
CHARLOTTE LYNX LIGHT RAIL

RETHINKING GROWTH IN A
SPRAWLING SOUTHERN CITY



JONATHAN HAWKINS
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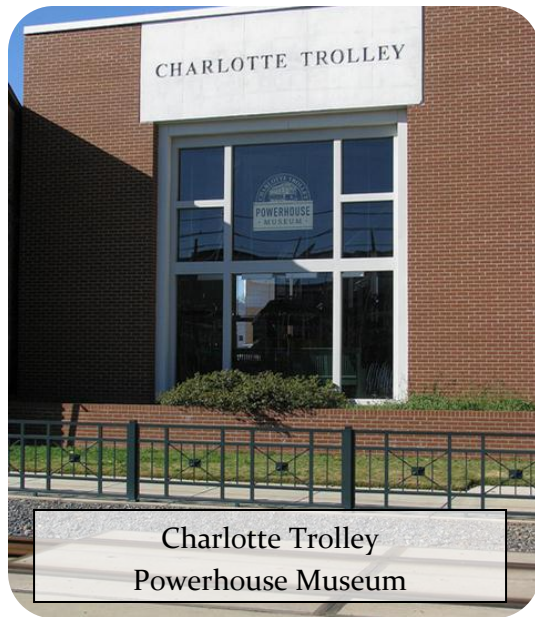
Light rail was never a part of the natural evolution of the city of Charlotte, North Carolina. Having experienced a doubling in population growth from 1980 to 2000, right in the prime of American sprawl and car culture, Charlotte grew up based on the premise of the automobile as the only way of moving around the city (El Nasser). A 2010 New York Times article noted that Charlotte ranked 40th out of 41 studied United States metro areas (Vaidyanathan) in terms of density. Furthermore, it has been estimated that 93% of Charlotte is built out in conventional suburban sprawl (Monjar). Because of this, Charlotte leaders faced more difficulty than many cities in their efforts to convince the public of the merits of light rail. Skeptics contended that in an area as sprawling and car dependent as Charlotte, it would be difficult to gain ridership from a public attached to their personal vehicles. Furthermore, generating transit-oriented development outside of Uptown (the central business district) would require a philosophical shift from developers. In the face of vocal opposition, city leaders continued to move forward with a plan to bring light rail to Charlotte, and in November of 2007 the LYNX Blue Line opened to the public.



Charlotte Transportation Center / Arena Station

HISTORY

Though North Carolina has a rich history of rail transit including street cars in most of its major cities in the early 20th century, by the end of that century those early systems were nothing but a memory, with Amtrak operating the only passenger rail systems in the state on the Carolinian, Piedmont, Crescent, Silver Star and Silver Comet routes. While many cities acknowledge their streetcar history in promoting new light rail, Charlotte leveraged its roots in a more active manner. In August of 1996, the last streetcar to operate in 1938 was restored. Following an agreement with Norfolk Southern to allow use of an abandoned freight corridor running through the heart of the city, the Charlotte Trolley opened, bringing short distance rail service to the city for the first time in nearly 60 years (Sampson).



