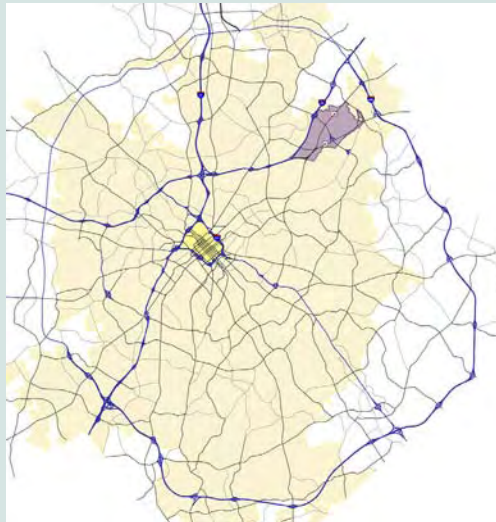




DRAFT
May 2007

UNIVERSITY CITY AREA PLAN

Volume One: Concept Plan



INTRODUCTION

Background

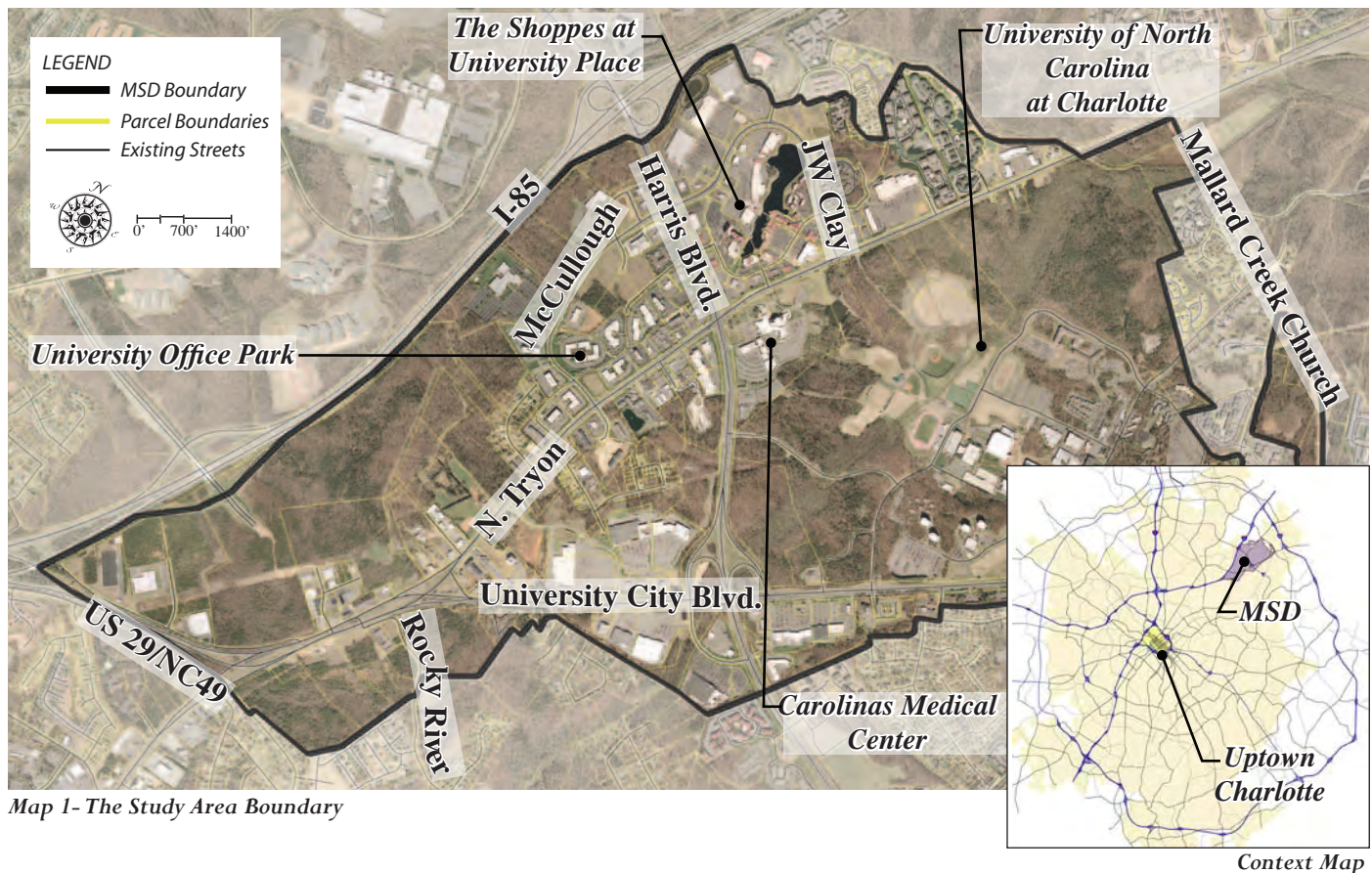
University City is in the heart of the Northeast District. Its commercial core, which is the focus of this plan, is generally located north of the US29/NC49 “weave”, east of I-85, south of Mallard Creek Church Road and west of University City Boulevard (please see Map 1). In 2003, Charlotte City Council designated this commercial core as a Municipal Services District (MSD). An MSD allows for the taxation of property owners within the district’s boundaries as a means of generating revenue to support enhanced services exclusively for the area.

