

# NORTH-SOUTH BUS RAPID TRANSIT



# PROJECT BRIEFING BOOK

**AUGUST 2023** 

Chapel Hill, NC



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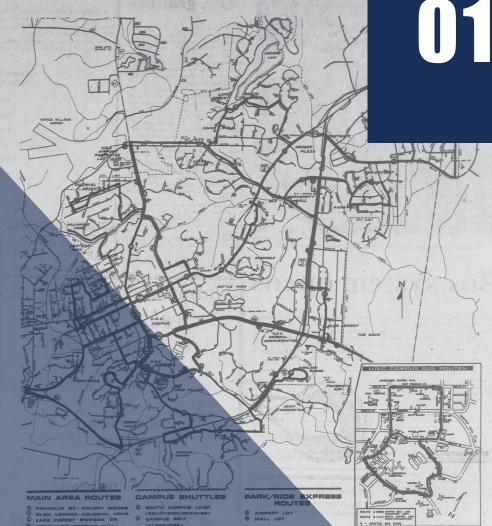
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### Bus routes set for town's transit sys

System includes shuttles to Airport, University Mall



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YESTERDAY, TODAY & TOMORROW

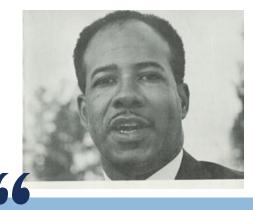
### A BOLD TRANSIT VISION

#### Since launching in 1974, Chapel Hill Transit has raised the bar for great public transit service.

When Chapel Hill Transit (CHT) began service in 1974, segregation was still the unspoken law of the American South and transit vehicles were the de facto battlefields of the ongoing fight for Civil Rights. And, in Chapel Hill, a visionary leader was taking bold steps and turning terrible conflicts into opportunities. Mayor Howard Lee, the first African-American mayor of a majority-white southern community - and namesake of our current transit operations center - had the dream and the drive to imagine and begin implementing a world-class transit system funded by a sustainable, cooperative partnership between the Town of Chapel Hill, the Town of Carrboro, and the University of North Carolina at Chapel Hill.

CHT launched with seven used vehicles purchased (and driven to Chapel Hill) from the City of Atlanta. In 49 years, CHT, one of the country's first and longest-running fare-free systems, has grown to a 98-bus fleet, serving 3.7 million riders (FY 2023), 23 routes, and 538 system stops in Chapel Hill, Carrboro, and on UNC-CH's campus. Overall transit ridership also continues to grow, increasing by approximately 8% between 2017 and 2019. Like other public transportation providers, ridership significantly declined in 2020 when, state and federal public health restrictions and a shortage of experienced operators severely impacted operations. However, post-COVID recovery has been strong with significant increases in ridership (+110% between 2021 and 2022). The NS Route continues to see a faster return to pre-COVID ridership than the system, as a whole (currently 22% lower than 2019 versus 44% lower, system wide).

Chapel Hill Transit plays a critical role in achieving community goals including enhanced transportation accessibility; promoting transportation equity; minimizing roadway congestion; and realizing more sustainable travel, growth, and development. Public transportation is integral to every one of the Town's guiding plans, including the comprehensive plan (Chapel Hill 2020), Future Land Use Map (Charting Our Future, 2020), Mobility Plan (2020), Complete Streets Policy, Vision Zero Policy, TOD plan (Shaping Our Future, 2023), and Complete Community Strategy (2023). And Chapel Hill continues to grow to help the Town and University meet their commitments to transportation solutions not only addressing community travel needs, but also promoting equitable access to economic development opportunities, affordable housing, education, and recreation.



"Took me several tries...got it done, got it approved and every time I see the buses, I feel very proud."

