



CHAPEL HILL



DURHAM



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# DURHAM-ORANGE LIGHT RAIL CORRIDOR



# TOD GUIDEBOOK



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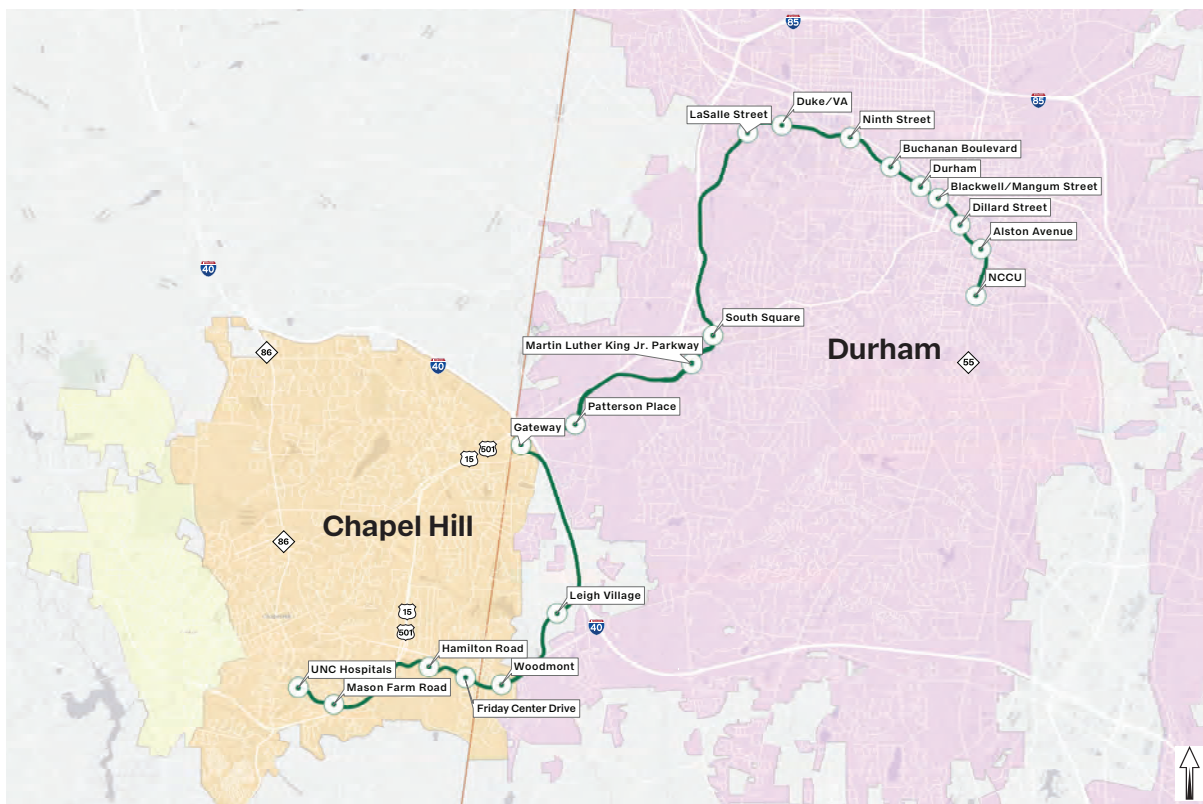
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# Why the Guidebook & How to Use it

Chapel Hill and Durham are about to embark on a nearly \$2.5 billion dollar investment in light rail that will enable the region to accommodate growth by concentrating a significant portion of future development along the light rail corridor. By harnessing the growing market for walkable, mobility rich and transit served neighborhoods, transit-oriented development (TOD) at light rail stations will result in new property tax and other revenues that will enable the region to pursue and achieve an array of community priorities, goals and objectives. In addition, light rail will allow the corridor to capture a significantly greater share of the region's expected growth than would occur without the presence of light rail, while fostering equitable growth and community prosperity.

This report, known as the TOD Guidebook, provides a guide to “one possible future” that will be made possible by the investment in light rail and station area infrastructure. The development scenarios presented in this TOD Guidebook are based on a market driven strategy that will connect people to education, jobs, shopping, dining, recreation and healthcare by creating walkable, transit-supportive places around each of the 19 stations along the Light Rail Corridor. The TOD Guidebook is the culmination of a two-year, \$1.7 million federal Transit-Oriented Development (TOD) planning grant awarded to GoTriangle in partnership with the Triangle J Council of Governments, the Town of Chapel Hill, and the City of Durham. Following two years of evaluation, engagement, and planning,

## DURHAM - ORANGE LIGHT RAIL CORRIDOR





the leadership of the Corridor coalesced around an implementation-focused approach that uses conceptual developments to illustrate “One Possible Future” for the Light Rail Corridor.

This initiative sets a foundation to help guide design and construction of rail infrastructure and surrounding neighborhoods in a manner that realizes desired community benefits and achieves positive social, economic and environmental outcomes for local neighborhoods and the region.

To maximize the benefits of the light rail, it is essential to look beyond the tracks and station platforms. This Guidebook highlights the key ingredients necessary to create walkable, mixed-use neighborhoods at each of the 19 stations along the Light Rail Corridor. The evolution of auto-oriented, low density areas into economically vibrant, socially diverse places requires a multi-faceted and integrated approach to succeed. Each of the station concepts presented is unique. While they are bound by the need for good urbanism and design, each station must be considered within its local context – what might be appropriate for certain uses, construction types or the amount of development at one station is not necessarily the correct approach for other locations.

Not every station will evolve into a major employment center with large office buildings or a regional shopping destination, just as not every station area will necessitate redevelopment to become a TOD. Each station presents a different set of existing conditions, neighborhood context, and market potential based on its location relative to other stations and job centers within the region. These variables underscore the need to properly calibrate planning and development scenarios.

**Success as it relates to TOD lies in the governance and partnerships that must be developed around the common vision of establishing transit-oriented developments that reflect the neighborhoods surrounding the station, and the authentic qualities of the community that governance and those partnerships support.**

To ensure both local and regional goals and objectives are met, Chapel Hill and Durham must proactively identify actionable steps, establish funding priorities, and adopt policies sooner rather than later – policies that enable different municipal agencies and departments to work together through a transparent, consistent and collaborative approach. Setting the vision and adopting policies now will enable the community, its leaders, and developers, to respond to a collective vision in a cohesive fashion when projects are proposed.

Developers and project designers will be in a better position to design and build projects that reflect desired outcomes and community benefits if that intended vision and benefits are encoded in consistent policies and development standards, as opposed to when they are applied and negotiated on a case-by-case basis. **To this end, the Guidebook is intended to serve as a foundation and resource for Chapel Hill and Durham to establish the overarching vision, identify policy changes, and prioritize public investments that enable transit-oriented development to occur according to the community’s goals.**

## **WHAT WE DID**

The recommendations and development concepts illustrated in this Guidebook represent “One Possible Future.” This future is presented as a series of station-by-station development scenarios derived from a cautious, market-based approach, and rooted in principles of good urban design. These scenarios further took into account existing neighborhood context, adopted land use policies, environmental features, and physical barriers such as freight railroads or highways. **An overarching goal of this Guidebook is to provide an analysis of a possible, economically viable, future development scenario that maximizes the community benefits of responsible development at transit stations in a manner that both respects and enhances existing neighborhood fabric and that creates a series of new, enduring, and diverse TOD neighborhoods.**

To help set the stage for future success, an integrated, multi-disciplinary team of professionals worked collaboratively, through an iterative process, to create realistic future station area development

scenarios. In addition, the engineers designing the light rail worked closely with the transit-oriented development team to ensure that the placement of stations, station access points, parking lots and bus transfers supported the creation of walkable, transit-supportive communities. These pieces were realigned at a variety of stations to support better outcomes, with a continued focus on enhancement of the existing neighborhoods around those station areas. A range of desired outcomes was considered, including:

- Maximizing development potential in the near term where feasible
- Protecting key waterways and natural drainage paths
- Creating appropriate connections with and to existing adjacent neighborhoods
- Enhancing local and regional mobility for pedestrians, bikes, transit users and drivers.

To ensure that the vision and recommendations expressed in this report were reflective of local needs and desires, significant efforts were undertaken to garner input from a wide array of stakeholders. The efforts started with a multi-day kickoff attended by scores of staff from the agencies and municipalities. This cross-silo, multi-agency and interdepartmental launch set the stage for the comprehensive and inclusive process to follow, including:

- Multiple meetings and engagement activities were conducted with a wide array of individuals and groups including civic leaders, community leaders, local real estate developers, bankers, university representatives, and most importantly, the community at large.
- One-on-one and small-scale interviews, informational sessions, stakeholder focus groups, public workshops and a week-long public charrette in Chapel Hill with attendance by Durham staff.
- A first-of-its-kind community summit, titled “Connecting to Opportunity,” focused on TOD best practices and case studies presented by a range of local and national experts in real estate, finance, infrastructure, mobility and public policy
- An affordable housing roundtable and workshop attended by municipal representatives from Durham and Chapel Hill, and a host of local and national experts in affordable housing strategies
- Multiple presentations to the Chapel Hill Town Council and Durham City Council, and a joint session with members of both councils plus the Commissioners of Orange and Durham counties.

These meetings provided opportunities to inform and educate municipal partners and residents, and to allow the consulting team multiple chances to listen and learn about desired outcomes and aspirations of the Chapel Hill and Durham communities. These stakeholder goals and objectives, such as creating more public space and positive transitions between existing and new development, are reflected throughout the analysis and action steps in this Guidebook. Importantly, those goals are part of a larger policy framework that includes leveraging property tax values to fund catalytic infrastructure to support TOD, job creation and more money for affordable housing.

One of the key steps taken during the process was to retain the special character of existing neighborhoods near the light rail stations. Neighbors who lived near station areas shared their interests through workshops, public meetings and scheduled commission and board meetings. In particular, stakeholders expressed high hopes that the opportunity to manage future growth through concentrated development at and around future light rail stations, in addition to providing neighborhood connections and amenities, will serve the needs of their local communities as much as it serves the needs of people throughout the region.

Within each station area, the team integrated elements of successful transit-oriented development with strong attention to market realities and the demand for good urbanism, including:

- Design of likely building types and sizes based on market potential and site context

- Respect and enhance existing neighborhood fabric and integrity
- Provision of linked bus service and bike and pedestrian facilities
- Construction of catalytic infrastructure for activation and sustained phasing of development over the next few decades

In addition, critical policy recommendations were developed to address the issue of affordable housing and the need for district parking management to support walkable urban neighborhood patterns.

## HOW TO USE THE GUIDEBOOK

It is important to underscore that while preliminary community engagement occurred, formal visioning and planning efforts were not undertaken. Input on vision was secured on an ongoing basis during the continuous stakeholder engagement; but, at the same time, the consultant team also relied on prior planning efforts, including adopted comprehensive plans, land use plans, open space plans, bike and pedestrian plans, and transportation studies, work that varied along the corridor in terms of purpose, sponsorship and scale.

**A key purpose of the TOD Guidebook is to generate a data-supported and market-driven understanding of the sustainable level of tax revenue that can be derived from that type of development in the Light Rail Corridor.**

TOD neighborhoods require investment in a range of community benefits such as integrated public spaces within the neighborhood context if a goal is to create enduring, cherished place and healthy tax base. If sufficiently robust tax revenues are generated, some of that increase can be reinvested in TOD-supportive infrastructure, connecting bus service, and affordable housing, in addition to other identified community priorities. These public investments create a more attractive landscape for additional private investment and resulting job creation that takes full advantage of the increasing demand for walkability, housing variety and convenient access to jobs, education and healthcare.

This multi-generational infrastructure and housing strategy can only be tested meaningfully by actually developing realistic illustrative building-scale development plans for each station area. Although these conceptual development scenarios are one of many possible scenarios for any given station, they are based on a comprehensive market study tailored to the conditions at each respective station, and, thereby, form the basis for the recommended infrastructure enhancements and their phasing priority.

The intended use of the Guidebook is straightforward. It provides a toolbox of reinforcing analytical and policy tools. After framing the opportunity for TOD in general, a comprehensive market study extrapolates tax revenue impacts from the specific station-area development concepts provided later in the report. Finally, this initial baseline of analysis sets out opportunities for how rail transit can be used and implemented to advance significant policy objectives such as affordable housing, walkability and parking reform.

Using the information gathered from the market study, previous planning efforts, and ongoing stakeholder engagement, the TOD team set out to create realistic development scenarios for each station area as “One Possible Future.” Each of the development concepts presented in the TOD Guidebook takes into account market demand, existing neighborhoods, environmental features, and adopted local policies. The scenarios are designed in a way that embodies walkable, transit-supportive development that enables equitable prosperity, while achieving community benefits through design, such as quality public spaces, and through new property tax revenues.

To provide a sense of continuity in terms of the character of certain stations, infrastructure needs, adjacencies, market contexts, and appropriate framing for zoning, stations were grouped in “families” based on shared characteristics. Station families are described, and each specific station area is further explored to determine both necessary zoning and policy changes, and recommended publicly funded catalytic infrastructure needed to promote equitable neighborhood change.

These development concepts, representative of one possible future, are intended to be used in

the following ways to guide municipal representatives, real estate developers and investors, and community interests in a manner that results in the type of development described herein:

1. A helpful guide for community conversations regarding land use policy and rezoning;
2. A policy framework for prioritizing public investments that support TOD, including street connectivity, bike and pedestrian facilities, public space, water/sewer infrastructure, and affordable housing; and
3. A benchmark tool for measuring specific rezoning and development proposals.

### THE TOD GUIDEBOOK TEAM

The TOD study was undertaken by a team of national and local experts in the fields of urban planning and design, transit-oriented development, real estate finance, market analysis, engineering and public policy. Led by Gateway Planning, the initiative was coordinated in a partnership led by GoTriangle that included the Triangle J Council of Governments, the Town of Chapel Hill, Orange County, Durham County, and City of Durham government staff. The region’s three flagship universities – North Carolina Central University, Duke University, and the University of North Carolina – each helped shape this work, through both their adopted campus plans and through face-to-face meetings with university representatives, as these plans were developed.

At the regional level, the unprecedented cooperation and collaboration during the initiative enabled a regional focus that crossed jurisdictional lines and business lines. With that backdrop, a non-profit organization, GoTransit Partners, was formed to provide a platform for elected and business leaders to work side-by-side to secure right-of-way donations and other contributed resources from the private and non-profit sectors to help complete the financial plan for the light rail. The possible future TOD plans provided a key motivating force in that effort.

At the same time, the early willingness for cross-collaboration between Chapel Hill and Durham enabled the consultant team and GoTriangle to work seamlessly in terms of calibrating the analysis and ultimately the recommendations in this guide both to the unique context of each station and also to the overall needs of the system in terms of efficient and timely operations.

Continuing a culture of collaboration will be critical as the project moves into implementation and operations. For example, cooperation among the public partners and private developers will be critical as a corridor-wide policy is potentially established for district parking at specific stations. Policy and business questions will need to be aligned on issues such as introducing paid parking as well as day of week and time of day parking regulations on the streets and in parking structures. This evolving and maturing network of agency, business and institutional cooperation sets the stage for tackling even tougher challenges such as delivering more affordable housing in station areas to take full advantage of the development opportunities from the light rail system.

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OPPORTUNITY OF TOD

*“We have  
a chance  
to create a  
community  
and a region  
where people  
are able to  
reach their  
potential.”*

KEVIN PRIMUS  
ENTREPRENEUR

# The Opportunity of TOD

Transit-oriented developments (TOD), are real estate projects that incorporate a range of commercial, residential, retail, office, entertainment, educational and other uses located at or near a transit station. They are walkable and mixed-use in nature and provide concentrated activities, supported by higher densities, public amenities, and compact building design within a traditional neighborhood construct.

From the Federal Transit Administration<sup>2</sup>:

*Successful TOD depends on access and density around the transit station. Convenient access to transit fosters development, while density encourages people to use the transit system. Focusing growth around transit stations capitalizes on public investments in transit and provides many benefits, including:*

- *increased ridership and associated revenue gains for transit systems*
- *incorporation of public and private sector engagement and investment*
- *revitalization of neighborhoods*
- *a larger supply of affordable housing*
- *economic returns to surrounding landowners and businesses*
- *congestion relief and associated environmental benefits*
- *improved safety for pedestrians and cyclists through non-motorized infrastructure*

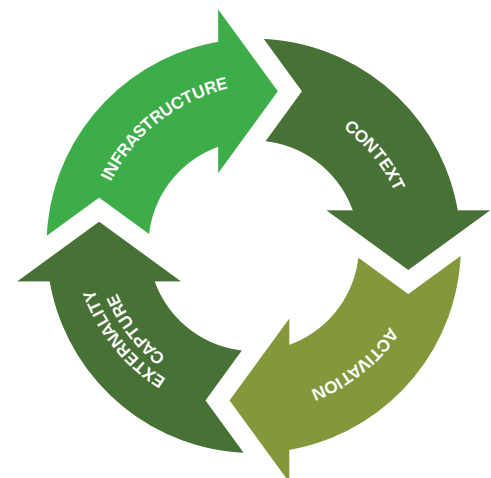
TOD primarily occurs when regional or local governments encourage it through land use planning, zoning laws, and changes to building codes, among other things.

TOD has many manifestations, ranging from a reinvented strip center like the one at the Othello Station anchored by Café Troung Nguyen Ben in an industrial area of Seattle, to the expanse of a modern transit village such as the Court House Station Area in downtown Arlington, Virginia. Regardless of the location, TOD is about the melding of people, community and its economy around a transit station.

In many respects, several destinations along the Corridor already show strong potential for this type of melding. In addition, the rail corridor was planned and located to capture as much existing activity as possible by connecting three major universities and three healthcare centers, incorporating three of the top ten largest employers in the state. Finally, there are some unique opportunities such as the combined power of the redevelopment potential of Patterson Place and the Gateway station to create a new regional employment center that also includes a significant residential population.

The ability for a TOD to provide community benefits for the transit corridor it serves is based on the intersection of four core factors: (1) essential infrastructure, (2) walkable neighborhood context, (3) street level activation and a sense of place, and (4) place management through district wide, ongoing governance. If related in a logically connected way, those factors can establish and sustain a TOD so that it becomes an organic, equitable, and vital center of community life.

Light rail offers Durham, Chapel Hill, Durham County, and Orange County as well as the university



<sup>2</sup> <https://www.transit.dot.gov/TOD>

communities of the University of North Carolina at Chapel Hill, Duke, and North Carolina Central University, a special opportunity to leverage the investment in light rail to promote quality growth and equitable prosperity throughout the region. When properly supported with policies that support TOD, light rail can connect, reshape and revitalize communities. The plans and strategies presented herein can tap into the transformative power of integrating transit into community life in order to:

- Hasten the implementation of local community plans;
- Catalyze economic development and ensure equitable access to prosperity;
- Advance the delivery of affordable, mixed income housing;
- Maintain and enhance the region's desirable quality of life; and
- Increase ridership within the Chapel Hill Transit, GoDurham, and GoTriangle systems by creating new transit-friendly destinations.

The benefits of walkable urban places for current and future residents and businesses are clear.

1. Walkability promotes increased physical activity and more sustainable lifestyles. Daily needs are just steps or a train ride away—the grocery store, shops, movies, restaurants, bars, and parks. In 2010, a study of commuters in Charlotte found that those who took light rail to work regularly were 6.45 pounds lighter than those who drove, due to the greater amount of walking among rail riders.
2. People living in walkable places have more disposable income because they do not need to spend as much on transportation. In addition to greater affordability, access to transit expands the reach of individuals to gain education, employment, and other economic opportunity. According to the Center for Neighborhood Technology (CNT), the average U.S. household spends 19% of its budget on transportation. Households with access to good transit typically spend only 9% of the household budget on transportation.
3. Transit-adjacent locations demonstrate an increase in land values by as much as 50% in comparison to locations that are not proximate to transit, and transit-oriented housing can generate up to 50% less auto traffic than conventional housing.
4. Walkable, mixed-use neighborhoods and the provision of transit each contribute greater outcomes for health and wellness, providing compounded benefits when both are in play. These benefits include reduced blood pressure, increased physical activity and reduction in obesity rates for those who use transit and/or live within walkable communities. In Arlington, Virginia, a national leader in developing TOD, the walk-to-school rate among children is nearly double the national average.