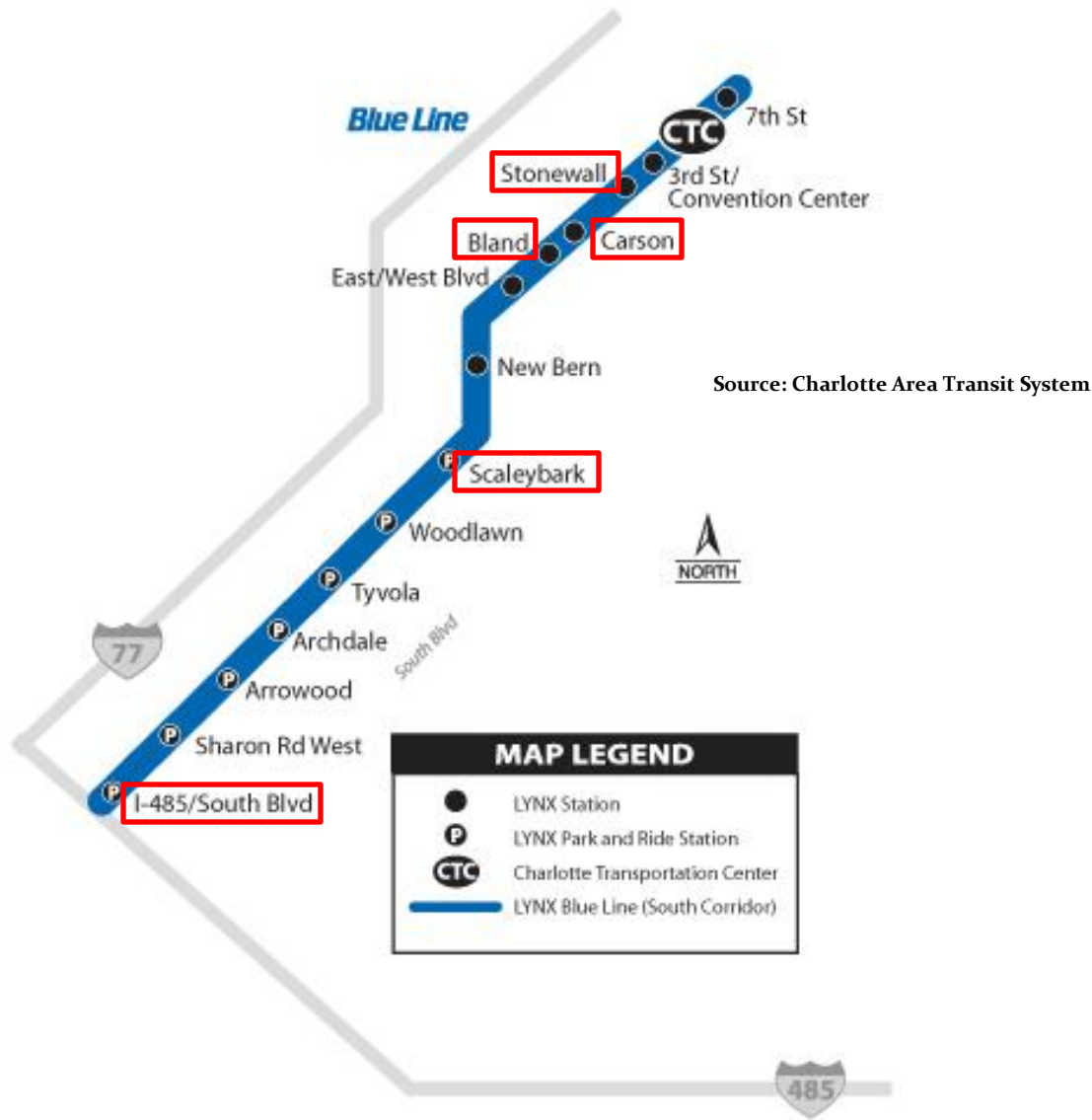
In its inception, the Charlotte Trolley utilized a single car and ran 1.8 miles from the South End neighborhood to the edge of Uptown, but this modest start paved the way for the light rail line to come. Running on weekends as a primarily novelty attraction, the trolley attracted 25,000 riders in its first six months and the city soon moved forward with plans to purchase three new cars and extend the line through Uptown. The trolley did several things that supported the eventual full build out of the light rail line: Demonstrated that transit service could work on the corridor, proved that even a limited service could generate transit-oriented development in the city and made it easier to implement the physical infrastructure of LYNX. According to RAIL Magazine, “Along the two-mile corridor, property

values have increased by nearly 90 percent and \$600 million in development has occurred on 800,000 square feet of land” (Sampson). Additionally, the trolley line was constructed to be compatible with light rail, making it easy to implement the Uptown portion of the Blue Line.

In addition to the Charlotte Trolley, the city was effective in getting the line built due to strong voices of support in government, business and the public that proved too strong to be overcome by opposition. The project was championed by a conservative Republican mayor, and received unified support from the Charlotte business community. Additionally, a citizens' transit advocacy group, Citizens for Efficient Mass Transit, proved instrumental in helping gather support (“Metro Magazine” 16-20). On two separate occasions, Charlotte citizens approved a 1/2 % sales tax increase to fund transit, including the light rail line. The first referendum was in 1998, where voters approved the tax by a 58-42 margin. Then, in November 2007, the very same month that the Blue Line opened to the public, a “Stop the Train” advocacy group campaigned for a ballot referendum to eliminate the transit tax. In an overwhelming show of support for transit, 70% of voters were against the repeal (Muth).

