

SHAPING THE HEALTHY COMMUNITY

The Nashville plan

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“A society projects its concept of the good life in the largest of its public works—its metropolitan form.” —Christine Kreyling, *The Plan of Nashville*

The alarming rise in obesity rates and associated chronic diseases over the past several decades is an established concern. While scientific research on direct causal links between the obesity epidemic and the built environment is still evolving, the obesity epidemic has galvanized architecture, public health, and planning professionals to collaborate on multi-pronged approaches to mitigate the crisis.

“A society projects its concept of the good life in the largest of its public works—its metropolitan form.”¹ In the last decade, one aspect of the good life has taken center stage: good health, as evinced in both the environmental well-being of the city as a whole as well as in the personal health of the citizens.

Thus the book-in-progress: *Shaping the Healthy Community: The Nashville Plan*. *Shaping* presents an action plan focused on Davidson County, Tennessee. Davidson County has been synonymous with Nashville since 1963, when city and county governments were combined to make Metro Nashville. The book’s target audience is not merely public health officials, planners, and other policy makers, but neighborhood organizations, design professionals, developers, and citizens seeking a prescription for a healthier city.

Shaping the Healthy Community is a response to decidedly unhealthy conditions.

Nashville’s health profile mirrors national trends, although many indicators are more negative than those of the U.S. as a whole. For example, the life expectancy in Davidson County was 73.7 years in 2009, while the national average was 76.2 years. Chronic illnesses such

as cardiovascular disease, cancer, stroke, and respiratory disease are among Nashville’s leading causes of death.

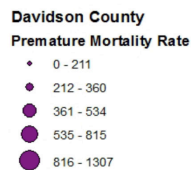
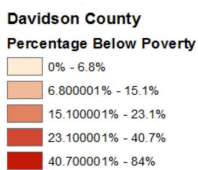
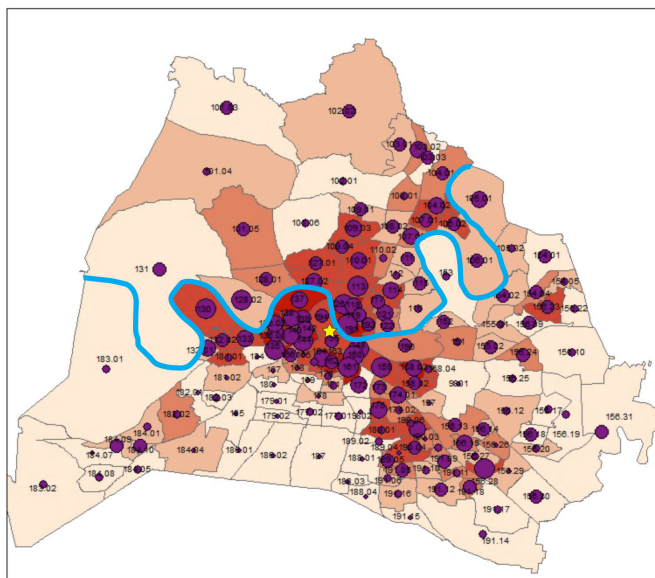
Nashville’s rising rates of overweight and obese populations are also problematic. In 2010 it was 60.6 percent; in 2011, the last year assessed, it was 66.2 percent.

There is a strong correlation between early death and poverty in Nashville (Figure 1). The ten census tracts with the highest premature (under 75 years of age) mortalities average a 41 percent poverty rate, 17 percent unemployment rate, and a 16 percent vacancy housing rate. Conversely, the ten census tracts with the lowest premature mortalities average a 9 percent poverty rate, 4 percent unemployment rate, and a 9 percent vacancy housing rate. The healthiest 25 percent of Nashville’s census tracts have premature mortality rates at or below 277 deaths per 100,000 people, while the sickest quartile have rates that are all above 660, reflecting roughly twice the risk of early death.

Nashville is also confronting environmental degradation, particularly in terms of air quality. Three interstates pass through the city. The considerable through-traffic belches noxious particulates into the atmosphere. In addition, the region is beset by sprawl and the resultant addiction to cars for transportation. According to a report by Smart Growth America released April 1, 2014, Nashville is second only to Atlanta for sprawl among the nation’s metropolitan regions with a population of a million or greater.