**People who live and work near transit are much more likely to take transit than people who are located further away. Not only does TOD provide residents and employees with more transportation options, it also helps to maximize the benefits of Durham and Orange County's investment in transit by making it convenient to more people.**

By focusing on walkable places—many with the promise of a rich mix of housing, businesses, entertainment, and cultural amenities —Durham and Chapel Hill can harness light rail to support quality growth in new areas as well as within existing neighborhoods. Similarly, the Universities will be able to better connect staff, students, and professionals to the various campuses and other destinations relevant to university life as more students, staff, and faculty live within walking distance of convenient transit.

The ability to harness light rail for economic development, an expanded university experience, and improved neighborhood life will require the alignment of leadership, both public and private, as well as development policy/regulation and budget priorities. It is important to underscore that these opportunities can be activated in both suburban and central city station locations, supported by strong market demand for transit-activated walkable places in both suburban and urban contexts.

**The TOD concepts provided in this Guidebook anticipate - but do not rely on - immediate rail**



**transit service in order to be implemented.** As such, the benefits of walkable neighborhoods and TOD development can begin to be realized in the near term, prior to the commencement of rail service. Walkable TODs often command price and rent premiums for office, retail, and residential uses as a result of many people's increasing preference to live and work in those types of areas. Accordingly, planning and activating walkable places in the immediate future makes sense even though rail service awaits a multi-year process for construction.

Starting to build walkable, compact, mixed-use neighborhoods in the future transit station areas today can capitalize on the unmet demand for walkable places. Doing so will bring about community benefits like increased tax revenue and job growth ahead of the light rail opening. These economic benefits will enable accelerated investment in affordably-priced housing to help offset the increase in housing prices being experienced across the region - and especially in walkable, "in town" neighborhoods close to Downtown Durham, Duke, and UNC. In other words, this Guidebook provides a practical approach to preparing now for equitable prosperity through purposeful policy-making and investment in walkability and transit-oriented development.

### **Principles for Creating Connected Walkable Places**

The recipe for walkable urban places involves creating destinations that encourage regular life activities through appropriate density, walkable neighborhood design and diversity of uses. This usually entails an intensity of uses that is greater than the overall community average, with more flexible but managed and shared parking solutions. These places become centers of community life, with an active public realm, a mix of land uses and more housing and job choices, resulting in a walkable environment where the car is an option rather than a necessity. In short, they become neighborhoods that work for people, rather than forcing people to adjust to an environment created for cars, at the expense of the human experience. Together, these factors can result in real reductions of daily car trips and, as a result, (1) increased quality of life, (2) improved environmental outcomes, and (3) greater social equity for those for whom the cost of car ownership is burdensome.

The following principles guide the process for creating these connected walkable places.

#### **1. Medium to higher density development to foster positive local and regional outcomes.**

An economically resilient community must have enough economic activity to support the array of uses necessary to create a vibrant, walkable neighborhood. This requires ground floor activity, including successful retail and significant street level and pedestrian activity. To provide this economic base, it is essential to have enough people live, work, and visit an area, which requires the need for higher than average densities for both residential and commercial uses.

Density equates to economic and social activity, which enables more people to live, work, and visit an area, providing the economic underpinnings for a successful walkable place. The provision of higher densities results in greater support for local businesses and retail, reduced auto dependence and increased transit ridership.

The benefits of density are both supported by and enhance the use of public transit. The higher densities of residential and commercial uses (1) provide



Source: GB Placemaking



Source: GB Placemaking



additional transit ridership and (2) result in the ability to support a greater range of businesses and services within a five to 10 minute walk from the transit station. The result is a virtuous cycle of economically beneficial neighborhood design, whereby density reinforces the ability to support transit, while transit helps serve a greater offering of residential and commercial uses.

That said, local context is essential. Recognizing that some existing neighborhoods near transit will remain lower density, it is all the more important to maximize new development opportunities where appropriate, in order to generate the overall economic and social performance needed for successful station areas and the creation of vibrant communities along the rail corridor.

In addition, not all density is the same. In a limited number of locations, it may entail mid or high-rise buildings. However, additional social and economic activity can be generated by increased density through reductions in land dedicated to surface parking lots and other non or underperforming uses, and more compact building design. Finally, it is possible to provide density, including mid and high-rise buildings, within a context whereby the greatest height and density is at and around a train station, yet both are reduced as one moves further from the TOD core. This stepped approach whereby building heights and densities decrease as you move further from the station itself enables buffers to existing communities and allows

## Connecting to Opportunity Summit

As part of the day long “Connecting to Opportunity” summit, held February 6, 2018 at DPAC in downtown Durham, a series of panels were presented in a public forum to discuss the benefits and challenges associated with transit-oriented development.

One of the day’s most powerful panels was held among some of the Triangle’s public and private sector leaders, providing a range of views from a regional perspective. Panelists included:

- Wendy Jacobs (Durham County Commissioner and DCHC-MPO Vice Chair)
- Damon Seils (Carrboro Alderman and DCHC-MPO Chair)
- Michael Goodman (Capitol Broadcasting)
- Roger Perry (East West Partners).

Two common themes surfaced, the first being the opportunity to connect jobs to people. As Damon Seils stated, “This project provides another opportunity for employers to engage with the community and their pool of workers,” a sentiment echoed by Michael Goodman, “We are all in one big fight for talent... the link between Durham and Chapel Hill, long term, is a critical link.”

In an impassioned plea to break down traditional walls between municipalities and communities throughout the region, Roger Perry had this to add, “The biggest problem in the Triangle is... this ethnocentric bent that we all have about Raleigh, about Durham, about Cary, about Chapel Hill is bologna. It’s one place. We need an attitude in this community that we are one place and that we are one people and a region.”



for building heights at the edge of station areas that complement and exist cohesively within the surrounding neighborhood fabric.

*Principle Attributes:*

- Highest densities immediately around the transit station, tapering down and transitioning to lower densities at the edges of the district.
- Site design for major projects should allow for greater intensification of densities over time, preserving certain sites until the greatest desirable densities can be achieved.
- Retail and office uses should be concentrated closest to the station.

## 2. A mix of uses.

Creating a mix of land uses will provide diversity and variety, encouraging people to walk to meet their needs regardless of which mode of transportation they used to arrive in a walkable district. The key is to locate various compatible uses close together, making them easily accessible to each other. This strategy improves walkability and reduces automobile use. Creating a more compact, walkable fabric promotes greater connectivity to other nearby neighborhoods, in addition to promoting more pedestrian traffic within the district itself.

*Principle Attributes:*

- Where feasible, active first floor uses oriented to serve pedestrians along key streets.
- A mix of uses including residential (with a variety of housing types), commercial, service, employment, institutional and public uses.
- Vertical and/or horizontal mixed-use.
- A mix of uses consistent with the character, needs, opportunities, and constraints of the area.
- Encourage work-live and other job incubating uses, especially on the ground floor when the market for retail may be limited.
- Ensure the plan supports the continued vibrancy of nearby existing retail corridors – rather than supplanting existing businesses with new retail - if appropriate.

## 3. A resilient, compact, high quality pedestrian-oriented environment.

Vibrant communities are convenient and comfortable places for pedestrians. Subtle factors, focused on a pleasant environment for the pedestrian, encourage people to walk. Building setbacks and treatment of the interface between buildings (existing and new) and the sidewalk are critical items to address.

*Principle Attributes:*

- Places designed for walking, blocks sized for a five-minute walk. Breaks in block faces should occur on average every 400 feet, to promote internal pedestrian circulation through the block.
- Entrances oriented to be easily accessible from the public sidewalk.
- Minimized curb cuts, concentrated in a single area if possible
- When large scale development is possible and blocks can be broken up, encourage a multimodal street grid and pedestrian paths connecting to the street grid.
- The more activity within the development, the wider the sidewalk.
- Street trees to soften the urban environment by blending natural features with built features.
- Pedestrian-scale lighting to ensure safety and deter criminal activity.
- High quality architectural design and detail conveying a sense of place and relating to the street and the pedestrian environment.

## 4. Limited, managed parking.

One of the most challenging aspects of any walkable urban district is right-sized parking. This

is all the more important when an area is evolving from an auto dependent environment to one that is more walkable and people-focused. Limiting parking supply and moving parking away from surface parking lots to managed on-street parking and shared parking structures enables and encourages residents, shoppers and employees to use transit to get to/from an area. It also promotes the use of a range of mobility options such as biking, walking or new micro-mobility solutions such as bikeshare or scooter share within a station area. A District Parking strategy should be at the heart of resolving tensions and creating new opportunities for parking to work well in light rail station areas.

*Principle Attributes:*

- Unbundled parking, provided on a district basis (i.e., shared uses) rather than building by building. Ultimately, parking should be managed by the city or a business district.
- Eliminate minimum parking requirements. Consider lowering maximums.
- Parking facilities should be located behind buildings, in parking structures with ground floor retail, and screened from adjacent land uses with minimal curb cuts.
- On-street parking should be provided on all key streets in the walkable district.
- Parking design should be integrated with the development in a manner that relates to the streetscape and circulation routes.
- Design parking in early developments that require more parking to be unbundled from housing costs and designed to be readily shared with other projects later on to reduce overall parking ratio of the station area.
- Price parking according to the market - i.e., paid parking or time-limited free parking.

## **5. Place-making: parks, open space, public art, civic space and activation of space**

To add value to the community and support higher densities in a walkable district, a variety of parks and public spaces should be integrated into walkable areas to provide a balance between what is 'built' and what is 'green.' Combined with well-designed multi-modal streets and public art, these spaces help to form a station area 'public realm' – spaces between the buildings that are open and accessible for all. These features will help communities preserve and enhance their unique identities while allowing new development.

*Principle Attributes:*

- Typically 10 to 15% of the land area in a walkable urban district should be dedicated to parks and public space of various sizes and types.
- Provide parks and public space within a five-minute walk of all residents.
- Maximize the relationship between adjacent land uses and provide a range of formal and informal gathering places
- Consider parks as part of a comprehensive approach to traffic calming.
- Incorporate public art where appropriate and feasible, and integrate with other place-making improvements.





MARKET + OPPORTUNITY

*“People  
are already  
perceiving us  
as a region.  
We have to  
work together.  
It’s really  
the only way  
forward.”*

**WENDY JACOBS**

CHAIRWOMAN, DURHAM BOARD OF COUNTY COMMISSIONERS



# Market: Evolution

## CHANGING DEVELOPMENT PATTERNS

Leveraging the investment in rail transit, development strategy and land use policy provides an opportunity for public jurisdictions to harness pent up demand for walkable urban neighborhoods and transit-oriented living. To “leverage” light rail, it is important to determine broader community goals and benefits that are both desirable and made possible by investments in transit and supportive TOD neighborhoods. While much of this Guidebook discusses the physical design of good urbanism, these place-based strategies support additional community benefits:

- Promote economic development;
- Provide financial and other support mechanisms for affordable housing;
- Increase mobility options that leverage public transit beyond the station areas proper;
- Create additional resources to finance the construction and maintenance of infrastructure, especially infrastructure for bikes and pedestrians, which receives limited state funding; and
- Increase connectivity and mobility not just at and around station areas, but throughout the corridor, including additional bus service linking rail stations to neighborhoods beyond the line.

A number of these desired outcomes are detailed throughout this Guidebook and necessitate a hard look at prioritization and timing to achieve community goals. As an example, it will be essential to properly phase certain infrastructure investments in the near-term future, that is, over the next five years, to enable development to occur at and around station areas. In addition, efforts may be needed to bridge a period of time between completion of the rail infrastructure and the creation of new property values that could support community benefits such construction of affordable housing. Just as a solid foundation must be built before constructing the upper levels of a house, it is essential to first invest in the underpinnings of the place-based and catalytic infrastructure that is necessary to create vibrant, walkable TODs.

Each submarket and accordingly, each station area, will mature at different times depending upon the existing built environment and economic fabric within an area and the timing and phasing of development of the station areas. For example, in some locations, retail may not be fully viable until the introduction of a significant residential population, while in others, hotels or taller office and residential buildings might be in a later phase after a local market has been created through the introduction of a mix of office, residential, and other uses on the site.

With these overlapping factors at hand, it will be critical for Chapel Hill and Durham to prioritize their desired community benefits, and then look to support phased development in a manner that provides sustainable growth of truly diverse, mixed-income residential TOD neighborhoods and the resulting tax base. Actions such as land banking may be necessary today to enable the provision of affordable housing into the future, understanding that the actual construction of those homes might be years away.

As will be discussed below, the opportunity to leverage economic development to generate additional financial resources depends largely on the scale, scope, densities and timing for each phase of development, and their associated uses. If TOD is not likely nor feasible at a specific station in the early years of the light rail line’s operation, a strategic decision to hold off on certain phases of development to wait for catalytic infrastructure to be built to support TOD may ultimately yield more tax revenue in the long run and increase the ability to deliver greater community benefits.

## Transit-Ready Summit - May 2017

On May 25, 2017, the consultant team, in conjunction with TJCOG and Urban Land Institute, hosted an informational “Transit Ready Development Breakfast” to discuss market opportunities – and challenges – associated with the construction of the light rail line and related development activity. Topics discussed included real estate finance, market conditions and finance mechanisms to capture new tax revenues and other new resources that will result from investment in rail and subsequent development of walkable, mixed-use nodes at and around station areas.

This well attended forum was open to the public, with an audience that included a number of elected officials, municipal staff and members of the local real estate and banking community, all gathered to learn from local and national experts on transit oriented development. Some key takeaways from the day’s speakers and panelists:

- Expansive growth in the region and a growing market for walkable, transit-oriented neighborhoods can be harnessed to spur economic development and tend to issues including quality of life, traffic congestion and affordable housing, throughout the region.
- Consensus on the market shift in the region from companies that sought low density, bucolic office parks in favor of more dense, mixed-use and walkable environments.
- The need for public investment and/or public-private partnerships, like American Tobacco, which would not have happened without the City of Durham’s investment in the parking deck.
- The need to ensure zoning codes fit the needs of today’s market, especially in regard to appropriate calibration for walkable and transit-served communities into the future.

Following the public event, a series of one-on-one and small group interviews were held between the consulting team and local members of the real estate development and finance communities. This was an opportunity to get a true sense of the challenges associated with developing throughout the Light Rail Corridor.



## GROWING LAND VALUES AND IMPLICATIONS

A number of factors come into play when discussing the nature of the appreciation in land values and rent growth at and around the planned station areas. Macro trends such as the general state of the economy, the cyclical nature of real estate, or the overall unmet demand for walkable, urban environments have a role. So too, do local and regional trends such as the expectation for continued strong growth, in addition to the continued presence and role of major universities, medical systems and other institutions. There is a level of confidence in the region’s overall growth projections, but where within the region new people and jobs will locate is largely dependent upon local policies that can either direct such growth toward more compact, walkable and connected communities or continue the historic growth of suburban sprawl in an auto-oriented fashion.

Local policy decisions can either harness or repel the market. Appropriate policies can encourage

a balance between rent growth and increased land values and the desired outcome of affordable housing. Decisions to invest in place-making infrastructure and mobility solutions that feed into the light rail line, in addition to land use and zoning decisions, will have a strong impact on whether values and rents rise to their potential over time. Conversely, values can be stifled as a result of poor infrastructure, land uses, densities or form at or around stations.

With the expected increase in land values and prices for homes and apartments over time, decisions must be made as to when to encourage development to occur. For example, before the line is open, but in anticipation of oncoming transit, development could begin to occur that might support stick-frame construction that maximizes its build-out at four or five stories, while that same parcel might support more intensive construction of 10, 12 or more stories in the future – where such height and density are appropriate within the local station area context. This scenario presents a choice:

1. Seek immediate, but less intensive development today which will limit potential future revenues, possibly in perpetuity.
2. Discourage / prohibit development at lower densities with an eye toward more intensive and economically fruitful development when the market is more substantial in the future.
3. Allow for development to evolve through strategically designed and placed buildings and infrastructure that anticipates future redevelopment.

As an example, it would not be ideal to see a three-story office building or five-story residential building at the station itself, when a few years into the future that same parcel may develop into something more.

**In summation, hard decisions must be made as to where it may be in the overall interest to hold off on development that “could” occur today, but should wait until additional market support exists in the future, to support the type of quality development and level of activity necessary to create a successful TOD that withstands the test of time.**

## ECONOMIC DEVELOPMENT OPPORTUNITY

The light rail project can harness significant market demand for walkable, mixed-use neighborhoods connected by transit. With a greater focus by corporate tenants on relocating within such environments, coupled with pent up demand for multifamily living within walkable neighborhoods, the light rail line has the potential to capture a significantly greater share of the region’s expected growth over the coming decades than would likely occur without the investment in light rail.

As a result of the concentration of growth fostered by the light rail project, additional public and private revenue streams and resources will be available for Chapel Hill and Durham, providing an opportunity to reinvest a portion of those additional revenues toward catalytic infrastructure to support development near light rail stations, public space, ongoing maintenance of community infrastructure, and in affordable housing and other public amenities.

As noted above, to maximize the opportunity, a number of factors must be taken into consideration:

1. The ability to leverage development potential at a site (or station area) through appropriate marriage of land use and transportation policy.
2. Maximizing the scale and density of development at key locations (such as Gateway-Patterson) which provide a rare opportunity for intensive development which can attract Class A office plus a full range of uses including, but not limited to, a range of for sale and for rent residential, retail, hotel/hospitality, entertainment, education, and health care.

3. Timing and phasing of development to ensure highest and best use for key parcels that may provide significantly greater returns to the public (in terms of place-making, value capture, economic development) if deliberately phased in the future as opposed to immediate development.
4. Leveraging investment in station area and catalytic infrastructure to increase the market potential for transit-oriented locations, providing additional return-on-investment on the overall rail corridor that will lead to greater reinvestment opportunities.
5. Provision of additional local bus service, and other mobility options to extend the economic and social benefit of the Light Rail Corridor.

Each local government, and each community, must determine its priorities and find a balance between desired outcomes and potential development types, scale, and phasing, all with strong consideration for the market as it stands today and into the future.

### **Affordable Housing**

Affordable housing is a critical issue throughout the Triangle Region, and particularly for Chapel Hill and Durham. The light rail project provides a number of opportunities to improve housing affordability along the corridor and throughout the region. New tax revenues and economic resources will be available to invest in the conservation of existing affordable housing stock in addition to opportunities to construct new affordable and affordably-priced housing. Furthermore, the creation of walkable, transit-served neighborhoods provides additional benefits such as significant reduction in transportation costs for residents, greater access to jobs and services, and economic opportunity for those who live throughout the corridor.

To achieve these objectives, affordable housing must become a central strategy in future policy decisions that range from land use and zoning to the investment in appropriate infrastructure that supports the densities necessary to create vibrant – and affordable – neighborhoods along the light rail line. There is no silver bullet; addressing the issue will require a combination of strategies and tactics over time. It is also important to recognize that trial and error is an essential component of finding the right combination of strategies and tactics. Finally, timing and phasing must be considered, as actions such as land banking or adopting new land use and zoning regulations must anticipate and set the stage to enable eventual construction of affordable housing upon completion of the light rail line.

### **Mobility / Transit Enhancements**

In addition to the additional connectivity offered by the light rail itself, the rail line also provides opportunities to offer additional mobility and transportation services that will increase choices for non-auto trips. These include more robust last mile connections, access to/from station areas and existing neighborhoods, and new technology-driven mobility solutions throughout the corridor.