University City Partners (UCP) was established in 2003 to coordinate planning, marketing and other activities in the MSD and to serve as an advocate for the area’s rate payers. Since its inception, UCP has undertaken a number of efforts to bring its rate payers together to focus on and discuss the MSD’s future development. It hosted several planning, transportation and urban design conferences, sponsored a design competition for the

Harris Boulevard/US29 intersection area and co-sponsored an economic impact study with the University City Area Council in 2004.

While all of the above helped shape the vision for University City, the culminating piece of work that led UCP to prepare and submit this area plan was the University City Urban Boulevard Study. In early 2005, UCP hired a planning consultant to develop a vision and plan for transforming the future Northeast light rail corridor into a “grand urban boulevard” within the MSD and to create a pedestrian-oriented town center for University Place.

Concurrent with the Boulevard Study, the City of Charlotte completed a detailed land use and design plan for the reconfiguration of the US29/NC 49 “weave” intersection and surrounding area. Large tracts have been landlocked for decades due to the current intersection configuration. The City also completed preliminary design concepts for the five light rail transit stations



Map 1- The Study Area Boundary

Context Map



An aerial view of N. Tryon Street and Harris Boulevard

within the MSD boundaries, as well as the transit station located near the intersection of US 29 and Mallard Creek Church Road, which is outside the MSD boundaries. Additionally, a study that focused on aligning transit through the UNC Charlotte campus was completed.

The land use and urban design concepts and recommendations that emerged from these planning processes have been incorporated into and are the foundation of the University City Area Plan.



View along N. Tryon Street near McCullough Drive

To implement the vision established in the Urban Boulevard Study, leaders in University City realized that the district plan policies guiding development of University City’s urban core needed to be revised. Consequently, University City Partners (UCP) sponsored development of this area plan. When adopted, the area plan will update the Northeast District Plan for this area. It will provide transportation and design policy guidance for University City’s commercial core and will serve as the area’s adopted land use, urban design and streetscape plan. Four station area plans have been included in this area plan and will be officially adopted as part of the plan adoption process. These

Plan Purpose

The purpose of the University City Area Plan is to update the 1996 Northeast District Plan. The Northeast District Plan is the official land use policy document currently used to guide development activity in University City. However, conditions have changed in this area, resulting in the need to update the policy guidance. Specifically:

- The corridor has since been designated as a light rail corridor and the transit station locations determined.
- The major improvements planned for the US29/NC49 “weave” have significantly changed. The 29/49 Roadway Improvement Project will consist of new, at-grade intersections at the I-85 Connector and at University City Boulevard (NC 49). In addition, the project will connect the new intersection with University City Boulevard to a previously constructed interchange at I-85 (City Boulevard Extension). This project has been approved and will be funded by the City of Charlotte.
- UNC Charlotte plans to create a major gateway to the campus off US29, including a rapid transit connection to the university.

station area plans provide specific land use, transportation and urban design recommendations for the area within a ½ mile walking distance of the transit station.

This area plan is divided into a Concept Plan and an Implementation Plan. The Concept Plan describes the policy framework and recommendations, while the Implementation Plan identifies specific strategies that will assist in implementing the Concept Plan. City Council will approve only the Concept Plan. The Implementation Plan will guide City staff, University City Partners and the private sector in implementing the Concept Plan.