Howard Lee, former Mayor of Chapel Hill and champion of Chapel Hill Transit

#### **CHT MILESTONES**

**1974** Chapel Hill Transit launches service

2002 Fare-free service begins

**2006** Real-time vehicle tracking launches

**2007** 60' articulated diesel-hybrid buses join fleet

**2012** Half-cent transit sales tax approved by Orange County voters via referendum

**2016** NSBRT Alternatives Analysis completed

**2019** NSBRT Locally Preferred Alternative (LPA) approved

**2022** Battery electric buses (BEB) join fleet

**2023** NSBRT completes NEPA; FTA Project Rating requested

### **CHAPEL HILL TRANSIT TODAY** BY THE NUMBERS...

1,600

**DAILY** PASSENGERS AT

6.6n

**RIDERSHIP** 

**PASSENGERS** HOUR (AVG)

**DAILY** (AVG)

SERVICE

538

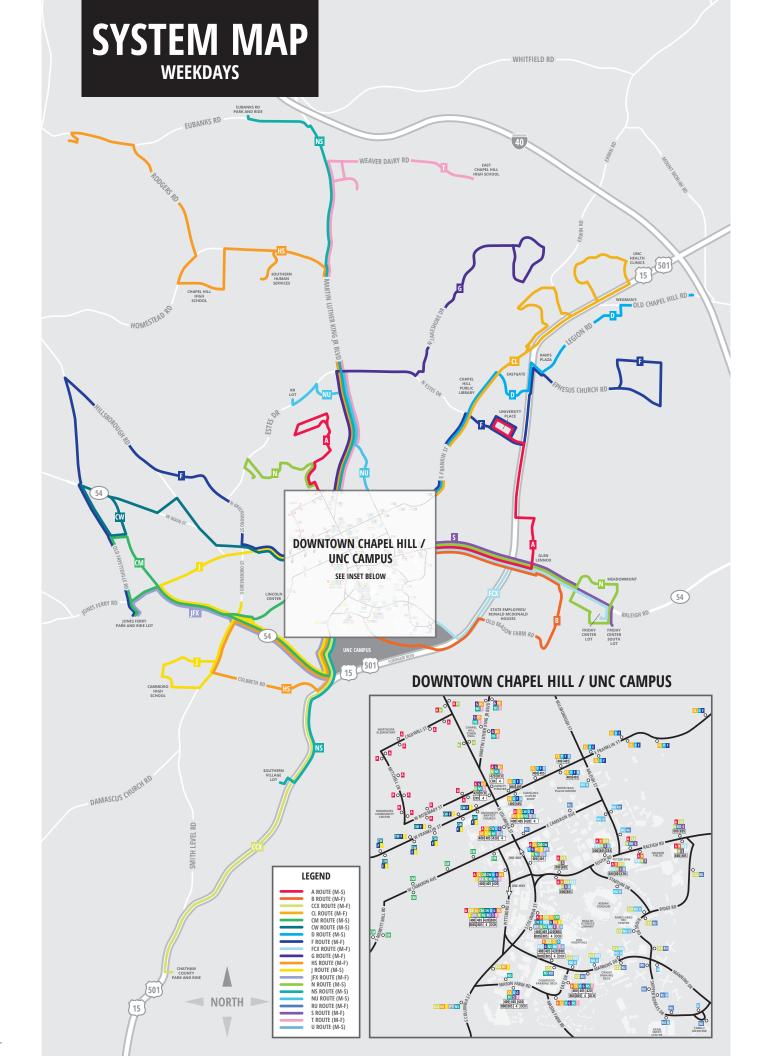
**FIXED** 

**VEHICLES** 

DEMAND

**BATTERY** 

**BEBs ON** 





# SMALL TOWN VIBES, BIG CITY BENEFITS

Chapel Hill is a small community with a unique identity but also inextricably linked - physically, economically, and socially - to the globally recognized Research Triangle Region.

Founded in 1973, and located in central North Carolina, the Town of Chapel Hill is the largest municipality in Orange County. The Town is home to the University of North Carolina's (UNC) flagship campus, the first public university in the nation, and anchors a corner of the world-renowned Research Triangle region. The Research Triangle – also including the cities of Durham and Raleigh – is a concentration of major universities, medical centers, and technology and research oriented corporate employers. Chapel Hill is also in the Raleigh-Durham-Cary, NC Combined Statistical Area (CSA), one of the country's fastest growing regions, attracting an average of 53 net new residents per day between 2015 and 2019.

Approximately 62,000 residents live in Chapel Hill (2020), including 29,000 students. The Town's increasingly diverse population including historically Black and African American communities, growing Latinx and Asian communities, and international immigrants and refugees, is an example of successful equity and inclusion at the local level. And while students represent a large share of community members, the Town's fastest growing demographic is residents aged 65 and older (+17% between 2016 and 2020).

To proactively mitigate the western spread of regional suburban sprawl, Chapel Hill, along with next door neighbor Carrboro and Orange County establishing a joint Municipal Services Boundary Agreement in 1988. This "rural buffer" agreement defining public service boundaries and mitigating unrestrained growth by restricting annexation of land designated as "rural." However, a failure to fully implement complementary land use policies promoting more compact development within the Municipal Services Boundary and consistently high development demand, have combined to drive up land and housing prices over time. These impacts and their legacies underly critical challenges Chapel Hill must resolve today.

66

The Town of Chapel Hill has the highest jobs-to-housing ratio in the region ... as a result, roughly 90% of the people who work here commute into Chapel Hill each day ... If we want to stay diverse, inclusive, green and resilient, we need to take important steps now to ensure we create more affordable housing ... in town so that people who work here can live here too [including] a robust regional transportation system with more transit and multimodal options.

- Pam Hemminger, Mayor Town of Chapel Hill



LAND AREA OF CHAPEL HILL

### **OUR COMMUNITY**

### BY THE NUMBERS...

62k

POPULATION (2020)