While the physical environment of the station areas is an important component to successful TODs, that built environment must also support multi-modal transportation and a robust suite of mobility offerings. Currently, the bus systems along the Light Rail Corridor serve two communities with a much higher per person demand for transit than most of the rest of the United States, with annual transit trips per person in the Durham-Chapel Hill Metropolitan Statistical Area exceeding that of communities like Charlotte, Minneapolis, and Denver, communities that have already invested in light rail.

This strong local transit market provides an opportunity for light rail to complement, enhance and expand the reach of this essential bus service. In addition, investment in complete streets, greater pedestrian connectivity and infrastructure to support cycling and oncoming micro-mobility options can, cumulatively, provide an outcome whereby “the whole is greater than the sum of its parts.” The result will be a comprehensive and holistic suite of transportation and mobility services meeting the needs of all residents and employees throughout the corridor. Such efforts should be taken in consideration of future automated local and regional mobility solutions to ensure a smooth transition as technology – and our associated behavior – evolves.

# Light Rail Market Assessment

## PURPOSE

Economic and market analysis serves as an important “reality check” to ensure that the range and amount of uses in the development concepts are reasonable when compared to the overall demand for within the regional job and housing markets. Future development designed without regard to market realities may never get built (builders cannot make a profit, so they skip it) or winds up empty (people don’t like it, so they refuse to live or work there). Market analysis provides insight as to whether developers and builders are likely to build, what they are likely to build, and whether people are likely to live and work there.

Successful translation from the Guidebook to the real world requires a number of items to come together in Durham and Chapel Hill. Enough companies need to be interested in the market to support development of office buildings. A large enough population of potential residents must be interested in living within the region, and, specifically within apartments, condos and townhouses. Finally, the existing population, in addition to new employees and residents, must be able to support retail and other commercial uses.

To meet these goals, there has to be sufficient economic growth and job creation within the region to support both the construction of new office space, while ensuring existing buildings remain stable and occupied. In addition, to market support for new space in general, it is essential to understand the type of space companies, and their employees desire - including those detailed within this Guidebook (walkable, transit-oriented, in mixed-use downtowns or downtown-like environments) as opposed to existing space in single-use suburban office parks.

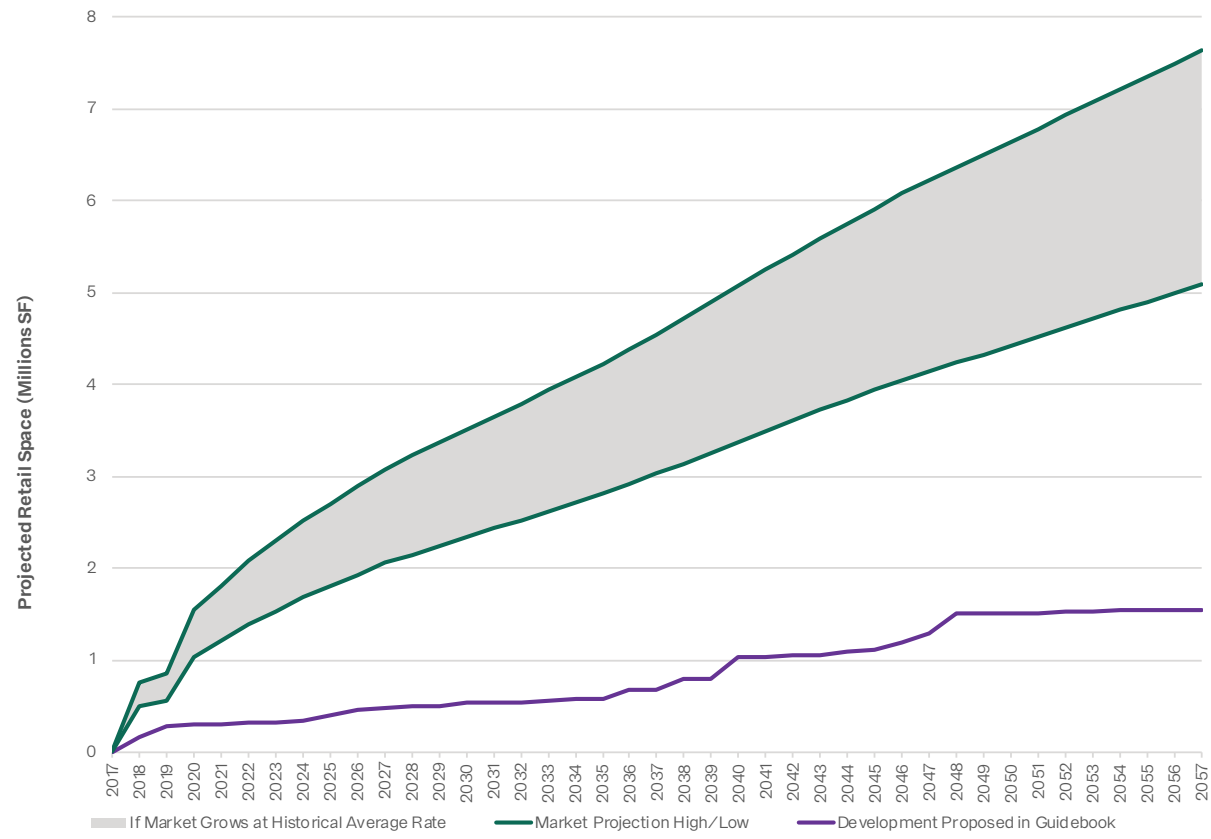
Furthermore, the new jobs that are created must pay enough to enable employees to afford the kinds of condos, apartments, and townhouses that are proposed - all the while further supporting associated retail and restaurant uses. Finally, people - the end users - must desire these kinds of living arrangements, within mixed-use, walkable communities, even with the wide array of housing choices already present in the region.

It should also be noted that the region as a whole is expected to continue growth at a similarly strong rate to what has occurred done in the past. However, **where and how this growth occurs can be heavily influenced by strategic and intentional planning efforts, such as a focus on creating new job and population centers at and around light rail stations.** Given these variables, this Guidebook has taken a more cautious approach based on conservative estimates, rather than using some unrealistic, above-average growth in jobs and residents to support the development plans presented in this work.

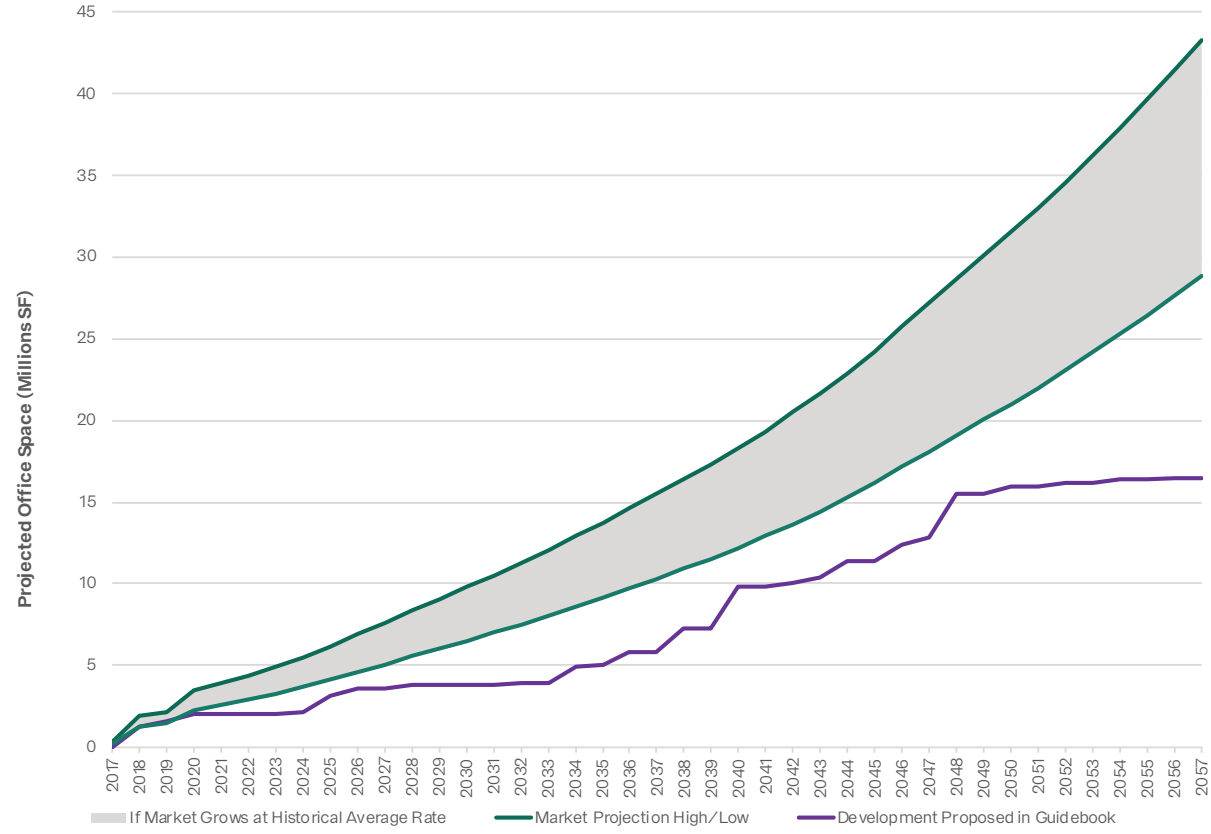
**The analysis conducted demonstrates that should the Triangle region continue to grow at or near its historic average over the past three decades (which includes two recessionary periods), ample market support will exist to support the types of new development recommended within this Guidebook.**

More broadly, demand in the U.S. for walkable communities is increasing while supply remains limited. That said, many significant research and studies have empirically demonstrated price premiums for walkable, urban, environments. This suggests that even within the confines of more cautious estimates for future growth, an opportunity exists to redirect and accommodate much of that growth toward the walkable TODs at light rail stations. These market trends are further supported by significant anecdotal evidence that demonstrate clear preference for companies and their employers to live in – or near – walkable, mixed-use, and transit-oriented neighborhoods.

RETAIL MARKET FORECASTS



OFFICE MARKET FORECASTS





## OVERALL APPROACH AND ASSUMPTIONS

Research completed during the project shows that the Triangle Region has consistently grown at an average rate of 3% to 5% per year over the last 30 years. Whether measuring population growth, job and employment growth, or amounts of housing, offices, and retail construction, all growth rates fall into this 3% to 5% range, when averaged over the last 30 years to include all the boom and bust cycles, including recessions in 2000 and 2008.

Approximately 20% to 25% of the overall growth in the Triangle region has occurred within Durham and Chapel Hill. During some years, more new houses, hotels, offices, and stores have been built in Raleigh and Wake County; but in other years, more development occurs in Durham and Orange Counties. On balance, the portion of regional growth occurring in Durham and Chapel Hill averages in the 20% to 25% range.

**If the Triangle region keeps growing at 3 to 5% per year, and Durham and Chapel Hill continue to absorb 25% of that growth, it would produce significantly more offices, stores, and apartments than are included for analysis in this Guidebook, supporting our conservative approach to this study. This strongly suggests that, if the Triangle Region can sustain its past growth rates, there will be plenty of market demand for the development outlined here, and potentially considerably more.**

It is understandable to ask “can we believe the Triangle region will continue growing at a similar pace in the future?” The picture is encouraging: the region consistently appears in top-ten lists for jobs and opportunity, quality of life, and cost of living. Duke, NCCU, and UNC have strong and growing academic programs that are likely to continue to attract top-tier students and faculty. The health services and medical research sector, undergirded by the universities, offers a strong and recession-resistant economic base. There is ample economic evidence that regional growth is likely to continue for another thirty or forty years, even with the inevitable ups and downs of the business cycle.

It is also important to consider who will likely live in these new walkable TODs. As compared to a national baseline, students and employees within the region are expected to skew younger, single, and/or childless: the prime life stage for apartment and condo living. This age group has demonstrated a preference for non-auto dependent transportation more than any other cohort, based on Census data.

When light rail connects the major employment clusters (campuses, hospitals, and downtown Durham), it is reasonable, even by conservative estimates, to expect strong demand for the types of new housing outlined in this Guidebook.

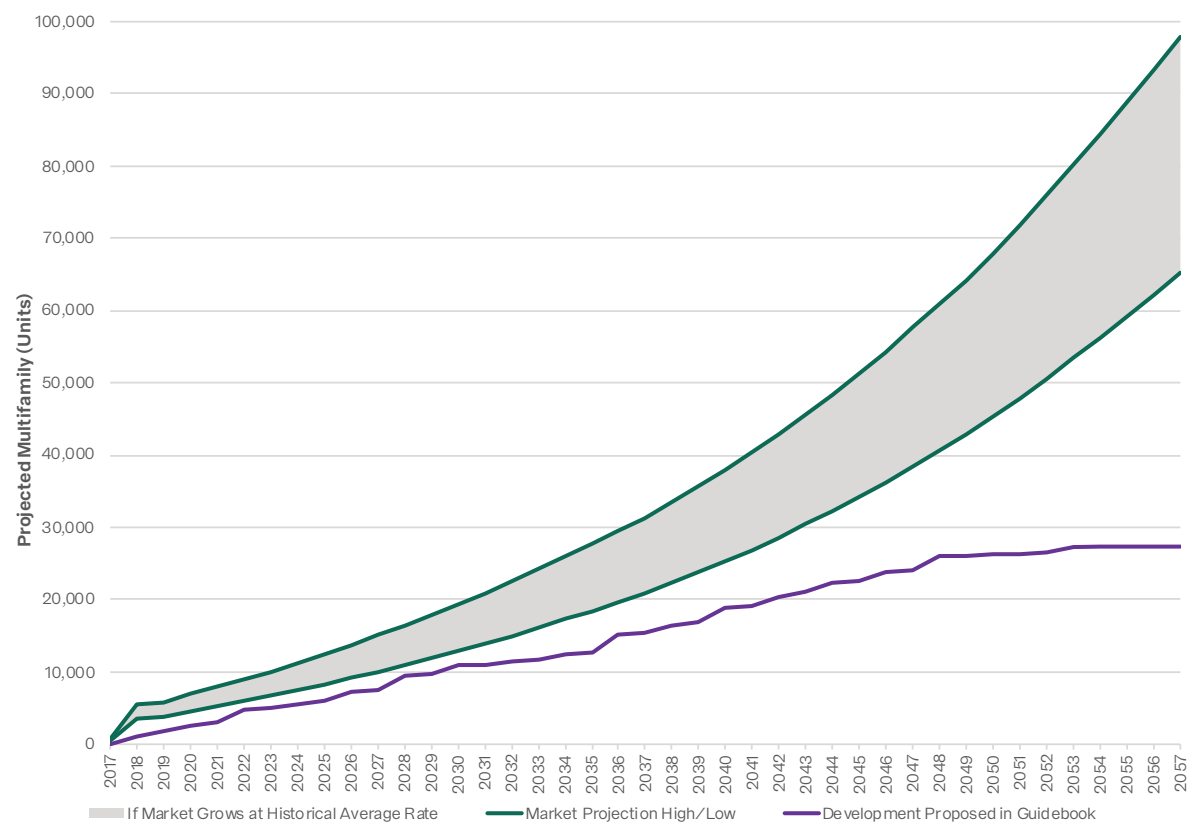
An increasing number of companies report that they intend to locate in urban, walkable neighborhoods. The popularity of the tech incubators and co-working spaces in downtown Durham already illustrate this reality. Locating an office near transit increases the ways employees can get to work and broadens the talent pool that companies can recruit from. Urban locations also reduce the need to provide parking and keeps more people from clogging up roads. Furthermore, these workers and residents will want places to hang out. Although online ordering and delivery services are changing the retail industry, there will still be the need for personal services and experience-oriented retail: restaurants, bars, hair and nail salons, live music venues and escape rooms: places to meet, and things to see and do. With the growth of residents and employees, retail is likely to follow.

## STATION AREA APPROACH

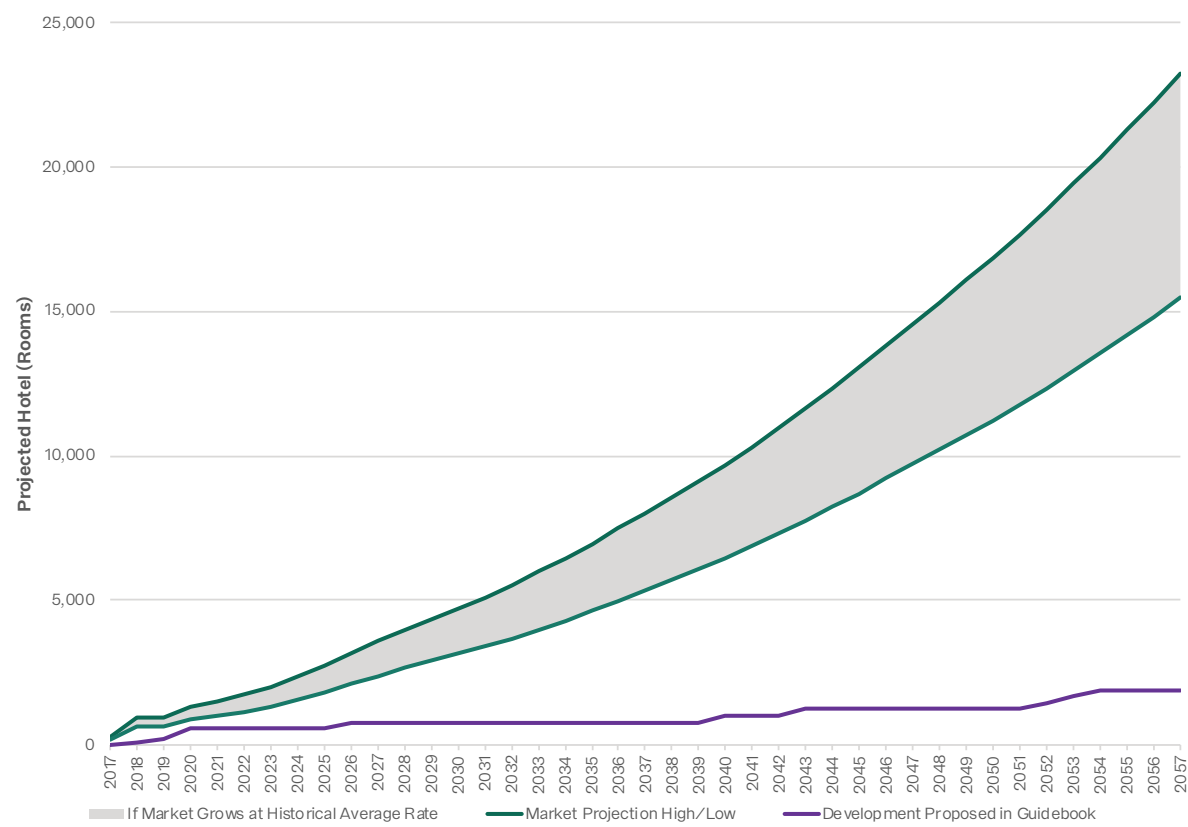
While market research on past economic growth and expected future development is helpful at a regional level, it is not a crystal ball that can predict when and where individual buildings might be



MULTIFAMILY RESIDENTIAL MARKET FORECASTS



HOTEL MARKET FORECASTS



built. When focusing on station areas, market-oriented questions more appropriately focus on what builders, developers, companies, employees, renters, owners, and residents will consider when deciding to build, use, or occupy new spaces. Market considerations include issues such as whether a parcel is large enough to site an office building, or if parking entrances and exits can be connected to existing streets while retaining good urban fabric. Some intersections may be too noisy for residential uses, while others may not be wide enough to support employees at rush hour.

