

Charlotte's North End Charlotte, North Carolina

April 27–May 2, 2014



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Reimagining Charlotte's North End

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About the Urban Land Institute

THE MISSION OF THE URBAN LAND INSTITUTE is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. ULI is committed to

- Bringing together leaders from across the fields of real estate and land use policy to exchange best practices and serve community needs;
- Fostering collaboration within and beyond ULI's membership through mentoring, dialogue, and problem solving;
- Exploring issues of urbanization, conservation, regeneration, land use, capital formation, and sustainable development;
- Advancing land use policies and design practices that respect the uniqueness of both built and natural environments;
- Sharing knowledge through education, applied research, publishing, and electronic media; and

- Sustaining a diverse global network of local practice and advisory efforts that address current and future challenges.

Established in 1936, the Institute today has more than 32,000 members worldwide, representing the entire spectrum of the land use and development disciplines. Professionals represented include developers, builders, property owners, investors, architects, public officials, planners, real estate brokers, appraisers, attorneys, engineers, financiers, academics, students, and librarians.

ULI relies heavily on the experience of its members. It is through member involvement and information resources that ULI has been able to set standards of excellence in development practice. The Institute has long been recognized as one of the world's most respected and widely quoted sources of objective information on urban planning, growth, and development.

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About ULI Advisory Services

THE GOAL OF ULI'S ADVISORY SERVICES program is to bring the finest expertise in the real estate field to bear on complex land use planning and development projects, programs, and policies. Since 1947, this program has assembled well over 400 ULI-member teams to help sponsors find creative, practical solutions for issues such as downtown redevelopment, land management strategies, evaluation of development potential, growth management, community revitalization, brownfield redevelopment, military base reuse, provision of low-cost and affordable housing, and asset management strategies, among other matters. A wide variety of public, private, and nonprofit organizations have contracted for ULI's advisory services.

Each panel team is composed of highly qualified professionals who volunteer their time to ULI. They are chosen for their knowledge of the panel topic and screened to ensure their objectivity. ULI's interdisciplinary panel teams provide a holistic look at development problems. A respected ULI member who has previous panel experience chairs each panel.

The agenda for a five-day panel assignment is intensive. It includes an in-depth briefing day composed of a tour of the site and meetings with sponsor representatives; a day of hour-long interviews of typically 50 to 75 key community representatives; and two days of formulating recommendations. Long nights of discussion precede the panel's conclusions. On the final day on site, the panel makes an oral presentation of its findings and conclusions to the sponsor. A written report is prepared and published.

Because the sponsoring entities are responsible for significant preparation before the panel's visit, including sending extensive briefing materials to each member and arranging for the panel to meet with key local community members and stakeholders in the project under consideration, participants in ULI's five-day panel assignments are able to make accurate assessments of a sponsor's issues and to provide recommendations in a compressed amount of time.

A major strength of the program is ULI's unique ability to draw on the knowledge and expertise of its members, including land developers and owners, public officials, academics, representatives of financial institutions, and others. In fulfillment of the mission of the Urban Land Institute, this Advisory Services panel report is intended to provide objective advice that will promote the responsible use of land to enhance the environment.

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The panel also thanks the approximately 80 leaders and representatives from the community, local businesses, and organizations and others who agreed to be interviewed and gave their time and energy to the panel process (see the appendix).

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Background and the Panel's Assignment

CHARLOTTE, LOCATED IN MECKLENBURG County, is the largest city in North Carolina, and the 16th most populous city in the United States. According to the U.S. Census Bureau, the population of Mecklenburg County is 919,628, with Charlotte accounting for about 731,424.

From 2000 to 2010, the population of the Charlotte metropolitan area (part of a 16-county market region) grew by an estimated 29 percent, largely due to the region's strong employment market, affordability, and overall quality of life. Charlotte has established itself as a major U.S. financial center and is now the second-largest banking center in the United States after New York City. Nicknamed the Queen City, Charlotte and its resident county are named in honor of Charlotte of Mecklenburg-Strelitz, the queen consort of British king George III during the time of the city's founding. In 2013, *Forbes* magazine named Charlotte among its list of Best Places for Business and Careers.

As the population and job markets continue to grow in Charlotte, so too does development opportunity in and around the city.

The Applied Innovation Corridor

Over the past decade, Charlotte's Center City has experienced extraordinary growth. That tremendous growth is the result of strong collaboration, successful planning, and strategic investments by both the public and private sectors. Building off Charlotte's strong tradition of planning and visioning, the city of Charlotte, Mecklenburg County, and Charlotte Center City Partners worked together to create the 2020 Vision Plan, a comprehensive plan that provides "a big picture framework and unifying vision for Center City growth and development."

The Charlotte Center City 2020 Vision Plan endorses targeted economic growth and industry recruitment in an

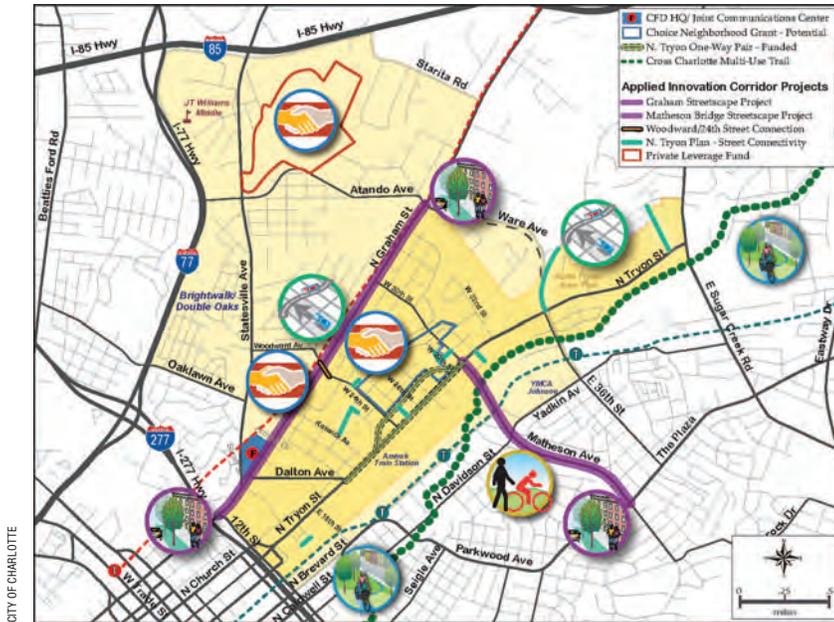


Regional map.

Applied Innovation Corridor that extends from Center City to the University of North Carolina at Charlotte (UNC Charlotte) campus. That strategy draws on the development momentum that exists in Uptown and South End and is modeled after the emerging practice of urban "innovation districts" being applied in cities across the world. Future investment and redevelopment are envisioned to link and leverage Charlotte's academic and research capital with its business assets, emerging industries, and governmental support.

The primary goal is to foster job growth in future "21st-century" industries and clusters, including energy production and infrastructure, biosciences, information technology, and health care. The Applied Innovation Corridor strategy is also intended to attract entrepreneurial startups and business expansion in innovative industries to catalyze further investment in mixed-use housing and commercial development. The intention is to create vibrant urban places by focusing investments on economic development and job growth.

A significant opportunity exists in the Applied Innovation Corridor, located just north of Uptown in an area centered on Graham Street and North Tryon Street. In addition to its proximity to Uptown, the area benefits from easy freight movement, future light-rail access, a potential commuter



The panel's study area is highlighted in yellow.

rail station, quick connections to Uptown's major transportation centers, new pedestrian and bicycle connections, and existing affordable and workforce housing.

The Panel's Assignment

Although the designated Applied Innovation Corridor extends from Uptown and South End to UNC Charlotte, the panel was asked to evaluate a study area located north of Uptown in an area centered on Graham Street and North Tryon Street, bounded by I-85 on the north, I-77 on the west, I-277 on the south, and the Little Sugar Creek Greenway and NoDa (North Davidson) on the east.

The panel was asked to focus specifically on the feasibility of the innovation aspect within that North End corridor that could be a catalyst for new land uses and neighborhood revitalization, as well as the appropriate types of supporting uses and development to realize the area's new vision. As the area seeks to be known for innovation, to be so, the vision must be replicable at an economical cost and must satisfy a specific need.

The sponsor (a team comprising members from the city of Charlotte, Mecklenburg County, Mount Vernon Capital/Vision Ventures, Foundation for the Carolinas, Knight Foun-

ation, Charlotte Chamber of Commerce, Charlotte Center City Partners, Charlotte Housing Authority, Charlotte Housing Partnership, and UNC Charlotte Foundation) requested that the Urban Land Institute conduct an Advisory Services panel focusing on the Applied Innovation Corridor concept and its neighborhoods. The sponsor asked a series of strategic questions, which included the following:

- What is the feasibility of using the "innovation corridor" concept as a land development and neighborhood revitalization strategy?
 - How should we focus and apply a Charlotte-based "innovation corridor" strategy on the basis of the successes of other places?
 - How can we create the environment to attract startups and expanding firms in innovative industries?
 - What types of industries and partnerships should we pursue?
 - How can private landowners and residents help foster this theme and encourage the growth and expansion of the concept in this area?
- What types of supporting uses and development, including affordable housing (new construction and preservation of the existing housing stock), should be pursued, and what types of funding mechanisms and development incentives should be pursued to facilitate the recommended land use vision?
 - What types of public amenities will foster a vibrant business and neighborhood environment?
 - Are there specific catalyst sites that are best suited to facilitate this environment?
- What types of public investments will best catalyze private investment? The public purpose of the innovation corridor initiative is to provide just the right amount of leadership and infrastructure necessary to encourage job growth and private investment. The city has identified some initial public projects focused in this corridor as part of its Community Investment Plan.

- Are they the right investments?
- What should come first?
- Are there additional investments that we should consider?

Summary of Panel Recommendations

The panel recognizes the thoughtful planning represented by the Center City 2020 Vision Plan and that the city sees great possibilities for future redevelopment in this area. The panel also recognizes the tremendous amount of foresight and work that has gone into the Blue Line Extension Transit Station Area Plans.

The Queen City has, for the most part, led a charmed life. From its early history, Charlotte's geographic location, transportation crossroads, natural and built environment, industry strength, business engagement, and exceptional quality of life have all contributed toward people *from Charlotte* wanting to remain and people *from elsewhere* wanting to become a part of the city's success story. Charlotte has seized economic opportunities, developed best practices for sustainable growth, and proved its capability to be world-class in many ways. Charlotte has a reputation for its forward thinking urban and transportation planning, its business and civic engagement, and its "can-do" attitude that will, regardless, get the job done.

While Charlotte has been vibrant and prosperous as the commerce capital of North Carolina, the city must now create a model for transition to become a 21st-century leader in a more competitive market. In a word, Charlotte must *reinvent* itself.

It is time to ask the tough questions:

- What will our new leadership model look like?
- Who will rise to the top as our most significant economic generators, and how do we capitalize on their presence in the region?
- What *is* our new vision?
- And, most important, how do we make certain that Charlotte's future includes and benefits all people in the change to build new value, vitality, and vibrancy?

Charlotte's North End with its mosaic of people, land uses, transportation, housing, businesses, and assets gives that community the chance to drive innovation and shape that 21st-century city that Charlotte wishes to become. This area, with its proximity to Uptown, can be a compelling demonstration for redressing the patchwork of previous zoning and planning while strengthening the diverse neighborhood fabric and connecting older with newer, high rise with high tech through multiple transportation options. Charlotte's North End—although often forgotten in the past—can be redeveloped to highlight its unique character and be remembered in the future as the place where history, grit, and conscience coexist.

The panel's most impressive observation during its week-long assignment was the people of the North End. The panel spoke with both residents who live, work, and raise their families in the area and business owners who provide goods and services. Each person is passionate, committed, knowledgeable, articulate, involved, and filled with ideas and expectations about his or her neighborhood and the overall area. One neighbor commented, "We are here to help trigger transformation in our neighborhoods and to make sure that everyone feels connected and valued."

With the forward movement for renewal of this significant portion of Charlotte, citizen engagement will be critical; it is the only way to truly achieve innovative success physically, economically, and socially in the North End.



The panel during a walking tour of the North End study area.

This report will paint the picture for what Charlotte's North End "can be" and will redefine the place where younger and older, families and students, all income levels, creativity and the everyday live, work, and play. Recommendations include frameworks around the built environment and the economic context hand in hand with the human and social elements of a new vision for the North End.

The panel recommends many strategies, including the following:

- Establishment of a new redevelopment corporation;
- Revitalization of the existing Amtrak station to become the anchor of a new mixed-use retail center and to connect with the light-rail extension;
- Development of strategies for a collaborative knowledge center;
- Recognition of potential clusters in the creative, food, and high-tech sectors along with future retail demand that will be created;
- A focus on human capital and ensuring that the benefits of development extend to everyone in the North End; and
- Expansion of the street network and conceptual structure extending from Uptown to the North End.