The daily vehicle-miles-traveled average in Nashville is 34.7 miles per person.² This is equivalent to 26 around-the-world trips per day for the population as a whole. The

FIGURE I. Map, 2013 (Source: Jill Robinson, NCDC Research Fellow)



vehicles pump 174 million cubic feet—approximately 858 Goodyear blimps—of CO₂ into Nashville’s atmosphere per day.

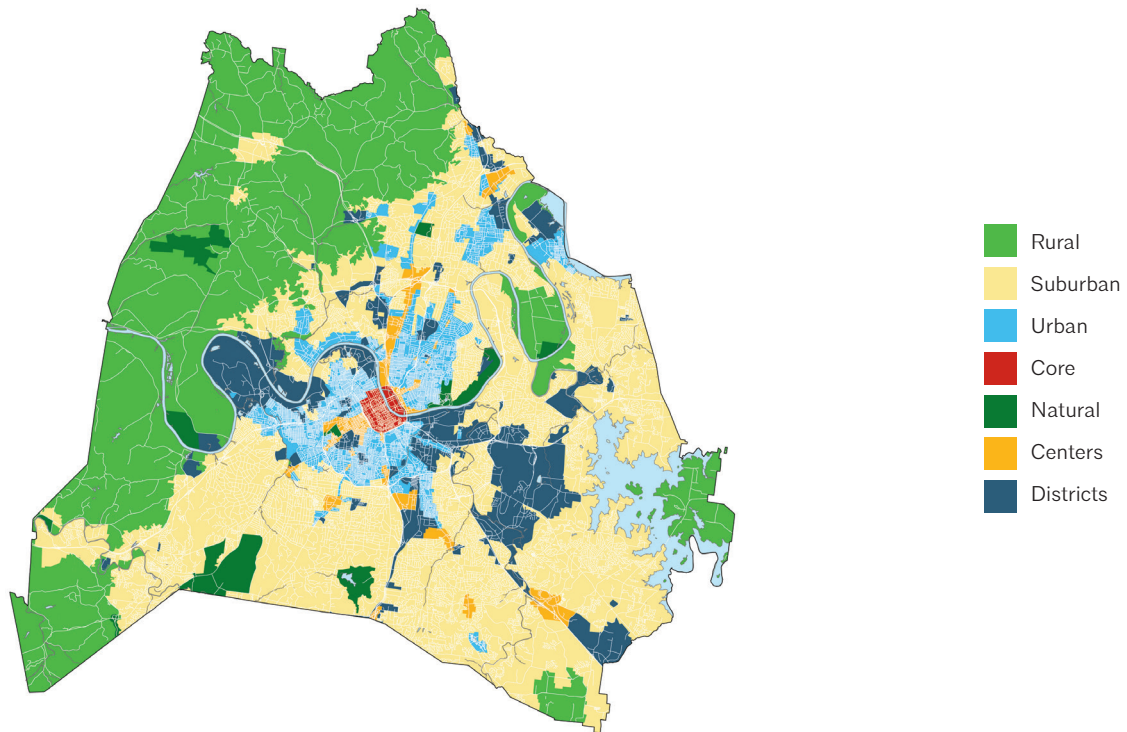
Metro Nashville’s Public Health Department is obviously in the business of improving these statistics. In 2010 the Centers for Disease Control and Prevention awarded the city a two-year, \$7.5 million Communities Putting Prevention to Work (CPPW) grant to promote healthy eating, active living and obesity prevention. Public Health worked with Mayor Karl Dean’s office, various Metro departments, and community partners—universities and schools, employers, youth organizations, places of worship, and hospitals—to create policies and shape the environment so that healthy choices are more prominent, more visible, and more likely to be the default choices.

Among four strategic issues identified for Nashville to address in the next five years: How do we maximize the built and natural environments to optimize health?

In 2011, the Public Health Department commissioned the Nashville Civic Design Center to research specific strategies for reshaping the 3-D environment to enable citizens to choose a healthier lifestyle. In 2014, Vanderbilt University Press will publish *Shaping the Healthy Community: The Nashville Plan*, a 250-page book that explores the relationships between the built environment and public health. The book is the product of more than three years of intense research, planning, and writing.

This book will serve as the basis for other online, printed, and curricular tools to get the message out. Additional funding for the project has come from the Nashville region Metropolitan Planning Organization (MPO) and the Tennessee Department of Transportation (TDOT). Vanderbilt University has contributed the book’s design.