As light rail is intended to add to the urban fabric, not replace it, development is depicted and analyzed primarily on parcels that are currently vacant, underutilized, or have old and empty buildings that can be adapted and reused in a different way to promote a higher and better use. Outside of the TOD study, a number of projects are currently proposed or under construction in or near the station areas. Development proposed in this Guidebook includes these projects as of July 1, 2017, and they influence the placement, amount, and timing of additional transit-oriented development shown.

Neighborhood context is just as important from a market perspective as it is from a design perspective. An out-of-place office building is less likely to attract companies to occupy it; people will shy away from an apartment complex if the neighborhood feels abandoned and unsafe at night. It would not make sense to propose a new corporate headquarters campus adjacent to NCCU, where the focus is on academic and residential uses. From a market perspective, it is important to consider the feasibility of successfully building and using new development. These market questions (will this location work for a builder? for a resident? for employees?) are considered for the designs and plans contained in the Guidebook.

## MARKET STUDY RESULTS

**The data that demonstrates continued growth is likely to at least meet, if not surpass, historic trends, coupled with the strength of the regions key employment industries suggest that Durham and Chapel Hill will add sufficient supply of new jobs and residents to support the proposed build scenarios outlined in this Guidebook.**

The charts on the previous and adjacent page show the overall estimated future growth based on average historical growth rates continuing into the future. Also shown is the total amount of cumulative development in the station area, as described in the Guidebook. In the projected growth section, the range represents the “high” and “low” demand growth scenarios, as the future is always uncertain; years 2018 through 2023 are based on current projects under construction or approved for development as of July 1, 2017 (the date which served as the cutoff for data collection and analysis feeding into the market study).

**To develop and fill the types and amounts of new building proposed in this Guidebook, based upon the findings of the market study, Durham and Chapel Hill would have to capture about 13% of expected regional growth, about half of what they have captured in the past.** This suggests that the amount and kind of development in this Guidebook are not only realistic, but conservative, from a market perspective.

Since many of the region’s new jobs will be on or near the academic and medical campuses of Duke, NCCU, and UNC, there will be demand for housing close to these employment centers. Because the light rail will serve those employment centers, it makes sense to build new housing along the corridor it serves. This will both increase the number of jobs available to more residents without using their cars and reduce price pressure on single family homes that are a short drive away. From a market analysis perspective, the jobs (and the demand for housing that comes with them) will be generated. Already attracted to this market, developers and builders will be interested in adding to the urban

fabric if they are allowed to and if supporting infrastructure is put into place. Residents and employees will be interested in living and working within these walkable neighborhoods further enhanced by good transit service. **It is a question of how and where, not if, new growth will take shape within Durham and Chapel Hill.**

## PROPERTY TAX REVENUE ANALYSIS RESULTS

TOD in the along the Light Rail Corridor could produce \$1.4 to \$1.9 billion in additional property tax revenues between 2018 and 2057. “Additional” refers to net new tax revenues that would be collected based on the increase property values above their 2017 baseline values (with the assumption that current land uses and densities continue unchanged for the same period from 2018 to 2057). This analysis concludes that the Light Rail Corridor has the potential to generate new development, property value, and tax revenue that could, with appropriate financial and regulatory mechanisms, be used to subsidize infrastructure or other community needs.

Station Areas	7,026 Acres
Development Concept Areas	1,361 Acres

### POTENTIAL NEW TAX REVENUES

LIGHT RAIL CORRIDOR	2027	2037	2047	2057
Baseline Property Value				
Lower Estimate (35th Percentile)	\$3.4 Billion	\$2.8 Billion	\$2.1 Billion	\$1.7 Billion
Upper Estimate (65th Percentile)	\$4.6 Billion	\$3.8 Billion	\$2.9 Billion	\$2.4 Billion
Net New Property Value				
Lower Estimate (35th Percentile)	\$1.8 Billion	\$2.8 Billion	\$3.3 Billion	\$3.3 Billion
Upper Estimate (65th Percentile)	\$2.4 Billion	\$3.7 Billion	\$4.5 Billion	\$4.5 Billion
	2018 - 2027	2018 - 2037	2018 - 2047	2018 - 2057
Net New Accumulated Tax Revenue				
Lower Estimate (35th Percentile)	\$172.4 Million	\$493.5 Million	\$929.5 Million	\$1.4 Billion
Upper Estimate (65th Percentile)	\$233.3 Million	\$667.6 Million	\$1.3 Billion	\$1.9 Billion

Financial estimates are reported as discounted present value based on an inflation-adjusted discount rate of 2.5%  
Discounted Present Value is a financial calculation that measures the worth of a future amount of money in today's dollars.



# TOD POLICY PRIORITIES

*“I think [about]  
wholistic  
communities,  
and I think  
that is the only  
community  
worth  
building”*

PETER FRENCH

RISING BARN

After extensive work and stakeholder engagement in the development of this Guidebook, the consultant team and GoTriangle team determined that the following policy briefs and respective action steps are critical to successful implementation of the Light Rail Corridor. Supplemental information on each of these policy priorities may be found in the appendices, beginning with Appendix B.

# Affordable Housing

As part of the TOD study, a comprehensive affordable housing report was developed in collaboration with Chapel Hill, Durham, Triangle-J Council of Governments and GoTriangle. For detailed insight into the affordable housing shortage, the opportunity the light rail presents to address it, and a comprehensive approach to address the issue at scale in the Light Rail Corridor — see Appendix B of The TOD Guidebook.

For detailed insight into local data, current efforts underway in the corridor, performance tracking measures, policy maps, and discussion of selected strategies refer to Appendix C of The TOD Guidebook. The essential policy takeaways, and strategies to support opportunities for dedicated affordable housing, and affordably-priced housing along the Light Rail Corridor are described in this section.

## THE AFFORDABLE HOUSING SHORTAGE

Chapel Hill and Durham are experiencing a growing housing affordability crisis, similar to many economically prosperous regions across the country today. Recent population and job growth in the region far outpaces the number of homes that are being built, resulting in upward pressures on pricing, leading to gentrification and displacement. Together, Durham and Orange counties are adding, on average, 20 people per day and housing construction is not keeping pace. This phenomenon is exacerbated by recent shifts in people's preferences, and therefore, willingness to pay more to live within more walkable, connected "in-town" neighborhoods near Downtown Durham, Duke, and the University of North Carolina at Chapel Hill. Further, demographics are trending towards one- and two-person family sizes at a time when one- and two-bedroom homes are already in short supply, particularly within in-town neighborhoods.

These trends are made even worse by the following dynamics within Durham and Chapel Hill:

1. There is limited available land, particularly in desirable in-town neighborhoods, resulting in higher land costs that are prohibitive for builders of affordable housing and an increasing number of families who are unable to afford increased rents or home sales prices.
2. Local regulatory policies, including zoning codes, that make it very cumbersome or outright illegal to develop a range of affordably-priced housing types, such as backyard cottages and other "Missing Middle" housing options. Regulatory policies can also unintentionally add substantial costs to more typical detached homes and apartment communities. These added costs are almost always passed onto the purchaser or renter of the home.
3. Arduous and unpredictable development review processes, which further limit housing options and diminish the pool of potential developers and lenders, while also stymieing creative ways to address the housing shortage.

Ironically, it is the builders of dedicated affordable housing and would-be builders of affordably-priced housing who are most impacted. The three trends above increase the gap between affordable rents, and the costs to build and maintain dedicated affordable housing. For builders of dedicated affordable housing, increasing costs create the need for increased public financial assistance to build



# Affordable Housing Roundtable

The consultant team hosted an “Affordable Housing Roundtable” that included prominent real estate developers and affordable housing experts along with local municipal representatives to discuss innovative approaches to the affordability issue.

A full detailing of recommendations, including those that took root in this discussion, are available in the Affordable Housing Report (see Appendix B). The following were key takeaways from the roundtable:

- There is no silver bullet solution, but rather there is the need to “stack” a series of strategies to address various elements that contribute to the growing affordability crisis.
- “Trial and Error” will be an essential component of finding a successful strategy. As such, municipal representatives and the community at large must not be afraid to fail and adjust along the way.
- Creative approaches will be needed to overcome certain limitations inherent to voluntary and mandatory density bonus programs, including statutory and financial realities that limit the effectiveness of these tools,
- There is a need not just to tweak the current regulatory landscape, but to “break the rules” and invent new regulations and other mechanisms to successfully address the issue.



each home, resulting in a less efficient use of public resources in the face of a growing shortage of affordable homes. In other words, these dynamics that are increasing home costs mean that it costs more to build fewer dedicated affordable homes. For would-be builders, this means that either (1) they do not build the homes, or (2) the homes that they do build are more expensive.

Plainly stated, in a prosperous, growing region like the Triangle, limiting the number of homes that are built, intentionally or unintentionally, through local policy, is a recipe for more expensive and increasingly unaffordable prices, for all renters and for families hoping to purchase a home.

## THE OPPORTUNITY

**The light rail project provides an opportunity to reaffirm the decades-old framework for how Durham and Chapel Hill wish to accommodate new people and jobs while supporting the creation and conservation of dedicated affordable housing.**

Transit-oriented development around light rail stations not only provides new opportunities for people to live in walkable neighborhoods served by transit, it also presents a substantial opportunity to leverage new private investment in station areas to support dedicated affordable housing. New tax revenues, increased property values, and economic growth can be harnessed to use a wide array of strategies that could result in greater production and conservation of affordable housing while improving overall quality of life for residents and employees.

Today, there are over 100,000 jobs in the Light Rail Corridor; in 20 years that number will exceed 150,000. The concentration of jobs, amenities, services, and healthcare in the corridor means that placing more housing near light rail, as well as along adjacent frequent bus routes connecting to light rail, will provide residents with low cost, frequent, and reliable access to educational and employment opportunities.



Housing along the Light Rail Corridor should be viewed as a key tool for equitable economic development. The creation of new housing options along the Light Rail Corridor – market rate and affordable alike – is an essential element to retain and attract employers to the area, as housing is one of the most critical aspects of corporate site selection and the ability to grow the local economy. Subsequently, investment and development activity along the corridor will increase property values that can be leveraged to support affordable housing, directly and indirectly through supportive infrastructure to create walkable and access-rich communities. The creation of new job centers along the light rail will have the dual benefits of (1) providing greater access to jobs and economic opportunity to individuals who live throughout the corridor while (2) reducing the combined cost of Housing + Transportation. Both of these realities provide for greater social equity and economic outcomes as a result of the light rail.

To frame the discussion about affordability, within the context of the light rail project, GB Arrington, one of the nation's foremost experts on transit-oriented development, stated:

*When you adopt TOD plans and zoning you have arrived at the starting line for securing affordable housing, not the finish line. The plans and zoning make TOD and affordable housing permissible, something very different than making them viable. The first pertinent question is 'how much affordable housing and urban density do the plans and zoning allow?' Then you can have the conversation about the robust toolbox necessary to help assure the outcomes the plans envision.*

Four Primary Takeaways from the Affordable Housing Report:

1. **Resources are necessary to address the escalating affordability crisis throughout the region.** Whether for land banking, financial assistance or direct investment in the production of housing, more money will be necessary. New property value from TOD around the light rail line provides an opportunity to significantly expand those resources but cannot be viewed as the only source for revenue. In this regard, outreach to non-traditional sources for long-term investing—such as for land banking—should be undertaken, including institutions like the Methodist Pension Fund and the Duke Foundation. Further, zoning codes and affordable housing programs should be regularly evaluated to ensure that limited funds are stretched as far as possible to support as many affordable homes at the lowest possible cost in order to maximize the total number of affordable homes that can be created or conserved.
2. **It will take an “all-of-the-above” trial and error approach** to determine the best set of strategies for Chapel Hill and Durham, with the understanding that different strategies will be necessary in different neighborhoods. Strategies and the types of housing must be calibrated to the local, neighborhood context and appropriate future development in and around each area.
3. **A dual approach of conservation coupled with increasing supply will be necessary to provide greater all around affordability in both the short and long term.** Considering both the higher costs and that relatively fewer homes are created each year, compared to the existing number of attainably priced homes, efforts must include conservation of existing affordable housing stock while simultaneously creating policies to incentivize affordable housing from new development.
4. **The time to act is now.** Land, while it is more expensive than it has ever been, it is also less expensive than it ever will be. Critical decisions must be made today in regard to planning, phasing and development of infrastructure necessary to support vibrant neighborhoods, which include affordable and attainable housing. Policy changes should occur in the near future (one to three years from now) to best prepare for and leverage future development of rail infrastructure and private station area development.

In summation, there is no single silver bullet that can successfully address the affordability crisis

in the Chapel Hill and Durham region. However, in concert with one another, a range of potential strategies could make significant progress in meeting this need.

## AFFORDABLE HOUSING OBJECTIVES & ACTION STEPS

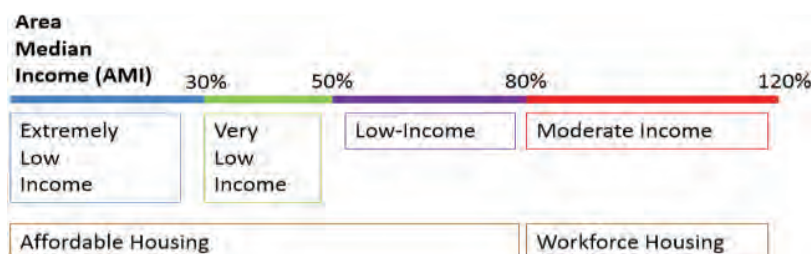
The comprehensive Affordable Housing Reports, which may be found in Appendices II and III, advance the following 12 objectives, and associated action steps to promote implementation:

### OBJECTIVE #1

#### Set Realistic, Yet Aggressive, Affordable Housing Goals by Number of Homes to Close the Affordability Gap within Station Areas

In order to substantially address the affordable housing crisis within the region, and to make a positive contribution to addressing it along the light rail line, it is necessary to have estimates and projections of the following:

- The shortage of affordable homes that exists today and will exist 10 years from now without action.
- The number of affordable homes that need to be built and conserved to address this shortage and the time it will reasonably take to do so.
- Identification of strategies that will be used to build and create new dedicated affordable homes and estimates of the number that can reasonably be produced by each strategy.
- Identification of strategies that will be used to support the construction of market rate homes and reduce price pressures on existing naturally occurring affordable homes.



- **ACTION STEP:** Durham and Chapel Hill set and validate a target number of affordable units for both construction and conservation over the next five, ten, and twenty years within station areas by the end of 2019.

### OBJECTIVE #2

#### Prioritize Conservation / Conversion of Existing Affordable Housing

While much of the burden to provide new attainably priced housing is put on the backs of new development, this approach is a rather inefficient way to make meaningful progress towards bold housing goals and production targets.

Instead, multiple existing naturally occurring affordable homes (or dedicated affordable homes whose affordability restrictions are about to expire) could be conserved for the cost of producing one new affordable home.

This is especially true of new construction in popular locations with higher land prices and higher construction costs. Conservation of affordable homes could be achieved through establishing a fund for affordable housing partners and private property owners to reinvest in existing communities in exchange for new or extended affordability commitments. This could also be done in partnership with property owners who would like to redevelop by using regulatory bonuses and financial incentives in exchange for the property owner committing to maintaining a certain amount of affordability as the property is redeveloped.

- **ACTION STEP:** Chapel Hill and Durham conduct an audit of existing workforce and affordable housing to determine properties that are best suited for conservation.
  - Identify naturally occurring affordable properties and score their risk of either being redeveloped or renovated with an accompanying rent increase (also known as “filtering up”).
  - Identify and score legally binding affordable properties with expiring affordability restrictions.

- **ACTION STEP:** Chapel Hill and Durham build capacity to better understand and engage in the private real estate markets by hiring or contracting with a multi-family real estate professional with expertise in the capital markets. This type of professional experience would support land purchases, land banking, dispositions, and provide in depth knowledge of potential off-market opportunities.

### OBJECTIVE #3

#### Implement Innovative Approaches to Land Acquisition and Control

Without land upon which to build or redevelop, it is impossible to create new homes. There is a need for both municipalities and their partners to acquire and/or control land for the purposes of creating a pipeline for affordable housing. There must be a sense of urgency to acquire and preserve key parcels within station areas for future development of affordable housing before land prices increase in anticipation of the opening of light rail. This could take the form of a land bank or partnerships with local institutions such as foundations or pension funds with social impact goals.

Interim uses are a potential tactic within a land banking strategy. This entails putting the property to a temporary economic use that is suitable to be transitioned through redevelopment to accommodate affordable housing once the funding is available. Not only do interim uses help reduce the carrying cost of the property, reserving more funding for affordable housing, they can also help to activate the area around the property. For example, a food truck park could provide an amenity to the employees and residents of a station area during its early phases of development without affecting the longer-term ability for the land to be used for affordable housing.

- **ACTION STEP:** Chapel Hill and Durham identify and prioritize purchase of land in station areas and other locations throughout the corridor, with timing informed by the targets established under Objective #1.
- **ACTION STEP:** Ensure that each land banked property has a role in meeting established targets for affordable housing. To do this, master plan and prioritize each site for development based on the analysis contained in this Guidebook and other pertinent community priorities.
- **ACTION STEP:** Identify potential private sector, not-for-profit and institutional partners to create an interim use of the land until it is ready to be developed into affordable housing.

### OBJECTIVE #4

#### Capitalize on Market Activity to Generate Revenue for Affordable Housing

Explore innovative means to capture and use new property tax revenues to support Affordable Housing through public and private financing mechanisms. The following potential strategies are available to local governments in North Carolina to capture increased property values in station areas:

- **Synthetic Tax-Increment Finance (TIF) District.** This tool relies on committing a certain portion of increased property tax revenues that result from new development activity.
- **Special Assessment Improvement District.** This tool is a levy on properties to support community needs, including affordable housing. This tool requires approval by a majority of property owners within the district boundary and is therefore suited to station areas with concentrated land ownership.
- **Municipal Service District.** This tool allows an additional property tax on properties to support the provision of services or community needs, including affordable housing.

These committed future revenue streams can be monetized through an array of financing tools available to local governments in North Carolina as a way to pay for costs associated with the construction of station area infrastructure and affordable housing. New revenue districts are not

necessarily required to do this; in the absence of a formal mechanism, Durham, Chapel Hill, or the counties could commit a certain percentage of future revenue within station areas to their affordable housing funds for the conservation of existing homes or the creation of new ones within station areas.

Regulatory changes, infrastructure projects, and affordable housing must be timed to complement each other, and they must be completed ahead of the uptick of land prices associated with the opening of light rail, to maximize (or even realize) the ability to support affordable housing. For example, Durham and Chapel Hill should adopt work plans that coordinate policy changes and investments in utilities, streets, land banking, and parking management strategies ahead of, or concurrent with, the construction of affordable housing. This coordinated infrastructure/land/parking investment should be undertaken when it can be catalytic to market-rate development on other nearby properties, in addition to supporting an investment in affordable housing. A coordinated approach is especially important given that other developments can help create a walkable neighborhood context for the affordable housing by providing things like sidewalks, public space, and retail. This approach will further reinforce the opportunity for equitable prosperity by using public investments to spur the creation of new places where people of all backgrounds and incomes can live, work, and interact with one another.

- **ACTION STEP:** Durham and Chapel Hill to commit portion of new station area tax revenue to affordable housing. As specific projects make their way forward, finance officers from the City of Durham, Chapel Hill, Orange County, and Durham County should work together to identify and recommend revenue mechanisms and finance vehicles to fund those projects.
- **ACTION STEP:** Create a set of priority investments (including their timing) to determine which investments provide the greatest opportunity to maximize future tax revenue generation and support affordable housing.

#### **OBJECTIVE #5**

##### **Conserve and Create Affordable Housing Opportunities through Partnerships between Anchor Institutions and Local Communities**

Durham and Chapel Hill must continue to coordinate and formalize partnerships with local universities, health care systems, and other anchor institutions. This strategy could be used in both the short- and long-term to leverage their presence and respective desires to be leaders within the community in addition to introducing housing as a potential benefit for employee recruitment and retention.