As Charlotte writes this new story for the North End, it must be one of safety, connectivity, proximity, equity, opportunity, availability, and vibrancy. The story must imbed in the civic consciousness the importance of enhancing

Uptown by reviving the North End. It must create value with a return on investment that touches all areas of the community. The North End must have a new identity and a brand to attract those who wish to be a part of this emerging success story.

Study Area and Surrounding Context

WITH I-85 ON THE NORTH, I-77 on the west, I-277 on the south, and the Little Sugar Creek Greenway and NoDa on the east, the study area covers 5.5 square miles and includes a large portion of Charlotte, generally referred to as the North End. Encompassing nine established neighborhoods—Graham Heights, NoDa, Druid Hills, J.T. Williams, Genesis Park, Greenville, Lockwood, Belmont, and Optimist Park—the study area includes a diverse set of land uses, including industrial, residential, warehouse, and distribution uses, and vacant land. A number of social service providers both serve the region and affect development opportunities in the study area.

The city has made a number of investments in the area, including the extension of the LYNX Blue Line. In 2009, the Ark Group opened the Music Factory, a 300,000-square-foot entertainment district adjacent to the study area. Recent developments include Brightwalk, a multiphased, master-planned, mixed-use project developed by the Housing Partnership, which will include 1,000 residential units (300 affordable rental units), 1,000 square feet of commercial space, and open-space amenities.

Brightwalk, a recently developed mixed-use project located in the study area, provides a mix of housing, including single-family homes, townhouses, and apartments.



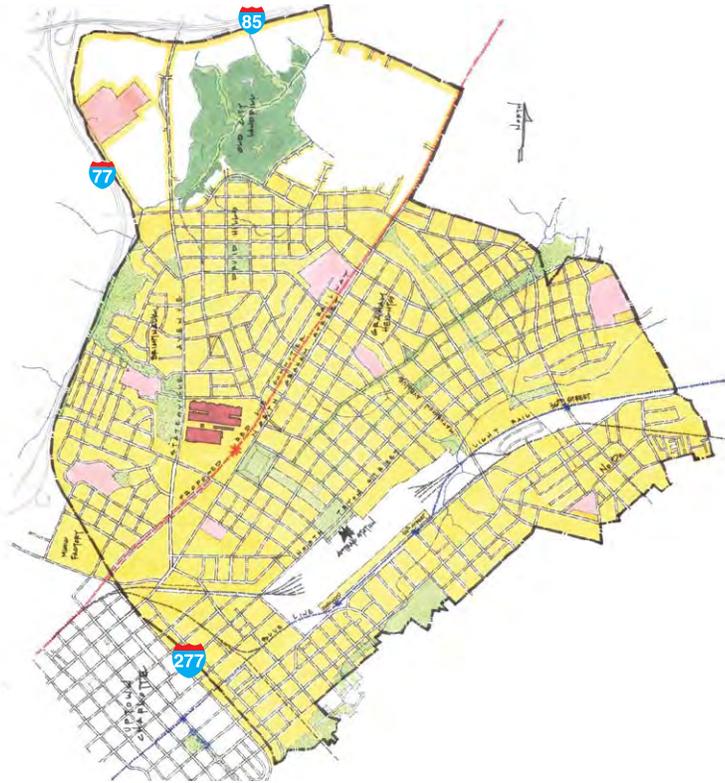
Built Environment

Drawing on site visits and study area tours, in addition to interviews with a number of stakeholders, the panel has developed a suggested framework for the built environment for the study area and its general vicinity. Specific recommendations include (a) extending the existing street grid, (b) maintaining and enhancing the Amtrak station as an asset, and (c) increasing connectivity to Uptown. Two major connections are also recommended: a new road through the current Rite Aid site that connects Oaklawn to Sylvania and the realignment of 24th and Woodward near their intersection with Graham. The panel also recommends the continued pursuit of the new Ware Avenue connection.

Street Grid

An immediately striking feature of Charlotte's land use plan is its regular street grid throughout the North End. That pattern is not foreign to Charlotte: the land use plan extends the grid that already exists in Uptown, as well as isolated areas within the North End like the Lockwood neighborhood. The panel's recommended plan respects and maintains the existing grid system and extends the grid to cover areas that currently lack it.

The panel has designed the grid to create an ideal block size for walkability. Blocks are approximately 350 feet on each side, matching existing block sizes in Uptown and other cities across the nation. The panel considers the proposed grid to be the building block for any future development in the North End. A key word here is "urban"—the panel has deliberately proposed a block system that will give the area an urban look and feel, consistent with Charlotte's goals for the area.

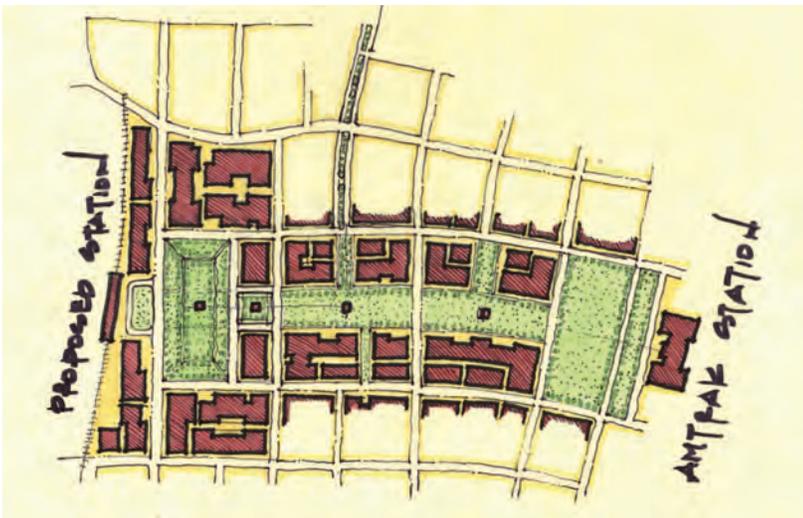


The panel's recommended plan maintains the existing street-grid system and extends it to cover those areas without one.

Amtrak Station

The panel recommends maintaining the Amtrak station in its current location. It is a visible asset and anchor in the midst of an area that is targeted for growth, and its relocation would send mixed signals concerning Charlotte's commitment to the North End. As envisioned on the proposed land use plan, the Amtrak station is the eastern anchor of the tech cluster, which serves as the dense activity center of the entire North End. Redesign of the station and its entranceway will be needed to improve access and aesthetics, but the station is a significant asset that should be preserved.

The panel recommends physical and design improvements to the Amtrak station but suggests it remain in its current location.



Connectivity to Uptown

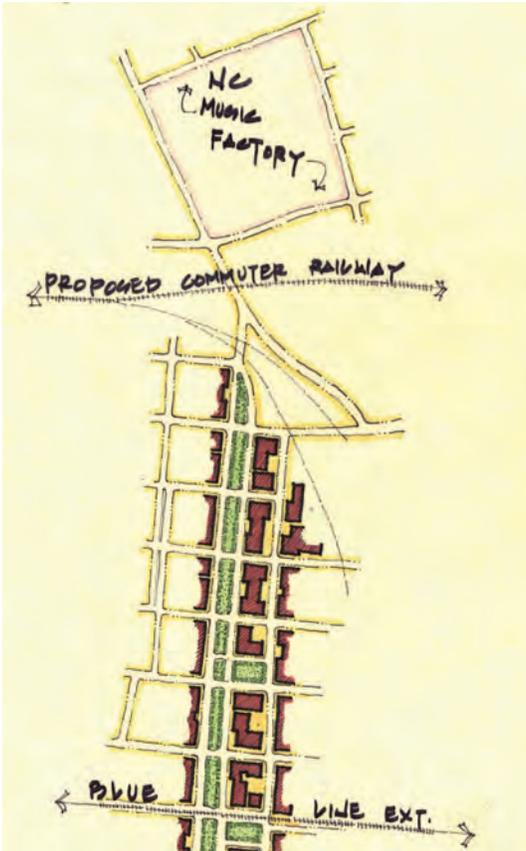
The proximity of the North End to Uptown is one of the study area's major advantages, but a series of physical barriers restrict access. In particular, the Brookshire Freeway (I-277) and two freight lines create a physical and perceptual barrier between Uptown and the North End.

The panel reinforces the ideas presented in the Center City 2020 Vision Plan, which call for reducing the barrier created by the Brookshire Freeway by burying the expressway or by converting it to an at-grade boulevard. Burying the expressway would allow significant development in the area, though it clearly would be a very expensive proposition. Converting it to a boulevard would be less costly, but it would also not fully remove the roadway as a barrier and would reduce the expressway's usability by through-traffic. Either would be an improvement over current conditions.

The panel recommends that Charlotte continue to examine both options, recognizing that some solution to this issue is needed to extend the environment of Uptown to the North End. Current planning activities within Uptown on North Tryon Street to strengthen the cultural institutions in that area can also create positive energy that can be extended into the North End.

The map highlights the Blue Line extension, Amtrak, and the planned Red Line that link the study area to Uptown.





To reduce the barrier created by the Brookshire Freeway, the panel recommends either burying it or creating an at-grade boulevard.

Even with the removal of the Brookshire Freeway as a barrier, the freight lines will remain. They, however, are smaller barriers than the expressway. Aesthetic improvements to the freight viaducts on North Tryon Street and the bridge on North Graham Street can ameliorate the barriers that they create without compromising their function as freight lines. Rather than a barrier, that area should serve as a gateway to the North End from Uptown.

Atando as a Line of Division

The panel focused much of its land use vision efforts on the area south of Atando Avenue. That area includes most of the existing residential neighborhoods, historic buildings, and transportation assets, and it also benefits from its proximity to Uptown. It contains the most diverse and



The renovation of Washington Park in Cincinnati, Ohio, helped transform the surrounding neighborhood, creating civic spaces while recognizing the value of its historic buildings. The panel sees a similar opportunity—to create civic space and enhance open space—at the Amtrak station.

complex collection of current land uses, creating planning challenges that the panel has tried to address throughout its recommendations.

North of Atando, the landscape changes. Logistics and distribution businesses dominate the landscape, and the area is more closely oriented with nearby expressways like I-85 and I-77 than it is to Uptown. It also includes challenging parcels like the Statesville Avenue Landfill, for which the panel does not have sufficient information to offer a concrete recommendation for future use. The area north of Atando also includes the J.T. Williams neighborhood, which appears to have a limited viability as a residential area because of its isolation and adjacency to incompatible uses.

Focusing logistics uses north of Atando will allow that industry to continue to provide economic value, but it will reduce truck traffic in the mixed-use and residential areas located south of Atando. Some truck traffic for local deliveries will still occur throughout the North End, but concentrating that traffic on through-roads rather than smaller residential streets will be helpful for creating a walkable, urban character.

It is difficult to see the area north of Atando as an extension of Uptown. However, if the land use changes that the panel has recommended for south of Atando lead to greater development pressure north of the street, there is nothing to stop the conversion of the northern area to a denser grid pattern in the future.

Density and Mix of Uses

Charlotte's existing land use plan does not specify a mix of uses, focusing instead on creating the built environment in which a mixed-use urban area can thrive. The plan recommends high-density employment in the tech cluster area, described at length later in this report. In other parts of the North End, a full range of employment, retail, and residential uses will occur, either mixed within a single building or in proximity. In other areas, specifically near existing single-family residential neighborhoods, a transition to moderate-density residential is expected. Overall, new development in that area should reflect a jobs–housing balance that includes employment as well as residential opportunities.

Although that wide range of uses is generally shown on the city's future land use plan, the existing zoning ordinance is not suitable for supporting the type of growth that is envisioned. The panel understands that the current approval process and jurisdiction are divided between the city and county with different requirements, procedures that can add time, cost, and uncertainty to the development process for developers and users alike. The city should streamline its development approval process to speed review, to reduce costs to developers, and to develop a reputation for predictability and responsiveness among developers and investors.

Building heights will vary across the North End. Most blocks are envisioned to contain mid-rise buildings, at a height that characterizes the urban neighborhoods that surround the central core of many American cities. Buildings are anticipated to be significantly taller close to Uptown and to the panel's proposed new urban North End technology industry cluster, called CTECH (to be discussed

in detail later in this report), as well as the areas around the new civic and open spaces.

Housing will be discussed in greater detail later in this report. Without specifying densities and zoning details, the proposed land use plan is intended to provide a mix of housing types and price points, preserving affordability for the current residents of the North End, permitting construction of high-quality workforce housing, and providing opportunities for growth. Brightwalk is an impressive model for mixed-income housing, and such developments could further reach the panel's vision by incorporating higher densities and more nonresidential uses.