FIGURE 2. Map of transect as applied to Nashville (Source: Metro Nashville Planning Department)



Methodology: Transect, Factors, Case Studies

The book team includes Gary Gaston as project director and contributing writer; Christine Kreyling as writer and editor; Ron Yearwood as images editor; Eric Hoke as principal illustrator; Patricia Conway as research coordinator; Jill Robinson and Amy Eskind as research fellows; and a revolving group of interns over the course of the project. Experts were commissioned to contribute essays in their various disciplines.

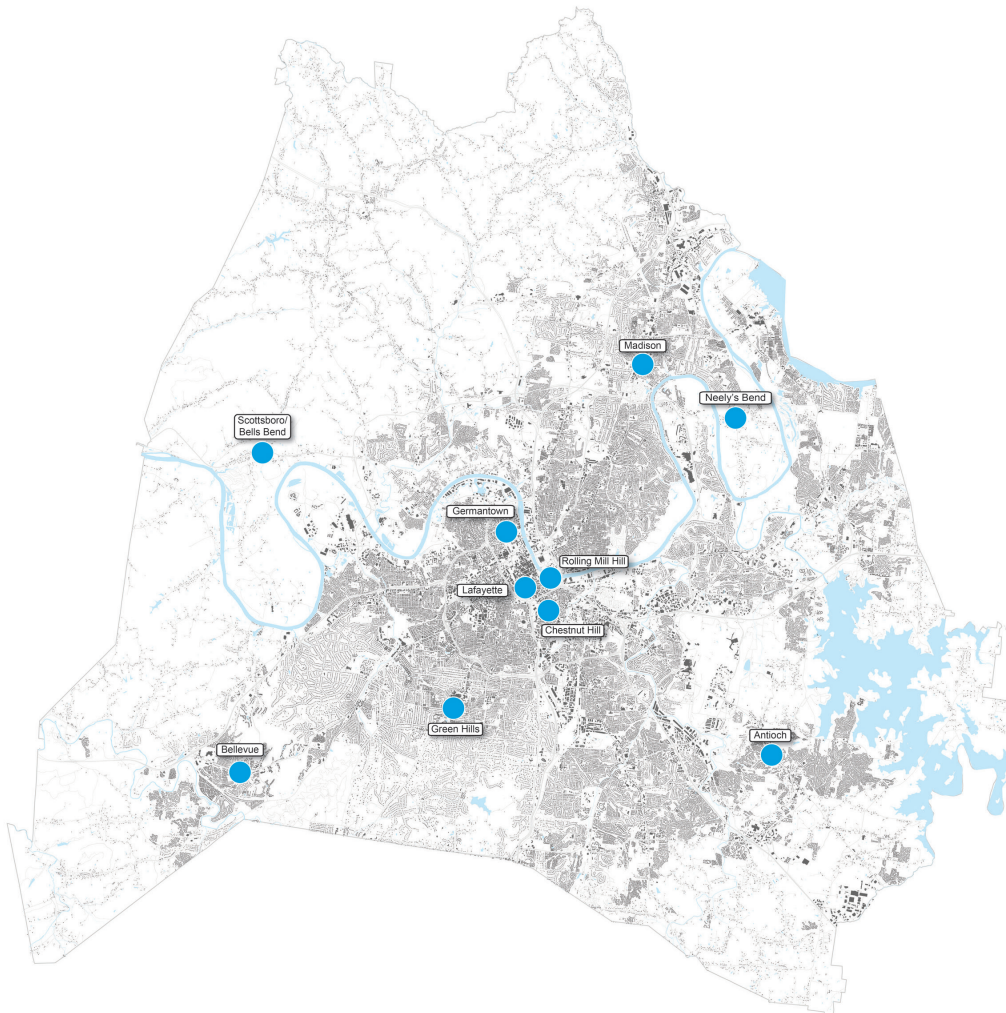
The process began by reviewing the available literature on planning, design, and public health to develop a list of factors that impact wellness and its lack in the built environment.

- Neighborhood design and development
- Transportation
- Walkability and pedestrian safety
- Food access
- Housing
- Parks and open space

These factors, however, are present to different degrees and in different forms depending on the type of built environment. For example, it is logical to plan and implement a fully integrated network of sidewalks in urban neighborhoods, but in the rural areas of Davidson County, the sidewalk strategy to increase walkability would be cost prohibitive and not in keeping with rural character; easements for unpaved trails are more appropriate in rural areas.