- **ACTION STEP Chapel Hill:** Incorporate affordable/attainable/workforce housing plans to into entitlement review for the UNC Health Care Eastowne Master Plan and Campus Master Plan / Development Plan Update
- **ACTION STEP Durham:** Incorporate affordable/attainable/workforce housing plans to into entitlement review for future Duke and NCCU planning and/or development processes

#### **OBJECTIVE #6**

##### **Establish Partnerships with Private and Not-for-Profit Entities to Fund, Develop and Manage New Affordable Housing**

In addition to partnering with the corridor's anchor institutions, it is necessary to find partners who can provide capital, develop affordable housing, and manage it. These partners can help provide the financial capacity and development expertise to make the most out of public investments in affordable housing and allow the municipalities and counties to pursue multiple projects at once.

Quasi-governmental or non-profit entities that provide a socially-minded investment function, such as Community Development Corporations, are particularly well-suited to fund land acquisition and/or development. This approach might also fit within the purview of an "impact fund" which is comprised of socially-minded investors who are willing to invest in projects that produce social and community benefits even though financial returns may occur on a longer timeline.

There may also be an opportunity for the municipalities and counties to partner directly with affordable housing developers which could take a number of forms, including the following:

- Selling or leasing municipal land at reduced or no cost.
- Providing construction of necessary infrastructure such as streets or utilities.
- Being a part owner of the project by contributing equity and sharing in financial returns or losses.

- **ACTION STEP:** Identify and engage in discussions with potential private, not-for-profit, faith/mission based and institutional partners. These include potential property owners and managers, developers, builders and investors.

## OBJECTIVE #7

### Ensure Zoning Requirements are Context Sensitive

An important aspect to addressing the affordability issue is to “densify everywhere” – while ensuring new homes fit within the local neighborhood fabric. This type of housing is known as “missing middle” and it includes housing types that range in scale between a stand-alone single family home and smaller apartment buildings. These types include Accessory Dwelling Units (ADU’s), duplexes or fourplexes that are sized to match and blend in to an existing neighborhood. Allowing missing middle housing types within residential neighborhoods surrounding station areas is a valuable strategy to complement the larger scale development anticipated in areas closer to the light rail stations.

In addition to allowing a diversity of housing types, it is important to reduce parking, unusable open space, and setback requirements in neighborhoods surrounding the station areas so that new homes can become a part of the neighborhood fabric while incrementally allowing it to adapt and change over time.

- **ACTION STEP:** Chapel Hill and Durham to conduct a neighborhood by neighborhood land use analysis to determine opportunities to increase supply of incremental, small scale “missing middle” housing.
- **ACTION STEP:** Review, assess and update zoning codes and other land use regulations to spur development of missing middle housing types, in accordance with the findings of the aforementioned analysis.
- **ACTION STEP:** Review, assess, and update zoning codes and other land use regulations to remove regulatory barriers that unnecessarily increase the costs of new housing and to remove barriers to constructing affordable and workforce housing in particular. Refer to the Zoning Policy Brief on page 29 for a listing of regulatory barriers identified by the TOD study.
- **ACTION STEP:** Create a public engagement process to help people understand the need for and benefit of incorporating incremental, small scale and missing middle housing within existing neighborhoods.

## OBJECTIVE #8

### Ensure that Density Bonuses are Calibrated to be Cognizant of Market Forces

Inclusionary zoning, while politically popular, is often applied too broadly, resulting in decreased overall production and higher housing costs – the exact opposite of the intended outcome. Too often, the result of compelling developers to include an affordable component, is an economic burden that makes it difficult to get a loan to build the project. As a result, the project may not occur, it may include fewer, larger, and more expensive homes, or it may skimp on design. Mis-calibrated density bonuses can have a similar effect. Policies that decrease the amount of new construction in places where people would like to live in a quickly growing market will result in upward price pressures for housing both in the station areas and in surrounding neighborhoods.

Given this reality, properly calibrated tools to encourage developers to provide more workforce and affordable housing rather than “force their hand” are recommended.

- **ACTION STEP:** Chapel Hill and Durham evaluate existing density bonus programs and other



development regulations to remove hurdles to better incentivize and enable developers to contribute to affordable housing.

- **ACTION STEP:** Chapel Hill and Durham to incorporate metrics in addition to straight line density (number of homes) as opposed to sole reliance on density in calculations, to increase the incentive for developers to build smaller, less expensive homes. These considerations could include:
  - Height requirements (which Durham already uses in areas)
  - Exemption (or flexibility) for lot coverage requirements
  - Exemption (or flexibility) for building massing requirements such as upper story setbacks
  - Reduced public space and parking requirements (where parking requirements exist)
  - Flexibility from material and design requirements, so long as requirements that relate to providing appropriate urban form and street-level characteristics are retained.

## **OBJECTIVE #9**

### **Ensure Development Processes are Transparent, Fair and Predictable**

One of the most overlooked and largest factors that dampens supply of both market rate and affordable housing are overly complex land use policies and entitlement processes. The additional time and risk work in tandem to contribute to higher costs for housing. Sometimes, adjusting the existing framework is not enough to provide the desired outcomes. At times, it is necessary to “start fresh” and either change the rules or break them and create a new way in which to do business.

As such, it is essential to provide clarity and transparency in the development process. Developers are willing to work within the rules, even jump through additional hurdles, if the process is clearly defined and conducted with fairness and objectivity.

- **ACTION STEP:** Chapel Hill and Durham review existing land use, development and construction approval processes to determine what aspects may hinder production of quality development in general, and the provision of affordable and attainable housing in particular.
- **ACTION STEP:** Chapel Hill and Durham revise approval framework with an expedited review for projects that meet certain affordability criteria. This type of framework provides more clarity and predictability and less financial risk for developers and investors.

## **OBJECTIVE #10**

### **Increase Sources of Affordable Housing Funding Using Innovative Financing Tools**

To successfully meet community goals the municipalities and counties must increase their financial capacity to support the pipeline and construction or purchase of affordable homes. Both Chapel Hill and Durham have experienced staff working on these efforts, and each has created a series of policies and mechanisms that result in a solid policy framework for the development of more affordable homes. However, limited financial resources remains a significant impediment to addressing community needs and reaching adopted housing goals.

The potential transit-oriented development spurred by the light rail project could provide a catalytic opportunity to obtain new revenue sources to meet the needs of the municipalities and the Region. However, new revenues must be leveraged by appropriate policies and investments within the Light Rail Corridor and beyond.

- **ACTION STEP:** Chapel Hill and Durham assess potential impact of innovative finance and funding strategies to increase capacity for affordable and attainable housing development at all scales (incremental, missing middle, larger scale intensive development).
- **ACTION STEP:** Chapel Hill and Durham codify mechanisms to leverage the increase in property values created at and around station areas, as a result of the light rail investment, to fund/ catalyze/leverage these funding sources and financing tools.

## **OBJECTIVE #11**

### **“Stack” different strategies and tactics to provide a layered solution**

A layered solution would reduce, if not eliminate, the funding gap between the cost to construct affordable homes and the requisite rents necessary to support such development. Public dollars can go much further when they are matched by or are used to incentivize and support private development when compared to having the public sector fund affordable housing directly. Increasing revenues for affordable housing without also finding ways to increase the effectiveness of those revenues will result in the inability of Chapel Hill and Durham to substantively address the affordable housing shortage.

- **ACTION STEP:** Chapel Hill and Durham create matrix of affordable housing priorities and opportunities categorized by scale, neighborhood typology and timing to create integrated strategies for a full range of affordable and workforce housing opportunities.

## OBJECTIVE #12

### Support Interdisciplinary Engagement and Collaboration

Since the only constant will be change (market conditions, policy tools, site opportunities, funding streams, organizational leadership, and staffing), structured and sustained engagement and collaboration will be important for success. Two initial collaborations that should be supported are:

- The existing Housing Practitioners Group facilitated by the Triangle-J Council of Governments that brings together housing expertise from local government agencies, the private sector and non-profit organizations to collaborate on affordable housing issues.
  - Increased communication and cross-silo frameworks within each municipality to ensure that a coordinated and informed process occurs to address a range of issues that inter-relate, including land use, economic development, infrastructure, affordable housing, and transportation.
- **ACTION STEP:** Chapel Hill and Durham look to create inter-municipal partnership frameworks to promote greater communication and coordination between and among the Town, City, Durham and Orange Counties, and TJCOG.
  - **ACTION STEP:** Chapel Hill and Durham look to create internal, cross-silo frameworks to foster coordination and collaboration among and between all staff and agencies that either affect or are affected by development in general and affordable housing, in particular.

# Zoning and Entitlements

## INTRODUCTION & OUTCOMES

This section describes the ways in which essential transit-oriented development principles inform and become incorporated into local planning and zoning mechanisms. In order to create walkable places with a mix of jobs, housing, shopping, dining, entertainment, and public space near light rail stations, Durham and Chapel Hill must adopt zoning requirements and review processes that intentionally enable and encourage transit-oriented development (TOD).

The recommendations in the Guidebook reflect differences between the two municipalities, including the different underlying characteristics within each station area, and the differences in planning and policy progress towards transit-readiness. This policy brief describes planning efforts that are already adopted or currently underway in Durham and Chapel Hill, in addition to the action steps needed for zoning and review processes to intentionally enable and encourage TOD. Also included in this policy brief is a discussion of the universities' roles as Anchor Institutions in land use decisions at multiple stations along the Light Rail Corridor.

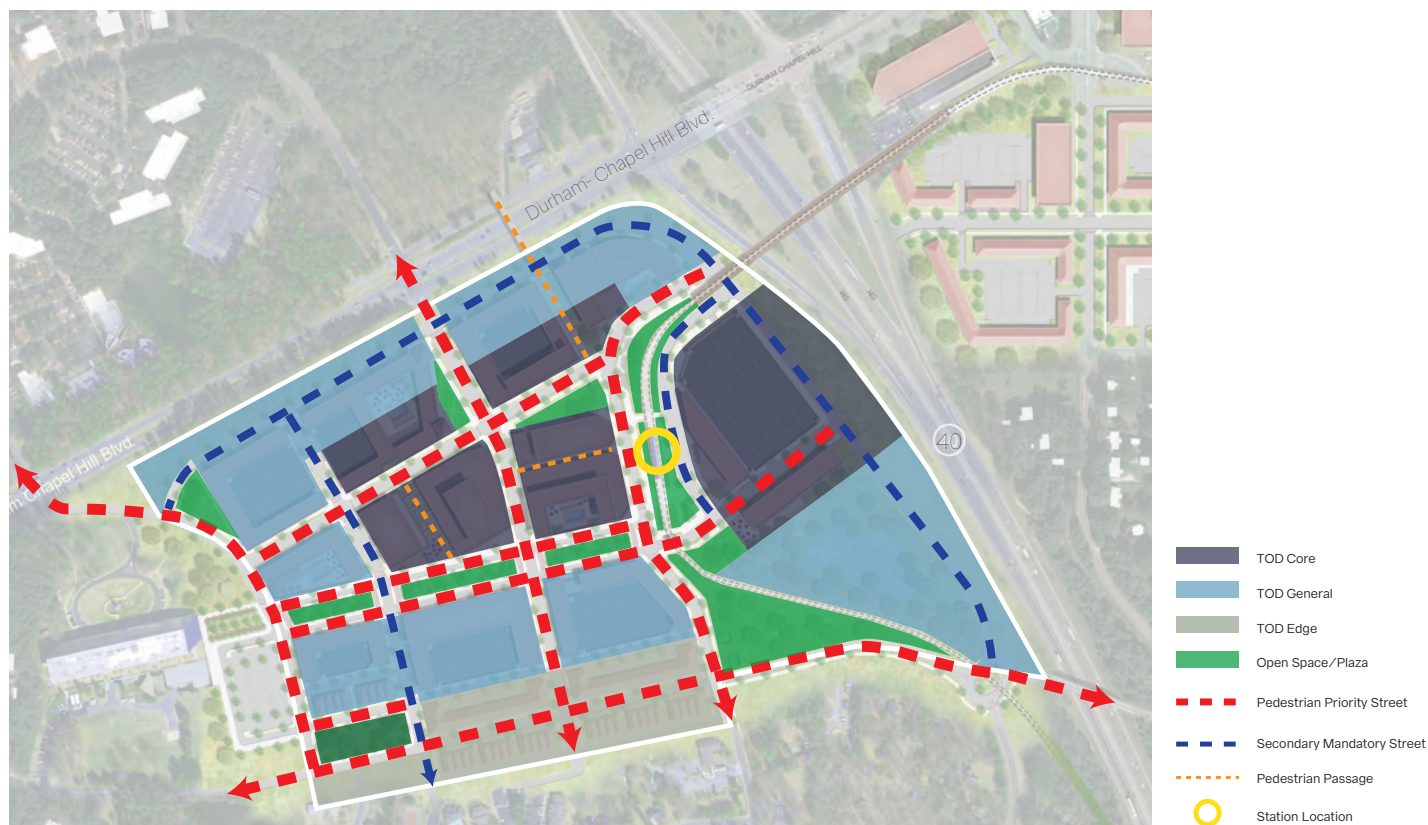
With the notable exception of the historic urban fabric in central Durham - adopted plans and appropriate zoning districts are essential for successful transit-oriented development. However, zoning requirements and processes are only a portion of the regulatory framework that is needed to support TOD. TOD plans and zoning ordinances, even in places like central Durham, must be coordinated with and complement a range of other policies and programs to fully realize the opportunity of TOD. The review process for mixed-use and transit-oriented development encompasses many municipal departments and external regulatory actors outside the municipal planning departments. Thoughtful and strategic coordination is warranted across multiple regulatory interests particularly given the fundamental importance of connectivity via a robust network of pedestrian, bike, and transit access, and the need for comfortable streetscapes and public spaces in all station areas.

Given the importance of connectivity of streets to both walkability and redundancy in the vehicular network, physical characteristics for TOD and walkable neighborhoods are often guided by a framework plan showing streets, blocks, and the ultimate build out of the public realm including streets and public spaces. In conjunction with this TOD study, a framework plan was created for the Gateway station area. These types of plans can be embedded in future land use maps, small area plans, or in zoning ordinances. The underway Patterson Place Compact Neighborhood Rezoning in Durham and the Future Land Use update in Chapel Hill present opportunities to establish framework plans that depict street types, streetscapes, public spaces and places where buildings should have active fronts that open onto sidewalks and public spaces. The image below depicts a draft framework that could be refined and adopted by Chapel Hill to enable and encourage TOD in the Gateway station area.

## CHAPEL HILL ZONING & ENTITLEMENTS

The Town of Chapel Hill will be undertaking a multi-year process of rewriting the Town-wide Land Use Management Ordinance (LUMO), creating a nicely timed opportunity to incorporate TOD practices in the within its station areas. The LUMO rewrite process is anticipated to take several years, presenting

### GATEWAY STATION EXAMPLE FRAMEWORK PLAN



the opportunity to take other types of action steps to enable and encourage TOD, consistent with the vision articulated in Chapel Hill 2020, the Town’s Comprehensive Plan.

Chapel Hill 2020 also identifies ‘Future Focus Areas’ along major corridors including U.S. 15-501 and NC 54. Four of the planned light rail stations are within these areas: Gateway, Woodmont, Friday Center Drive, and Hamilton Road. Each of these station areas was analyzed in detail as part of the TOD study, including a week-long design workshop in Chapel Hill in February of 2017, and in several public meetings with the Town’s advisory boards and the Town Council. The Gateway station area in particular garnered a great deal of attention given its central location along the line between two major research universities, proximity to major highways, as well as the airport. This important location combined with opportunities for coordinating with the Patterson Place station area and the pending Eastowne Master Plan creates an opportunity for a new regional employment center with a mix of offices, housing, shopping, dining, and entertainment with ample public spaces including pocket parks, avenues, greens, plazas and multi-use paths.

In addition to the draft framework for the Gateway station area, this report includes zoning principles as a helpful reference for TOD station areas for staff, residents and public officials to consider when drafting zoning regulations in the light rail station areas, consistent with the vision of Chapel Hill 2020. In the long term, the Friday Center and Hamilton Road stations, represent a significant transit-oriented economic development opportunity that should be carefully planned in partnership with the University of North Carolina at Chapel Hill, as discussed later in this section. Similar to other university-owned properties off the main campus, there are opportunities for increased property tax revenues through payment in-lieu-of-tax agreements for new property values created by both private and university development on UNC property.

## DURHAM ZONING & ENTITLEMENTS

The City of Durham and Durham County operate with a joint planning department and Unified Development Ordinance (UDO). The Future Land Use Map and UDO are organized based on development tiers, categorized generally as downtown, urban, suburban, and rural. Light rail stations are located in the Downtown or Urban Tier in Central Durham, and Compact Neighborhood Tiers elsewhere in Durham, which are specifically designated transit-oriented developments (TOD) areas in the Comprehensive Plan and Future Land Use Map. Following the direction in the Comprehensive Plan, Durham is in the multi-year process of adopting transit-supportive Design Districts within its station areas. The Design Districts include standards that:

- Establish boundaries of the various sub-districts, which ensures a transit-supportive core and appropriate transitions in height and building size between new TOD and existing neighborhoods.
- Set parameters for building heights, building types, streetscapes, and outside building edges.
- Identify street networks, and in some cases, building requirements based on street type.
- Govern minimums and maximums.
- Provide bonuses to projects that commit to public priorities, such as affordable housing or public parking.

The stations in Downtown Durham and the Ninth Street station presently have adopted transit-supportive Design Districts in place. As of this writing, Compact Suburban Design District regulations are being drafted and publicly vetted for the Patterson Place station area.

### Regulatory Barriers to Missing Middle Housing

As part of the Station Area Planning work, the team assessed existing Durham UDO requirements, and also conducted feedback sessions with a range of developers familiar with working in Durham



to identify certain requirements that add costs or barriers to developing affordably and moderately-priced housing across the city. Potential impacts of changing the identified requirements were considered, and it is recommended that the City evaluate the following improvements to better accommodate or allow the construction of “missing middle” housing types that are affordably-priced by design. While these recommendations are broadly applicable within Durham’s Urban Tier, they are specifically valuable as edge treatments to Durham’s station areas in the Downtown Tier and Compact Neighborhood Tier help provide an appropriate and neighborhood-scaled transition between existing neighborhoods and station areas.

- **Eliminate** the minimum acreage requirement for the Urban Planned Development Residential designation, to better facilitate incremental and innovative residential infill.
- **Simplify** architectural standards by eliminating requirement for townhomes to be varied in materials and varied in front façade setback, to better accommodate historically accurate architectural details and to avoid introducing unnecessarily complicating and costly building massing.
- **Refine** the density bonus to correlate with recommendations identified elsewhere in the affordable housing sections of this Guidebook.
- **Establish** complete streets design standards and require that street designs be context-determined.
- **Eliminate** the requirement for every house to have frontage on a public street, instead allowing detached, fee simple housing to have access to rights-of-way via dedicated easements such as alleys, greenways, and other small park spaces.
- **Increase** the maximum size limitations on Accessory Dwelling Units to 50% (from 30%) of the primary dwelling unit’s square footage, to allow more houses of smaller sizes to include such units.
- **Facilitate** the development of “missing middle” housing types such as cottage courts, duplexes, quadruplexes, multi-unit homes, and other architectural types that are spatially compatible with existing and redeveloping neighborhoods; regulate based on urban form rather than density.
- **Eliminate** minimum lot sizes within the Urban Tier; instead, allow minimum building code considerations to govern what constitutes a viable unit.
- **Consider** eliminating off-street parking requirements for single family detached units, cottage courts, and other detached housing types.
- **Eliminate** unnecessary ‘landscape’ buffers between differing uses or differing densities.
- **Prioritize** pedestrian connectivity across all driveway and alley entrances, maintaining sidewalks continuously in plan and profile across all private and commercial entrances.
- **Expand** street tree standards to require street trees in all public rights-of-way to be located between the travel lanes and pedestrian routes, everywhere in the Urban Tier (excluding freeway types where pedestrian facilities are not provided) with minimal exclusions for utilities and other specific site encumbrances.
- **Allow** publicly owned utilities such as water and sewer to be placed in dedicated easements rather than solely in public-rights-of-way.

