for the 21st century.²³ A review of Atlantic Station notes that industrial use is no longer appropriate for land in central cities.⁷ It is bounded to the North by railroad tracks and to the East by two interstate highways. The development by Jacoby Development, Post Properties, and the Mills Corporation took place on the former Atlantic Steel site where heavy milling had occurred for over a century.²¹ Atlantic Station is seen as expanding and helping to link downtown, and it was built in the environmentally sensitive Chattahoochee River large water supply watershed.⁷ Atlantic Station is a \$2 billion redevelopment/reclamation in Midtown Atlanta that contains a mix of middle-income, affordable, and upscale housing with other amenities.^{18,20} This development was a successful cooperation between city, local, and governmental agencies. It was zoned a Central Area Commercial Residential-Conditional District from its former Heavy Industrial Zoning.²⁰ Former mayor Bill Campbell called the development the most important project in Atlanta in the past 50 years.²¹

From its conception Atlantic Station was envisioned as a high-end mixed-use development offering residential, retail, hospitality, entertainment, and integration with mass transit. It was going to be a development that would reconnect neighborhoods bisected by interstate construction.¹¹ The same process that weakened cities by promoting suburban sprawl also physically tore the fabric of cities. During planning a design charrette was conducted between many organizations and yielded substantial improvements in street connections, traffic calming, walking ease, mixed-use, and layout efficiency.²¹ Atlantic Station is now a 138 acre live-work-play development with 15 million square feet of retail, office, residential, and hotel space. It also contains 11 public parks, and is constructed at the nexus of I-75 and I-85.¹⁷

There were notable environmental and bureaucratic hurdles before the developers of Atlantic Station. However, EPA analysis found that the air quality benefits which Atlantic Station would contribute deserved exemption from the previously mentioned Federal moratorium. Atlantic Station increased air quality benefits substantially when compared to models of 3 other developments of similar scale. Project XL, an initiative that provides special exemption status to encourage innovative development strategies, was employed to classify Atlantic Station as a Transportation Control Measure.²¹ This classification freed up DOT funds for the construction of the 17th street bridge.²² Reconnection came in the form of a 130 foot wide bridge that spans I-75 and I-85 and contains wide sidewalks, bike and transit lanes, a light-rail line, benches, trees, and 4 conventional lanes.²¹

Additionally, the Resource Conservation and Recovery Act (RCRA) remediation plan called for soil removal, structural requirements, concrete and soil cover controls, groundwater interception, and a conservation easement. A conservation easement was assigned to all of Atlantic Station; it is an enforceable mechanism which implements and ensures protective human exposure scenarios and control of groundwater migration. The measure also requires an operating groundwater interception system, perpetual maintenance of engineering barriers, acquisition of all adjacent contaminated properties, a potential termination of RCRA permits, and is transferable to all future owners.¹¹ The conservation easement provides environmental diligence for the site in perpetuity but is still a flexible measure.²³

A number of other steps were undertaken to comply with RCRA and their own environmental aims. Around 132,000 cubic yards of concrete were recycled and used as backfill, and 164,000 cubic yards of granite were reused as well.¹⁶ The recycling of the cement did not cut project costs that much, but did notably reduce waste and materials consumption. Of the 9,000 truckloads of waste that were removed, about 85 percent was non-hazardous and 15 percent was hazardous. Utilities for the next 100 years were installed before construction, and there is an 8x8 culvert that runs beneath the entire 1 mile development. Since it represented a \$2 billion investment, the developers could have “gotten away with much more” lax environmental diligence.²³

Fortunately, the developers were environmentally minded, and involved agencies such as the Environmental Protection Department (EPD) in the design process. The EPD made real-time decisions with developers that spanned the two year cleanup and planning process. Continually arising obstacles, such as radioactive waste from the arc furnace controller, delayed and altered plans. Much waste was contained on site, with a substantial amount under the seven story parking garage where it forms a layer 10-35 feet thick. There is no leeching, assuredly, but even if there was, the groundwater monitoring and recovery system captures and if necessary treats the water before it is introduced to the Atlanta sewer system.²³