Parks and Open Space

The proposed land use plan shows a park and open-space system that emphasizes connectivity. Parks and open spaces primarily follow stream corridors, creating natural greenways that can be used for bicycle and pedestrian paths, as well as natural buffers around those sensitive natural features. Open space is also envisioned as a key civic element, used to create a sense of place near assets like the Amtrak station and the tech cluster. The panel does not recommend creating a single, massive central park in the North End, believing that a series of smaller parks that are integrated within the urban street grid is more appropriate and will provide better recreational access for the area.

The existing Statesville Avenue Landfill is shown on the proposed land use plan as open space, but because of uncertainty regarding site conditions, the panel has not explored its development potential in enough detail to offer firm recommendations for future programming.

Connectivity to the Light-Rail Extension

The existing light rail has been a success, and Charlotte is wise to make its extension to UNC Charlotte a top transportation priority. The benefits that light rail will bring to the areas around its stations are transformative and have



Examples of using open space to establish a sense of place through a series of smaller green spaces.

been maximized by planning and infrastructure investment for transit-oriented development. However, the extension of those benefits to the North End is limited by the Norfolk Southern Intermodal Yard, which has only a few crossings and serves as a major barrier for east–west connectivity in the area.

The panel recognizes the difficulty of creating new connections across the rail yard. Challenges of many types—including physical engineering and design, coordination with Norfolk Southern Railway, and funding—would face any efforts to create a new connection. Despite those challenges, the panel believes that new connections are necessary. The potential for positive linkages is great enough that they should be pursued, despite the difficulty. The current crossings are just not sufficient or direct enough to extend the benefits of the light-rail extension to the greater North End. The panel strongly recommends the construction of a new bridge across the Norfolk Southern rail yard. That endeavor will clearly require close coordination, and likely intense negotiations, with Norfolk Southern.

The Amtrak station is also in proximity to the light rail, although it is separated from it by the Norfolk Southern Intermodal Yard. Multimodal connections to the Amtrak station are important, and it would benefit from access by light rail. The panel's plans recommend a connection in the area, near 24th Street, in a location that is consistent with a new connection shown in the Center City 2020 Vision Plan. The panel did not explore design details, and the location is conceptual, but a connection in that general area is important to link those two major transportation assets.

The panel has also concluded that the proposed maintenance yard for the Charlotte Area Transit System will restrict redevelopment potential along the nearby stations on the light-rail extension. Although the North End is underused at present, the panel's vision for the area is a dense, urban area that will increase land values. The panel recommends that a new location be sought for the maintenance facility.



The panel recommends building a new bridge over the Norfolk Southern rail yard to help extend the benefits of the light rail to the North End.

Transportation Transition

The preceding discussion of land use already covered many of the transportation elements and connections in this area. The panel also looked in greater depth at the type of transportation system that would be necessary to support the land use that it has envisioned. The major theme here is multimodal access—a dense urban area of the type the panel envisions requires transportation service by multiple modes. That multimodal service will establish the North End as a suitable environment for green, sustainable businesses, making it attractive to many of the residents and businesses that the panel seeks to attract.

Street Connections

Although the grid pattern is a central element of the design of North End, so too are the external connections to Uptown and to the light-rail stations.

In several areas, the panel recommends specific street connections within the study area. The North End is limited by a lack of through-streets that cross the study area from east to west, and that limitation presents challenges for access and internal organization. Two major connections are recommended: a new road through the current Rite Aid distribution center that connects Oaklawn to Sylvania and realignment of 24th and Woodward near their intersection with Graham. The panel also recommends the continued pursuit of the new Ware Avenue connection.

Transit Access

No urban area is complete without public transit, and Charlotte has been investing in expanding its system. Transit connections to, from, and within the North End are needed to create the urban environment the panel envisions. The proposed commuter rail has not advanced because of challenges in funding and coordination with Norfolk Southern, and a station in that location is uncertain. Therefore, other creative multimodal options should be explored, including options in the same corridor.

Bus service already operates on major corridors in the North End, with high-frequency service on Tryon Street, moderately frequent service on Statesville Avenue and North Graham Street, and a neighborhood shuttle service. However, conventional bus service is unlikely to be attractive to the employees of the panel's proposed CTECH (described later in this report) and residents of the area. Improvements and enhancements to bus service—such as greater frequencies, enhanced stations, real-time arrival information, and specialized vehicles—could attract greater ridership from the new types of users that the system needs to serve. Dedicated right-of-way, which would be necessary for a full bus rapid transit service, is unlikely, but improvements could be made to bus stops, sidewalks, and other public infrastructure in the right-of-way to improve the attractiveness of service. Many riders will transfer from another service—likely light rail—which should occur either at the Transportation Center in Uptown or at the stations on the light-rail extension in the corridor.

Other options like trolleys and streetcars could be considered, but those more capital-intensive modes may conflict with the future viability of commuter rail.

Complete Streets and Streetscaping

Charlotte's complete streets policy and its interest in retrofitting existing streets to support multimodal transportation are very encouraging. Previous and ongoing investments in the North End—like road diets on Statesville Avenue and the Matheson Bridge—are beginning to demonstrate not only Charlotte's commitment to bicycle and pedestrian travel but also its interest in supporting urban development in the area. Streetscaping investments like the one-way pairs on North Tryon Street and the planned improvements on North Graham Street are positive, but the panel is not convinced that they will be transformative. The panel suggests focusing additional attention in the western part of the study area, building on the previous road diet on Statesville and the positive energy related to the Brightwalk development, and directly supporting the initial stages of tech cluster development. The panel advises refocusing

and reprioritizing investments in areas where they will support immediate redevelopment in the study area.

The panel noted that despite the improvements in the study area, connectivity remains a challenge. The Cross-Charlotte Bike Trail, running near the light-rail extension, will be a tremendous asset but has limited connections to the North End. The Matheson Bridge improvements will help, but other connections are needed. This observation further emphasizes the panel's previous recommendations concerning connections across the Norfolk Southern Intermodal Yard, which should serve cars, buses, bicycles, and pedestrians alike.

Parking

A proactive and measured approach to parking is necessary to create an urban environment. Parking in the study area is currently free and plentiful—which does not support the panel's recommendations for a walkable urban environment that encourages and supports alternative transportation. As development occurs, the supply and pricing of parking should be managed.

In the long term, large off-street parking lots should be avoided in the North End, for several reasons. Surface parking lots create empty spaces in the street grid and are not conducive to a walkable environment. Freely available parking, located close to residents and businesses, reduces the incentive to use alternative transportation by residents, workers, and visitors. But even if parking is free to the user, it is not free to build or maintain, and requiring significant off-street parking adds to the cost of new development. Surface parking will likely be necessary in the short term to support early stages of development, but it should be converted to structured parking as full buildout occurs.

Several options exist to address parking, and Charlotte should consider all of them. Reducing parking minimums is a basic step. And, in some cases, minimums could be eliminated altogether, leaving it up to the private developer to determine how much parking is needed. On-street parking can help create a pedestrian-friendly environment, and

it should be permitted and provided along local streets in the North End wherever possible. Shared parking between uses, particularly in a mixed-use district like the one envisioned for the North End, is a way to serve multiple uses that require parking at different times of day (such as an office, which requires parking during the workday, sharing parking with an entertainment use that draws its traffic at night). Off-street parking lots, and possibly on-street spaces as well, should give some consideration to the use of electric vehicles, including charging stations in appropriate locations. Pricing should also be considered, with prices based on market demand.

Other Innovative Transportation Programs

The overall intent of the proposed North End plan is to create an environment where multiple modes of transportation can function. That approach includes conventional modes—like driving, taking transit, walking, and biking—but it should also address new innovations in transportation.



TYLER LACROSS, FLICKR

Extending Charlotte B-Cycle stations north will help make connections from the North End to Uptown.

Charlotte's bike-sharing program is an asset, and it should be extended north to cover key destinations as they develop. Clearly, bike-sharing stations should be placed at light-rail stations along the extension and might be supportable in NoDa even in advance of the station's opening. Bicycle sharing could be a way to make connections from the North End to the light-rail stations and Uptown—which are generally too far to walk comfortably, but which are

within easy reach by bicycle. Bike sharing also supports the panel's concept of an urban environment where cars are unnecessary for most trips, extending the environment of Uptown.

Car sharing has not yet taken off in Charlotte, but it has emerged in many cities—including Raleigh, Greensboro, and Davidson, to name a few—as a serious transportation option. Typically, car sharing serves people who use transit, bike, or walk for some of their trips, but who occasionally need cars for shopping, longer trips, or access to car-dependent areas. Car sharing can start with universities, major employers, and public agencies or can simply be located where many residents use alternative modes of transportation. Charlotte should begin discussions (if it hasn't already) with companies like Zipcar and Enterprise to discuss expansion of those services, which are typically offered at no cost to the city.



FRANK SWIFTER, FLICKR

Car-sharing membership programs like Zipcar offer hourly and daily car rentals, providing an alternative mode of transportation to serve people who occasionally need cars.

CTECH: Knowledge, Culture, Vision, and Promise for Charlotte

CHARLOTTE IS A DYNAMIC CITY with a high quality of life; a well-trained workforce; a strong core of businesses, universities, and health care institutions; and significant sources of local business, individual, and foundation investment capital. Equally important, it has civic vision, public and private leadership, a can-do spirit, and a culture of cooperation.

Charlotte's Applied Innovation Corridor strategy is already a reality with a number of energy, biotech, and bioinformatics corporations, including Duke, Siemens, and others located throughout Greater Charlotte and on the UNC Charlotte Research Campus. That corporate base provides Charlotte with the credibility and skilled workforce to anchor and stimulate growth of a proposed new urban North End technology industry cluster called "CTECH." Charlotte also has a core of entrepreneurs, UNC Charlotte scientific expertise, and technology startups that will continue to grow and whose workforces will increasingly be attracted to locating their businesses and families in a hip North End CTECH environment. In addition to that business and intellectual infrastructure, Uptown already has the capacity for a broadband internet backbone infrastructure—both from its banking industry and from having hosted the 2012 Democratic National Convention—to build in support for tech sector high-speed internet requirements.

Charlotte has a significant opportunity to build on that solid foundation and to achieve new economic growth and increased tech industry employment from local established and emerging companies, UNC Charlotte and other local universities, and technology companies recruited from across the United States and the world. Tapping into that tech sector demand can drive the repurposing of underused industrial facilities and can anchor a vibrant and diverse 21st-century live/work/play North End district. It will also reinforce and generate additional demand for mass transit.

CTECH is the proposed technology industry cluster for the North End.

Every tech cluster is unique, established on the specific companies and areas of local business. It is important for Charlotte to identify its local strengths and intellectual capital to build on and market those strengths.

Partnering with the Tech Industry Community

Attracting new tech companies to Charlotte means competing within the city, the region, the nation, and the world. Companies make decisions on their timetable and quickly. They need to know detailed terms of the locations they are considering, and they need to work with someone who has the authority to make and keep recruitment commitments. To compete effectively, a nimble, empowered, tech-friendly economic development and a comprehensive tech-savvy business environment are critical. They include the following fundamentals:

- Streamline the Greater Charlotte area overlapping corporate recruitment entities, responsibilities, and decision making and designate a tech industry point person for CTECH.
- Leverage Charlotte's banking industry concentration to foster a tech-supportive capital market, including angel investors, venture capital, and early-stage investment capital for young companies.
- Establish a public funds pool that has "but for" gaps and loan guarantee requirements in private sector funding, that supports tech facilities buildout and equipment needs, or both.

- Secure foundation and corporate support and funding to grow the Charlotte tech industry cluster through business advisory services and mentorships. That effort should be led by hiring a tech industry expert tasked with advancing Charlotte’s entrepreneurial ecosystem and creating an “idea lab” entrepreneurial resource center in partnership with businesses, UNC Charlotte, and other local colleges. That model has been extremely successful in other cities and other university-sponsored facilities in leading U.S. tech cluster communities.
- Pursue linkages and collaboration with other Greater Charlotte tech concentrations—such as UNC Charlotte’s engineering school, University Research Park, the Energy Production and Infrastructure Center, and Packard Place—and support growth of the university tech-transfer culture to accelerate tech commercialization and new business formation.
- Build working relationships with other North Carolina local tech clusters to advance Charlotte’s tech identity and international and national reputation as another North Carolina tech hub in a cohesive statewide interconnected tech cluster—as has been done successfully in California and Massachusetts, for example.
- Provide flexible, cost-effective tech facilities for young companies.