At the time of this writing, the Durham City-County Planning Department has undertaken an evaluation of many of these regulatory barriers at the direction of the City Council and Board of County Commissioners. The first round of potential amendments to the UDO to address these regulatory barriers is slated for review by the community at large and public officials in the Winter of 2018-2019<sup>2</sup>.

## UNIVERSITY ENTITLEMENTS RELATIVE TO TOD

The light rail line connects three university campuses including significant acreage at several stations along the alignment. The public institutions of the University of North Carolina at Chapel Hill and North Carolina Central University anchor each end of the line, while both UNC - Chapel Hill and Duke

2 <http://durhamnc.gov/3679/Expanding-Housing-Choices>



University own large portions of land in proximity to multiple stations along the line. From a municipal land use perspective, universities often operate under specific zoning districts not applicable to other uses. This is the case in both Durham and Chapel Hill. Additionally, master agreements can be used to accommodate long-term approvals of university development in exchange for commitments to enhanced design and community benefits, enhancing clarity for the respective institution, and importantly, for the broader community.

With patient-serving medical uses, academic and research space, residential uses, athletics facilities, and extensive support uses, academic institutions have complex operations that do not fit easily into conventional zoning approaches. Many universities across the nation have partnered in developing staff and faculty housing, supportive retail, entrepreneurial office space, private research labs, and arts and entertainment facilities, to support both the Universities and the community. Collectively, these are uses that are compatible with or strengthened by the institutional mission.

While North Carolina Central University has a more compact campus and less developable acreage near the light rail station, both UNC - Chapel Hill and Duke University have significant undeveloped or underdeveloped university-owned acreage in proximity to light rail stations. As opportunities for transformation of those areas are contemplated by each of the universities, according to their respective internal interests and considerations, Durham and Chapel Hill should be prepared to partner, encourage and accommodate transit-supportive and transit-oriented development.

The area around UNC Hospitals area and the Duke and VA Medical Centers are among the largest and densest job centers in the Triangle. The medical centers also attract a significant number of patients and visitors each day. The result is that these areas generate a substantial amount of transit and vehicular trips today in compact areas. The light rail project offers the opportunity to capitalize on present land use and travel demands in these areas, to continue guiding growth and economic development across the region consistent with land management and growth frameworks that have been in place within Orange and Durham counties for several decades.

### Zoning Action Steps

- **Adopt** transit-supportive future land use map designations and policies, such as the draft Gateway framework, for Gateway station and within the NC 54 focus area. (*Chapel Hill*).
- **Draft, Refine, and Adopt** transit-oriented development standards and review processes and Apply them to light rail station areas (*Chapel Hill*).
- **Continue to Refine and Adopt** Transit-Supportive Design Districts within the Compact Neighborhood Tier (*Durham*).
- **Continue to Partner with Universities** to meet university needs and provide community benefits as they update their respective master plans and seek updates to zoning entitlements (*Both*).
- **Evaluate and Remove Regulatory Barriers** to the construction of missing middle housing types, which are by design, affordably-priced, neighborhood-compatible, small-scale homes (*Both*).

## Parking

Managing parking effectively is critical to the success of transit-oriented development (TOD) districts. Every component of parking will impact the economic vitality, transit ridership, and the overall livability of the station area for residents, employees, and visitors. These components include the parking supply, how easy or difficult it is to find parking, as well as how the parking is built and managed.

## PRINCIPLES

When planning for parking in TOD districts, there are several key principles to consider. The first is that TODs have significantly higher levels of access across multiple modes of transportation, compared to many other places in the community. Therefore, parking in TODs should be approached differently than in other areas with less transit access.

With that in mind, by reserving less land for parking and more for development in TODs, the community can have greater economic development, a larger tax base, and more community amenities like public space. Creating the type of success described above requires the prioritization of access by walking, biking and transit to TOD districts ahead of access by private vehicles.

## THE BIG IDEA: DISTRICT PARKING

Most development review processes and parking regulations outside of TOD districts narrowly consider parking on a micro-scale, evaluating outcomes on a parcel-by-parcel basis, asking “how do we make sure there is enough parking for this site?” By contrast, District Parking is by definition a macro-scale solution to parking, that continually asks “how do we get parking right across the neighborhood to support community goals?”

District Parking is a mechanism to address many challenges related to TOD parking. It provides a way to manage the implementation of a parking strategy in one or more station areas, and helps the strategy evolve over time to meet community goals. The District Parking approach can address several parking-related problems in urban settings simultaneously, and can be particularly effective in creating walkable urban places.

Successful District Parking features parking spaces that are:

- **Shared** – can be used by more than one land use, business, or institution
- **Actively Managed** – may be used in different ways at different times of day or week
- **Unbundled** – sold or rented separately from residential or commercial building space
- **Priced** – priced to make sure that there are always spaces available for people who like to park, which means a higher price when lots of people want to park and a lower price (or no price) when fewer people want to park.

The TOD Guidebook provides more detail on how to implement these strategies in TOD districts, and how to use District Parking as an overall strategy to get multiple initiatives to work together for greater benefits.

### Timing of Action Steps

The recommended Action Steps for Parking in TOD along the light rail line below are presented as a set of actions that can be deployed at stations all across the corridor.

As current land use in different stations vary dramatically, from the ongoing urban development in Downtown Durham to presently-undeveloped land at Leigh Village, the timing of particular strategies and their relevance for will vary dramatically and must be calibrated to the characteristics of each individual station.

The specific timing of each action will depend on the status of development implementation at a particular station. For example, it would be reasonable to assume that implementation of new parking regulations would begin around the Patterson Place station, a suburban station on which transit-oriented development will be superimposed above an existing development pattern, before the Gateway Station, where there is currently little development. Additional parking strategies and action steps may be found within each station area analysis as well as in the full Parking Strategy in Appendix D.

## PARKING ACTION STEPS

- **Adopt** zoning regulations that accomplish the following:
  - Reduce or eliminate parking requirements and set parking maximums,
  - Require new projects to provide public spaces and encourage them to share spaces
  - Require new projects to unbundle parking spaces from leases for building space
  - Require new projects to survey and report parking occupancy every five years
  - Allow payments-in-lieu as an option to meet parking requirements
  - Allow a new project to use existing nearby under used spaces to meet requirements
- **Assess** the readiness of each station area for District Parking strategies and prioritize the implementation of District Parking strategies accordingly.
- **Implement** the first coordinated District Parking Strategy in a station area by 2021, consisting of the following Action sub-steps:
  - Perform supply/demand analysis as well as a parking market-rate study
  - Evaluate financial options available to acquire, fund, and manage parking facilities.
  - Create an opt-in process for property owners to place their spaces into the parking district by procuring or expanding a parking availability and mobile payment application.
  - Develop a policy to manage curb space and prevent conflicts between parkers, bicycle infrastructure, deliveries, ride hail users, bike- and scooter-share.
- **Strengthen** Travel Demand Management (TDM) programs in station areas, treating light rail station sites as “TDM Hotspots,” including employer education on parking pricing / incentives.
- **Advocate** for changes to the NC Housing Finance Agency Qualified Allocation Plan to support reduced parking requirements in station areas as well as shared and off-site parking.
- **Educate** developers, property owners and managers, lenders, university parking officials, and public officials on the benefits of District Parking in light rail station areas and strategies necessary to establish them.

# Streets and Public Spaces

To create comfortable and vibrant neighborhoods, it is critical to have well-connected, walkable streets and attractive, active public spaces of different sizes spread across the neighborhood. These collective experiences of public spaces, the street, the sidewalk, and the outside edges of buildings work together to form the “public realm.” People enjoy spending time in places that have quality streets and public spaces, whether they are walking somewhere, drinking coffee at a sidewalk café, chatting with a neighbor, or bird watching in a pocket park. Walkable streets and public spaces are not only important for connectivity and visual relief; they are central to the rich sensory experiences of civic life in towns and cities.

Public spaces – plazas, squares, parks, and greens – are the places where the experiences of nature can be encountered but also are points of respite, breaking up long walks into shorter, interesting segments. For walkable streets and public spaces, dimensions are critical. The best results often come from small public spaces where buildings, trees, and space for people provide neighborly places to meet. When it comes to public spaces, bigger is often not better. Each part of the street and each public space must be appropriately scaled for the purposes it serves, always with a priority placed on the quality of the experience for pedestrians.

This section frames design considerations for walkable streets across a spectrum of conditions from

higher to lower vehicular volumes, and from higher to lower intensities of adjacent buildings that come up to the sidewalk. This section also introduces several example designs for public spaces. Appendix E includes more specific design and policy information for both walkable streets and public spaces.

## WALKABLE TOD STREETS

### Purpose

Durham and Chapel Hill should adopt TOD street policies that then guide the adoption of regulations and design manuals to support TOD. A successful TOD Streets Policy addresses the essential role streets play in providing a high-quality pedestrian realm and connectivity that is critical for successful transit-oriented-development. Principles for walkable streets are equally applicable for walkable neighborhoods in general, serving a diversity of building types. In conjunction with zoning, a TOD Streets Policy helps to shape the basic and essential urban structure for walkable neighborhoods. The purpose of this policy is to provide for an inter-connected network of walkable streets supporting multiple modes of travel and access.

The conventional suburban street hierarchy of local streets, collector streets, and arterials is insufficient and often detrimental to creating walkable urbanism. This system limits street connectivity and directs traffic and business to wider, higher speed roads that are often hostile to people on foot or on bike. Fortunately, engineering resources, such as the *Urban Street Design Guide*, provide a framework for reconciling conventional standards, which prioritize cars, with the needs of people on foot and on bike. This streets policy framework provides and translates these technical considerations to action items for Durham and Chapel Hill to ensure that streets are designed for people and to support successful transit-oriented development.

### Policy Goals

Creating and maintaining a positive relationship between public spaces and private spaces is essential for creating safe, comfortable and desirable spaces for pedestrians, cyclists, residents, and visitors. With an integrated and interconnected network of multimodal streets, demands for vehicular movement and access can be appropriately accommodated while creating a rich walkable, neighborhood environment having a mix of building types. In order to support the benefits of walkable streets in station areas, Chapel Hill and Durham should adopt policies that:

1. **Assign a role to each street.** Each street should either be a place-focused, experiential component of the public realm or a thoroughfare for people traveling between places. A successful TOD streets policy should take into account the different roles that streets play in supporting walkable urban places. The graphic below shows the difference between streets that are intentionally designed as place-based versus those prioritizing vehicular movements. This differentiation enables clearer guidance in design and operational considerations for people walking, biking, and those riding in buses or cars. Clear design guidance will create a coherent, calibrated, and purposeful street network for a given location.
  - **Place:** Most of the streets within station areas fall into this category. These streets are designed to support places and prioritize people on foot and on bike over people in vehicles. The focus of these streets is providing access to businesses, residences, public buildings, and public spaces. These streets are not designed for the quick movement of vehicles at high speeds, though they may have multiple lanes. The Center City area of Downtown Durham, inside the Downtown Loop, is a good local example of streets functioning as places.



□ **Link:** These streets provide higher vehicular capacity connections between local streets and the surrounding road network. These types of connections may also serve parking facilities and service driveways. Links should still be designed with wide sidewalks and attractive streetscapes as well as protected facilities for bikes. While these streets may be necessary to support station areas, they are not conducive to forming the backbone of a walkable urban place and are less likely to support active ground floor uses like retail. South Columbia Street, on the Campus of the University of North Carolina at Chapel Hill between Franklin Street and Cameron Avenue, is a good local example of an urban link that provides vehicular capacity but also wide and comfortable pedestrian spaces.

2. **Use streets to create high-quality places through zoning requirements.** By their nature, streets constitute most of physical space within the public realm. Therefore, streets must be designed to serve as the backbone of walkable urbanism. To create a high quality place, the transportation framework must be developed in coordination with a zoning framework as both buildings and streets are vital parts of the public realm. Coordination allows better alignment between the street and sidewalk, and the building frontages that face the sidewalk and provide an active edge to the public realm.

A successful TOD streets policy must be coordinated with development standards that are conducive to creating an active street edge. These include standards that require:

- buildings pulled up to the street instead of set behind parking or unusable open space,
- an active commercial or office use on streets categorized as “places”,
- windows that allow people to see into non-residential ground floor spaces,
- entrances from the street be spaced every 50-100 feet for non-residential uses,
- each ground floor residence is elevated between 2.5-6 feet above the sidewalk, and
- each ground floor residence has an individual entry to the street

These standards are in addition to streetscape standards that require

- wide sidewalks that are sized according to the street type and building size
- landscape or pedestrian amenity zones that include benches, bike racks, planters, bulletin boards, “little libraries”, waste and recycling receptacles, and street lighting.

To create comfortable urban neighborhoods, it is critical that for TOD zoning ordinances to include standards such as these to guide the development of welcoming, attractive streets and street edges. Moreover, these standards must be written to compliment public space requirements to create a high quality public realm. A TOD streets policy should direct municipal staff and adequate municipal resources to accomplish this critical aim through continued, iterative refinements to zoning and street design guidelines.

3. **Align and balance public interests and goals.** A strong alignment across multiple public interests enables a clearer and more predictable design and development review process while holistically considering the public interest of protecting the health, safety and welfare of the general public. It is worth noting that traffic crashes are a leading cause of injury and fatalities. Many of these crashes are a result of streets that were designed to maximize vehicle throughput with insufficient consideration given to the comfort and safety of people on foot or on bike.

A successful TOD Streets Policy requires a highly collaborative and coordinated approach across multiple municipal departments that have responsibility for designing, approving, and maintaining the dimensions and physical character of streets and sidewalks. These departments include emergency services, fire protection, parking, transportation, engineering, planning,



parks, public works, and finance. NCDOT, transit providers, and the community at large should also be engaged.

4. **Establish realistic guidance that is mutually beneficial for the development community and the municipality.** A successful TOD streets policy should establish a shared set of expectations from municipal administrative officials, elected officials, the development community, and residents that govern how streets are built or retrofitted to support a walkable neighborhood.

The conceptual and technical basis of this policy framework is grounded in best practices from the Institute of Transportation Engineers (ITE) *Designing Walkable Urban Thoroughfares Manual*, the National Association of City Transportation Officials (NACTO) *Urban Street Design Guide*, the AASHTO *Guide for the Development of Bicycle Facilities*, and the NACTO *Urban Bikeway Design Guide*. As development occurs, this streets policy should evolve to match local context and new best practices as they emerge.

A full draft TOD Street Policy that achieves these policy goals may be found in Appendix E as a reference for Chapel Hill and Durham to consider refining and adopting. Such a policy is critical to coordinating the planning, design, and construction of streets that support TOD, through both municipal street and public space projects and private developments. Such a policy is also important for coordinating street design guidelines, transportation plans, zoning standards, public space standards, among other requirements to create a holistic approach to designing and building a quality public realm.

## **PUBLIC SPACE DESIGN**

Just as streets are critical to shaping a comfortable and safe pedestrian realm providing connectivity and access for the station areas, public spaces such as plazas, parks, and squares are also important in shaping the public realm. To maximize the social and economic benefits of public space, it is essential to provide both appropriate design features and the appropriate size and scale. Locating public spaces near the sidewalk of high-quality pedestrian streets or near active ground floor uses such as a cafe with outdoor dining are some of the ways spaces can become better activated. Successful public spaces are interesting and attractive, and allow for both purposeful and leisurely uses as appropriate.

Too often, public spaces are too large to contribute to a highly connected and comfortable pedestrian realm. While large urban parks, athletics and events spaces, and natural reserves are vital components of a city, walkability and the pedestrian realm is influenced far more by the smaller, in-between spaces that are spread throughout pleasant neighborhoods. These spaces add vitality to the neighborhoods themselves, but also are critical in shaping a sense of place, a sense of movement and arrival, and sense of comfort that invites people to walk around. Small parks and civic spaces are also proven to add to real estate values, as the market reflects their desirability as a public amenity.

The Appendix includes examples of different types of civic space that are important contributing elements in the creation of walkable neighborhoods. Designed well, they can serve multiple functions beyond enhancing walkability, including managing stormwater, mitigating the urban heat island effect, providing play spaces for children, and creating spaces for neighborhood and public events. Such spaces, whether publicly or privately owned, perform a vital role as part of the public realm in enabling safe, comfortable and enjoyable walkable neighborhoods.

### **Principles for the Design of Public Space**

Chapel Hill and Durham should adopt regulatory refinements and plans for both publicly and privately constructed public spaces in station areas taking the following principles into account, with reference the types of public spaces depicted in the Appendix.

- Locate the space where people are likely to be, such as near street corners, at transit stations, at public building entries, and areas with street-facing retail
- Make the space physically and visually connected to the sidewalk or other public spaces
- Size the space appropriately to serve its purpose

- Include design treatments that add visual interest and provide visual relief including trees, landscaping, and stormwater treatment
- Program the space with planters, seating, art, water fountains, community bulletin boards, pedestrian-level lighting, trash / recycling receptacles, and other pedestrian amenities
- Ensure that the combination of the placement of the space in addition to its edges, size, treatment, and programming make it feel like it is meant to be used by the public

Chapel Hill and Durham both have both recently made progress towards these public space design principles in refining public space requirements and design guidelines in their downtowns, as well as in other areas that are intended to transition into walkable places. To support TOD, it is necessary for both municipalities to continue this progress to ensure harmony in station areas between zoning codes that govern building placement and facades, public space requirements, streetscape requirements, and street design for both public street and park projects and private developments.

### **Street and Public Space Action Steps**

- ☐ **Adopt** a broad “People First” policy that prioritizes access and mobility by people-powered means and transit above access and mobility by personal vehicles.
- ☐ **Adopt** a specific “TOD Streets Policy” that accomplishes the following:
  - Assigns a role to each new or retrofitted street
  - Compliments zoning requirements for streetscape and building faces
  - Aligns planning, transportation, public safety and other interests
  - Establishes clear guidance to manage public and private expectations.
- ☐ **Adopt** Public Space standards that fully compliment zoning and street design standards.
- ☐ **Evaluate and Adopt** alternatives to vehicular Level of Service for TOD projects including Vehicles Miles Traveled impacts or Maximum Daily Vehicle Trip Caps to support stronger TDM measures.

