



# **LYNX Blue Line Extension Health Impact Assessment Executive Summary**

Mecklenburg County Health Department

October 2014-July 2015

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The full HIA report and supporting documents can be found on the project website at:

[http://charmeck.org/mecklenburg/county/HealthDepartment/CommunityHealthServices/Pages/Blue-Line-Extension-\(HIA\).aspx](http://charmeck.org/mecklenburg/county/HealthDepartment/CommunityHealthServices/Pages/Blue-Line-Extension-(HIA).aspx)

## Acknowledgements

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### Stakeholder Workshop Attendees\*

|  |                                    |
|--|------------------------------------|
| Amy Hawn Nelson, Urban Institute           | Katie Curry, Environmental Planner |
| Andrew Bowen, N&BS                         | Ken Tippet, CDOT                   |
| Angela Allen, UNCC                         | Kevin Brickman, MCP&R              |
| Charisse Jenkins, MCHD                     | Kristian Belk, UNCC                |
| Chris Gilbert, UNCC                        | Laurette Hall, LUESA               |
| Curtis Bridges, CRTPO                      | Mandy Vari, Planning               |
| Janelle Goodrich, University City Partners | Marcus Carson, LUESA               |
| Diane Gavarkovich, Urban Institute         | Marcus Plescia, MCHD               |
| Elizabeth Frere, UNCC                      | Megan Green, LUESA                 |
| Frank Blair, Public Library                | Meghan Wally, UNCC                 |
| Gary Silverman, UNCC                       | Michael Talbert, LUESA             |
| Gwen Cook, MCP&R                           | Michelle Nance, CCOG               |
| Hannah Sawyer, MCHD                        | Mike Kennedy, MCHD                 |
| Helena Connors, UNCC                       | Mike Lizotte, UNCC                 |
| Jan Whitesell, Planning                    | Nalyn Siripanichgon, LUESA         |
| Jason Lawrence, CATS                       | Sayra Brynn, P&CR                  |
| Jerry Mann, UNCC                           | Scott Curry, CDOT                  |

## Executive Summary

Nationally, investment in public transit has steadily increased as a means to encourage sustainable development patterns and decrease traffic congestion, especially in highly populated areas such as Charlotte, North Carolina. Opened Fall 2007, the LYNX Blue Line Light Rail has experienced immense popularity with ridership numbers more than doubling initial projections. Plans to expand the 9.6 mile line an additional 9.3 miles, connecting the 9<sup>th</sup> Street Station in Center City to the North Davidson (NoDA) and University areas to terminate on the University of North Carolina Charlotte (UNCC) Main Campus, were approved and construction on the extension started in 2013. The Blue Line Extension, featuring 10 new stations, is scheduled to open Fall 2017 and will provide UNCC students, faculty, and staff (and others) an additional means of transportation and access to health promoting opportunities.

The Blue Line Extension Health Impact Assessment was conducted from October 2014 to July 2015 by the Mecklenburg County Health Department in conjunction with representatives from UNCC and the Charlotte Area Transit System (CATS). This report summarizes the findings and recommendations of that assessment. The goal of the HIA is to inform decision-making surrounding the Blue Line Extension, focusing on the light rail's potential impacts on the four categories of housing, transportation, environment, and UNCC policies (See Figures E.S. 1-4).

### What is HIA?

The National Research Council defines HIA as “a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects” (National Research Council, 2011).