\$77<sub>K</sub>

MEDIAN HOUSEHOLD INCOME

25 MEDIAN AGE

70.1% WHITE, ALONE

10.6% BLACK OR AFRICAN AMERICAN ALONE

40%

HOUSEHOLDS
SPENDING MORE THAN
HALF THEIR INCOME
ON HOUSING

19.6%

RESIDENTS
MEETING FEDERAL
POVERTY
THRESHOLDS

13% ASIAN, ALONE

4.5% TWO+ RACES

HISPANIC OR LATINO, ANY RACE

54%

ZERO
CAR
HOUSEHOLDS

**52%** 

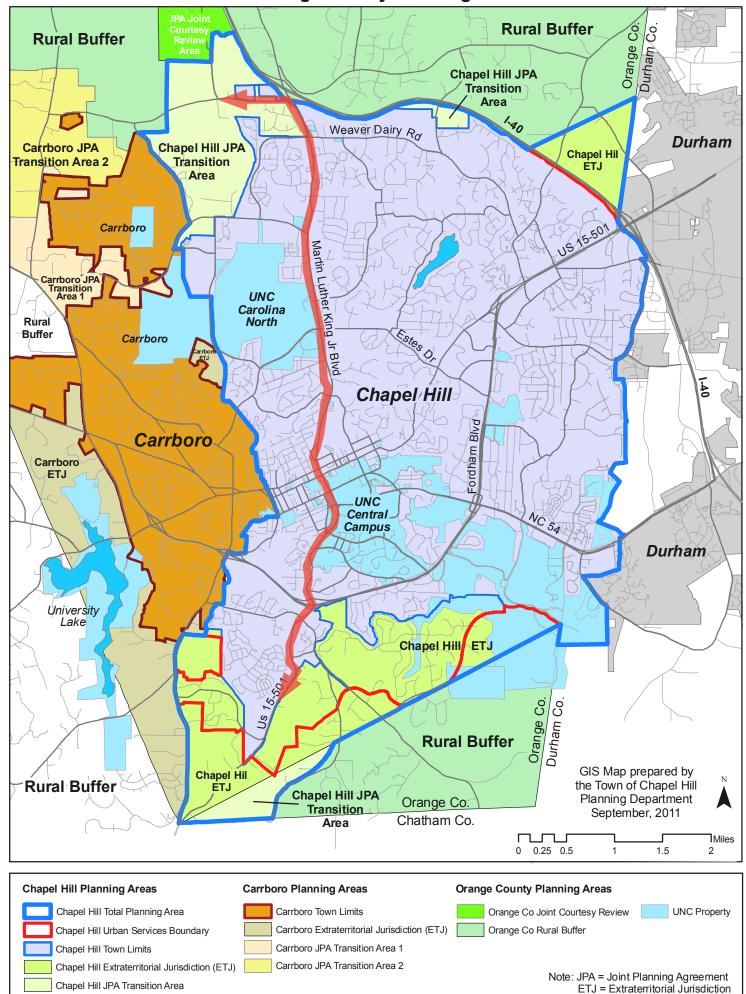
COST-BURDENED RENTERS

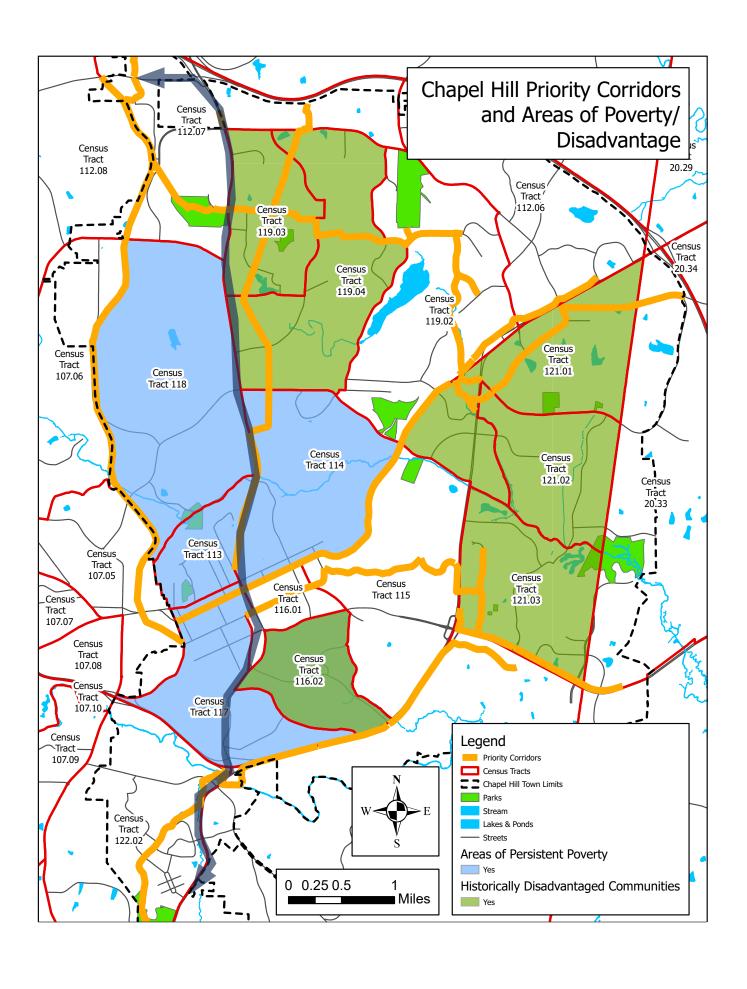


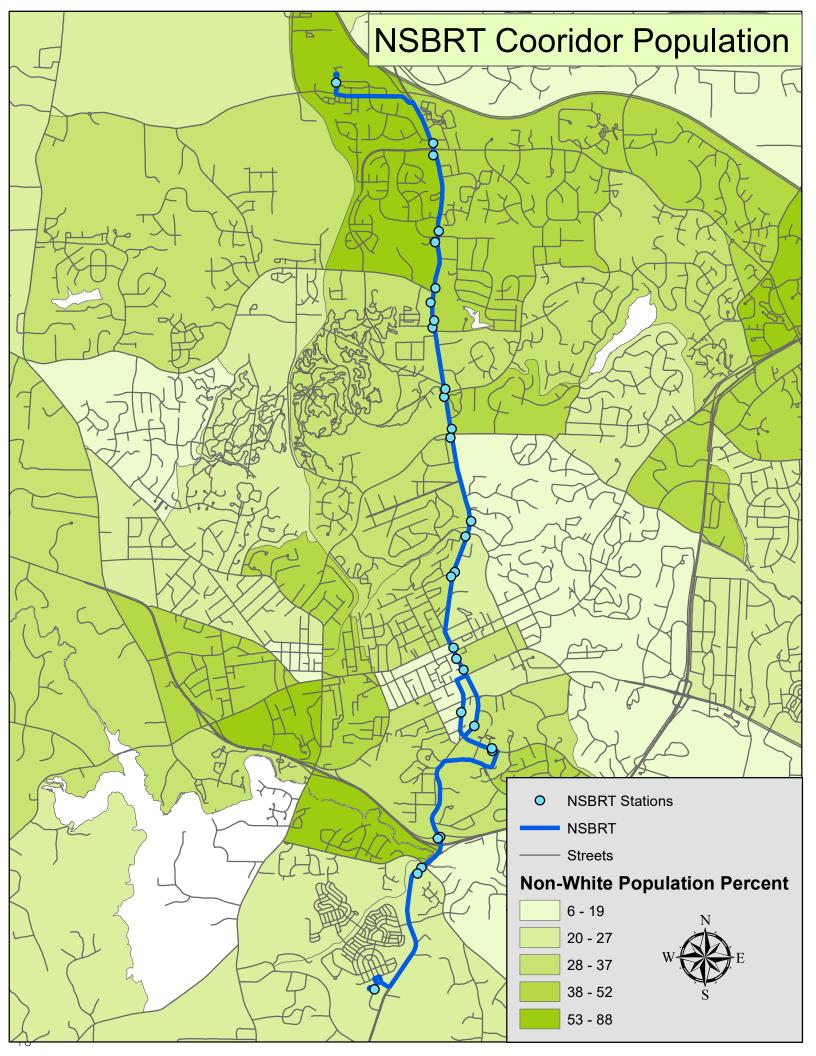
## COMMUTER INFLOW/ OUTFLOW

90.5% of people working in Chapel Hill live outside of the Town

#### **Southern Orange County Planning Jurisdictions**









## PREPARING FOR THE FUTURE; MEETING THE TRANSPORTATION CHALLENGES OF TODAY

NSBRT is more than just "better" bus service; it is a landmark investment in Chapel Hill's transportation future.

In 2016, the *North-South Corridor Study* projected that, without major roadway improvements, traffic in the Martin Luther King Jr Blvd., S. Columbia St., and US 15-501 South corridor will reach unmanageable and unacceptable levels by 2030. Chapel Hill Transit's proposed NSBRT route will accommodate this travel demand growth by introducing high-capacity transit service on an established high-ridership route, connecting employees, students, and residents to key community assets and activity centers, including UNC's campus and healthcare facilities. In combination with a complementary multiuse path along most of the corridor, strengthening connections to the Town's bicycle and pedestrian network, the NSBRT enhances mobility options, responds to emerging travel and demographic trends and preferences, improves connectivity within the corridor, and encourages more sustainable, transit-oriented development patterns reducing the community's reliance on single-occupancy vehicles.