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# STATION FAMILIES



*“Living connected would be knowing you are a local community, but knowing how we fit into the bigger community and respecting that... we are all on the same page.”*

VIJAY SIVARAMAN  
PROFESSOR AT NCCU



# Station Families

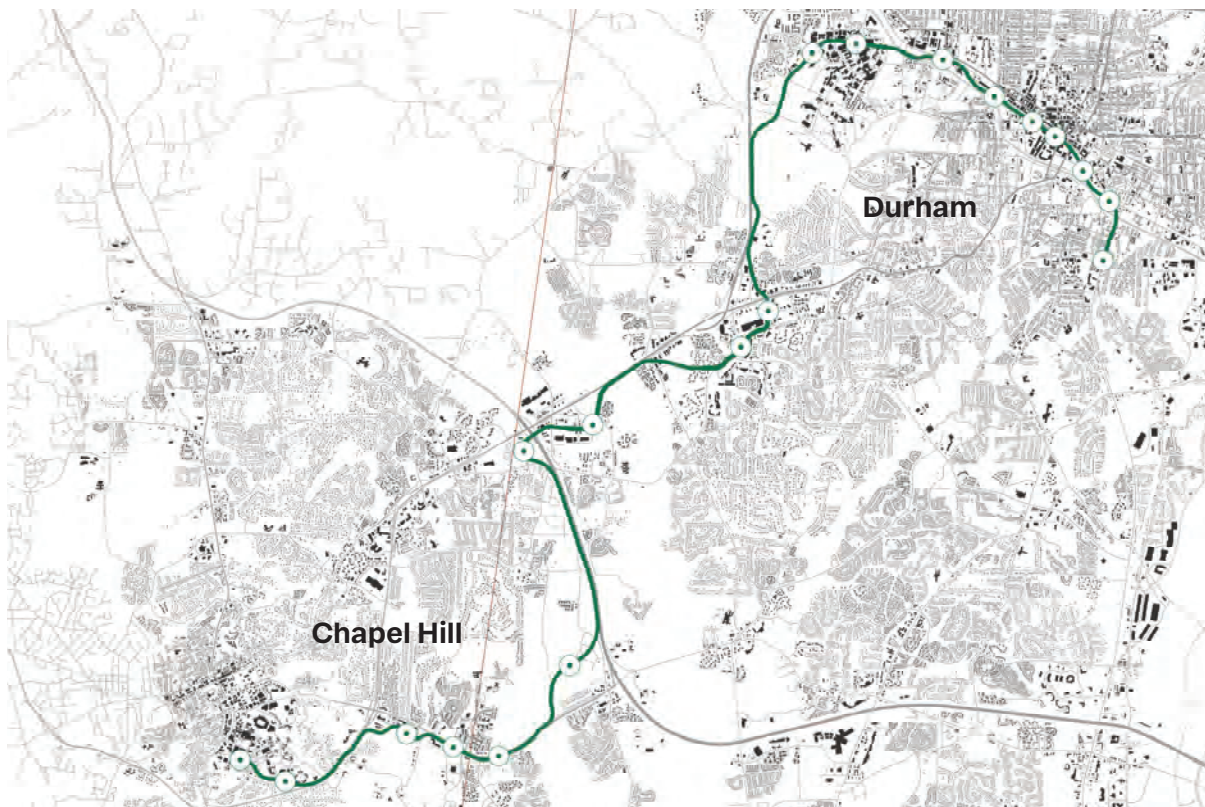
In developing light rail and the accompanying plans for TOD within each station area, Durham and Chapel Hill have an opportunity to strengthen and enhance the environment necessary for the continued cultivation of the highly coveted and incredibly valuable “Sense of Place” for which, those communities are already recognized. The Station Family Typology below provides a framework that groups stations based on their existing context and on opportunities for TOD place-making.

## STATION FAMILY TYPOLOGY

To best explain the nature of each planned light rail station and its surrounding neighborhood, the consultant team assigned each station into one of five station families that share common activation and development characteristics. These include the market potential and scale of development, greenfield vs. redevelopment opportunities, types of buildings and uses, and general overall feel and user experience.

Within each station family, commonalities exist in terms of calibrating planning, infrastructure and development strategies to generate the greatest economic and social outcomes. By focusing on these common traits among each station family, it becomes possible to distill a set of priorities in policy and infrastructure needs to maximize the return on investment in light rail at both a station and corridor level. Importantly, each station area and surrounding neighborhoods offer a range of existing assets that set the tone for future opportunities. These new investments must be intentionally curated

## LIGHT RAIL CORRIDOR



relative to the character, perception, function and feel of each place in order to ensure sustained success of the place as one of which people want to continue to return.

### **Application and Methodology**

Understanding that each station area is unique, these groupings helped frame the associated analysis and individual station area activation approach. The groupings are informed by historical neighborhood patterns, current neighborhood attributes, parcel fragmentation and ownership, and infrastructure needs. Through this process, each station area activation strategy was then placed in the necessary context of specific development challenges, sensitivities, opportunities, and phasing.

The five station family categories along the Light Rail Corridor are: University Villages, Neighborhood Destinations, New Communities, Suburban Retrofits, and Urban Hubs. Some of these terms, such as Suburban Retrofits, are deeply ingrained within contemporary planning lexicon, while others, such as University Villages, may conjure up a variety of images. In this instance, the significant influence and land ownership at several station areas is driven by the three academic institutions located along the line. Icons were created to match each of the station family typologies and are used throughout this Guidebook to indicate which station areas are part of a particular family.

As has been noted throughout this Guidebook, the following scenarios (for both station families and the concepts for each station area) provides “One Possible Future.” A formal planning and development process – including requisite public input, meetings and hearings – will be conducted by each respective municipality as future land use plans and zoning ordinances are drafted and considered by Durham and Chapel Hill.



# University Villages

Anchored by the corridor's historic institutions - North Carolina Central University (NCCU), the University of North Carolina at Chapel Hill (UNC) and Duke University, University Villages present a specific set of underlying conditions, social fabric and economic networks, in addition to a specific audience of users served by these locations. The users of these stations will be heavily weighted toward university and/or medical trips, whether for employment, educational, research, social, healthcare or support purposes.

University Villages also provide certain challenges and opportunities in terms of land ownership (most of which is under institutional ownership and control as opposed to public and/or privately-owned property) and the need for complementary uses that enhance the existing fabric while enabling appropriate growth in the future that benefits both the respective institutions and the community at large.

UNC HOSPITALS  
MASON FARM ROAD  
FRIDAY CENTER

DUKE/VA

NCCU

VERANO / TEXAS A&M TOD - SAN ANTONIO, TEXAS





## ACTIVATION & DEVELOPMENT STRATEGIES

- Development is shaped by proximity to university educational, research, and healthcare enterprises, which pervade economic and social exchanges.
- Businesses, residences of varying types, and development patterns in general cater primarily to university affiliates.
- Business may include a dynamic mix of small local business with regional and national chains.
- Diverse residential options across a range of price points are focused on medium to high density housing and a mix of owners and renters.
- Performance spaces feature live music, theater and other cultural activities.
- Generally active between 6 a.m. and 12 a.m.

### Partnerships Deliver: ASU Downtown Campus

The Downtown Arizona State University (ASU) campus is a story of how a strong partnership between ASU and the City of Phoenix resulted in a transit-oriented downtown revitalization. Phoenix voters approved a \$223 million bond in 2006 by a 2-1 margin to create the campus. A decade later, the campus is home to 11,500 students spread across 20-acres. Six colleges are based downtown including the Walter Cronkite School of Journalism and the Sandra Day O'Connor School of Law. Valley Metro Light Rail opened in Dec 2008, linking the Downtown Campus to ASU's main Tempe campus 13 miles to the east.

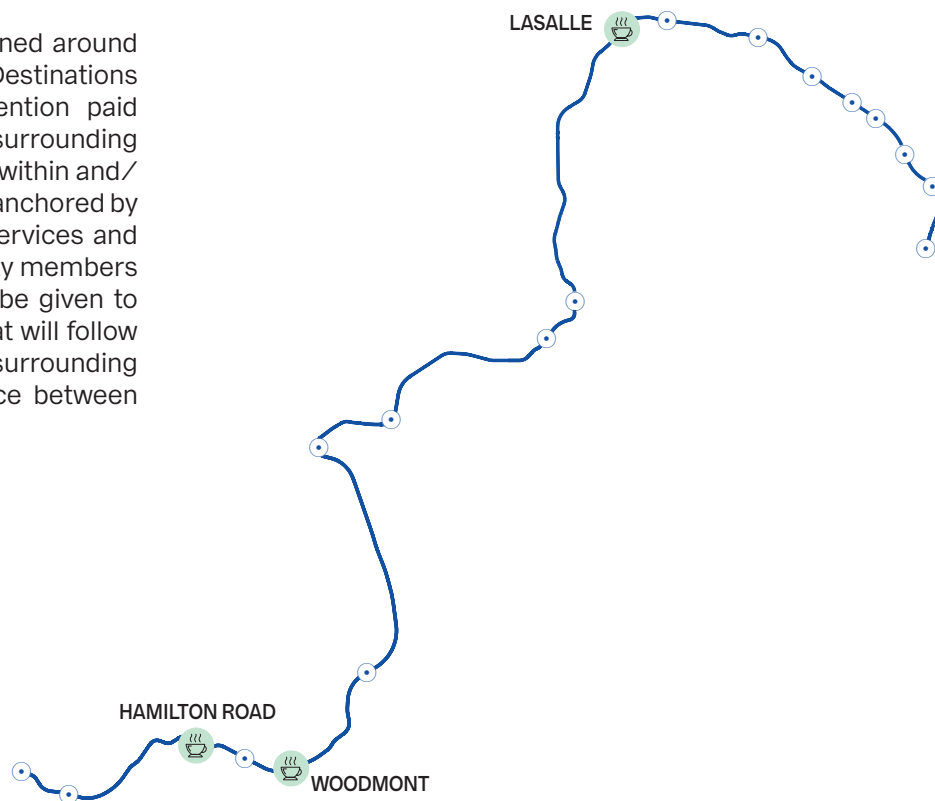
As the local paper *azcentral* put it in 2014 "In many ways, the creation of the downtown Phoenix campus was a perfect storm: The right leaders, in the right place, at the right time, with a shared vision and a willingness to take risks ... ASU has changed the face and feel of downtown. The area around Central Avenue north of Van Buren Street was, at its best, desolate; at its worst, scary. Civic Space Park, punctuated by an iconic net sculpture, replaced empty lots and abandoned storefronts. New academic buildings that have won national design awards stand where there were once parking lots. Formerly deserted streets now bustle with pedestrian activity. New restaurants and shops are thriving in spaces that were empty for years. Near campus there are new hotels, more new restaurants and a steadily growing nightlife."





# Neighborhood Destinations

Representing station areas that are planned around existing communities, Neighborhood Destinations should be calibrated with specific attention paid to enhancing and connecting to surrounding neighborhoods. These locations, located within and/or near bedroom communities, are often anchored by small commercial centers with limited services and entertainment geared to serve community members within close proximity. Attention should be given to the types of uses, intensity and forms that will follow the opening of these stations and their surrounding development activity to ensure a balance between existing and new development.



HERITAGE CROSSING - IRVING, TEXAS





## ACTIVATION & DEVELOPMENT STRATEGIES

- While (re)development in these stations will not be as closely connected to historic/downtown areas, there are opportunities to create important, primarily local serving, neighborhood hubs.
- Experience will be grounded in two ways: (1) connecting to and enhancing the existing neighborhood fabric, and (2) by new opportunities presented by the introduction of transit service
- Establish areas of commerce that are characterized by a mixed-use environment (and supported by zoning that guides such development).
- Residential intensity, options and price points driven by neighborhood context, with pockets of medium-density multifamily, where appropriate.
- Retail will include a mix of corner stores, bodegas, small format coffee shops, and late night restaurants.
- Generally active between 7 a.m. and 12 a.m.

## NEIGHBORHOOD DESTINATION ACTIVATION EXAMPLES



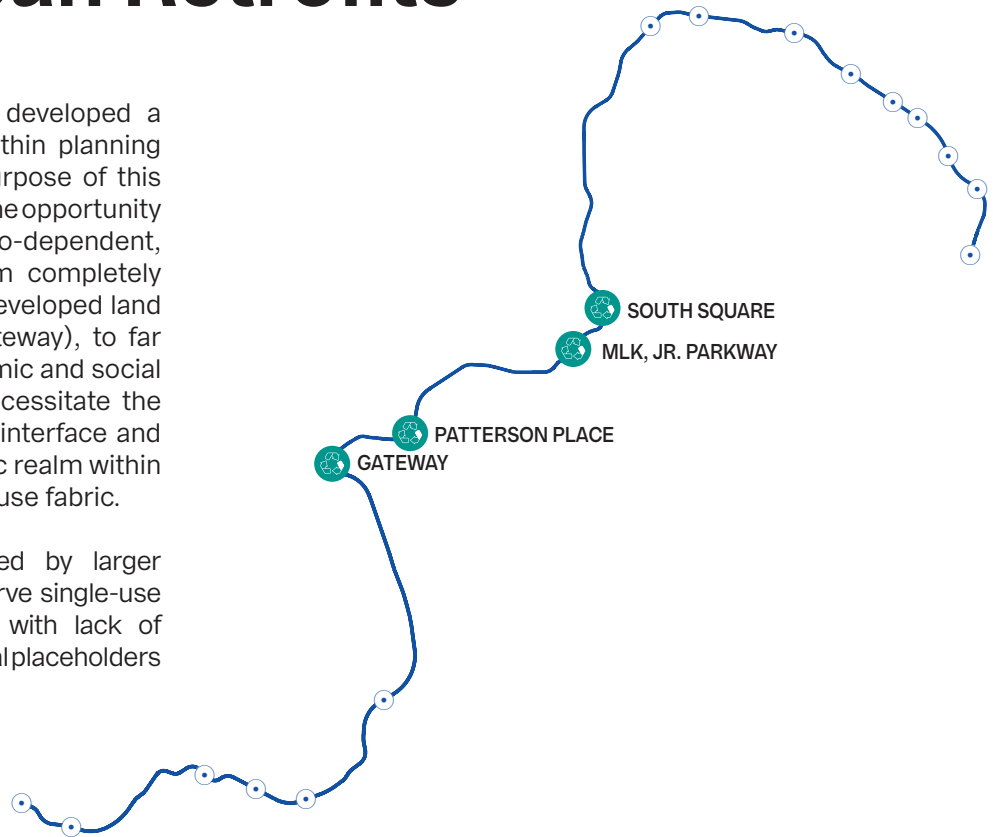
(Left to Right) Photos by: Alex Storozhuk; Kenner Galdamez; Chanan Greenblatt; Terrah Holly; and Han Song



# Suburban Retrofits

The term “Suburban Retrofit” has developed a certain meaning and connotation within planning and development circles. For the purpose of this Guidebook, these stations represent the opportunity to transition and evolve from auto-dependent, lower density areas that range from completely built out (South Square) to a mix of developed land and significant greenfield areas (Gateway), to far more intense, vibrant areas of economic and social activity. These desired outcomes necessitate the construction of a range of uses that interface and interact with each other and the public realm within a truly walkable, compact and mixed-use fabric.

These areas are generally populated by larger parcels, with large parking lots that serve single-use development. While auto-dominated with lack of pedestrian amenities today, they are ideal placeholders



## PARK HILL - NORTH LITTLE ROCK, ARKANSAS





for future transit-oriented development and functional services. Existing utility infrastructure can handle some development growth but may require additional investment for higher density projections. A variety of housing types currently exist in close proximity to these stations, but housing choices can be expanded by adding essential missing middle housing options as an edge treatment for the station area to help transition from larger building types near the station to existing residential communities.

## ACTIVATION & DEVELOPMENT STRATEGIES

- Embrace a steady evolution from auto-oriented commercial to urban format commercial and mixed-use with proper phasing of infrastructure, parking and development, over time.
- Provide a reawakened community-oriented experience driven by the creation of new job growth centers, substantial increases in densities and considerable vertical mixed-use development.
- Ensure a respectful and contextually appropriate transition of housing intensity from the most active centers of the station areas, out to existing neighborhoods and communities.
- Create active, commercial hubs that are likely to be driven by national brands, including larger format grocery and other larger footprint regional and national chains.
- Retail/entertainment is likely to be predominantly driven by larger format restaurants, but can include small boutique chain and locally-owned concepts to provide both a mix of experiences and scales throughout the area.
- Potential opportunity to attract major employer for Class A office and/or corporate relocation opportunities within the newly created urban fabric.
- Generally active between 7 a.m. and 10 p.m.

## America's Largest TOD: Tysons Corner

Tysons Corner Virginia grew-up around the automobile; it is now being transformed and transported into the future around its four new Metrorail stations which opened in 2014. The 2008 plan Transforming Tysons charted the course for the redevelopment of the nation's 12th largest employment center into America's largest TOD. Tysons' 1,700 acres are evolving from 46 million SF of development and 40 million SF of parking into a 21st century city of 160 million SF of urban livability: walkable, mixed-use, transit connected, green urbanism. Two assessment districts totaling \$650 million have been established to help fund Tysons implementation.

Four key drivers underpin the Tysons transformation strategy: first, substantially increasing the housing in Tysons to get a better housing jobs balance; second, focusing growth around Tyson's four metro rail stations; third, creating a tight grid of interconnected streets; and, fourth, greening Tysons with a multi-functional green network.

Since 2011 more than 5.4 million SF of development has been built or is under construction, an addition 42.2 million SF has been approved consistent with the TOD plan. Recent development approvals for the Tysons West station are indicative of the scale of what's coming: 13.3 million SF of redevelopment across five projects adjacent to station, 20% of the housing will be affordable/workforce and over five and a half acres park land. The wide the mix of uses has evolved consistent with the plan - the jobs to household ratio within Tysons has improved significantly from 12.4/1 in 2005, to 7.2/1 in 2017.

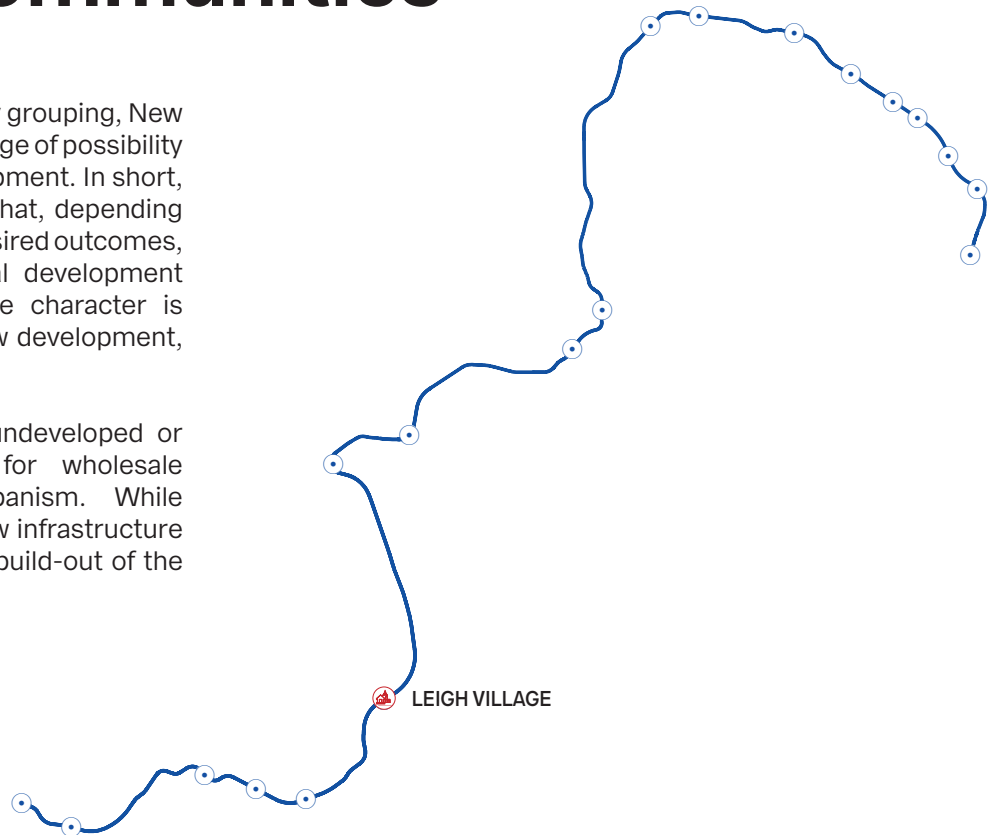




# New Communities

More so than any other Station Family grouping, New Communities provide the greatest range of possibility as to the nature of potential redevelopment. In short, these are generally blank canvases that, depending upon future market conditions and desired outcomes, may support a number of potential development typologies and uses. Ultimately, the character is more so what is to be defined by new development, than that which exists today.

Currently, these areas are largely undeveloped or minimally developed, well-suited for wholesale transformation into walkable urbanism. While surrounding infrastructure exists, new infrastructure will be needed to accommodate full build-out of the station areas.