The Brooklyn Navy Yard, founded in 1801, is now a 300-acre industrial park on the Brooklyn waterfront. The former naval shipbuilding facility is now home to a variety of tenants including: commercial artists, artisans, woodworkers, entertainment, film and media, e-commerce fulfillment, high-end designers combined with on-site manufacturing; maritime ship repair; and warehouse distribution.



PISTOLSDRAWN, FLICKR

CTECH Vision

The vision for CTECH is a hip, safe environment with an urban fabric, with old and new side by side, and with connectivity not just in its buildings and open spaces but as a place. The CTECH knowledge cluster can be the financial catalyst and business anchor for creating Charlotte’s unique center-city tech district. Transforming and repurposing the almost 3 million square feet of industrial space into state-of-the-art facilities for a new breed of entrepreneurial worker will reinvigorate North End neighborhoods—sustaining current and new residents alike. The North End will be diverse, walkable, affordable, sustainable, and socially connected in work and play—embracing a holistic and healthy lifestyle. It will be built on urban design principles of permeability, with a vibrant mix of uses, scale, services, and amenities interspersed throughout the community. The workspaces will be people dense, collaborative, and flexible to support a tech-savvy hyperchange culture of today’s “hypercaffeinated” workforce.

A CTECH District Master Plan

The panel imagines CTECH as a transition zone between the high-rise density of Uptown and the lower-density residential neighborhood clusters in the North End and beyond. Like other successful tech districts, it will have a mix of repurposed industrial space and new construction. The objective is to create a pedestrian-friendly, distinctly urban versus “suburban” environment (street grid and street walls) with a higher density of buildings in the mid-rise range (floor/area ratio 2–3) for both office and residential/retail/amenity uses. In addition, tech facilities have a higher density of workers—as few as 100 square feet per person for open collaborative office environments where workspaces are shared to 300–400 square feet per person in research and development laboratory spaces versus the traditional closed-office model. The residential buildings—whether for rental or ownership, luxury, market-rate, or mixed-income—are also envisioned as multifamily in a mix of mid-rise structures, as well as low-rise townhouse-like cluster housing (a ratio of approximately 75–100 units per acre).

Even with easily accessible mass transit, that density will require a larger number of parking spaces. The panel encourages creating zoning requirements that not only support the use of mass transit and bike paths but also reduce the number of required parking spaces through shared-use parking ratios. Such ratios are particularly effective in mixed-use 24/7 districts as envisioned for the CTECH district. For example, University Park at MIT—a 27-acre former heavy industrial site with approximately 1 million square feet and now one of the nation's premier innovation research campus developments—has an overall parking ratio of 1.5 spaces per 1,000 square feet compared with the previously required ratio of 2.5 spaces per 1,000 square feet, reducing the required parking by 2,300 spaces. After 25 years of operation, the actual use is even less—just over one space per 1,000 square feet. Changing the zoning to permit shared-use parking and higher mode splits will have a significant and positive effect on reducing both traffic and cost since structured parking spaces cost in excess of \$30,000 per space in urban areas.

Those zoning changes will also significantly reduce the land needed for onsite truck circulation, creating redevelopment opportunities for more attractive and higher-value open spaces and room for new multistory buildings, including mixed-use retail and residential uses. For example, University Park at MIT was very similar to the North End. University Park now has seven acres of parks, buildings from five to 19 stories with 2.3 million square feet (plus 2,300 structured parking spaces in three garages). It has an overall density of 2.3 and a mix of 1.5 million square feet of tech space, 674 housing units, 100,000 square feet of retail space, and a 213-room hotel and conference center.

Vision Implementation

Creating the CTECH knowledge cluster requires Charlotte's government, business, academic, and community leadership to develop a new lens on work culture, work facilities, and urban living. It also requires an understanding of who is "in charge"—no longer the baby boom generation, but rather today and tomorrow's millennials. Their distinctive

values, priorities, and healthy, green, fast, nimble, entrepreneurial culture are driving demand for holistic, diverse, connected, hip, authentic center-city communities with work and living spaces—the funkier and older the better. As Jane Jacobs, the pioneering urban champion, said, "The best new ideas are generated in old spaces."

Technology/innovation cluster success requires having space (facilities for companies to occupy on a leased or ownership basis), building place (a hip, collaborative culture and mix of uses), and density (urban street-grid/street-wall pedestrian environment), as well as a critical mass of companies and employees. It also requires a critical mass of available and affordable tech-enabled facilities.

Successful technology clusters must also have a comprehensive tech infrastructure—including a concentration of tech companies; venture capital; business, government, and industry support services; and a large, highly skilled pool of workers. Success requires literally "showing" and "telling" the world that there is a "there" there, which is tech enabled, open, and ready for business in the heart of a 24/7 neighborhood with great restaurants, shopping, services, schools, and parks and with funky yet affordable for-sale and for-rent housing choices. This identity is particularly important in establishing a new North End vision and tech epicenter. During interviews with community stakeholders, the panel identified the general sense that the North End is "off the radar" as an isolated industrial and older residential neighborhood—not an emerging vibrant live/work/play district or the "next South End." Equally important, the business and real estate community do not yet see the North End as "shovel ready" for tech-friendly affordable space.

Using insights and information from the stakeholder interviews, the panel has focused on recommendations to lay the foundation for and to begin to make the North End CTECH central, both as a work district and as a live/work/play district anchored by the 21st-century tech and creative industries.

Partnering with the Real Estate Community

The North End has an ample supply of several million square feet of underused industrial space, including the 100-acre former Ford Motor Company plant and later the Charlotte Quartermaster Corps, and significant vacant land available for new construction—all boding well for establishing the North End as CTECH, Charlotte’s knowledge cluster epicenter. For Charlotte to harness that potential space, the local real estate investment, development, brokerage, and property management infrastructure is critical.

Technology provides a win-win opportunity for Charlotte’s commercial real estate players to grow significant real estate demand for high-quality facilities and to build their tech real estate expertise and investments. Those efforts require a sustained long-term commitment and a sufficient pipeline of space to support ongoing tech industry growth.

The panel recommends that Charlotte partner with its commercial property investment and development community to identify property owners who will play a critical support role in locations throughout the larger Charlotte Applied Innovation Corridor and those in the target North End CTECH cluster. In addition,

- The panel recommends promoting infrastructure and strategic planning and perceptual interconnection with Uptown, embracing the North End as over “here” not over “there.”
- The panel also encourages the formation of a CTECH business leadership working group that includes key property owners to identify and to prioritize needs and opportunities and to create an implementation plan that attracts new tech businesses, associated housing, and retail development. The panel understands that a similar leadership group has been formed to focus on redevelopment of an adjacent area in Uptown. The panel encourages that group to work closely with the CTECH group and to consider expanding its target area to include the CTECH district.



An example of existing industrial facilities located in the North End.

Proposed CTECH Initial Phase

The panel toured the North End and believes that a viable and exciting near-term Phase I plan will establish CTECH as the epicenter of the Applied Innovation Corridor. Existing industrial facilities are ideal for meeting tech industry requirements for intensive industrial-like buildout to support tenant-intensive use requirements in an “office” environment.

That proposed initial core CTECH district will benefit and derive credibility from its proximity to Uptown, the Music Factory, and the new Joint Communications Center for police and fire department functions and other civic support services that are already in place and that are changing the face and perception of the North End.

To jump-start the initial core of the larger CTECH business cluster, the panel recommends repurposing existing, underused North End industrial facilities. The panel encourages Charlotte to build on the significant master planning and visioning work that has already been done by Vision Ventures, owners of the New Camp Station redevelopment, which will include 2.6 million square feet of tech space in new and existing facilities, 850 housing units, 100,000 square feet of retail, 18 acres of interconnected open spaces, and a future commuter rail station. The panel sees that large parcel as a possible location for an initial tech cluster district. The former Department of Defense Army Depot land and facilities could be combined with the

abutting historic Ford facilities currently owned by Rite Aid into a unified Phase I of CTECH.

Those two parcels, with over 1 million square feet of existing space, provide the necessary critical mass to establish a viable initial CTECH district. Using those parcels leverages land that is already assembled with only two property owners. In addition, renovating existing buildings can make new tech-friendly space available more quickly than new construction, and they can be redeveloped in phases for a wide range of large and small tech users to support their operations.

The panel understands that the city has had discussions with Rite Aid regarding purchasing its site, thereby discontinuing its current industrial distribution use and making it available for tech users. The panel applauds that concept as strategically important in changing the current perception and use of that key North End gateway parcel. The site would also expand the critical mass of available high-quality tech space, would reinforce the CTECH district appeal, and would be compatible with the adjacent New Camp Station. In addition, using the sale of historic tax credits for which the Ford buildings are eligible can generate funds to help cover the cost of repurposing those buildings, reducing the rents as necessary to be attractive to potential users and to be an economically viable investment for the project developer.

Further, acquisition would create the right-of-way for an important new east–west street, providing greater vehicular access into and within the North End. The new street would extend from an exit on I-77 on the west and across Statesville Avenue and Graham Street to Tryon Street. It could also be paired with an upgraded Woodward Avenue/24th Street. Those two east–west streets would also bracket and help define the CTECH core district and would begin to transform the CTECH district by establishing a more urban grid.

The Right Facilities, the Right Culture, the Right Cost

The tech industry is a “wide umbrella” with a broad range of scientific research fields, including biology, physics, other scientific disciplines, engineering, materials, energy, and information technology. The development of transformed industrial facilities will serve a wide range of tech anchors and users, including the following:

- University facilities and tech spin-offs;
- Health care;
- National/international tech company offices and headquarters;
- Specialized industry concentrations, for example, energy, food science, information technology;
- Venture capital, tech investor, economic development offices;
- Tech industry service providers: legal, accounting, marketing;
- Entrepreneurial startups;
- Shared offices and makerspaces;
- Creative companies and industrial designers;

Located in a converted warehouse, the Hub Islington is part innovation lab, part business incubator, and part community workspace.



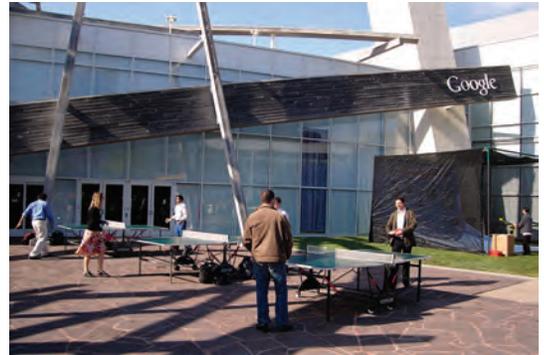
IMPACT HUB, FLICKR

- Large corporate research and operations facilities;
- Biotech office, R&D, and scale-up facilities;
- Engineering/new technologies R&D and research facilities;
- Big-data centers;
- High-value scale-up production space; and
- Clean-tech manufacturing facilities.

Those tech industry uses share the need for, among others, the following infrastructure-intensive facilities:

- Specialized, yet flexible, building and design with sustainability/green focus;
- A range of building sizes that will accommodate subdivision into multiple smaller spaces for startups to one or more floors and whole buildings for large corporate facilities;
- Large floor plates and floor heights;
- Heavy floor and roof loading capacity for heavy equipment;
- Vertical shafts for facilitating venting requirements and connection to rooftop equipment;
- Backup emergency generators;
- Internal loading docks;
- Intensive power loads; and
- Intensive high-speed broadband and security infrastructure throughout buildings and campus.

The tech industry continues to pave the way to changing the work culture into a hip culture. Beyond their own leased space, having open collaborative common areas is now a “must have” to attract tech companies and their highly skilled workforces. For example,



The Google Campus in Mountain View, California provides a mix of creative workspaces, labs and recreation areas for its employees.

- A wi-fi-enabled campuslike environment with common spaces inside and out for texting, e-mailing, informal gatherings, and impromptu chats;
- “Green, green, green, lots of light and glass”;
- Flexible meeting space with whiteboards;
- An “idea lab” entrepreneurial business accelerator center with programming, seminars, and resources for startup groups to gather to advance new company and product ideas and to meet with mentors, potential investors, and service providers;
- “Rec area” spaces inside and out for Ping-Pong, yoga, volleyball, and so on;
- Coffee and “munchies”: high-quality and “hip” food and cafés; and
- Workout facilities.

Infrastructure-Intensive Tech Facilities: The Challenge of Funding Their High Cost

Equally important to having the right facilities, work environment, and amenities is having facilities that meet the economic needs of growing tech businesses—often with

limited capital. Those requirements drive the building and tenant fitout cost significantly above that required for more general office users. For example, all-in new construction tech buildings cost approximately \$450 per square foot.