Figure E.S. 1: Potential Health Impacts of Housing

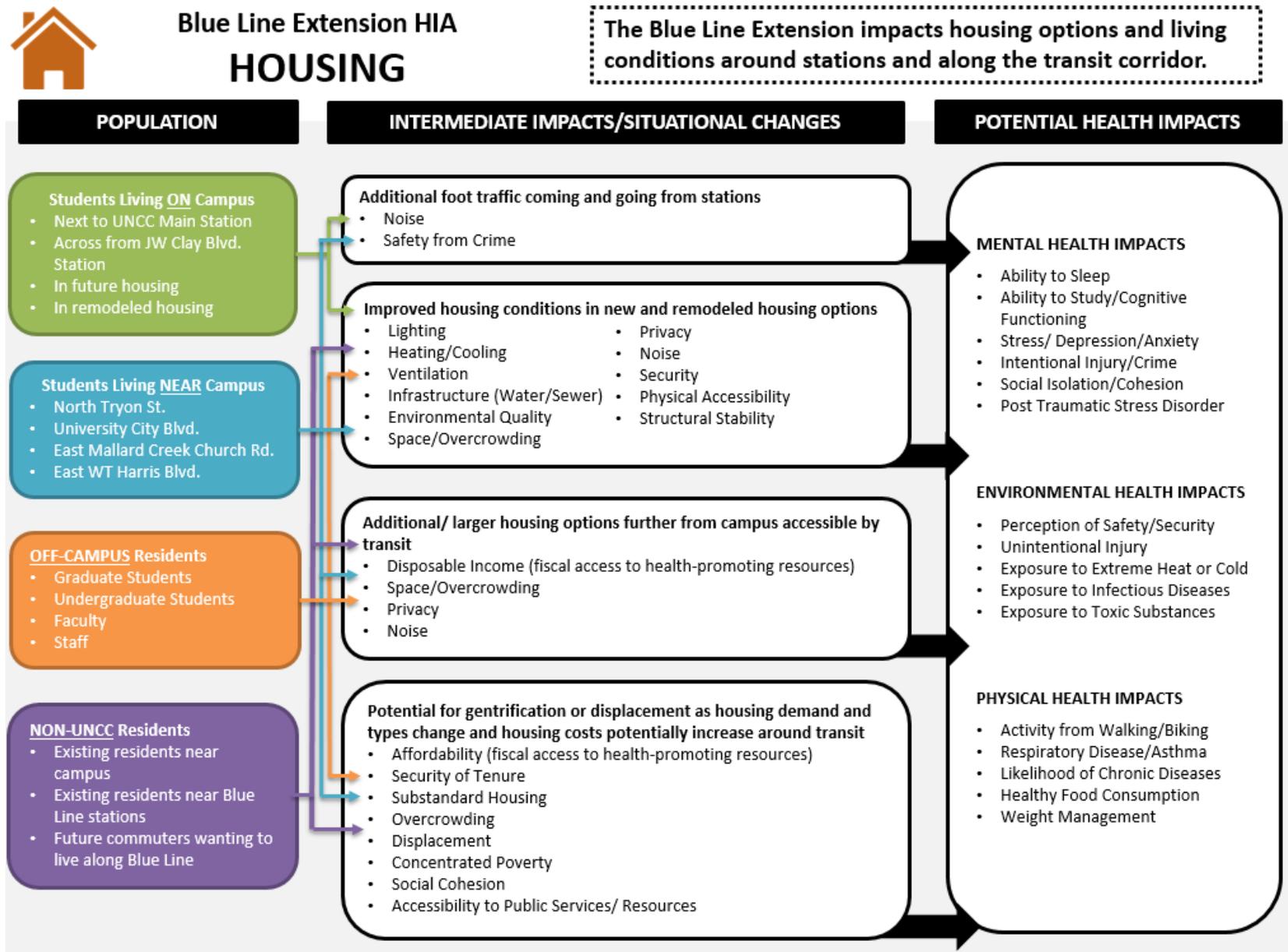


