



Planning — July 2012

### A Sustaining Places Story

## Top-to-Bottom Sustainability Analysis

Greensboro, North Carolina, assesses its plans, policies, and codes through a new lens.

*By Dave Wortman and Graham Billingsley, FAICP*

In many ways, Greensboro, North Carolina, embodies the challenges communities are facing today and the questions they're asking about their future: How do we support a thriving and vibrant downtown and walkable neighborhoods while addressing growth pressure at the fringes? How do we attract and retain employers while still being good stewards of natural resources? And, for city governments, how can we support staff and become more resource and cost efficient as an organization?

Greensboro was one of many communities that received funding from the federal American Recovery and Reinvestment Act to help answer some of these questions, in particular through the Energy Efficiency Community Block Grant. The boost from these funds prompted many communities to develop energy, climate action, and sustainability plans and to weave sustainability themes into their comprehensive plans.

In 2009, Greensboro used its \$2.5 million EECBG share to develop an Energy Efficiency and Conservation Strategy with the support of its Community Sustainability Council, to undertake greenhouse gas inventories, and to draft a Sustainability Action Plan addressing everything from transportation and green jobs to education and "nature in the city." One of the strategies outlined in the EECS was an update of Connections 2025, Greensboro's comprehensive plan, so that it could incorporate the themes of energy and sustainability.

While such a strategy is certainly not unique to Greensboro, what is unique is the next question the city asked: What if we could align all of our plans by using sustainability as a guide — along with Connections 2025?



That query led Greensboro in 2011 to embark on the Sustainability and Efficiency Opportunities for Greensboro—Policy Alignment Process study, a nine-month effort to take a hard look at sustainability across all of the city's major plans, ordinances, and policies — from its Economic

Development Guidelines to its Consolidated Plan, and from the Greensboro Transit Authority Transit Plan to the Land Development Ordinance. The study looked for where sustainability is addressed, where it's not, and how all of Greensboro's planning efforts could be aligned. The outcomes of the study demonstrate how powerful sustainability can be as an organizing principle.

### Finding a meaning

As author Ben Herman notes in his April 2010 story in *Planning*, "Embracing Sustainability in Community Plans," most definitions of sustainability include some acknowledgment of people, planet, and prosperity. More importantly, as Herman writes, sustainability embodies a process of continuous, ongoing improvement and a realignment of community goals and practices to grow in a more responsible and resilient manner.

While Greensboro has not adopted a formal definition of sustainability, the goals of its Sustainability Action Plan are to reduce greenhouse gas emissions, improve energy efficiency, provide for economic development opportunities, promote an improved quality of life, and save taxpayer money. Among the many anticipated additional benefits are reduced energy and fuel costs, more green jobs, improved air quality, improved public health, and greater educational opportunities.

For the Sustainability and Efficiency Opportunities project, sustainability was seen as a conceptual framework to better integrate and coordinate plans and link land use, transportation, and economic development opportunities. From an operational perspective, sustainability was seen as a way for the city to identify ways to work smarter, not harder, saving resources and money in the process, whether in processing permits or collaborating across departments.

### Greensboro Plans, Policies, and Codes Evaluated

|                      |  |
|----------------------|--|
| Economic Development | Downtown Economic Development Strategy<br>Economic Development Guidelines<br>Economic Development Strategic Plan<br>Urban Development Investment Guidelines  |
| Housing              | Minimum Housing Code<br>Consolidated Plan  |
| Land Use             | Land Development Ordinance<br>Neighborhood Plans (two)   |
| Parks and Recreation | 1997 Comprehensive Parks and Recreation Master Plan<br>2005 Master Plan Update<br>Bicycle, Pedestrian, and Greenways Master Plan   |
| Transportation       | Long-range Transportation Plan<br>Coordinated Human Services Transportation Plan<br>Greensboro Transit Authority (GTA) Mobility Plan<br>GTA Transit Services Plan<br>Piedmont Area Regional Transit (PART) Draft Regional Plan<br>PART Alternatives Analysis |
| Water Resources      | Water Supply Master Plan<br>Stormwater Management Plans<br>Wastewater System Rules and Regulations<br>Water and Sewer Upsizing Policy<br>Stormwater Manual   |
| Other Documents      | Management, Accountability, Performance (MAP) Goals<br>Sustainability Action Plan<br>Energy Efficiency and Conservation Strategy   |