Depending on the intensity of tenant R&D requirements, typical buildout costs over and above the base building can range from \$50 per square foot to more than \$200 per square foot for a biotech research lab and other intensive buildouts. Securing financing for those higher costs is one of the challenges for both tech industry users and real estate developers. Nonetheless, established tech cluster markets have enough market experience and leasing track records to enable developers to secure the necessary equity and debt capital. However, that capability has been possible because there has been significant critical mass of sufficiently mature tech companies that have been able to pay the rent necessary to support those costs.

Tech companies prioritize their investments into conducting R&D, hiring high-skilled employees, and getting their products to market. In the early stages before companies have revenue and profitability, they have limited ability to fund brick-and-mortar facilities and buildout costs. To attract the economic development and employment that the tech industry can bring, every effort must be made to fund fitout in the rent and to offer no-frills/high-value/cost ratio rental rates. Sufficient “converted industrial space” and tenant buildout public assistance funding are necessary to make less costly facilities available to young companies and to help the continued growth of the tech cluster. Offering flexible and relatively short-term leases and expansion rights is also important.

As has been used in other tech clusters, the public sector has

- Created tenant improvement low-interest loan pool and loan guarantee programs to leverage the availability of bank financing;
- Developed special tech business districts with various tax incentives, including waiving taxes on utility costs and construction materials; and

- Used tax increment financing and other public funding mechanisms to provide direct and indirect support for tech industry facilities affordability.

Complementary CTECH “Mid-North End District” Expansion Area

To maximize the interconnection of the two large properties in the western section with the rest of the North End, the panel recommends creating a second CTECH district master plan, which this report refers to as the “Mid-North End District.” That area is focused on the more than 150 acres of land between Graham and Tryon streets, with the current Amtrak station and the western edge of the rail yards as the eastern and western boundaries, respectively, and between I-277 on the south and 30th Street on the north.

The panel’s key recommendation is to redevelop that vacant industrial land to create a diverse urban mixed-use district that includes tech companies, retail and commercial businesses, and housing.

When fully developed, the Mid-North End District can include millions of square feet of development. It will likely require a planning and implementation horizon of 25 years and several economic cycles. However, the panel believes that it is critical to the success of a reenvisioned North End and the CTECH cluster to create a district-wide plan that captures both the initial and the long-term visions and that signals to all stakeholders and tech industry prospects the potential, excitement, and commitment to its implementation.

It is important to note that implementing those recommendations will also complement and reinforce the significant public investment already committed in the north–south corridor to the east of the tracks along the route of the light-rail extension from Uptown to UNC Charlotte, including NoDa.

The panel also recommends that the district be planned at higher, more urban densities reflective of the land values near Center City (and as distinct from the existing neighborhoods and from Brightwalk). The goal for the area is to

become a transition zone to Uptown and to create a more urban and walkable neighborhood feel while preserving the current North End single-family houses and existing neighborhoods.

Since the area is very large and will require significant demand, the panel recommends concentrating on a smaller subdistrict area for the initial phases, as will be described in the next section. Even that initial area can have a significant transformative effect and can generate additional parcels to expand the CTECH district. Such expansion will present options for significant new tech company facilities in five- to ten-story, mid-rise, state-of-the-art new construction that is built around a series of parks and open spaces and that provides a distinctive urban campus-like environment. The panel also recommends including a significant number of new housing units, for sale and rent, with a range of building types and price points. The panel encourages including live/work units targeting and affordable for artists, as well as units for young university graduates and entry-level tech workers. Those types of residential users can help create and enhance a new CTECH district similar to the success that NoDa has experienced.

To make CTECH a destination residential neighborhood, new units must appeal to many types of families. Critical to their decision making is the availability of high-quality K–12 schools. To attract such families and to train the next generation of knowledge workers, it will also be important to plan for new K–12 schools in this new neighborhood.

As Charlotte's epicenter for technology, there is both an opportunity and a need for a distinctive new science and technology middle and high school—created perhaps in partnership with UNC Charlotte, or other universities, and with the business and foundation community, similar to what the Gates Foundation and the Annie E. Casey Foundation have done in other communities.

A key feature is the creation of a large green, open-space area around which the buildings and new street grid are organized to serve as an important, active, vibrant

gathering place ringed with larger multistory buildings and ground-level restaurants and retail for the entire CTECH and North End residential and worker community. That open-space area will also serve as a pedestrian and bike path connector for the entire CTECH district between the Amtrak station and the proposed commuter rail line.

Mid-North End CTECH Phase I

To advance the overall Mid-North End CTECH vision and its initial development phases will require collaboration with the landowners in the North End to establish a CTECH Phase I mixed-use district and then to engage in a master-planning process and supporting zoning overlay.

The panel recommends that the land bounded by Graham Street on the west (benefiting from the adjacent New Camp Station and Ford Assembly redevelopments), the upgraded 24th Street on the north, and the new proposed Oaklawn east–west connector street on the south be included as the Phase I subarea.

The panel sees a terrific opportunity to jump-start new construction and to reinforce the transformation of CTECH and the greater Mid-North End district. The panel recommends that Charlotte work with Vision Ventures on its land adjacent to Dillehay Courts and with the Charlotte Housing Authority to create a public/private partnership to develop those two parcels into a single mixed-use development. That new development is envisioned to include offices, retail, and mixed-income housing built around a series of open spaces. By developing a range of housing types from affordable workforce to market rate and by creating a higher overall density through the mix of uses, the project will be of sufficient size to be economically viable and to substantially transform the neighborhood. The plan also leverages the current land assemblages and public and private sector development capacity, capital, and expertise. And it will serve to tie together the very successful investments and attractive housing in NoDa and Brightwalk.

Lastly, the new development can help stimulate the panel's proposed Amtrak station expansion as a hub of activity for the district and as an important mass transit component that will foster CTECH's link to the greater North Carolina and East Coast business/tech corridor. The panel proposes that the station be combined with the adjacent land to create mixed-use retail, community, office, and amenity space to serve the North End and CTECH. As noted throughout this report, the panel strongly recommends that the Amtrak station and associated mixed-use development anchor the eastern edge of a large "quadrangle" park.

Public Sector Implementation Initiatives

Having sufficient land and a supporting physical and aesthetic infrastructure is critical for the tech cluster to grow. The North End has enormous potential: a strategic location adjacent to Uptown and convenient accessibility through an increasingly robust mass transit service and local roadways and a highway system. However, a governmental structure must be in place to coordinate, facilitate, and regulate the myriad overall public and private implementation efforts and to amass the financial and human capital required.

Charlotte's greatest opportunity is to work with existing property owners, investors, and developers to create a comprehensive tech cluster vision and near- and long-term strategic North End implementation plan. That endeavor includes creating a brand, marketing, cheerleading, identifying, and leveraging both private and public investment capital to jump-start the tech cluster. The first priority should be to identify appropriate existing buildings and to develop a comprehensive plan to ready them for immediate use.

To accomplish that goal, the panel recommends creating a public/private partnership (a community development corporation or CDC) to establish and promote an initial CTECH geographic core business improvement district. One model to consider is East Baltimore Development

Inc., an entity used in Baltimore, Maryland, to rebuild the neighborhood and to create a mixed-use research park adjacent to Johns Hopkins Medical Center. As explained further in this report, the proposed role of the public sector members of the partnership is to create a not-for-profit public development corporation entity for the North End with broad responsibility for facilitating all the district's public, private, transportation, and infrastructure redevelopment. It would also use tax increment financing, public funds, and foundation funds to leverage developers' and users' capital investments.

The CDC must also have the legal authority to obtain public and foundation funding for infrastructure, district and tech promotion, and a range of community support, enhancements, and services. Working in coordination with the city, the Charlotte Chamber of Commerce, and local and regional business promotion and economic development agencies, it will be critical for the proposed CDC to institute a number of business-friendly measures to encourage and accelerate private capital investment in facilities, place making, housing, and amenities.

New District Infrastructure

As noted elsewhere in this report, the panel strongly recommends that the city bundle and reprioritize its committed infrastructure and roadway improvements funding to maximize the transformative effect and to create an iconic gateway and streetscape improvements around the initial Ford/New Camp Station redevelopment area. A critical underpinning to CTECH as a tech industry hub is the installation of a high-speed internet and broadband backbone. The panel encourages the city's efforts to partner with Google, Siemens, and others to use CTECH as an urban demonstration opportunity and to leverage the expertise and private capital they bring.

To be successful, CTECH must be attractive to and must secure occupancy commitments from the widest range of universities, hospitals, and small entrepreneurial and established companies that anchor Charlotte's overall

economic vitality and whose employees want an accessible, attractive, safe, pedestrian-friendly environment with amenities. CTECH's success will come by creating its own distinct culture. But it must also be seamlessly connected to Uptown and easily accessible by train, bus, bicycle, and car, and on foot to the rest of Greater Charlotte.

Without those transformative infrastructure improvements, the CTECH district will be viewed as an industrial area focused on distribution, isolated from the rest of Charlotte and Uptown, and dominated by truck traffic along Graham and North Tryon streets. In addition, east–west streets and connections within the North End itself are inadequate or insufficient to unify the existing residential and NoDa neighborhoods. The North End industrial facilities and vacant parcels are not competitive with other sites that already have access to high-speed infrastructure.

The panel also recommends creating a new flexible mixed-use overlay zoning with district-wide master plan design guidelines as soon as possible. Such guidelines are critical tools for enabling and supporting the reuse of the existing industrial facilities as tech offices, makerspaces, shared work spaces, live/work creative spaces, and a mix of residential, retail, restaurant, entertainment, and other uses to differentiate and establish the vibrant diversity critical to transformation. The panel envisions that the existing residential neighborhoods in the North End will remain intact. To support multigenerational housing, as well as to assist continued housing affordability in the face of gentrification, the panel also recommends that the zoning permit the addition of an adjacent/subdivided living space in single-family districts.

Market Potential

THE PANEL WAS INFORMED BY a number of excellent sources, but perhaps the most prescient and relevant is the actual Center City 2020 Vision Plan itself. From that plan, the panel learned that the Applied Innovation Corridor was conceived as the area from the South End following the Blue Line light-rail corridor through Center City and along the under-construction Blue Line extension east of North End to the UNC Charlotte campus.

A key piece of the Applied Innovation Corridor is the North End, the panel's study area, precisely because it contains large swaths of underused and vacant industrial land, as well as empty, residentially zoned land, all in proximity to Center City and the Blue Line extension. The Center City 2020 Vision Plan calls for that area to become a "walkable, mixed-use 'urban industrial park' with distinctive neighborhoods" that "fosters an atmosphere of creativity, innovation, and entrepreneurship." An additional comment suggests an "exciting urban living and working experience linking North End to NoDa, Belmont, and the larger Applied Innovation Corridor."

The Center City 2020 Vision Plan indicates existing Charlotte area industry clusters targeted for growth:

- Commercial banking and finance, insurance services;
- Health, medical device manufacturing, biotech, pharmaceutical research, and health administration;
- Energy production and infrastructure, research and development;
- Defense (performance materials, fuel and power systems, military vehicles, and aerospace components);
- Informatics (software engineering, financial, security, and health administration);
- Motor sports;
- Film, television, and media; and
- Plastics manufacturing.

The Center City 2020 Vision Plan calls for the North End to become a place that will attract startups and expanding firms in innovative industries, a process about which this report will go into in detail. A further suggestion is to connect the North End to Uptown and the surrounding areas to fully leverage nearby assets, which the panel's recommendations certainly seek to do, as well as to leverage transit-oriented development to foster a unique set of employment opportunities. Creating a true jobs–housing balance in the North End is the other major recommendation from the Center City 2020 Vision Plan, which the panel has taken to heart.

Existing North End Facilities

According to information received from the Karnes Company during the panel's stakeholder interviews, the study area contains a commercial inventory of 2,981,201 square feet, of which 5.9 percent is vacant. For an area of approximately 5.5 square miles, that amount is relatively small, and much of that space is underused or located in facilities in need of significant repair, renovation, or adaptive use.

In particular, the study area's industrial facilities total 2,618,701 square feet, of which 5.6 percent is vacant. Those buildings are involved mainly in shipping, logistics, distribution, warehousing, automobile repair, and manufacturing, in addition to a concentration at the Statesville Avenue Landfill site of asphalt and concrete production, as well as recycling. Those uses create heavy traffic counts of large trucks, which in turn create traffic impairment,

air quality degradation, roadway maintenance costs, and safety concerns for pedestrians, cyclists, and automobile passengers.