The NSBRT's proposed 8.2 mile route along Martin Luther King Jr Blvd., S. Columbia St., and US 15-501 South, connects the Eubanks Road Park and Ride at the corridor's northern end, Southern Village's mixed-use community and park and ride, downtown Chapel Hill, and UNC 's campus. Key project elements include dedicated bus lanes, transit signal priority, optimized station locations, and a companion multiuse path for more reliable, efficient, and connected multimodal transportation. The multiuse path will form the spine of Chapel Hill's future "Everywhere to Everywhere" (E2E) greenway network, enhancing multimodal access to new development with improved first- and last-mile connections, a project recently awarded \$1,000,000 in funding through USDOT's RAISE planning grant program.

The NSBRT project thoughtfully maximizes equitable investments in transit. The proposed NSBRT corridor runs through a USDOT-defined Historically Disadvantaged Community Census Tract and travels through or along the boundary of five Areas of Persistent Poverty Census Tracts. Several stations near Chapel Hill's urban core such as Franklin and Longview will serve communities ranking above the 90<sup>th</sup> percentile for transportation cost burdens, and above the 60<sup>th</sup> percentile for multiple markers of social vulnerability, environmental burdens, and climate and risk disaster burdens.

The proximity of high-capacity transit service to low-income residents offers significant benefits for Chapel Hill's housing-cost-burdened residents, who are both less likely to own a private vehicle and significantly *more* likely to rely on transit service to meet daily needs. The higher densities and mixed uses required to support transit will also help temper rising housing costs and attract employment opportunities in locations closest to the Town's existing supply of affordable housing.



**Public transit is** critical to achieving the Town's goals for a safe, comfortable, and holistic multimodal transportation system. Guiding plans explicitly reference NSBRT as a critical strategy leveraging existing transportation facilities, reducing reliance on singleoccupant vehicles, and supporting higher-density transit-oriented development.