Planning Process

The planning process for this area plan began, in effect, when UCP first brought stakeholders together in 2004 to discuss the district's future development. Experts in transit planning and urban design headlined the various conferences sponsored by UCP and generated much discussion about the changes taking place in the area and the opportunities and challenges facing the MSD. Through these and other early on efforts, UCP was building the planning foundation and educating stakeholders on possibilities for the MSD. When UCP hired the consultant to work on the Urban Boulevard Study, community engagement intensified. UCP held a number of community forums in 2005 and 2006, including a design charrette where various development scenarios for the North Tryon Corridor were created. In addition, the consultant held a series of one-on-one interviews with affected property owners, business owners and others to solicit their ideas and input.

Throughout the planning process, UCP staff and consultants met with Planning Department, Charlotte Department of Transportation (CDOT), Charlotte Area Transit System (CATS) and Parks and Recreation staff. Progress reports on the work taking place in University City were given to City Council in October 2005 and March 2006. The culmination of all the community engagement efforts and the public unveiling of the Urban Boulevard Study recommendations occurred at UCP's September 2006 community forum held at the Oasis Shrine Temple. Over 130 people attended to hear the consultant's presentation and to offer feedback through discussion and an exit survey. Subsequently, UCP prepared this area plan document, incorporating the ideas and recommendations that had evolved through the Urban Boulevard planning process.



A stakeholder interview



POLICY FRAMEWORK

A number of adopted and proposed land use and transportation plans, strategies and tools have implications for University City and have been taken into consideration in developing this area plan. These plans/strategies and their potential impacts and/or overlaps are described below:

Centers, Corridors and Wedges Framework

Originally introduced in 1994 and adopted by Charlotte City Council in 1997 as part of the 2015 plan as a tool to guide future growth, the Centers, Corridors and Wedges Growth Framework is the over arching policy for growth in Charlotte and Mecklenburg County. It identifies five radial growth Corridors and a variety of activity Centers that have the infrastructure to support higher intensity development. Wedges, which fall between Corridors, are reserved primarily for low to medium density residential development reflecting the existing development pattern in those areas.

Because transit station area plans can cover large areas, including parts of Corridors and their more specific transit station areas and interchange proximity areas, as well as parts of Wedges, the Centers, Corridors and Wedges Growth Framework provides the broadest and most comprehensive level of guidance. This includes guidance on land use types and intensities, urban design, transportation and infrastructure. This affects University City, as numerous opportunities for intensification and mixing of uses will be created to support the future Northeast Light Rail Transit Corridor.

General Development Policies (GDPs)

In November 2003, Charlotte City Council adopted the first phase of an updated version of the General Development Policies, which provide guidance for the location, intensity and form of future development and redevelopment throughout the community. Because this area plan provides specific guidance regarding residential densities, location and design, the residential location and design element of the GDP will not apply. Instead, the GDP were used as a guide in the development of this plan, especially the Transit Station Area Principles (2001) component of the GDP. The principles were used as the basis for the more refined land use and design recommendations for the four station areas in this plan and, in general, to concentrate higher intensity development and redevelopment within defined corridors and centers and lower density development in the identified

“wedges” between the corridors. Phase II of the GDP is currently underway and includes chapters on the Environment and Infrastructure.

Northeast District Plan

The Northeast District Plan, adopted in 1990 and updated in 1996 and through subsequent rezonings, area plans and plan amendments, is the official policy guide for growth and development in this northeast area, which includes University City. The plan provides policy direction for land use and zoning, transportation and other infrastructure improvements and amenities aimed at improving the area’s livability. The Planning Commission and City Council refer to this district plan when reviewing and making decisions on development proposals and rezonings. By adopting the University City Area Plan, City Council will officially update the Northeast District Plan for the MSD area. Land use, transportation and other recommendations included in this area plan will update those recommendations included in the district plan. It should be noted that the District Plan map is updated to reflect changes to the adopted land use through rezonings, area plans and plan amendments; however, the area plan maps are not typically updated and remain a “snapshot in time”.