### About Greensboro

The city of Greensboro, named for Revolutionary War hero Nathanael Greene, was established in 1808. Greensboro has always been a transportation hub, early on for the roads crossing through the region, then for the railroads, and now for Interstate highways 40 and 85 and the Piedmont Triad International Airport, all of which support the leading industries of retail trade, manufacturing, and education. The city is home to a number of universities and colleges, including the University of North Carolina–Greensboro and Guilford College.

Since Connections 2025 was adopted in 2003, interest in sustainability and livability has increased. In the last decade, the city has undertaken efforts to foster energy efficiency, reduce greenhouse gas emissions, enhance water supply planning, and better link transportation and land-use planning activities at the neighborhood, corridor, and citywide levels. And in 2008, the city council created an advisory body, the Community Sustainability Council.

In 2010 Greensboro hired the Brendle Group and Clarion Associates to help city staff and the

sustainability council to develop Greensboro's EECS and its Sustainability Action Plan. During this time, Greensboro also hired Teska Associates and Billingsley Consultants (now Orion Planning Group) to create a Housing Consolidated Plan based on the livability principles developed by the Interagency Partnership for Sustainable Communities — a consortium of the U.S. Department of Housing and Urban Development, U.S. Environmental Protection Agency, and U.S. Department of Transportation.



### **Step by step**

Over the course of the nine-month project and with a budget of just under \$60,000, the outside team (comprised of the authors' companies plus Teska Associates) worked closely with the planning staff to sift through plans, interview city employees, and conduct web-based surveys. The team also reviewed community sustainability frameworks and examples of sustainability planning from a number of other communities nationwide. Resources included the HUD-DOT-EPA principles, APA's Sustaining Places Initiative, and the ICLEI STAR Community Index.

The project proceeded in two phases. Phase 1, which resulted in a report, involved a review of 25 plans, policies, and ordinances, undertaken to identify the gaps, inconsistencies, and opportunities in city documents. Phase 2 led to a set of recommended actions based on that report.

The team interviewed more than 35 city staff members from a cross section of the city's 21 departments about the plans, ordinances, and policies with which they most frequently worked. Interviewees were asked about gaps, inconsistencies, and opportunities; the areas where sustainability was already being addressed; and how plans and policies could better align with implementation practices.

The consultant team also developed and administered two web-based surveys, one to the rest of the city staff and the other to the external community, including developers, community stakeholders, and city board and commission members.

All of this information was compiled using an Excel-based "Plan Evaluation Tool" developed specifically for the project. This tool not only provided a consistent method for evaluating and documenting findings, it also created a means to compare linkages and alignment between documents.

### **What we found**

Overall, city leadership and staff were forthcoming and engaged in the project. The consultant team asked some key questions as they reviewed the city's documents: Did the documents support, hinder, block, or simply not address sustainability? In fact, many of those documents already addressed sustainability in a meaningful way. While this is particularly true of more recent planning documents that specifically call out principles and concepts of sustainability, such as the Housing Consolidated Plan, planning documents from transportation and water resources to parks and housing also included sustainability principles, even if not explicitly stated.





Several plans also presented opportunities to further strengthen policies. This included, for example, adding to the Economic Development Guidelines more incentives for targeted business clusters to support infill or for attracting high-growth clean tech sectors to the city. Or, in the case of the Land Development Ordinance, adding mechanisms to encourage energy efficiency or alternative energy sources.

A major anchor of sustainability is systems thinking: understanding connections and multiple economic, environmental, and community dimensions, whether it be for a particular topic or for a community plan. As it turned out, many of Greensboro's plans were prepared in silos by individual departments.