Figure E.S. 2: Potential Health Impacts of Transportation

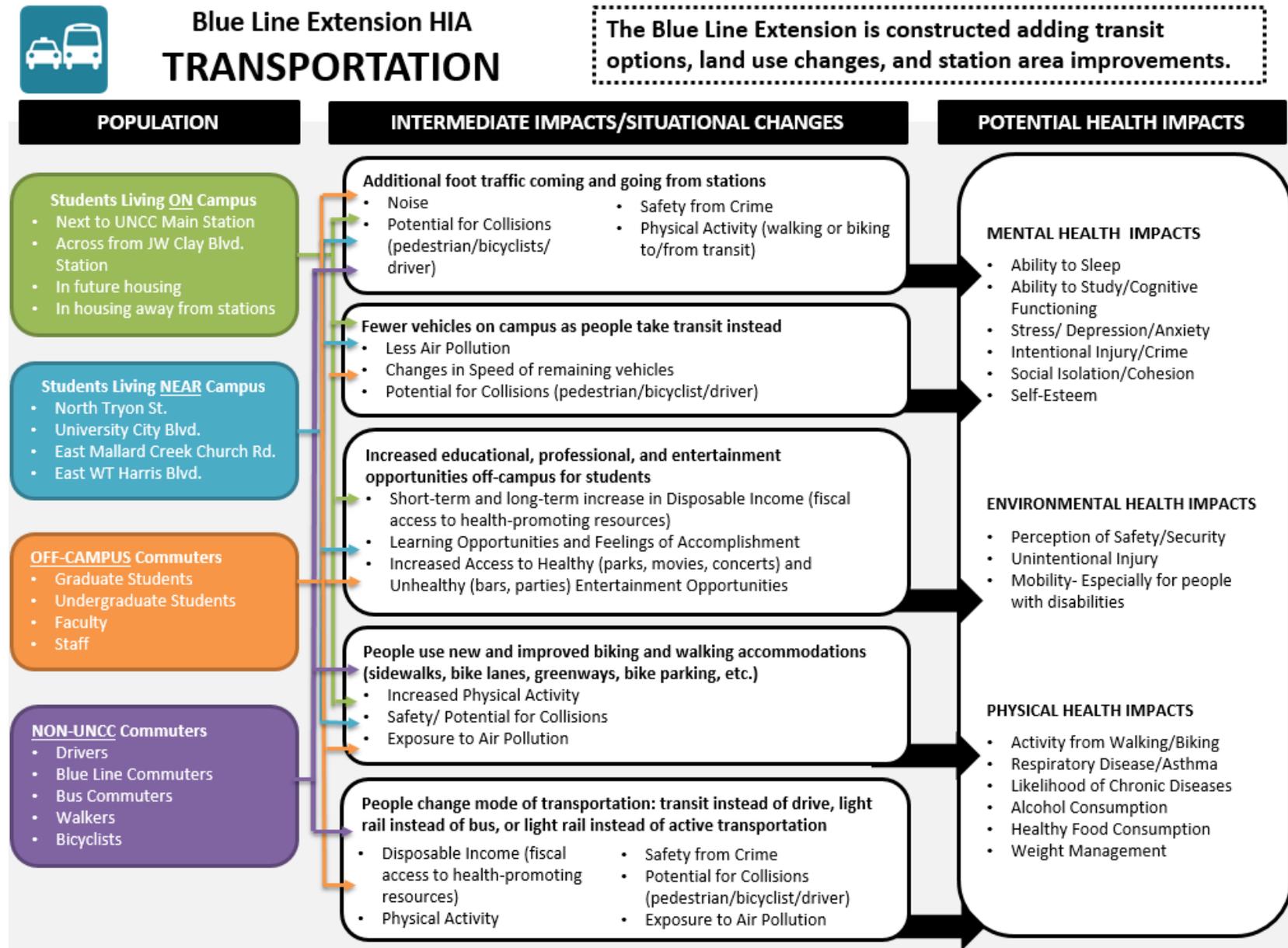


Figure E.S. 3: Potential Health Impacts of the Environment