The retail space consists of only 77,500 square feet, of which 24.7 percent is vacant. The North End can truly be called not only a *food desert* but also a *retail desert*. Considering how many people currently live in the area—as well as the new residents coming into Brightwalk and NoDa and the thousands who will predictably be drawn to the planned Blue Line station areas—the missing commercial and amenity uses are a real detriment to positive growth. Simply put, a huge amount of purchasing power is leaving the study area because of a dearth of acceptable outlets in which to shop, dine, be entertained, and obtain services. Those deficits do, however, provide excellent opportunities for entrepreneurial endeavors. Missing or inadequate commercial uses include groceries, pharmacies, service retail, food-and-beverage outlets, medical clinics, hospitals, and hotels and tourism facilities, all of which are required to create a balanced, healthy, and desirable community for both working and living.

The current inventory of flex spaces in the study area consists of 285,000 square feet, of which 4.1 percent is vacant. It is important to note that no appreciable inventory of office space exists in the entire North End. Together with the underused warehouse space—much of which is located in attractive, historic brick mills and factories—the flex and industrial facilities can become a backbone for the projects to be discussed herein.

North End Potential

The panel sees extraordinary potential for redeveloping and upgrading the commercial and industrial facilities and vacant land in the North End, by targeting primarily small companies, startups, arts groups, and gutsy entrepreneurs to create, animate, and synergize activities, in addition to larger companies for certain aspects of their business activities.

The use of the area for logistics and heavy manufacturing will likely decline over time, especially with the relocation of the Norfolk Southern Intermodal Yard along the freight rail line to a purpose-built facility near the airport, and the panel applauds that natural evolution of such heavy industrial uses away from the study area. Nonetheless, bigger corporations can have an important role in leasing or developing spaces in the study area for back-office uses and light manufacturing with high value-added potential.

One of the other prime targets for the North End will be existing business categories attracted to creative clusters and lively inner-city areas—like the study area will become—to grow their technology incubators and accelerators, R&D operations, data centers, and showroom and marketing activities, including

- Power generation and transmission, R&D, and production;
- Green technology and alternative energy; and
- Life sciences and nanotechnology.

The panel believes, however, that in addition to the industries already entrenched in major facilities in other parts of the Charlotte market, three potential industry categories could well find that the North End's existing and future flex and office spaces in the midst of urban-density lifestyle amenities would be ideal for their types of business formations and interactions. They include creative, food-related, and technology industries. The entities engaged in economic development would do well to become more familiar with the study area to be able to serve the large and small companies that are looking for facilities in precisely the type of area the North End is on the way to becoming.

Target Sectors

One anchor facility, centered on music performance, is already in place and growing fast as one of the prime gateways to the North End. The North Carolina Music Factory

provides an excellent gateway for expansion into the North End physically and as a template for the creation of other industry clusters, mixing entertainment, lifestyle amenities, housing, and business opportunities. The Music Factory—with its range of music venues, food-and-beverage outlets, planned restaurant incubator, recording studio, small-unit apartments, and significant office space—is a prime example of the kind of creative and technological cluster that the North End will spawn with the proper leadership and public/private investment.

Increasing numbers of entrepreneurial individuals and small companies whose workforces are composed of members of the millennial generation are attracted to living and working in gritty, amenitized enclaves, which are neither high-rise urban nor far suburban. They are often attracted to historic buildings, like the Music Factory. The mill and manufacturing infrastructure remaining from the 19th century, as well as newer prototypes developed with the same industrial feel, will be key. The North End has many such buildings that are not being used at their new millennial, highest-and-best use potential, but that could become the focus of creative endeavors, incorporating

- Coworking spaces, cohousing buildings, and live/work areas (vertical and horizontal);
- Makerspaces (shared shop spaces);
- Artist, photographer, and media production studios;
- Craft production and sales, hand-built furniture facilities, and locally made fashions;
- Galleries, exhibition spaces, showrooms, party facilities, and event spaces;
- Advertising and graphics agencies;
- Architecture and planning firms;
- Automobile-oriented businesses (art cars, ecocars);
- Software, online, and gaming development;
- Theaters (stage and film);

- Nonprofit arts groups and museums; and
- Professional services to all those groups and individuals.

All of those types of small and growing enterprises benefit from being in complexes with many other types of companies and workers. But the supporting restaurants, bars, cafés, open space, and retail and recreational amenities, as well as a variety of mixed-income “cool” housing types, are absolutely necessary in contiguity for millennials to be drawn to an area. The ability to walk to work and to eat and be entertained is critical in the decision-making process for the creative class of workers whom the companies of today fight over.

A second major industry that could plant roots and blossom in the North End is a food cluster, containing some or all of the following facilities:



There is great potential to repurpose some of the North End's industrial space into food cluster spaces such as a food truck lot, like the South Austin Trailer Park & Eatery in Austin, Texas, shown above.

- Demonstration urban farm, community gardens, greenhouses, and kitchens;
- Farm-to-table, organic, and vegetarian restaurants and local sourcing;
- Farmers market and food truck lots;
- Craft breweries and wineries;
- Food production and sales facilities;
- Commercial and craft bakeries;

- Restaurant row; and
- Culinary arts education, professional and hobby.

Such a food cluster, which does not have to be contiguous in one location, will become a phenomenal benefit to the other growing work and living facilities in the North End, and the food companies are synergistically benefited by the presence of the creative class living and working nearby.

Other major uses that could be drawn to the North End, once it has its development legs under it, could be technology focused, such as larger R&D labs, a medical school or teaching hospital, a university or community college campus, and vocational and technical schools.

Residential buildings, new and adapted for use, will be required to house the workers who are drawn to those facilities. The targeted workers like lofts and high-design, walkable, pet-friendly projects and are willing to trade a small unit for open space and high amenities. To achieve such residential projects will require densities higher than the standard 22-units-per-acre zoning, which is a suburban density. Mixed-use environments with mixed-income housing will provide the urban collaborative feel prized by younger entrepreneurs, artists, undergraduate and graduate students, professors, and creative class workers.

To reach the North End's potential, the panel recommends a plethora of strategies, but one overarching strategy is that the existing property owners must take a proactive approach to upgrading and developing their properties to be ready for the growth they hope to see. Even considering the other strategies suggested by the panel, the landowners stand to gain the most; thus, they are the ones who need to take the risks.

Critical mass is essential, so the larger landowners need to take the development lead. Planning and visioning are important for knowing what to do and where to do it, but the development community needs to create the spaces.

The city and county will obviously have a major role in everything recommended, as will the other stakeholders, such as the railroad, the universities, medical providers, homeowners, and residential tenants.

The panel also strongly encourages taking advantage of the active ULI Charlotte district council and especially the local ULI Young Leaders chapter to accomplish the plan via consulting, planning, development, and marketing. The Young Leaders represent the target market and can help identify and reach this growing constituency.

Key Features of the North End Study Area

THE CHARLOTTE NORTH END STUDY AREA within the designated Applied Innovations Corridor is within two miles of Uptown and has a number of established neighborhoods: Lockwood, Graham Heights, Ritch Avenue, Druid Hills, J.T. Williams, Genesis Park, Greenville, Belmont, Optimist Park, and NoDa. Most appear to be well maintained, and they have generally attractive streetscapes. Those communities are historically working-class neighborhoods with approximately 11,794 residents according to the 2010 U.S. Census, a decline of approximately 5 percent from the 2000 census figures. The residential areas are fairly attractive with modest homes, some “shotgun” homes, and few boarded-up homes. The area is 82 percent minority with a low homeownership rate of 35 percent, well below the city’s overall homeownership rate of 57 percent. Renters occupy 65 percent of the housing units. Housing values are generally less than 50 percent of the citywide average, but they have recently been skewed by the new Brightwalk development. Rents are lower than the median gross rents for units in the city, and 40 percent of the residents in the study area live below the poverty line. Those neighborhoods have strong leadership and a number of faith-based organizations, and they appear to be well organized.

Living in the Study Area Today

Today, the North End study area is approximately 75 percent African American. The area contains a number of social services providers, including homeless shelters and an emergency shelter for women and children. Those facilities have a strong negative effect on the perception of the community, and homeless people and youths “hanging out” dot the streetscape, especially on the main arteries through the community, creating a negative image. The Dillehay Courts, a 136-unit townhome-style public housing

development, is also in the study area and is plagued by a negative reputation. All of those characteristics contribute to concerns about safety and crime in the community. The study area has a number of parks and greenways, but few other amenities. With one marginal grocery store, the area meets the criteria for what is described today as a food desert. The high unemployment rate in the area, 26 percent versus 10 percent in the city of Charlotte, combined with the education attainment level for adult residents in the area, which is significantly less than the citywide level, presents challenges for residents in today’s high-tech economy.



The study area is home to a number of social services providers including the Salvation Army Center of Hope, which provides emergency shelter for women and children.

Community Strengths

The North End study area benefits from being centrally located and close to Uptown where many of its residents work. It will be the home of the new fire department headquarters scheduled to open in July 2014. The soon-to-be-constructed Joint Communications Center will be located behind the fire department headquarters and will collocate police and fire department 911 dispatch facilities and other emergency dispatch and public service facilities, including the Charlotte Data Center.

The planned Blue Line will improve access to the area and will facilitate residents' getting to work in Uptown.

The recently opened Brightwalk housing development is the newest community asset. It is located on a 98-acre site in the North End study area. When fully completed, that mixed-income development with attractive homes and rental units will contain 1,000 new single-family homes, townhouses, and apartments—including senior housing and a daycare facility. It is designed to house working families and will feature amenities such as public art and offices, shops, and restaurants.

The area also benefits from a number of public schools and charter schools serving the community, as well as Project LIFT's \$55 million investment designed to improve high school graduation rates. The area is also home to the Performance Learning Center and a private school, the New Life Christian Academy.

taken to ensure that such effects are minimized. Preventive measures should include homebuyer and homeowner counseling, the development of homebuyer programs targeting renters, and the inclusion of a requirement that permanently affordable units on site be a meaningful component of all new housing construction.

Increased development activities in the community will likely cause resentment among the current community residents who may feel that their needs and aspirations are being "crowded out" by the pace of change and by services that cater to newcomers with higher incomes. How those concerns can be addressed is detailed in the following section.

Opportunities and Challenges Generated by the Proposed Applied Innovation Corridor

The benefits to the study area from the proposed development will be numerous. They include, but are not limited to, improved transportation, new retail stores and other amenities, jobs, increased employment training opportunities, and the development of market-rate and workforce housing. In general, the quality of life of the residents of the community should vastly improve.

The challenges will be found in the unintended consequences resulting from the construction and overall development of the area. As the community becomes more attractive, property values will likely increase, thereby affecting taxes of homeowners and increasing rents. That consequence, unfortunately, will likely result in displacement and community change. Steps should be

Human Issues: Making the North End Work for Everyone

WITH THE RIGHT TOOLS, Charlotte can make the new North End work for all its residents longstanding and new, mitigating the unintended consequences of development and opening doors to new opportunities.

Community Safety and Homelessness

The panel heard concerns from a range of stakeholders in the private, public, and community sectors that the current concentration of social services for homeless people generates crime and lower-level antisocial behavior and undermines attempts to improve the North End and attract new investment. The issue is heightened by the location of two facilities at North College and North Tryon streets, the North End's "gateway" from Uptown. The panel also heard positive reports of the new Moore Place development, providing secure longer-term homes for the chronically homeless alongside a program of health and other support. The panel understands that there may be opportunities to relocate existing shelter facilities away from the Uptown gateway area and recommends that any new provision be developed with reference to Moore Place's holistic approach.

Responsible Redevelopment

Although it does not envision any relocation as a result of its current proposals, the panel recommends the adoption of the "responsible redevelopment" model should it occur. The model involves ensuring that every household liable to relocation has access to a named advocate and adviser and making a commitment that people's new homes and neighborhoods will be at least as desirable as their current ones across a number of key indicators, such as affordability, crime rates, and education provision. The city should also explore a program of land banking through

which it acquires and preserves land in the study area for the development of affordable housing.

The panel heard concerns from older homeowners on fixed incomes that increases in house values and associated rises in the property tax will, over time, price them out of their homes. The panel therefore recommends exploration of an abatement model, holding seniors' taxes at an affordable level to complement North Carolina's existing rebate strategy. Consideration should also be given to developing a program that provides residents affected by rent increases caused by the changed character of the neighborhood preference for the rental of newly constructed affordable units or adequate rental assistance subsidies to facilitate and enable them to relocate to other, less expensive communities.

A small grants program to meet repair and maintenance costs could also help low-income homeowners contribute to boosting the overall area.

Inclusionary Zoning

To help safeguard the area's status as a mixed-income neighborhood, Charlotte could encourage use of its inclusionary zoning policy for future North End developments. The voluntary mixed-income housing development program, created in 2013, encourages housing diversity—using regulatory and financial incentives—through private sector development of affordable housing units. It is worth noting that the likes of artists, teachers, nurses, and even entrepreneurs will most likely start out with incomes below 80 percent of the area median income.