VERANO / TEXAS A&M TOD - SAN ANTONIO, TEXAS





## High Performance TOD: The Platform District

Orenco Station is the Portland region's most celebrated early TOD. When the first phase of Orenco opened along with Westside light rail in 1998, the 237-acre project was recognized as the Best Master Planned Community in America. The final phase, the Platform District, followed some 15 years later on the land immediately adjacent to the light rail station within the larger Orenco TOD. In a reflection of the evolution of the station area, a six-story residential building now stands on what was a 155 space Park-N-Ride.

Government planners used both carrots and sticks to get the high-performance TOD project designs they wanted in the Platform District. The City of Hillsboro imposed extensive planning restrictions on the area, mandating high densities near the rail station. Incentives include a Portland Metro TOD grant, property tax abatement and a land donation from TriMet for a \$2.6 million plaza built by the developer.

Compared to the earlier phases of Orenco, the Platform District is denser, more mixed-use, has lower parking ratios and tighter, more urban scaled public spaces. The parking is unbundled, meaning it is not tied to a unit – residents can forgo parking or pay for it separately. The result is high-performance TOD, in this case the ability to have more growth with fewer impacts. A detailed 2017 national study showed nearly 69% of Platform District trips were non-auto, and that the TOD produced 41.5% fewer auto trips than Institute of Traffic Engineers (ITE) estimates. The district provides 40% less parking than ITE guidance.



### ACTIVATION & DEVELOPMENT STRATEGIES

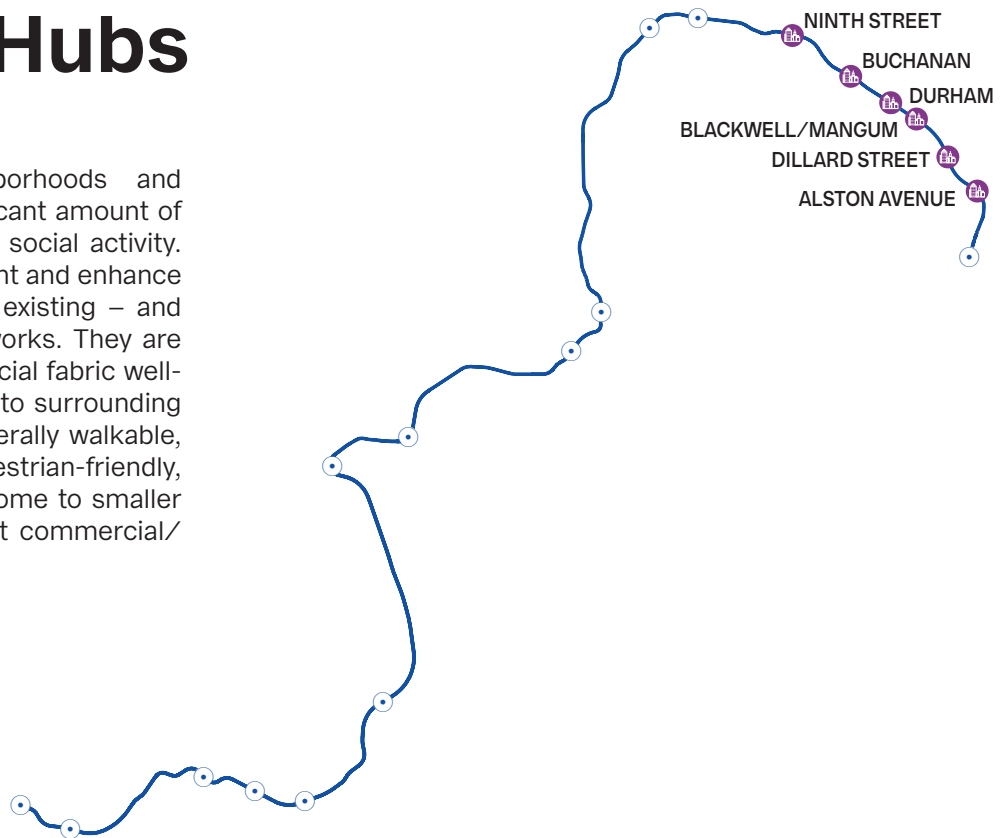
- These stations are well-positioned for development as regional infill, to include range of mixed-use environments that promote walkable urbanism and connectivity within the new neighborhoods, and to adjacent areas and communities.
- Promote a range of housing densities and types, an integrated network of green spaces, and an active community/commercial center centrally-oriented to transit.
- Potential opportunity to attract major employer(s) within the newly created urban fabric.
- Active at variable times, in large part unknown until the specific nature of the development is more well-defined.





## Urban Hubs

These stations represent neighborhoods and districts that already display a significant amount of urbanism and related economic and social activity. As such, it is important to complement and enhance the existing fabric while supporting existing – and future – cultural and economic networks. They are rich in history, with economic and social fabric well-connected by existing infrastructure to surrounding neighborhoods. These hubs are generally walkable, with a mix of uses within a pedestrian-friendly, human-scaled environment that is home to smaller scale, locally driven retail and recent commercial/office activity in some locales.



TRINITY LAKES - FORT WORTH, TEXAS



# A New TOD Toolbox: Denver's Mariposa District

The Denver region's robust TOD toolbox was essential to the success of projects like the Mariposa District. The Denver toolbox balances implementation tools created in other regions, plus homegrown invention and creation of a new set of tools to address equitable TOD. The scope and breadth of the initiatives to specifically advance TOD is particularly illuminating: detailed TOD planning and new zoning; a \$24M TOD Housing Fund; a HUD funded Livability Partnership; transit agency TOD pilot projects; a non-profit which is part land bank and part community focused credit line for affordable TOD; and, a TOD Manager and TOD Strategic Plan within the City of Denver. These initiatives are housed in local governments, the transit agency, philanthropic, and non-profit agencies.

Planning for the Mariposa District started with the City of Denver's 2006 Station Area Plan for the 10th and Osage Station. The Denver Housing Authority (DHA) master redevelopment plan for South Lincoln Park Homes completed in 2009 – called for a mix of privately managed, subsidized affordable units and market-rate units along with commercial space and office. The result is a \$197M redevelopment of a distressed public housing development into a mixed income TOD with triple the units. The latest installment of the nine-phase project was completed in June 2017. Phasing allowed DHA to minimize resident displacement. About 48 percent of DHA residents returned to the Mariposa District, compared to 10 to 15 percent for project where housing is razed and replaced. Before construction started in 2012, 252 people were living in the 14-acre area. Now, about 1,500 people occupy the 581 mixed-income units. The eighth phase is expected to add 58 more units. The project received an EPA National Smart Growth Award for equitable development in 2012.



## ACTIVATION & DEVELOPMENT STRATEGIES

- Build from and enhance the existing urban fabric with a mix of commercial amenities near existing residential neighborhoods.
- Use a range of densities and, where appropriate, mix of uses.
- Enhancement and/or creation of walkable streets and public spaces with concentrated centers of activity.
- The pre-existing character of small shops and restaurants should be protected.
- Generally active 18 to 20 hours with predominant activity between 6 a.m. and 2 a.m.



## East Liberty: Urban Renaissance

East Liberty is a story of rise and fall and then rising again as a TOD. The New York Times described the journey as waking-up from an urban renewal induced coma. The urban renaissance was made possible by a long-term partnership with local non-profits, the City of Pittsburgh, the Pittsburgh Urban Redevelopment Authority, Mosites Company, the developer behind many of the retail and TOD developments, and the transit agency, the Port Authority of Allegheny County.

In the two decades since the 1999 community plan called for more retail, the partnership has delivered 810 new mixed-income homes. To address displacement East Liberty Development Inc. is looking to create 500 units of affordable housing over five years funded by a City of Pittsburgh affordable housing fund to help residents vulnerable to displacement. True to the plan, a series of national retailers opened new facilities with urban footprints rather than suburban setbacks. Home Depot opened in 2000 on a failed Sears site. Whole Foods, a \$7.6 million development on an abandoned stretch of Centre Avenue, ignited immediate activity when it opened in 2002. A new Target followed in 2011. With Google's arrival in 2006 market dynamics accelerated further. In 2010, Google moved into the newly developed Bakery Square where they occupy 160,000 square feet.

The centerpiece of the neighborhood's ongoing revitalization is a \$157 million transit, retail and residential center on the MLK JR Busway which opened in 2015. A new pedestrian bridge connects the transit center directly to the apartment complex with 360 market-rate units, a 554-space "cross-use" parking structure for retail and residential, a 120-space bike garage, and 43,000 square feet of retail space. A \$15 million TIGER grant helped to pay for the transit improvements. Transit ridership at the East Liberty station is up 20 percent because of the new center.



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# STATION AREA ANALYSIS



*“It’s not about connecting on how I get around, it is more of an internal thing, like how I’ve bought into the city and has the city embraced me.”*

AYIZE GLENN GRAY

DEVELOPER

# Station Area Analysis

## METHODOLOGY

This TOD study was built upon significant prior engagement with the public in the development of the light rail project alignment. These details gathered from the public process were used as a starting point to dive into the existing conditions around the stations and perform development and policy analysis for creating great transit-oriented development at these stations.

Many of the stations within the City of Durham had an established planning framework for TOD as a starting point, as well as design district zoning adopted in two areas of the city. Chapel Hill had identified light rail station areas within its Comprehensive Plan, but had not yet adopted TOD supportive land use policies or zoning ordinances in its station areas. Accordingly, the Chapel Hill stations required more robust public engagement, a strong look at planning principles, and elements of a TOD framework for those station areas.

### Public and Partner Engagement

A week-long workshop was held to convene key partners, in the analysis process, as well as offer specific input sessions for stakeholders, including the general public, at station areas in Chapel Hill. The collective conversation guided the process between Chapel Hill and Durham so that this study would be structured to meet the needs of each area. Continued workshops were internally held to detail development potential at each of the stations in the City of Durham, and additional meetings and work were performed by Perkins+Will, hired separately by a major landowner, focusing on the Leigh Village station.

Key insight from local citizens resulted in feedback related to bus access, walking, and bicycling points, a strong desire to cultivate community benefits, including affordable housing within the development of station area plans, and a concern for transitions of density to existing neighborhoods.

The TOD consultant team has held a series of informational meetings, workshops and summits to both listen to, and educate, elected leaders, municipal staff, key stakeholders and the community at large. These forums ranged from dozens of one-on-one and small scale meetings with key individuals and groups, to public workshops to day long events that convened local and national experts in the fields of transit oriented development, real estate finance, infrastructure and affordable housing. In addition to educational meetings and events, the consultant team presented on multiple occasions to the Chapel Hill Town Council and Durham's City Council. Some of the highlights of other meetings include:

- In conjunction with TJCOG and Urban Land Institute, an informational breakfast was held that focused on the market opportunities – and challenges – associated with the construction of the light rail line and related development activity. Topics discussed included real estate finance, market conditions and mechanism by which to capture new tax revenues and other new resources that will result from investment in rail and subsequent development of walkable, mixed-use nodes at and around station areas. This well attended forum was open to the public, with an audience that included a number of elected officials, municipal staff and members of the local real estate and banking community, all gathered to learn from local and national experts on transit oriented development.
- An afternoon long Affordable Housing Roundtable was held between the consultant team, municipal staff and a group of national leaders in the field of affordable housing development and finance. This private session provided an opportunity to take a “deep dive” into this complex issue, in an effort to further educate staff and municipal leadership about potential strategies to address the growing crisis of housing affordability.

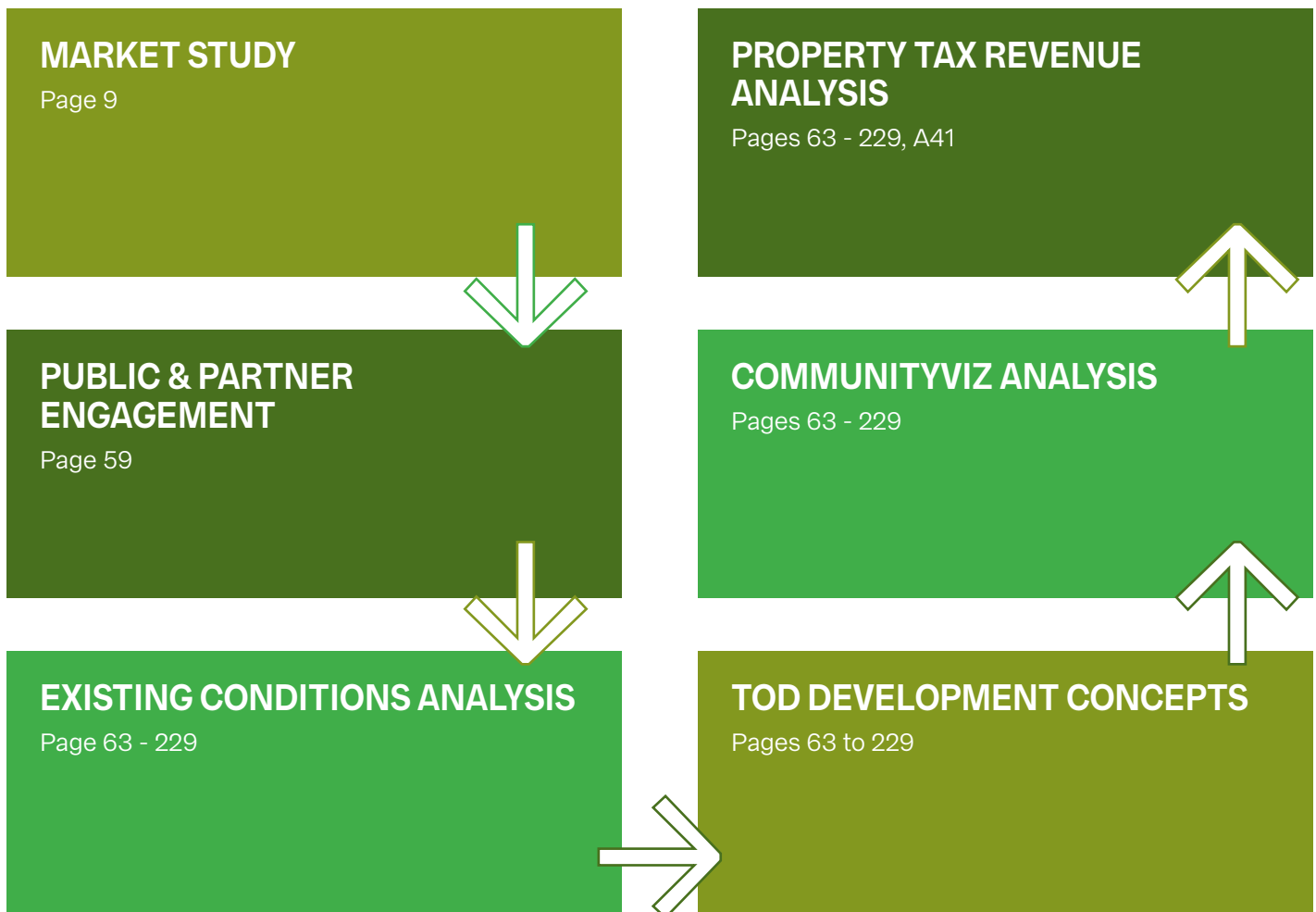
- A day long summit was held titled “Connecting to Opportunity.” This seminal event, open to the public, witnessed a sold out crowd at DPAC in downtown Durham, and was well attended by an array of elected officials, staff, leaders of the local business and real estate communities and the public at large. A series of panels convened nationally renowned experts across a full spectrum of topics, with a focus on economic development opportunities and how to address the affordable housing.
- Key members of the consulting team presented an update to a public meeting that included members of Durham City Council, Chapel Hill Town Council, Orange County Commissioners and Durham County Commissioners. This joint session was an opportunity to inform all interested municipal parties of the findings to date while providing an opportunity for Council Members and Commissioners to provide their insight, opinion and ask questions about the project and process.

## Analysis

The recommendations and development concepts illustrated in this section represent “One Possible Future” and take into account neighborhood context, adopted land use policies, environmental features, and physical barriers. An overarching goal is to provide an analysis of a possible, economically viable, future development scenario that maximizes the community benefits of responsible development at transit stations that both respects and enhances existing neighborhood fabric and that creates a series of new, enduring and diverse TOD neighborhoods.

Takeaways from the development concepts at each station area were processed through CommunityVIZ in order to inform the regional mobility plan and this study’s performance measures.

## THE TOD INITIATIVE & HOW THINGS RELATE



## PUBLIC AND PARTNER ENGAGEMENT



The integration of new bus, bicycle and pedestrian connections were documented to show direct connections from planned and existing regional and local transit services and hubs. These enhancements also reflected expanded street network opportunities to accompany new development patterns in the station areas.

Development patterns within the concept plans informed additional insight towards zoning calibration for each of the municipalities. They also provided inputs for a “5D Analysis” to determine what levels of auto trip reduction could be accommodated by growing with walkable urbanism around light rail. Additional “5D Analysis” information is located in Appendix F.

### Phasing Approach - Process and How Light Rail Fits In

Phasing within this section is highlighted relative to the opening of the rail line. With the assumptions that there is a ten year window from 2018 to the rail opening, the stages come in increments of ten years.

**Pre-Rail (2018 - 2027):** The near-term stage from current time to the opening of the rail line.

**Rail +10 (2028 - 2037):** The middle-term stage after rail has opened and progressing for ten years.

**Rail +20 (2038 - 2047):** A long-term stage between ten and twenty years after rail opens.

**Rail +30 (2048 - 2057):** Long-term stage of development 30 years after rail opens.

### Infrastructure Improvements Estimates of Probable Cost

Under each station area, high level estimates of probable public investment infrastructure costs were presented using best professional judgment and local understanding of projects. The estimates are presented through dollar sign figures under each TOD Public Investment Infrastructure Priority section and indicate the following:

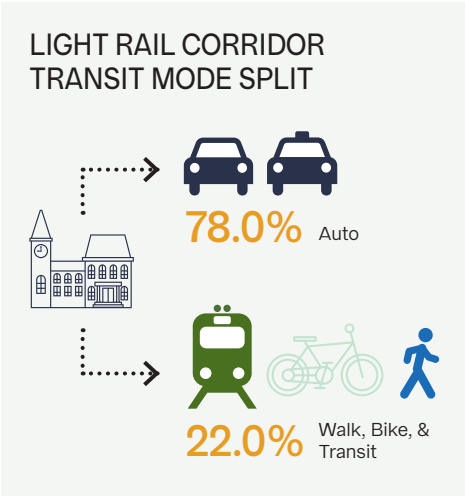
\$	= <\$2 Million
\$\$	= \$2 - \$5 Million
\$\$\$	= \$5 - \$10 Million
\$\$\$\$	= >\$10 Million

It is important to note that these estimates are not based on any engineering or survey work, but are order-of-magnitude projections. As projects are prioritized and enter into design and engineering detailed estimates will be required to understand and adequately plan for anticipated capital requirements.



TOD GUIDEBOOK STATION AREAS AT-A-GLANCE

The following information is based on the Conceptual Development Scenario analyzed in the Guidebook that represent “One Possible Future” for corridor redevelopment. The station development concepts consider existing land uses, infrastructure, and environmental features, and indicate land that is most likely to experience redevelopment as a result of market demand stemming from proximity to transit, and incorporates best practices for transit-oriented development.



GUIDEBOOK STATION AREAS

Residents

40,200 Existing  
57,300 New

Jobs

48,000 Existing  
56,800 New

PROJECTED NEW DEVELOPMENT

		Light Rail Corridor
Single Family Residential	Dwelling Units	1,400
Multifamily Residential	Dwelling Units	28,300
General Retail	Square Feet	1,315,000
General Office	Square Feet	14,965,000
Institutional	Square Feet	1,360,000
Hotel	Rooms	1,900