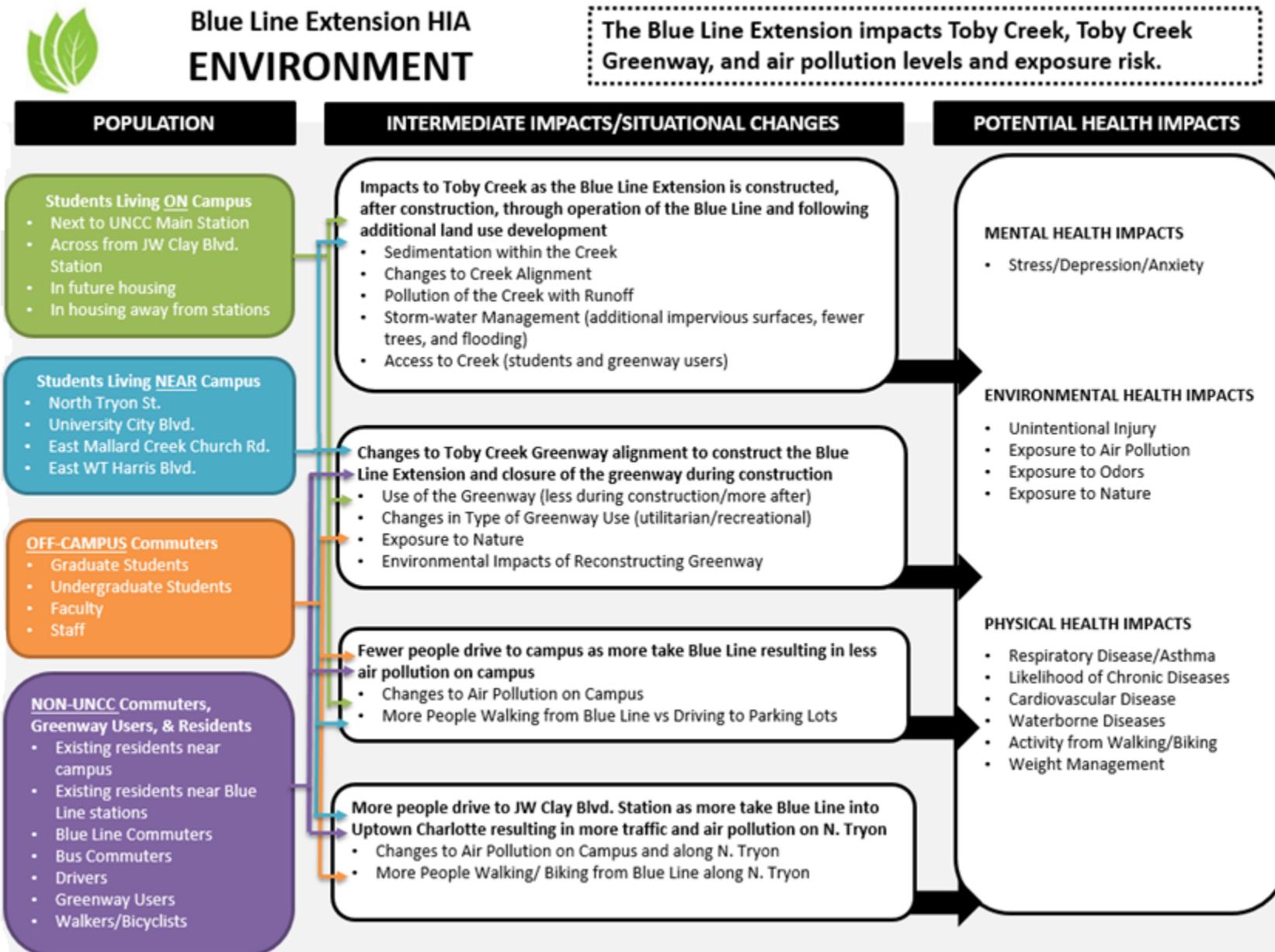
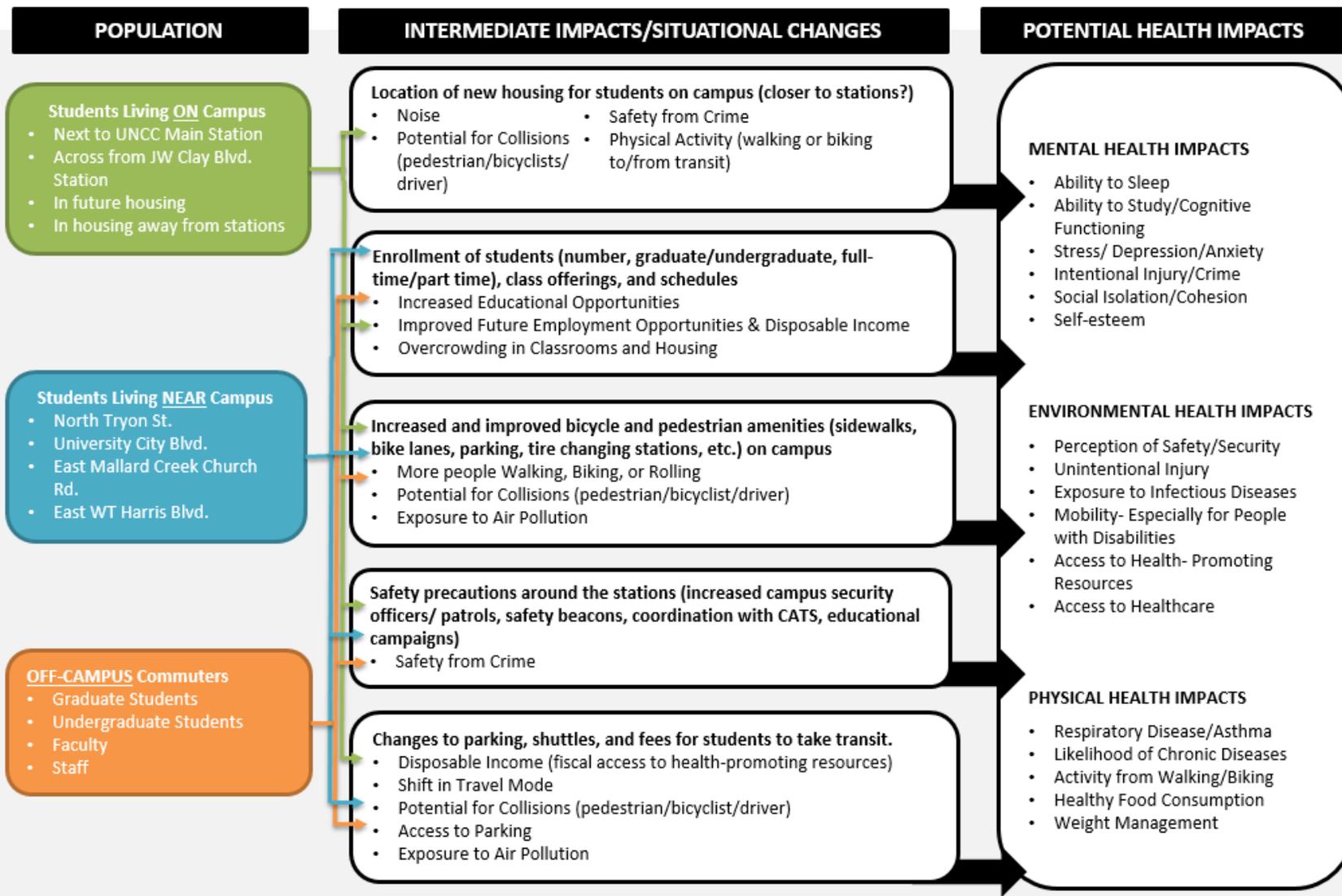