The “Transect” is an urban planning model created by New Urbanist Andrés Duany to define a series of zones that transition from sparse rural farmhouses to the densest downtown core. This was chosen for the basic structure of the book, each Transect zone (Natural, Rural, Suburban, Urban, Centers, Downtown, and Districts) represents a different chapter. In addition, the book includes a chapter on active design practices for the individual building, specifically targeted to architects and developers. Introductory materials include a history of the relationship between public health and urban planning on both a national and local scale, as well as a diagnosis of the current health of the city by the director of the Nashville’s Public Health Department.

FIGURE 3. Map with case study neighborhoods (Source: Ron Yearwood, NCDC)



Shaping the Healthy Community utilizes Nashville as a case study to reflect these distinctions in the built environment form, and enables greater specificity in crafting the strategies contained in the book. This is particularly appropriate for *Shaping* because the Metro Nashville Planning Department employs the Transect in its practices, so the language and philosophy are familiar to those citizens and officials who participate in the planning process (Figure 2).

Each chapter devoted to a zone of the transect begins with the narrative of a resident, who discusses his/her daily life in terms of the factors: getting children to school, traveling to work, shopping for groceries, recreation options, etc. This profile device, which allows readers to understand the personal impact of

built environment form, was inspired by Chicago's Comprehensive Regional Plan, *Go To 2040*.

Next comes a brief history of the zone in terms of how employment, housing and transportation options and infrastructure at the time of the zone's development shaped the zone's 3-D form. The impact of the streetcar on the development patterns of urban neighborhoods versus the car on suburban form, for example, illustrates the determinant of transportation infrastructure. Also included are current statistics for the zone: population, acreage, average density, etc.

Then each transect zone is analyzed in terms of the factors to determine the positive and negative aspects—called “health-promoting” and “health-defeating”—of the zone. For example, urban neighborhoods usually



FIGURE 4 & 5. Before and after visualization (Source: Erick Hoke, NCDC)

have good multi-modal connectivity, which enables people to drive less, walk, bike and use public transit more. Nashville’s rural zone, on the other hand, has good access to open space, both public and private, and presents the opportunity for healthy food through individual gardens, collaborative agriculture, CSAs, etc.

The meat of each chapter is the presentation of strategies to enhance the positives and mitigate the negatives. Among the positives proposed for enhancement, for example, is the recreational potential of the Cumberland River as it passes downtown by means of a community boathouse for kayaks, canoes and sculls.

For even greater specificity, two neighborhoods in each zone are treated as case studies. These neighborhoods are chosen to illustrate the differences among communities present within a zone in terms of history, infrastructure and demographics (Figure 3). Strategies for each case study neighborhood reflect these distinctions and fine-tune the recommendations for the zone in general.

Shaping the Healthy Community: The Nashville Plan features hundreds of photos, maps and illustrations that demonstrate best practices for improving the health of Nashville’s neighborhoods (Figure 4 & 5). Ten detailed

case studies are utilized to accomplish this, including: Bells Bend, Neely’s Bend, Madison, Bellevue, Chestnut Hill, Germantown, Lafayette, Rolling Mill Hill, Green Hills and Antioch.

Partnerships established with faculty members at Vanderbilt University allowed further investigation through analyzing existing Nashville city plans; visiting sites and providing qualitative analysis of the built environment of identified neighborhoods; and conducting interviews with individuals residing and/or working within selected study areas, which have helped shape personal narratives to relate individual experiences of living and working in the various types of neighborhoods.

Shaping the Healthy Community: The Nashville Plan will be used to educate private citizens, business and policy leaders, planners and designers of the critical role that the built environment plays in public health; inform these groups of the important infrastructure investments needed to begin shifting priorities for new projects towards considering health in every project advanced in the city; and provide a blueprint / action plan that guides Nashville towards its goal of becoming the “healthiest city in the Southeast,” as identified by Nashville Mayor Karl Dean.

References

- 1 Keyling, C. *The Plan of Nashville*. Nashville, TN: Vanderbilt University Press; 2005.
- 2 Highway Performance Monitoring System, US. Department of Transportation. <https://www.fhwa.dot.gov/policyinformation/hpms.cfm>. Accessed September 14, 2013