The first Atlantic Station structure that is encountered after crossing the 17th street bridge has raised the visibility of the development and reinforces the commitment to sustainability. The commercial high-rise 171 17th street validated the economic viability of green-design when it set records for largest office sale in Atlanta in 2005 and the record for price for a single building sale in Atlanta.³ It is both the first commercial high-rise in Atlantic Station and the first high-rise commercial office tower in the world to get a LEED-CS certification. The attainment of a Silver level rating was assisted by the designation of Atlantic Station as a LEED campus; 7 of the 37 credits apply to all buildings in the Atlantic Station development. Atlantic Station is one of the few sites in the world to get credits for site wide attributes in the larger community master plan.²

The sustainability of the development is enhanced by other components of the design. During development, 2,800 new trees were planted in Atlantic Station. These and other storm-water detention measures lessen flow at peak times. There are also 2 miles of networked piping which deliver chilled water from the central cooling facility to the buildings on site. Priority parking and special charging spaces are made available for electric vehicles; there is also a car-share with electric cars and charging, VIP carpool parking, and a guaranteed ride home system. Non-standard lane width, turning radii, and block sizes also reduce roadway cross-section and promote pedestrian traffic.¹⁶ Atlantic Station employs a system of electric shuttles as well.¹⁵ The development will also house a major public monument, the Millennium Gate. The Gate will be the largest public monument constructed since the Jefferson memorial and will be over 73 feet tall.¹⁴ It is the total synthesis of remediation, innovative and progressive planning, and attention to detail that has made Atlantic Station the smart-growth paradigm that it is today.

Another smart-growth development is just across the city from Atlantic Station. Glenwood Park is two miles from the center of downtown Atlanta and boasts walkable tree-lined streets, city houses, townhouses, apartments, and parks. The development encourages resource efficiency, environmental protection, and restoration.²⁰ Glenwood park is a 28 acre brownfield redevelopment which is also an infill mixed-use development with residential and commercial spaces.* There is a classic main-street design with on street parallel parking and a town square. Tree-lined streets, public squares, and pocket parks all increase the neighborhood qualities. The oval-shaped Glenwood park functions for community gatherings as well as water retention and filtration. While it was built on a former industrial site that most recently performed concrete recycling, the surrounding area is mainly old single-family home neighborhoods. The development is just one mile from two Metro Atlanta Rapid Transit Authority (MARTA) stops and directly on a bus route.¹⁹

The site was developed by Green Street Properties who gained further insight into the development by hosting a design charrette. Such measures and the development's assets such as retail and dining facilities fostered warm relations with the surrounding communities. Glenwood Park now provides the area with a center and fills the area's lack of retail while replacing the previous 'eye-sore' facility. The development was zoned with Planned Development Mixed Use zoning which permitted flexibility to alter the design of the development after approval was granted; a special city ordinance also secured the ability to use specific dimensions of streets and block sizes in 'traditional neighborhood developments.' Since the development was internally financed, design alterations did not require complex and time consuming approvals. The development also boasts a Southern Living Idea House which showcases environmental construction as well as beauty. This house uses 38

* The many sources which were reviewed for this paper presented sometimes contradictory information regarding Glenwood Park's status as 'brownfield' redevelopment. It was referred to as 'greyfield,' 'brownfield,' and 'formerly industrial.' For the purposes of this paper it will be considered a brownfield site.

percent less power than a traditional home of the same size, and generates 15 percent of its energy from rooftop photovoltaics.¹⁹

Glenwood Park forms a neotraditional concept with mixed-use, infill development that provides many services without the need to drive.⁶ Glenwood Park's housing was developed in accordance with the Earthcraft program. This is a green building program that provides a blueprint for "healthy, comfortable homes that reduce utility bills and protect the environment." Earthcraft is a partnership between the Greater Atlanta Homebuilders Association, Southface, and other government and industry partners. Southface is a not for profit organization providing environmental education and outreach to promote sustainable homes, workplaces, and communities.⁴ In total there are 325 residences, 20,000 square feet of office space, and 50,000 square feet of retail space.¹²