Social Infrastructure

The panel recommends that in developing the new North End, opportunities be taken to plug gaps in the area's current social infrastructure. Through interviews, the

panel learned that the city's health care providers have an increased interest in opening a facility in the area. Clinics and other amenities, such as libraries and child care, increase the appeal and livability of the area and provide places where both new and established residents can meet and make connections. With services increasingly being delivered online, extending high-speed internet access to businesses and homes across the North End is another essential infrastructure investment.

Community Planning

Continuing Charlotte's strong tradition of engaging residents in the planning process will help ensure that the new North End is a neighborhood where everyone can feel at home—with a mix of amenities and recreational uses accessible to all. For example, it could allow people from the area's established neighborhoods to assert their preferences for retail, restaurant, and recreational provision and give the city time to consider how that mix of uses can be fostered through discussions with developers and retailers. Such provisions are arguably as important as facilities like health care for promoting an inclusive community, and Charlotte has the opportunity in the North End to test how they can be delivered most effectively.

Education and Skills

Investment in the school system—including new charter schools and Project LIFT, together with a very strong community college and university infrastructure—provides a good basis from which to develop residents' education and skills to access new employment opportunities at all levels (management, skilled, and semiskilled). The panel recommends development of a new specialized school focused on CTECH's priority sectors and drawing on the expertise of the new workforce to further enhance that offer. Such a school would also serve to retain the most aspirational North Enders in the area when their children reach school age.

On workforce skills, the panel heard several examples of good practice, including the joint work of Central Piedmont Community College and Duke Energy to forecast the skills needed in the energy sector five years ahead and to plan

training provision accordingly. Similar partnerships with new investors and employers could reap strong rewards, particularly if delivered in specialized facilities located in the area.

Fostering Local Entrepreneurship

As more businesses and professional people locate to North End, there will be an associated increase in disposable income and the demand for shops and services. Building on Charlotte's existing programs, such as those for business revitalization and small business loans, the panel recommends a program to help residents grow businesses that respond to that demand.

The New North Enders

The most important resource in any area or firm is its human capital. In the panel's vision for the North End, residents of established neighborhoods from NoDa to Greenville will be joined by a wide variety of people keen to live, work, and play in one of the city's friendliest and most accessible neighborhoods. The panel expects that the residential mix will include international workers from firms locating in the area, students, entrepreneurs, artists, technicians, professionals, and managers, many of whom will stay to build families and strengthen the community further.

What will they want to see, do, and use? The panel expects the following:

- *An inclusive vision.* The new North End can and should support all of its residents in developing their full potential. That means building physical, social, and business networks that promote growth, exchange, and learning—for example, encouraging staff from overseas firms to support language learning in local schools, while established residents reciprocate by helping newcomers understand and appreciate the area and its amenities. At a deeper level, partnerships between education providers and new employers will help those North Enders with more disadvantaged backgrounds improve their skills and increase their prosperity.

- *An accessible landscape with active frontages.* Ensuring that people can walk and cycle around the neighborhood easily and safely will help promote healthy lifestyles and will also support the economic inclusivity referenced earlier. Active frontages help stimulate local enterprise and encourage networking at both the social and business levels. The visual stimulation provided by attractive and varied shopfronts also serves to promote the area and distinguish it from other districts, such as Uptown. Design collaborations between retailers and local artists should be actively encouraged.

- *A mix of recreational uses and facilities.* A number of residents and other stakeholders identified a lack of recreational uses in the area, outside of some small and well-loved parks. Redevelopment offers the opportunity to provide some of those local facilities—a different and complementary offer to the entertainment centers in Uptown and at the Music Factory. For example, an indoor play center for younger children, a black box theater, a city park where workers can enjoy a lunchtime sandwich, and a market square to host farmers and craft markets. Support services such as health facilities and a public library will also be helpful in fostering a vibrant business and neighborhood environment.

- *Good public transport links to other employment and recreational centers.* Census data show that many current North Enders work in Uptown and other areas of Charlotte. Increasingly, as the study area starts to develop its employment base, residents of other areas will be commuting to the North End. Improved public transport links will contribute to the sustainability of the area and will enhance the quality of life by reducing the cost and time of commuting.



STEVE HUANG, FLOKOR

Love Letter to Brooklyn is an example of how retailers and artists collaborate to enhance the retail landscape. Renowned artist and sign painter Steven Powers was commissioned by nearby retailer Macy's to create this project in downtown Brooklyn.

- *Lots of jobs at all levels.* Above all, people will be attracted to the area by the range and quality of the jobs offered and the chance to build a career surrounded by dynamic and innovative organizations. The panel's recommendations are designed to create the physical, social, and educational infrastructure in which meaningful, rewarding employment can grow—so that the North End can help Charlotte grow.

Conclusion

BOLD IDEAS, SHORT- AND LONG-TERM possibilities, and opportunities to realize have been presented in this report.

How can Charlotte best achieve progress in the North End area? It will require a new vision, strong leadership, and champions of change. It will ask for partnerships among the private, public, and independent sectors as never before. The tradition of leadership already exists: from academia with UNC Charlotte, already a partner in this corridor, and the other area colleges; from corporations with Duke Energy, Siemens, and related energy businesses; from the banking presence of Bank of America and Wells Fargo, and Charlotte's many other businesses; from the growing health care industry; from the foundation and nonprofit community; the list is long. The task is to capture the imaginations of those leaders and to invite both their support and priority to help realize the potential for the North End.

Achieving progress will also need a process that is prescribed and systematic. It will demand exceptional patience, as change will take time. An entity that can freely guide all aspects of the North End's redevelopment is imperative.

The panel is recommending the establishment of a new North End redevelopment corporation that can independently (a) expedite zoning and development approvals, (b) leverage public and private investment, (c) foster high-level strategic collaborations, (d) establish land banking that leads to catalytic development, and (e) promote the holistic redevelopment of the North End area.

The other key component to achieve progress is constant and consistent civic engagement. A deliberately designed, ongoing public participation program with the neighbors, the businesses, other key stakeholders, and the com-

munity at large should be developed with responsibility for regular communication through all means available and for monitoring the advancement toward Charlotte's goals, as well as planning celebrations around your wins, both small and large.

When asked to describe the city, one individual the panel interviewed on Tuesday stated, "We dream big, we think big, we do big."

True, but the caution, as another person interviewed said, is "too big can be the enemy of your vision."

In addition, although the existing culture and, often, leadership can be barriers, Charlotte must ensure a culture that accepts new ideas, creative contributions, and different methods for alliance creation. And although innovation can be large or small, brand new or a bit different, complex or simple, it should be disciplined in order to occur consistently and methodically.

As the city thinks about all that lies ahead and the work to bring about a new Charlotte North End, the following quotes just seem to apply:

"Innovation is the specific instrument of entrepreneurship . . . the act that endows resources with a new capacity to create wealth."

—*Peter Drucker*

"It's about the people you have, how you're led, and how much you get it."

—*Steve Jobs*

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

—*Daniel Burnham*

North Carolina claims many firsts: one, the Wright brothers' flight, had a tailwind that lifted a dream and creativity to the level of innovation and success. The Queen City has that legacy of being a first in many ways. That same tailwind can propel Charlotte's North End to push the imagination and creative spirit toward new heights, new firsts in the 21st-century future, a new revitalized Charlotte North End.

The Urban Land Institute stands ready to assist in any way.

About the Panel

Glenda E. Hood

*Panel Chair
Orlando, Florida*

Hood is a founding partner of triSect LLC, a strategy consulting firm focused on civic innovation serving the business, government, and independent sectors. Hood served as Florida's secretary of state from 2003 to 2005 and as mayor of Orlando from 1992 to 2003. Before being elected Orlando's first female mayor, she served as a city council member for 12 years and was president of her own public relations firm.

As mayor, Hood was a strong advocate of growth management strategies and smart-growth principles to build safe, livable neighborhoods, revitalized downtowns, and strong local economies. Under her leadership, Orlando's land area grew by 50 percent; older and historic intown neighborhoods were revitalized; compatible new mixed-use infill was constructed; the city's largest parks initiative built new parks and refurbished existing ones; unprecedented partnerships in education were established; transportation alternatives were championed; Orlando became a high-tech center and competitive world marketplace; and the arts became a civic priority.

She spearheaded the reuse plan for the Orlando Naval Training Center, the most ambitious economic development project in the city's history, which has been recognized across the country as one of the finest examples of the reuse of a former government property and a model for incorporating all elements of smart growth. And she has been a key adviser on domestic security and disaster preparedness for the state of Florida and the U.S. Department of Homeland Security.

As Florida's secretary of state, Hood was responsible for the department's Divisions of Administrative Services, Corporations, Cultural Affairs, Elections, Historical Resources, and Library and Information Services, as well as select state economic development and international business initiatives.

Hood has served as president of the National League of Cities and Florida League of Cities and as chair of the Florida Chamber of Commerce. She is a fellow of the National Academy of Public Administration, an active participant with the Urban Land Institute's Advisory Services panels and ULI's Daniel Rose Center for Public Leadership, and a longstanding board member and past board chair of Partners for Livable Communities. She serves on the corporate boards of SantaFe HealthCare and Baskerville-Donovan Inc. and chairs the Urban Trust Bank Board.

Hood graduated from Rollins College with a BA in Spanish after studying in Costa Rica and Spain. She has attended Harvard University's Kennedy School of Government Executive Program and has been selected to participate in the Mayor's Urban Design Institute at the University of Virginia and the Society of International Business Fellows.

Vicky Clark

London, United Kingdom

Clark is currently working with the London Borough of Haringey on a strategy to secure positive local economic and employment outcomes from major sports and leisure redevelopment in Tottenham, an area badly affected by the London riots in 2011.

Previously, Clark worked for the Greater London Authority as senior manager of the 2012 Economic Legacy. Ahead of the 2012 Olympics and Paralympics, she worked with

local and national stakeholders to maximize employment benefits from the Games, meeting the aspiration set when the Games were awarded for 70,000 jobless Londoners to find work as a result. Following the Games, her focus moved to realizing the local economic benefit from the transformation in perceptions of and investment in East London, setting up a number of pilot projects to help residents access better-paid, higher-skilled jobs. Before joining the Greater London Authority, Clark worked for a number of years in the Thames Gateway, one of Europe's largest regeneration areas. Working with partnerships of local authorities in London and in Essex, she helped develop and prioritize major regeneration and housing schemes to attract government and private sector investment.

Clark holds degrees from the University of Oxford's Balliol College and the London School of Economics.

Bob Dean

Chicago, Illinois

Dean is the deputy executive director for local planning with the Chicago Metropolitan Agency for Planning (CMAP), which serves Greater Chicago. He managed the development of GO TO 2040, the region's long-range comprehensive plan, which was adopted in 2010. GO TO 2040 establishes coordinated strategies to help the region's many local governments and other stakeholders address transportation, land use, housing, economic development, natural resources, and other quality-of-life issues. The plan has been recognized for its comprehensiveness and scope and has received numerous national and local awards.

Currently, Dean manages CMAP's Local Technical Assistance (LTA) program, which is designed to implement GO TO 2040 through assistance to local governments. The purpose of the LTA program is to provide assistance to communities across the Chicago metropolitan region to undertake local planning projects that advance the principles of GO TO 2040. Since the initiation of the program in 2011, CMAP has completed over 60 local planning projects, with 50 more currently underway. Typi-

cal products include comprehensive plans, corridor plans, transportation plans, and zoning ordinance updates. The LTA program is widely hailed as a success in the Chicago region because of its ability to translate regional principles into local action.

Dean holds a master's degree in regional planning from Cornell University and a bachelor's degree in American history from the University of Delaware. Before his work at CMAP, Dean worked in transportation planning for local governments in suburban Chicago, and he began his career with the Delaware Valley Regional Planning Commission, the regional agency serving Philadelphia.

Gayle Farris

New York, New York

Farris is the 25-year former CEO of Forest City Enterprises Science and Technology Group. She created a new paradigm-setting, innovation campus asset-class, partnering with the Massachusetts Institute of Technology, Johns Hopkins, the University of Pennsylvania, and other major institutions. Those projects established the national standard for state-of-the-art buildings supporting entrepreneurial culture and intensive technology and biotechnology/pharmaceutical uses, anchoring revitalized 24/7 urban neighborhoods. She developed and operated 2 million square feet of mixed-use technology/medical research parks valued at more than \$2 billion in current operation with another 8 million square feet in development rights. Those public/private partnerships generated significant economic development, job creation, technology commercialization, and more than 1,000 mixed-income housing units.

Farris is currently based in New York City engaged in applying innovation campus concepts to vibrant urban place making around today's engineering and information technologies and university collaborations with new ventures and established companies. Given the importance of seamless live/work/play environments, she is also partnering on a novel residential brand for active urban dwellers combining lifestyle residential communities, green design,

high-tech, high-touch, and comprehensive wellness facilities and programs. Those services can also be applied in office and hotel developments.