## BY THE NUMBERS...

8.2

TOTAL LANE MILES

\$183<sub>M</sub>

TOTAL
CAPITAL
COST (YOE)

**5.7** 

TRANSIT-ONLY LANE MILES

\$1.4m

ANNUAL OPERATING COSTS

14

HIGH CAPACITY
TRANSIT
VEHICLES

7.5 MIN

PEAK

IN HEADWAYS

17

PREMIUM
TRANSIT
STATION AREAS

20

MIN

OFF-PEAK HEADWAYS

DAYS PER
WEEK OF
SERVICE

8.6k

CORRIDOR
TRIPS (2019)
PRE-PANDEMIC

**14.9**k

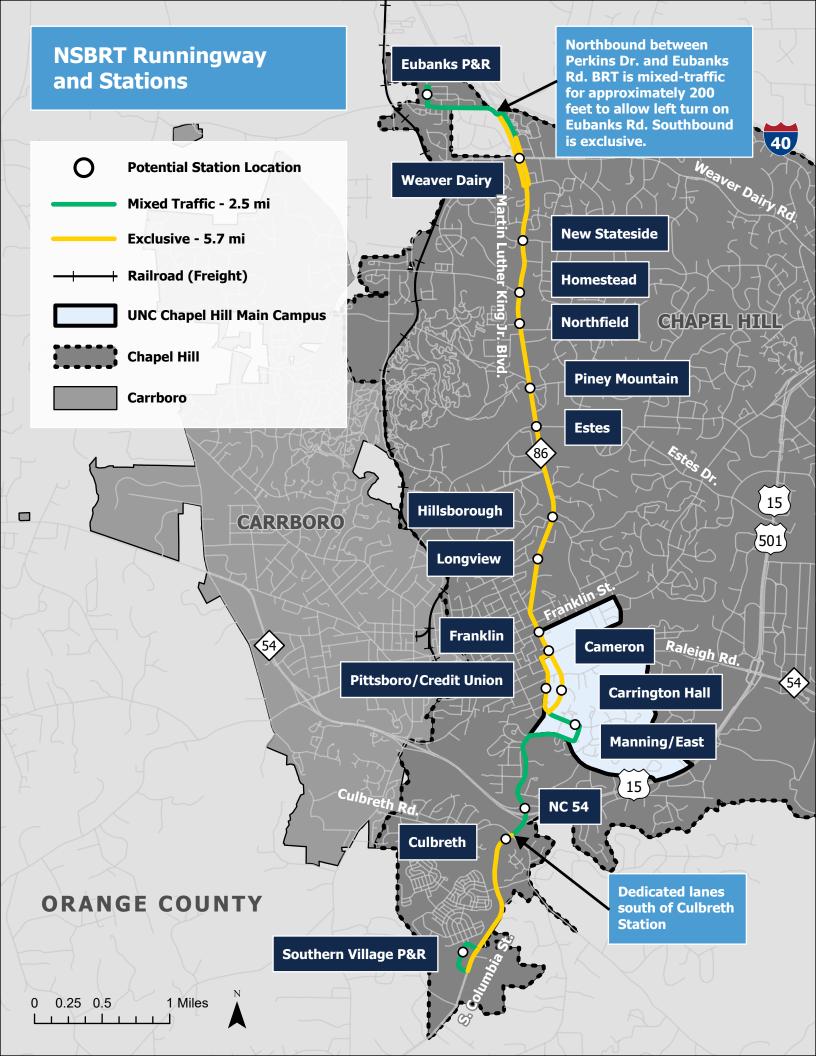
PROJECTED TRIPS (2045) PRE-PANDEMIC METHODOLOGY

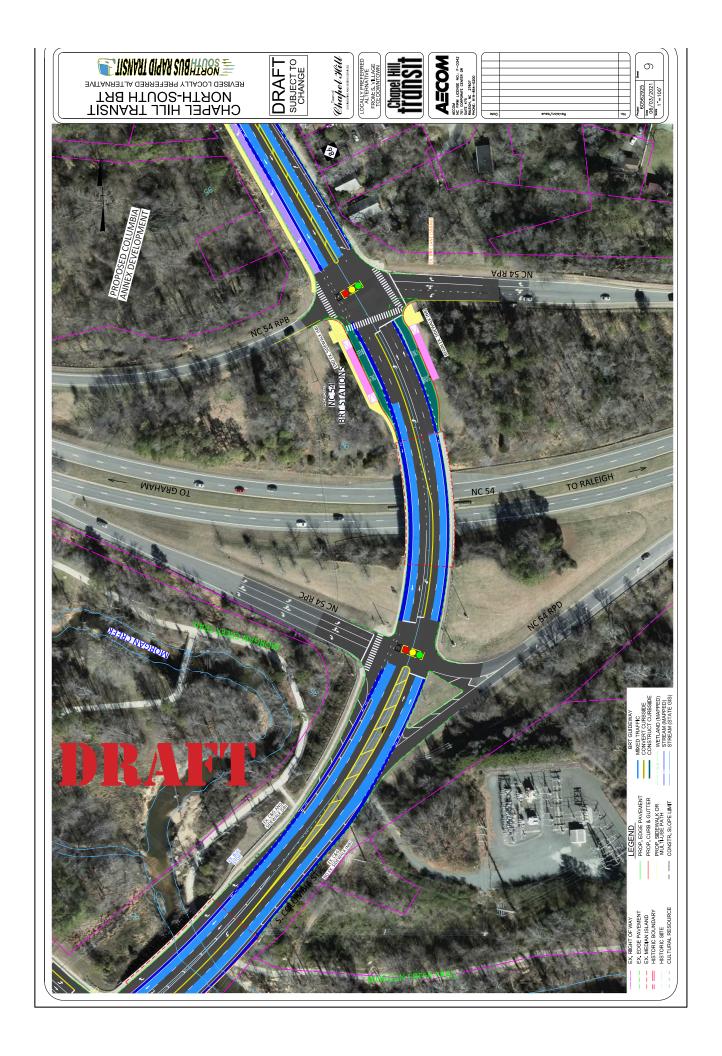
4.7k

CORRIDOR
TRIPS (2022)
POST-PANDEMIC

8.4K

PROJECTED TRIPS (2045) POST-PANDEMIC METHODOLOGY







NSBRT is an investment in Chapel Hill's future addressing rapidly growing travel demand, emerging transportation modes, and unprecedented rates of in-migration and development. After conducting a Tier 1 Analysis, the proposed NSBRT project was selected as the Locally Preferred Alternative (LPA) achieving goals related to multimodal connectivity, land use, economic development, environmental impacts, capital cost, and community support.