Not surprisingly, the team found many opportunities to strengthen the links between such plans, partly by assessing each planning effort for its contribution to the triple bottom line — that is, its benefit to the economy, environment, and community. This meant yoking plans together not only with each other, but also with the city's Management, Accountability, and Performance Plan, which focuses on results and includes both goals and indicators that address sustainability. This meant linking MAP's indicator for carbon footprint reduction to the city's energy efficiency and conservation efforts as well as its multiple transportation and transit plans.

The consultants also found that the ties between planning and implementation needed to be beefed up. Even strong sustainability policies were not being translated to implementation practices, whether because standards were waived by decision makers, or simply because policy and practice were disconnected in the city's day-to-day operations. Conversely, there were also cases where staff implementation practices with respect to sustainability — such as Parks and Recreation's design practices for new park facilities — were steps ahead of what was actually contained in the Comprehensive Parks and Recreation Master Plan.

The project's final report lays out a number of recommendations for filling gaps in plans, better aligning them with sustainability and each other, and addressing implementation. For the future update of Connections 2025, the consultant team recommended integrating sustainability across all of the plan's elements, encouraging economic growth that contributes to Greensboro's sustainability aspirations, potentially adding a new community livability element, and including key performance metrics that align with MAP.

Finally, with respect to city operations, the consultant team suggested ways to integrate sustainability concepts and principles. A handful of cities — Olympia, Washington, and Fort Collins, Colorado, among them — have developed internal "triple bottom line" support tools to help guide their decisions and actions, whether by wrestling with a complex policy option or by informing procurement choices. Staff interviews yielded many other good ideas, from collecting customer suggestions about operational efficiencies to allowing departments to share in the savings from reducing energy costs.

Although considered a success, the project certainly presented some challenges. Communicating and discussing an all-encompassing topic like sustainability with city staff sometimes proved difficult, prompting one staff member to ask, "What is it we're trying to sustain?" In addition, the web-based community survey yielded a poor response rate, which meant it was hard to tell how community groups and the development community perceive plans and policies.

Another disappointment was the city's decision not to pursue the update of Connections 2025 on the heels of the project, admittedly a major undertaking when the city is facing many more immediate issues.

Overall, however, both the consultants and city officials consider the sustainability project a success. By using sustainability as the North Star of its planning efforts — both in municipal operations and for the community — Greensboro demonstrates how communities can position themselves to benefit from plans that are well linked, integrated, and likely to lead to implementation, resulting in outcomes that will benefit their citizens for years to come.

☒ Sidebar: Decatur Goes from Soybeans to Sustainability

*Dave Wortman is a program manager with the Brendle Group in Fort Collins, Colorado. Graham Billingsley is a partner in the Orion Planning Group in Boulder, Colorado.*

### Resources

**Images:** Top — Proximity Hotel, built to a LEED Platinum rating, includes 100 rooftop panels that heat 60 percent of the water for the hotel and in-house restaurant. Photo courtesy Proximity Hotel. Middle — A revitalized, walkable neighborhood in Greensboro. Photo by Duany Plater-Zyberk. Bottom — Downtown is home to the International Civil Rights Center & Museum, in the old Woolworth's building. Photo courtesy City of Greensboro.

APA's sustainability initiative resulted in a Planning Advisory Service report published by APA in 2011: *Sustaining Places: The Role of the Comprehensive Plan*, by David Godschalk, FAICP, and William Anderson, FAICP, available from APAPanningBooks.com.

For more on Greensboro's comprehensive plan and its sustainability initiatives, visit [www.greensboro-nc.gov/index.aspx?page=2781](http://www.greensboro-nc.gov/index.aspx?page=2781).

ICLEI STAR Community index: [www.iclei.org](http://www.iclei.org)

HUD-DOT-EPA Partnership for Sustainable Communities: [www.epa.gov](http://www.epa.gov)