Figure E.S. 4: Potential Health Impacts of UNCC Campus Policies



# Blue Line Extension HIA UNCC CAMPUS POLICIES

UNCC operating procedures and long-term planning decisions on campus change due to Blue Line Extension.



## Major Findings

After examining national literature, local data, survey results, and conversations with stakeholders, a mixture of potential positive and negative health impacts emerged based on possible responses to housing, transportation, environmental, and UNCC policy options.

The condition of **housing** is expected to improve as new development takes place causing positive health impacts. Affordability and potential gentrification is a concern; however, the increased mixture of types of housing and price-points could either improve or be detrimental to health depending on whether or not policies are in place to protect affordability and increase housing options. With increased police monitoring around stations, station design, and noise controls being implemented, the neighborhood and community conditions around the stations and residential buildings should also improve with the addition of transit options causing positive health impacts.

**Transportation** options, speeds, safety, and vehicle miles traveled should improve with the introduction of transit, potentially reducing the amount of air pollution, severe collisions, road rage, and traffic congestion. Physical activity levels are expected to increase, respiratory disease rates should decrease, health equity should improve with increased access, and the severity of injury or fatality caused by vehicle collisions should decrease. Because the extension terminates on UNCC Main Campus, additional considerations of campus safety, noise and potential access to unhealthy activities (increased alcohol consumption) should also be addressed.

**Environmental** considerations include impacts on water quality and stormwater management which should improve as long as best management practices are implemented with the construction of the Blue Line and the use of transit decreases the need for additional paved parking lots on campus. Regional air pollution should decrease, causing positive health impacts but the exposure risk for those walking and biking near traffic may increase. During the construction of the Blue Line, exposure to nature and physical activity on Toby Creek Greenway decreases due to trail closure; however, long-term access to parks and nature should increase with positive health impacts.

Depending on how **UNCC's campus policies** respond to the Blue Line coming to campus, many positive health impacts could be gained. With greater access to the Uptown Campus and the potential to use land designated for parking for additional classroom and student services, enrollment and course offerings could increase with many long-term positive health benefits. If transit becomes a viable option (perhaps through a subsidized "Go Pass") and the number of students, faculty, and staff needing parking decreases, associated financial savings could result in positive or negative health impacts depending on the use of these savings.

## Recommendations

### *Overarching Recommendations*

1. Continue to consider health implications as Charlotte Area Transit System (CATS) and Charlotte officials plan, construct and promote transit use in the greater Charlotte area.
2. Increase channels of communication between the Charlotte Area Transit System (CATS), the University of North Carolina Charlotte (UNCC), Charlotte-Mecklenburg Planning (CMP), Mecklenburg County Health Department (MCHD), and members of the community including transit users, developers, and business owners.

3. Support additional studies that collect baseline health data, record usage of the Blue Line Extension (especially by students, faculty, and staff of UNCC), and monitor the health impacts of increased transit options.
4. Follow the recommendations set forth in the Environmental Impact Statement conducted on the Blue Line Extension.
5. Increase the knowledge, use, and support of the Student Health Survey including the addition of custom questions relevant to commuting patterns.

#### *Housing Recommendations*

1. Identify neighborhoods at risk for gentrification. Implement policies and incentives that would protect existing low and middle-income neighborhoods from gentrification and require the inclusion of affordable housing and a wide variety of housing types and price points along the Blue Line Extension.
2. Increase awareness of developer incentives to promote housing density, life-cycle housing, and mixed-use development patterns within a quarter mile of transit stations.
3. Promote additional collaboration between University of North Carolina Charlotte (UNCC) Facilities Planning and local developers to balance the needs of low, middle, and high income residents and provide a balance of on-campus and off-campus housing for UNCC students.
4. Install noise control mechanisms on the rail line at turns near housing, additional soundproofing around the UNCC Main Campus Station and JW Clay Blvd Station, and greater noise-reducing insulation in the residential halls surrounding the stations.
5. Consider impacts on students living around the stations when setting transit schedules, establishing policing stations, and offering late-night shuttles from the stations.

#### *Transportation Recommendations*

1. Conduct a recurring commuter (motor vehicle operators, pedestrians, and bicyclists) survey and counts to determine commuting patterns of University of North Carolina Charlotte (UNCC) students, faculty and staff to determine where they are commuting from, the length of commute, time of commute, mode of travel, and barriers to taking transit.
2. Establish a "Go Pass" that would allow University of North Carolina Charlotte students, faculty, and staff to use their campus identification card to take all forms of public transit offered by the Charlotte Area Transit System (CATS), either for free (subsidized by UNCC using either student fees or parking permits) or for a reduced rate. While negotiating the "Go Pass," review the policies on parking decks, usage and rate structure for CATS and for UNCC to reduce overcrowding at the JW Clay Blvd Station and reserve spaces for transit users and businesses.
3. Carefully plan wayfinding mechanisms including signs, painted pavement, landmarks, and electronic applications to guide riders in and around campus and to notify them of the arrival time for the next train and other transit connections. Provide incoming and current students with resources on active transportation opportunities on and around campus that include information on routes, safety, facilities, rental programs, etc.
4. Implement context sensitive solutions to improve safety and increase pedestrian, cyclist, and ADA access to campus.