SYSTEM OVERVIEW

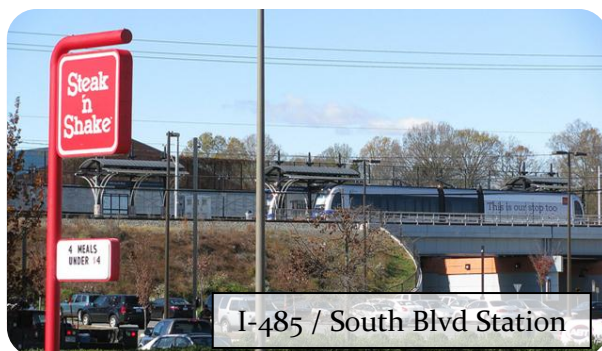
The LYNX Blue Line runs 9.6 miles from the southern edge of the I-485 beltline to Uptown Charlotte. The corridor runs parallel to South Blvd, a major arterial road. There are fifteen stations along the route, with the spacing between stations shrinking as the line approaches Uptown. The seven outermost stations offer free park and ride lots with a total of 3,190 spaces. Service begins at 5:20 AM and ends at 1:00 AM. During the weekday morning and evening commutes, headways are 10 minutes, widening to 15 minutes during off-peak hours. Weekend headways are 20 minutes during the day and 30 minutes at night. The travel time from end to end along the line is 34 minutes (“Charlotte Area Transit System”).



SELECTED STATION OBSERVATIONS

On the afternoon of Wednesday, November 23, 2011, observational analyses were conducted at several station stops along the Blue Line corridor to better understand the activity, development and physical design of the areas immediately adjacent to the stations. The stations observed were

I-485/South Blvd, Scaleybank, Bland, Carson and Stonewall.



I-485/SOUTH BLVD

The I-485/South Blvd station is the southernmost stop on the LYNX Blue Line, and the farthest from Uptown. As the name indicates, it is located near an exit on the partially completed Interstate 485 beltline that

will eventually circle the entire city of Charlotte. The immediate area around the station is typical of a city that experienced most of its growth during the automotive era. South Blvd is a wide, four-lane arterial road with purely commercial strip development in the area surrounding the LYNX station.



The side of the street opposite the station is a massive shopping center development called Carolina Pavilion, including fast food and chain restaurants, a 22-screen cinema, and stores such as Target, Nordstrom and Sports Authority. On the side of the street closest to the station is a gas station, Discount Tire and several chain restaurants, all centered in large parking lots. All of these developments had large setbacks from the road and are difficult to access on foot. There

is sidewalk infrastructure along South Blvd that appears to have been planned with the light rail, but access into the Carolina Pavilion shopping center is not designed with the pedestrian in mind. Sidewalks do not extend into the development from the road, and hedges in many areas prevent from pedestrians from simply crossing the grass from the sidewalk into the shopping center.

There is no evidence of current or future transit-oriented development in the area around the I-485 station. Aside from several small residential neighborhoods within a reasonable walking distance of the station, the station was clearly planned to serve as a park and ride, though it is also one of the main transfer points in the system, linking with four bus lines. With 1,120 parking spaces in a deck and surface lot, it has by far the highest parking capacity of the seven park and ride areas along the Blue Line ("Charlotte Area Transit System"). With no interesting elements of urbanism in the area and the longest ride into Uptown on the line (around 30 minutes) it seems unlikely that a developer will take interest in the I-485 station area for TOD purposes unless opportunities at other stations become exhausted.



The station does appear to have resulted in at least one positive improvement to the built environment for its neighbors: Struggling to find a suitable location for the giant parking deck, transit officials came to an agreement with Charlotte Mecklenburg Schools to construct the deck into the side of a ravine behind the station on land partially owned by the school system. As part of the agreement, the top level of the deck, which is at grade to the top of the ravine and Sterling Elementary School, was converted into a green space and playing field for the school ("Context Sensitive Solutions"). This also allowed the station to connect to a residential neighborhood across from the school, giving these residents an easy walk to transit.