The NSBRT will help the Town accommodate travel demand growth through transit infrastructure and operational improvements, resulting in a more efficient and reliable transit service. A companion multiuse path along the corridor, and connections to other bicycle and pedestrian infrastructure, creates mobility options, responds to emerging travel and demographic trends and preferences, improves connectivity within the corridor, and encourages a more sustainable, transit-oriented development pattern.

The proposed NSBRT will travel along a busy north-south transportation corridor already characterized by significant vehicular traffic, robust transit service, and bicycle and pedestrian traffic generated by employment centers, residential areas, and commercial and mixed-use development. Highly utilized park and ride lots anchor both the north and south ends of the corridor, and key destinations include UNC-CH campus, UNC Hospitals, and Downtown Chapel Hill.

The proposed corridor is currently served by Chapel Hill Transit's highest ridership route, the NS, serving, on average, over 2,900 riders per day (2022). Several other CHT routes serve the corridor, bringing average daily ridership to well over 3,000 average riders per day. The existing transit stop at UNC Hospitals "is currently served by 25 routes operated by CHT and GoTriangle, resulting in 53 buses per hour in each direction during the peak hour."

High ridership reflects an existing concentration of jobs and housing along the corridor including approximately 29,000 residents and roughly 33,000 jobs meaning nearly 40% of Chapel Hill's population and 60% of the Town's jobs are within a half-mile mile of proposed NSBRT station areas (approximately 30% of the Town's planning area). This high concentration of jobs and people make the corridor a natural location for premium transit service and transit-oriented development.



### IMPLEMENTING A TRANSIT-ORIENTED FUTURE

The corridor's assets, including the planned NSBRT, proximity to I-40 and NC 54, regional transit connections, and significant opportunity sites continue to attract the interest of developers.

NSBRT will travel 8.2 miles along Martin Luther King Jr. Blvd., Columbia St., and US 15-501S. This corridor is the Town of Chapel Hill's primary north-south arterial and is a gateway to the Town and UNC Chapel Hill, from both the north and south. The corridor's assets, including the planned NSBRT, proximity to I-40 and NC 54, regional transit connections, and significant opportunity sites continue to attract the interest of developers.

In alignment with the Town's goals for transit-oriented development, many planned or under-construction residential and mixed-use projects in the Town are located along the proposed NSBRT corridor. This is expected to continue and increase, with a projected 30% growth in population and 55% growth in employment over the next 25 years. The half-mile station areas contain approximately 7,560 housing units, with around 250 units being legally binding affordable housing

To maximize the impacts of the NSBRT, while ensuring the corridors existing businesses and residents continue to thrive, Chapel Hill adopted a framework and implementation plan for transit oriented development in Spring 2023- *Shaping Our Future*. The plan builds on Chapel Hill's earlier TOD-related efforts by including specific guidance on what TOD looks like in Chapel Hill and where it will be most successful. This includes defining implementation strategies for affordable housing, economic development, walking and biking improvements, environmental strategies, and an ongoing update to the Town's Land Use Management Ordinance (LUMO) to align with the plan.

As a result of this plan, Chapel Hill is expediting a Town-initiated rezoning project at the intersection of Martin Luther King Junior Blvd., Hillsborough Street, and Umstead Drive, piloting the implementation recommendations of the Town's recently adopted Complete Community Strategy and *Shaping Our Future* plan. Town staff are working with UNC to create a development framework and ambitious TOD rezoning schedule in this station area. Following community outreach and engagement in late summer 2023, Town staff will request that Council open a legislative hearing for the TOD rezoning in October, with adoption anticipated in November 2023.



## TOD Values & Principles

Chapel Hill's vision for transit-supportive growth and development in the NSBRT corridor is guided by values and principles including:

- Enhanced equity and opportunities
- Housing diversity and affordability
- Sustainability, resilience, and environmental stewardship
- Vibrant, high quality public realm
- Homegrown economic development
- Multimodal transportation options, connectivity, and complete streets
- Dynamic, mixed land uses
- Distinctive and attractive development
- "Smart" growth and development