5. Design the trains, stations, adjoining streets, and surrounding land uses to promote walk-up or bike-up services. Monitor bike arrival and boarding on the Blue Line to gauge the need versus availability of station racks, on-board racks, and storage space.
6. Market the health benefits (physical activity, weight management, stress reduction) and fiscal savings of taking transit.

#### *Environment Recommendations*

1. Include additional trees and vegetation plantings along the transit corridor, on campus, and around stations to help with localized air pollution and stormwater management.
2. Market the air quality benefits of taking transit noting daily air quality ratings (high ozone or unhealthy air quality days) on the Charlotte Area Transit System (CATS) website and at stations.
3. Monitor asthma incident rates at UNCC Student Health Services and area hospitals especially in comparison to poor air quality days.
4. Follow best management practices when constructing the bridge over Toby Creek.
5. Decrease the number of surface parking lots on campus and paved surfaces to reduce runoff and implement additional stormwater management measures such as bioswales and rain gardens.
6. Install a user-counter on Toby Creek Greenway, perform intercept surveys, and monitor usage of the greenway.
7. Reopen Toby Creek Greenway and connect the greenway to the larger Cross Charlotte Greenway Network as soon as possible.
8. Market and provide wayfinding to greenway connections and parks along the Blue Line.

#### *UNCC Campus Policies Recommendations*

1. Form a short-term taskforce at University of North Carolina Charlotte (UNCC) to address the implications of the Blue Line on campus to include representation from housing, student health, transportation, police, enrollment, academic scheduling, and the student body. Increase student involvement and information about student needs within the decision-making process.
2. Incent students, faculty and staff to use transit (especially to travel between campuses and from housing or work opportunities) and dis-incent having a car on campus.
3. Improve walkability, bikeability, and ADA accessibility on campus including potentially expanding the amount of time available between classes for crossing campus.
4. Build a pedestrian bridge over the northbound lanes of North Tryon St. from the JW Clay Blvd Station to connect the station to the University of North Carolina Charlotte (UNCC).
5. Work with the Charlotte Area Transit System (CATS) to establish a “Go Pass” or at least extend the 10-Ride Local pass to include rides on the Blue Line and connecting bus shuttles.
6. Diversify funding sources for parking structures and transportation programs so that University of North Carolina Charlotte (UNCC) is not dependent on parking permit sales and can offer more services (pedestrian and bicycling facilities, extended shuttles, etc.).
7. Include transit information in various educational programs such as orientation for incoming students, healthy behavior courses (way of increasing physical activity and as a designated driver option), and safety instructions (safety on transit, using transit, locking doors in residential halls and vehicles, etc.).

8. Convert under-used surface parking lots to academic buildings, increase the demand for classes and programs offered at the Uptown Campus, and schedule classes to optimize use of classroom space in order to increase enrollment and the number of degrees offered at University of North Carolina Charlotte (UNCC).

### **Conclusions**

The HIA provides a lot of background information on the Blue Line Extension, University of North Carolina Charlotte campus planning, and development patterns in Charlotte and examines these plans and projects through a lens of health. It is the intention of this HIA to provide a broad overview of the potential health impacts that the introduction of light rail transit and associated land use development and transportation improvements will have on the UNCC population (students, faculty, and staff). Hopefully this HIA will serve as a model for future HIAs in Mecklenburg County and a spring board for additional conversations as subsequent decisions are made in preparation for and in response to the Blue Line Extension being built.