SCALEYBARK

The seventh station heading toward Uptown Charlotte on the Blue Line is Scaleybark, which contains the northernmost park and ride lot on the line. Much like I-485 and the other five stations preceding it, Scaleybark is located in an area designed for cars. The station is positioned in the median of South Blvd, making pedestrian access potentially dangerous, as evidenced by recent incidents of pedestrians being injured by trains after crossing the street in September and

November of 2011 (Wootson). Industrial and commercial uses surround the station. Many of the adjacent lots are vacant and advertised as for sale. The most noteworthy attractor may be the Scaleybark branch of the Charlotte Mecklenburg Library system, which is one block from the station. Behind the commercial and industrial parcels that front South Blvd are residential subdivisions, but given the lack of sidewalk infrastructure in the subdivisions and the state of the built environment directly around the station, high amounts of foot traffic from these neighborhoods is unlikely.

Despite these drawbacks, Scaleybark has potential for transit-oriented development. It is not particularly valuable as a park and ride, with 315 parking spaces in a surface lot ("Charlotte Area Transit System"). Indeed, land immediately adjacent to the Scaleybark station is planned as the future site of an \$18 million mixed-use development with 500 housing units. However, the economic recession has resulted in the stalling of the project, and currently the land sits bare. Construction recently began on streetscape



improvements including bike lanes, improved sidewalks and on-street parking, but there is still no timetable for the overall development. Additionally, as part of the developer's agreement with the city, they will be required to build a park and ride deck for the light rail (Stabley). Developer requirements such as this may be holding back transit-oriented development for the benefit of motorists. At the very least, transit officials should investigate the possibility of charging for parking to better utilize its current capacity rather than expanding it.

BLAND

Though the seven southernmost stations on the LYNX Blue Line such as I-485 and Scaleybark are oriented toward park and ride commuters and have seen very little in the way of development around the stations, the other eight stations in and closer to Uptown Charlotte, which do not



have parking lots, have had successes in this regard despite recent economic conditions. This is undoubtedly a deliberate strategy on the part of the system's planners, as the users generated by the more suburban park and ride oriented segments of the line may be necessary to make the line feasible from a ridership perspective.

Unlike the car-oriented suburban stations, Bland and others closer to Uptown exemplify the success that Charlotte has had in generating density around some of its transit stations. This station and the others in the vibrant South End district close to Uptown were attractive for development even before the light rail, and the opening of the Blue Line seems to have accelerated growth with significant infill development. At Bland Street, new mid-rise apartment and condominium development lines the tracks on both sides. Wayfinding

elements have been installed with branding specific to the South End neighborhood, and a wide pedestrian walkway lines the rail right of way on both sides. The area is lively with shops and restaurants around the residential developments, and the Charlotte Trolley Powerhouse Museum is located adjacent to the station. The development at Bland Street Station exemplifies how the Blue Line has succeeded in creating more sustainable growth in some areas.



Bland Street Development

CARSON

The next station heading toward Uptown, Carson, is four blocks from Bland Street but seems to have had mixed success at catalyzing development. West of the station, the area resembles the Bland Street area with several mid-rise apartment and condo buildings creating a dense neighborhood abutting the rail alignment. However, to the east there appears to be no new development. This may be in part due to existing businesses that do not have any desire to relocate, and in fact likely enjoy the benefits of the nearby light rail station. Unfortunately, these businesses for the most part do nothing to create vibrancy or a sense of place. For example, directly adjacent to the station is the studios of News 14 Carolina, which are surrounded by a large surface parking lot, the perimeter of which has a high fence. On the opposite side of the station, there is a private parking deck, and beyond that a number of surface parking lots and low density development. The Interstate 277 John Belk Freeway, a loop freeway around the perimeter of Uptown Charlotte, may also be hindering development in this area. The freeway acts as a physical barrier separating Uptown from the areas around it, and residential developers may be likely to shy away from this particular location due to the unattractiveness and noise of the freeway.



Carson Station



As part of the overall Blue Line project, there have been streetscape improvements around the station to better support pedestrian and bicycle movements, including improved sidewalks and a bicycle rack. The single bike rack provides parking for only eight bicycles and there were no bicycles stored in the rack during this observation. Additionally, the sidewalk leading from the light rail station to South Blvd is a source of confusion, as it has a single bike lane marking on it, seeming to indicate that bicycles should be on the sidewalk instead of the road. As the sidewalk is 10 feet wide at this point, bicycles could be a potential threat for pedestrians and would seem to be better suited

riding in traffic on Carson Street.