### THE CORRIDOR BY THE NUMBERS...

BUSINESSES WITHIN 1/2 MI. OF NSBRT STATIONS

457/%

LAND CURRENTLY ZONED RESIDENTIAL WITHIN 1/2 MI. OF **NSBRT STATIONS** 

EST. JOBS WITHIN 1/2 MI. OF **NSBRT STATIONS** 

**15**%

LAND CURRENTLY **ZONED UNIVERSITY** WITHIN 1/2 MI. OF **NSBRT STATIONS** 

7.6<sub>k</sub>

HOUSING UNITS WITHIN 1/2 MI. OF **NSBRT STATIONS** 

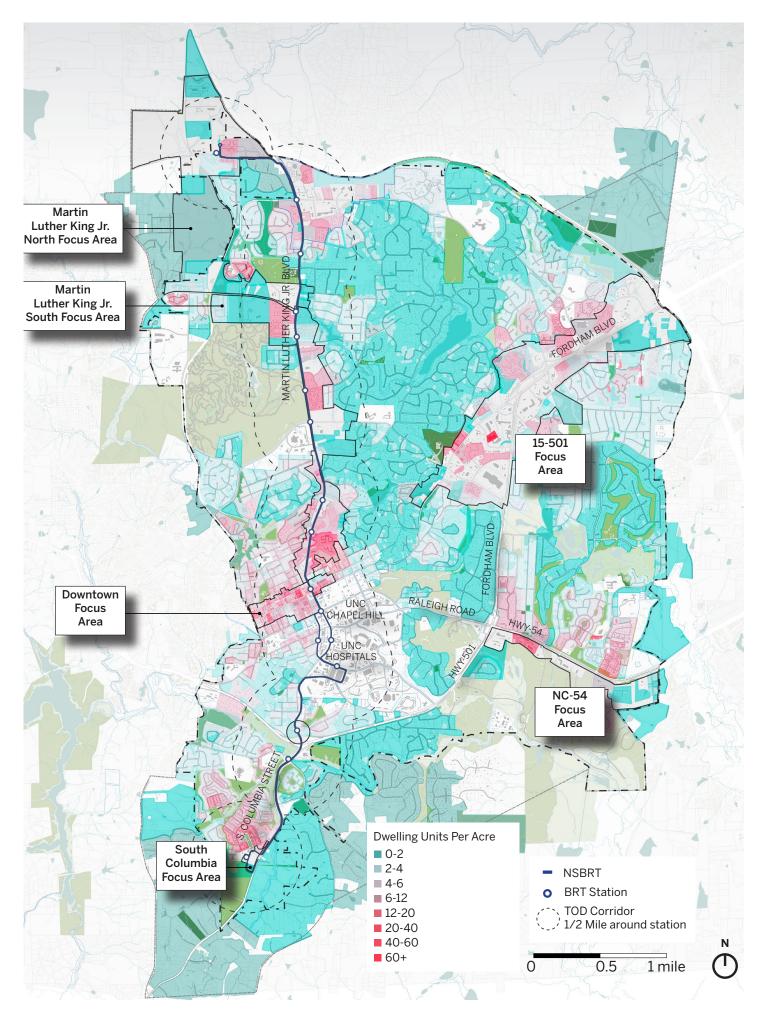
LAND CURRENTLY ZONED COMMERCIAL. INSTITUTIONAL, AND MIXED USE WITHIN 1/2 MI. OF NSBRT **STATIONS** 

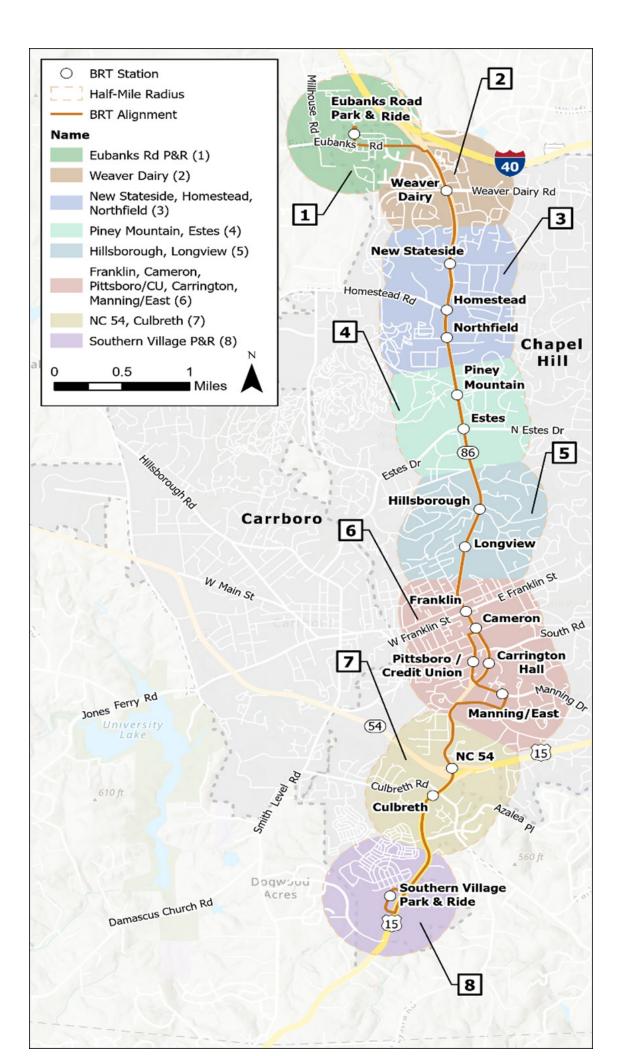
LBAR HOUSING UNITS WITHIN 1/2 MI. OF NSBRT STATIONS

**RANGE OF POTENTIAL NEW HOUSING** 3-3-3 UNITS IN NSBRT STATION AREAS

EST. POTENTIAL SQ FT OF NEW 295 SQ FT OF NEW OFFICE IN NSBRT STATION AREAS

EST. POTENTIAL SQ FT OF NEW RETAIL. SERVICES, ETC. IN NSBRT STATION **AREAS** 







Transportation choices are critical to Chapel Hill's growth and development patterns. Shifting the proportion of people using transit, walking, and cycling to fulfill everyday needs, requires new policies and investments making sustainable and healthier travel modes more efficient, affordable, convenient, and connected, connecting everywhere to everywhere. NSBRT adds mobility options for residents, employees, students and businesses, promotes more equitable future growth and development, and enhances well-being through walkable streets and stronger connections to open spaces. NSBRT:

- Connects Eubanks Road Park & Ride at the north to Southern Village Park & Ride (8.2 miles)
- · Links neighborhoods, downtown, UNC-Chapel Hill, and UNC Hospitals
- Creates dedicated, curb running transit lanes along most of Martin Luther King Jr Blvd. and US 15-501 South
- Offers 17 world class stations with cutting edge amenities
- Increases transit system capacity
- Augments the off-street travel network with a new multiuse path (MUP) along most of the BRT corridor
- Connects to existing and future multi-use paths and Chapel Hill's growing "Everywhere to Everywhere" greenway network
- Provides faster, more reliable transit access to local and regional employment centers with rapid buses departing every 7.5 minutes at peak
- Supports the Town's ambitious climate action goals
- Responds to growing and changing mobility demands.



### **NSBRT...AND BEYOND**

#### NSBRT is a critical element of the region's future high frequency transit network.

Research Triangle has world class universities, global companies, and consistently ranks among the country's best places to live. But we lack a cohesive, connected, high-capacity transit option. A reliable, affordable, and enjoyable public transportation option becomes increasingly non-negotiable, as the region continues to grow, attracting more people every day. Looking beyond NSBRT, Chapel Hill Transit and regional partners in Durham County, the City of Durham, and at the DCHC MPO are already discussing the possibility of BRT along the primary east-west corridor connecting Chapel Hill, Durham, and beyond and solving a major access and mobility bottleneck.

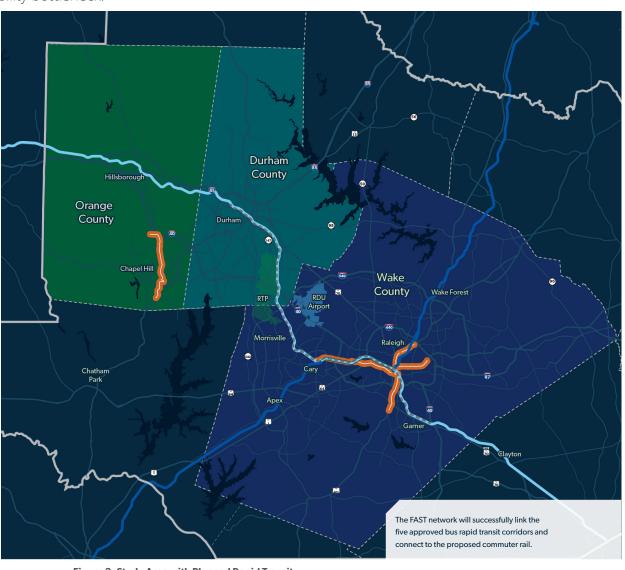
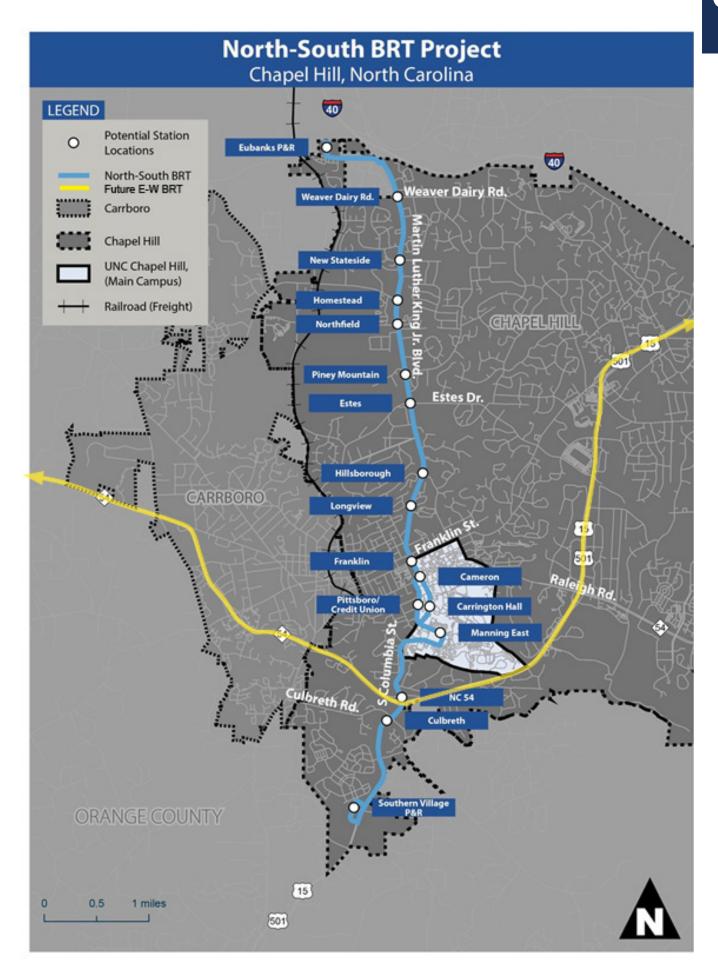


Figure 2. Study Area with Planned Rapid Transit

SOURCE: FAST Network Concept for North Carolina's Research Triangle Region and Triangle FAST Implementation Playbook

BRT
Commuter Rail
NC By Train Service
Future Inter-City Rail
NC By Train Service and Future Inter-City Rail





## Chapel Hill Transit

# NORTH-SOUTH BUS RAPID TRANSIT

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