Farris is a frequent adviser and speaker on urban place making and is a research affiliate of MIT's School of Architecture and Planning for its New Century Cities worldwide program. She serves on the alumnae advisory boards of Harvard Graduate School of Design and the Real Estate Initiative. She is a member of the Urban Land Institute's University Anchor Institutions Council and WX New York Women Executives in Real Estate and is past president and chair of the Massachusetts Chapter of the National Association of Industrial and Office Properties.

Michael Medick

Alexandria, Virginia

Medick is a registered architect and urban planner with extensive experience in real estate development and revitalization of cities, communities, buildings, campuses, and neighborhoods. He has design experience in all segments of the real estate industry, including single-family, multifamily, mixed-use development; campus planning and housing; military base housing; and retail, commercial, traditional neighborhood development, transit-oriented development, and community design guidelines. Medick recently served on the board of directors of the Baton Rouge Growth Coalition and the Louisiana Chapter of the U.S. Green Building Council. He previously served as chair of the American Institute of Architects' National Housing Committee and the AIA's Livable Communities Committee and as president of the University of Maryland's School of Architecture Alumni Association and the Alumni Board of Governors.

Zane Segal

Houston, Texas

Segal is a developer, landowner, marketing consultant, and licensed real estate broker. He is knowledgeable about commercial, residential, hospitality, transit-oriented,

and mixed-use properties in historic, urban, suburban, and resort areas. He has 36 years of experience in venture management, project development, construction, and brokerage on a range of property types, including investment land, development sites, custom homes, townhomes, condominiums, apartments, hotels, retail centers, office buildings, subdivisions, and sports facilities, as well as master-planned projects incorporating several uses.

Segal received a BA in humanities with a minor in visual design from the Massachusetts Institute of Technology and an MA in cinema from the University of Southern California. He has studied graduate-level architecture and planning at the University of Houston and was initially licensed in Texas as a real estate agent in 1982 and as a broker in 1998.

For his own account, Segal is currently developing two single-family subdivisions with more than 300 lots and is joint-venturing a mixed-use, urban-density, suburban project of more than 300 loft units above 15,000 square feet of ground-floor retail and restaurants. He has been a principal and managing venturer for significant properties in Houston's center city and in suburban areas to the west, northeast, and southeast of the city core. He has brokered many multifamily, single-family, investment, and commercial sites and has also arranged financing for a major resort.

At its 2008 Fall Meeting, the Urban Land Institute conferred upon Segal the Robert M. O'Donnell Award for outstanding contributions to the success of its Advisory Services program. He has chaired five and has served on ten additional national ULI Advisory Services panels, as well as chairing ULI Houston's first two technical assistance panels and participating on others. Segal served on the ULI Houston board for eight years, as vice chair of membership and of Advisory Services. Having participated on the committees of the first three ULI Houston Urban Marketplaces, he also instigated and led the initial Suburban Marketplace, the first such conference held by any ULI district council.

He served on the Houston Planning Commission's Mixed-Use/TOD Committee, chaired its task force on urbanizing the suburbs, and engaged in numerous other community visioning and planning efforts. Segal has often spoken, has written for publication, and has been quoted by the media on real estate, development, urbanization, and the arts. He is an avid traveler, photographer, novelist, and runner.

Stephen Whitehouse

New York, New York

Whitehouse is a partner of Starr Whitehouse Landscape Architects and Planners in New York City. His diverse pursuits as a planner and designer over the past 30 years share a concern for the environmental quality and social vitality of places. His work on public and private multidisciplinary projects in the New York metropolitan area spans a continuum of policy development, planning, plan implementation, and landscape architectural design.

As chief of planning for the New York City Department of Parks and Recreation, he managed the expansion of the USTA Billie Jean King National Tennis Center in Flushing Meadows and launched New York City's Greenway system and Green Streets program. Whitehouse negotiated the creation and management of publicly accessible space in private development, such as Riverside South, as well as the acquisition and creation of new public parks in the city's redeveloping neighborhoods. His tenure helped establish the groundwork for such major initiatives as Hudson River Park, Manhattan's West Side bike path, Brooklyn Bridge Park, and the adaptive use of Governors Island.

With Laura Starr, he founded Starr Whitehouse Landscape Architects and Planners in 2006, with a commitment to making urban density livable. Recent waterfront projects include the award-winning Bushwick Inlet Park on the East River in Williamsburg and reuse studies for Hallet's Cove in Queens and the Harlem River Promenade in the Bronx. Urban residential projects include an array of courtyards, entries, and rooftop amenity spaces in market-rate and affordable multifamily and mixed-use projects. Economic development work includes the current Gowanus Canal

Corridor Brownfield Opportunity Area, supporting existing and emerging manufacturing and industrial clusters. For the Downtown Alliance, Whitehouse directed the "Water Street: A New Vision" study, which has set policy and design direction for public and private reinvestment in one of the nation's largest commercial districts.

Starr Whitehouse has been deeply involved in resiliency planning in the aftermath of Hurricane Sandy, first with design investigations of Manhattan and Staten Island for the Mayor's Strategic Initiative for Recovery and Resiliency, and currently as part of the U.S. Department of Housing and Urban Development's Rebuild by Design competition with the BIG Architects team, preparing the "BIG U" concept for the lower half of Manhattan.

Whitehouse is a graduate of Harvard University (English), City College of New York (landscape architecture), and Columbia University (urban design).

Roger L. Williams

Potomac, Maryland

Williams is the founder of Rogelio Williams & Associates, a domestic and international consulting firm that specializes in advising on a wide range of issues involving community development. The firm provides guidance on management of community transformation, asset building, disaster recovery strategies, resident ownership, resident engagement, development of innovative community economic development and housing financing strategies, microfinancing, human capital development, organizational development, program evaluation, Community Reinvestment Act matters, and foreclosure management and loss mitigation strategies.

Internationally, Williams has worked in post-earthquake Haiti, South Africa, and Nicaragua. Domestically, he has worked extensively in Camden, New Jersey, post-hurricane New Orleans, and a wide range of U.S. cities. Williams is the framer of Responsible Redevelopment, an approach to community development that is based on the integration of human capital with physical development

in community revitalization efforts and that advocates for a holistic approach to community development. He has consulted for the U.S. Department of Housing and Urban Development on changes to the regulations for Community Development Block Grants and the Neighborhood Stabilization Program and has worked with community organizations in New Orleans on involving minority males in community redevelopment efforts.

Before founding RW & Associates, he was a senior fellow and director for neighborhood development at the Annie E. Casey Foundation. He has been a vice president at both Fannie Mae and Freddie Mac, a senior vice president at First Union Bank and the Dime Savings Bank of New York, and deputy general counsel at the Bedford Stuyvesant Restoration Corporation. He received national recognition for his innovative management of nonperforming mortgage loans (foreclosure management) and the development of mortgage products to serve low-income individuals. He is a founding director of CityFirst Bank, the first community development financial institution bank in Washington, D.C.

Publications by Williams include HUD's "Choice Neighborhoods Promising Practice Guide—Creating Choice Neighborhoods: Boston's Critical Community Improvements"; the National League of Cities' *Partnerships Unlock Door to Progress in the Twin Cities: The Central Corridor Light Rail Project* and *Resilience in the Face of Foreclosure*; and an article for the National Multifamily Housing Council on increased demand for multifamily housing. He has also participated on Urban Land Institute panels, including one that proposed an adaptive use for a closed General Motors stamping plant. With ULI's Rose Center for Public Leadership on Public Land Use, he has advised the mayors of Oakland, California; Tacoma, Washington; and Honolulu, Hawaii; on community development initiatives.

Williams received a JD from New York University School of Law and a BA from Haverford College. He serves on the Advisory Board of the ULI Rose Center for Public Leadership in Land Use; the Executive Committee of the Board of the Round House Theatre in Bethesda, Maryland; and the Board of the International Housing Coalition. He has also lectured as part of the Capstone Program for Real Estate Professionals at Georgetown University and has served as an adviser for students in Georgetown's Master's in Real Estate Development Capstone program.

Appendix: Participants and Interviewees

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| John Allen, economic development director, Mecklenburg County | Jose Gamez, associate professor of architecture and urban design, UNC Charlotte |
| Nicole Bartlett, consultant, Arts and Science Council | Daryl Gaston, president, Druid Hills Community |
| Frank Blair, director of technology and operations, Charlotte-Mecklenburg Library | Ted Greve, senior lawyer, Ted A. Greve and Associates; board member, North End Partners |
| Gene Bodycott, executive vice president–sales/broker-in-charge, New Forum | Roger Grosswald, property owner |
| Charles Bowman, market president, Bank of America | Carol Hardison, CEO, Crisis Assistance Ministries |
| Sharon Boyd, psychologist, Charlotte-Mecklenburg Schools | Darlene Heater, executive director, University City Partners |
| Scott Cole, division traffic engineer, North Carolina Department of Transportation | Stuart Hodgeman, president, North End Partners |
| Ashley Conger, communications adviser, E4 Carolinas | Simon Ismail, property owner |
| Geoffrey Curme, distressed debt investor, Mount Vernon Asset Management LLC | Andrew Jenkins, owner, KARNES Research |
| Christopher Dennis, resident, Lockwood Neighborhood Association | Lee Jones, Mecklenburg County Park and Recreation |
| Dena Diorio, manager, Mecklenburg County | Lee Keesler Jr., CEO, Charlotte-Mecklenburg Library |
| Fred Dodson, vice president, real estate development, Charlotte Housing Partnership | Tony Kuhn, director, Vision Ventures |
| Tracy Dodson, vice president, brokerage and development, Lincoln Harris; chair, ULI Charlotte | Mary Beth Kuzmanovich, vice president, Carolinas Healthcare System |
| Betty Doster, special assistant to chancellor for constituent relations, UNC Charlotte | Dennis LaCaria, director, Facilities Planning and Real Estate, Charlotte-Mecklenburg Schools |
| Mike Flynn, vice president, economic development services, Charlotte Regional Partnership | David Laren, Tryon Development Group |
| Trevor Fuller, commissioner, Mecklenburg County | Noah Lazes, president, Ark Group |
| | Emma Littlejohn, owner, The Littlejohn Group |
| | Carol Lovin, executive vice president and chief strategy officer, Carolina Healthcare System |
| | Melissa Lowe, president, Park at Oaklawn |

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| Robby Lowe, director of strategic business development, Balfour Beatty | Donald Santos, development manager, Pollack Shores Real Estate Group |
| John Mackey, president and CEO, Discovery Place | Terry Shook, owner, Shook Kelley Inc. |
| Bruce Major, chief operating officer/psychologist, Sugar Creek Charter School | Julia Simonini, new business development/project support, The Littlejohn Group |
| Fulton Meachem, president and CEO, Charlotte Housing Authority | Lucille Smith, officer, Greenville Neighborhood |
| Jeff Meadow, senior development officer, Charlotte Housing Authority | Michael Smith, president and CEO, Charlotte Center City |
| Bob Morgan, president, Charlotte Chamber of Commerce | Charles Thrift, real estate broker, Collett & Associates |
| Dale Mullennix, executive director, Urban Ministry Center | Daniel Valdez, advocacy program manager, Crisis Assistance Ministry |
| Tom Murray, CEO, Charlotte Regional Visitors Authority | Mary Vickers, dean, Central Piedmont Community College |
| Cheryl Myers, senior vice president for planning and development, Charlotte Center City | David Walters, director, Master of Urban Design Program, UNC Charlotte |
| Dionne Nelson, planning commissioner, Charlotte-Mecklenburg Planning Commission | Curt Walton, vice president, real estate and facilities management, Foundation for Carolinas |
| John Nichols, president, The Nichols Company | Nancy Welsh, founder and CEO, Builders of Hope |
| Susan Patterson, program director, Knight Foundation | Bob Wilhelm, vice chancellor for research and economic development, UNC Charlotte |
| Richard Petersheim, senior landscape architect, Land Design | Lloyd Yates, executive vice president of market solutions and president of Carolinas Region, Duke Energy |
| Paul Picarazzi, principal, Vision Ventures | |
| Colin Pinkney, executive director, Harvest Center | |
| Julie Porter, President, Charlotte Housing Partnership | |
| Allison Preston, resident safety manager, Charlotte Housing Authority | |
| Heidi Pruess, community plan and sustainability officer, Mecklenburg County | |
| Dennis Richter, president, National Renewable Energy Corporation, ULI Charlotte | |
| Dan Roselli, cofounder, Packard Place | |
| Theresa Salmen, district council coordinator, ULI Charlotte | |

A ULI Advisory Services Panel Report



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