Glenwood Park also executed substantial environmental efforts. Prior to development, nearly the whole site was covered in concrete, and there were also 13 unknown underground storage tanks.¹⁹ The recycling efforts during construction were laudable: 250,200,000 pounds or 60,000 cubic yards of concrete and 800,000 pounds of granite rubble block were recycled. The granite was sufficient to build all of the walls in the central park. Additionally 250,000 pounds of metal were removed, along with 30,000,000 pounds or 41,500 cubic yards of mysteriously buried woodchips. The woodchips were taken to a waste-to-energy plant in Alabama where they were burned to make enough energy to power 900 average houses for a full year.¹² Storm-water run-off has been cited as a major threat to river basins draining Atlanta and a storm-water management plan was mandated.⁶ Storm-water and well-water use save 35,000 gallons of city water weekly. The development planted over 1,000 trees which provide aesthetic appeal, water retention, and alleviation of the heat-island effect. The development is predicted to save 1,627,500 miles of driving per year, and the Earthcraft homes collectively save over 1.3 MW of energy per year.¹²

The two developments are actually quite similar. Both are mixed-use brownfield redevelopments which offer transportation choices and represent infill development. They employ compact design to preserve open spaces, and they are both walkable communities with a range of housing opportunities.²⁰ Both developments also embraced the surrounding neighborhoods. Atlantic Station provided green space and connected new and existing neighborhood streets.²¹ The most conspicuous difference is that Glenwood Park is less dense and incorporates more "neighborhood aspects" while Atlantic Station is much larger and more focused on entertainment and work coupled with housing in a 24-hour community.^{22,20} Both Atlantic Station and Glenwood Park have received numerous awards for their innovative environmental efforts and their development strategies. The two developments were also awarded consecutive Development of Excellence Awards from the Atlanta Regional Commission.

Atlantic Station received the award in 2004. The award notes that Atlantic Station is the largest urban brownfield redevelopment in the U.S. and that its environmental innovation is just one part of the success story. Its remediation included a \$10 million plus effort to remove 9,000 truckloads of contaminated materials. Innovative strategies to prevent pollution and reduce energy consumption were also employed. Materials were reused, and sustainable building practices were employed. A partnership with a local energy company yielded the Southeast's largest and most efficient central cooling system which saved \$25 million in construction costs and operates at 25 percent higher efficiency than conventional systems.⁸

Glenwood Park received the award in 2005. It commended good growth in a greyfield location and proclaims it "a great urban fabric that meshes with and enhances the immediate neighborhoods." It is a place where one can and wants to walk, and the I-20 highway interchange is at its door. Over 80,000 tons of material had to be removed from the site, and many materials were recycled. Through a management plan, storm-water runoff was reduced by 2/3 and irrigation using this water reduces waste of the city's potable water.⁹

Additionally, both developments will benefit from the Atlanta Belt Line redevelopment which will use original train lines which define the city core to create a transportation and green-space corridor. It will feature light-rail, buses, trolleys, and trails. As an approved Tax Allocation District the Belt Line will encourage its development as taxes will offset remediation costs along with Federal and State incentives.²² Georgia owns most of the right-of-way surrounding the Belt Line, and the tracks may be used for electric trolley cars or rubber-tired flex trolleys which can operate both on and off track. A flex route would be created through Midtown, Inman Park, and Glenwood Park and would connect to a fast bullet train route north of Piedmont park at a new MARTA station near I-85 or at the Atlantic Station Development from which a high-speed rail line to Athens has been proposed.⁵ Thus, both developments are part of a network of increasingly interconnected and transportation friendly developments.

These two developments highlight the potential success that can occur when inspired individuals and organizations collaborate and focus their efforts on smart-growth. Though the two developments differ in scale and functionality, they are both prime examples of remediation and infill redevelopment of brownfield locations in the heart of a Southeastern metropolis. Through effort such as these the Piedmont-Atlantic Mega-Region can experience a much more sustainable pattern of growth. Such growth could integrate the diverse people of the region while helping to preserve its natural beauty. The vision within the charter of New Urbanism may in fact become realized and lead to a Southeast where "farmland and natural areas are as important to the metropolis as the garden is to the house."¹³

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