STONEWALL

Stonewall Station is the first northbound stop on the LYNX Blue Line in Uptown Charlotte. Though the other stations in Uptown are surrounded by skyscrapers and high-rises in the heart of the city, the area around Stonewall is not characterized by dense development. Having just crossed the I-277 freeway via a bridge, the rail alignment is elevated at this station, making it more difficult to integrate into the urban fabric. Additionally, Stonewall may suffer from the same problem as Carson in that the freeway is directly adjacent, making some parcels unattractive for development. While this area may become built up as Uptown continues to grow and expand, at present it is somewhat barren. The incentive of being close to a rail station seems to be clashing with the disincentive of close proximity to a freeway. The Charlotte Convention Center is across the street from Stonewall Station; however, the next northbound station on the Blue Line is labeled as the Convention Center stop, so visitors would not use Stonewall. Recently, the NASCAR Hall of Fame opened near the Stonewall station, so perhaps that facility could aid in generating more activity in the area.



IMPACT

When the LYNX Blue Line opened in 2007, it was projected to average 9,100 trips per weekday during its first year. The initial projections estimated ridership at 18,100 weekday trips by 2025. There was considerable skepticism about whether the line could attain these figures, but even some of the Blue Line's harshest critics were silenced by its performance. In the first month of operation (November, 2007), the line averaged 12,457 weekday riders. In July of that year, the average was 16,895, a whopping 87.6% increase over projected ridership, and the first year average

for the system was 15,027, a 65.1% increase (Newsom). Even Jim Puckett, one of the leaders of the movement to repeal the transit tax, was quoted as saying “I have to admit, they are doing better than I expected. Our concern was whether we would have a white elephant, and it doesn’t seem we do” (Harrison).

From a development standpoint, the Blue Line has also seen success, even in the face of a recession. According to the city, since opening the line has generated over \$1.8 billion in private development and 7,581 completed or planned housing units (“City of Charlotte”). Between 2005 and 2009, 9.8 million square feet of new development grew up along the line, but 64% of that development was in Uptown (“Center for Transit-Oriented Development”). As Uptown was already a rapidly growing area with existing transit and walkability, much of this new development may not necessarily be tied to the light rail line. Uptown is likely to be a bustling urban center with or without rail transit. As noted in the site observations, many stations have seen very little development around them, while others have completely transformed the surrounding neighborhoods. An improving economy could stimulate more growth along the line as it should be a hot spot for development given its successful ridership figures.



FUTURE PLANS

The economic recession has not been kind to Charlotte’s future transit plans. Funding for the city’s 2030 long term transit plan is expected to fall \$1 billion short of projections, and officials have responded by scaling back plans. A proposed 10-mile streetcar has been put on hold, though thanks to a federal grant, the first 1.5-mile stretch is currently under construction and scheduled to open in 2015. The city is also holding off on a proposed bus rapid transit line from Uptown to the Charlotte-Douglas International Airport, instead placing priority on two rail projects: an extension of the LYNX Blue Line and construction of the LYNX Red Line. The Blue Line extension, which would continue north of Uptown to the UNC Charlotte campus area, is projected to open by 2016. The Red Line, a heavy commuter rail line to the Lake Norman area, is estimated to be up and running by 2018. The success of the Blue Line is evident in the city’s efforts to push forward with two major rail expansion plans even in the face of funding hardships (Portillo).



CONCLUSIONS

The LYNX Blue Line is the most significant indicator of a recent shift in attitudes toward growth in Charlotte, North Carolina. The prevalence of transit-oriented development in the corridor has been far from universal, with some stations displaying little to no change in land use around them. However, there has been a clear change in growth patterns at some stations, with infill development and densification creating an alternative to the sprawling growth patterns that have characterized Charlotte for decades. The surprisingly large ridership numbers are indicative of a public demand for transit that was even greater than officials hoped, and the ambitious rail and bus expansion plans going forward show that the Blue Line is only the starting point for a comprehensive regional transit network. For such an auto-oriented region, the amount of success that LYNX has achieved in just four years should be seen as a significant step in the right direction for a city that is attempting to grow in a smarter and more sustainable way.

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