Transportation Action Plan/Urban Street Design Guidelines

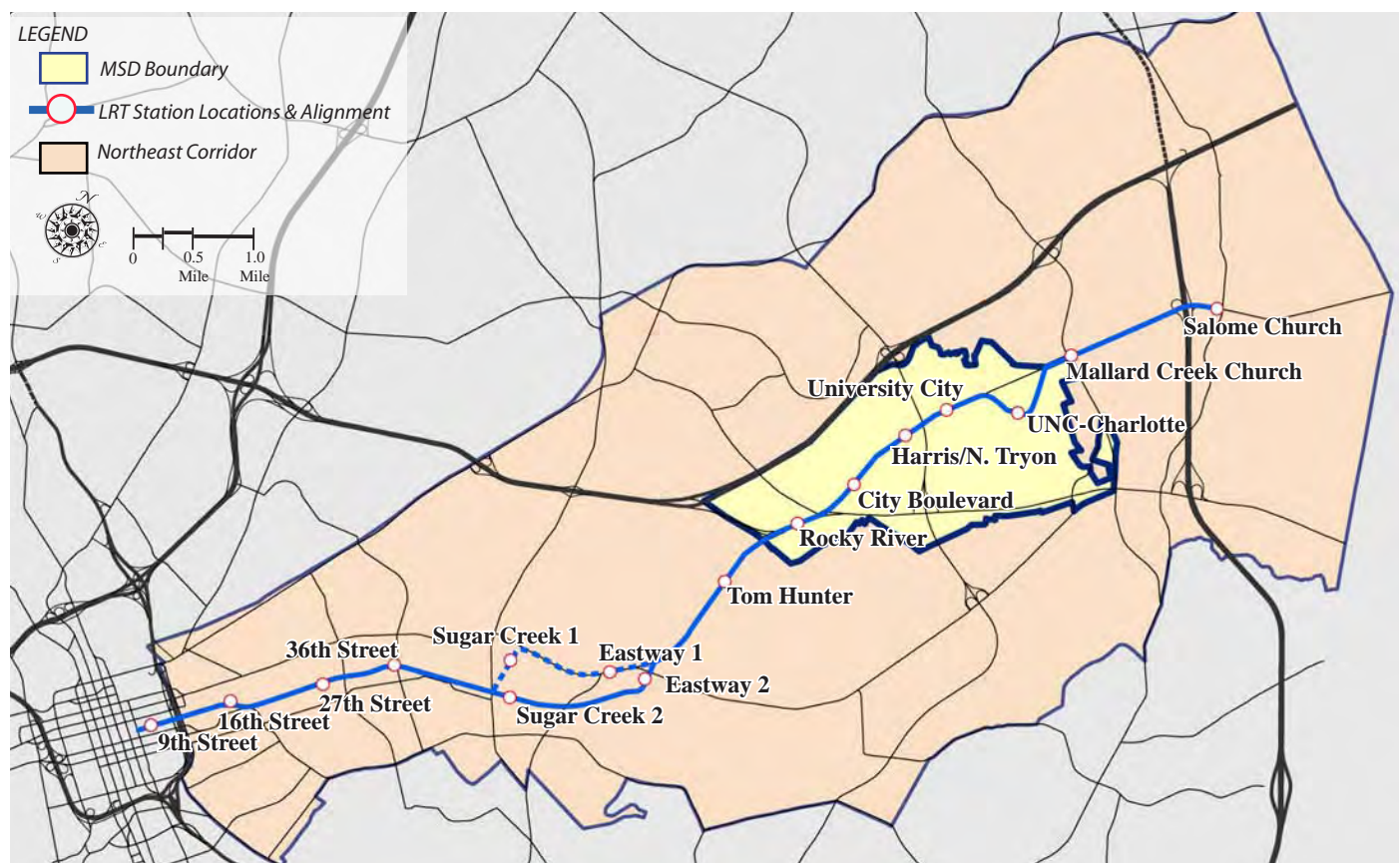
The Transportation Action Plan (TAP) (2006) defines short and long-term policies together with an implementation “blueprint” for improvements for accommodating motor vehicles, transit riders, bicyclists and pedestrians. The policies outlined in the TAP work in tandem with those outlined in the Centers and Corridors Framework. The TAP was used as the basis for developing transportation goals and recommendations for the University City area. The TAP’s comprehensive “toolbox” of transportation programs will help to implement this plan. Programs such as multi-modal intersection improvements, Street Connectivity Program, Bicycle Program, Sidewalk Program and the Bicycle/Pedestrian Connectivity Program will help to implement the plan vision.

The Urban Street Design Guidelines (pending adoption) provide a comprehensive approach to planning and designing new and modified streets in Charlotte. They were used in the development of this plan to help determine street classifications and cross-sections that help guide the design and redesign of streets and to reinforce land use decisions to create synergy between the streets and the land uses along them. The USDGs will be critical in creating the appropriate streets and street network in order to implement this plan.

2030 Corridor System Plan

In November 2006, the Metropolitan Transit Commission (MTC) approved the 2030 Corridor System Plan that sets the course for rapid transit in Mecklenburg County. The development of the Northeast Light Rail Transit Corridor (LRT) was included in the plan approval. Detailed design on this corridor is expected to begin in 2007, and construction is projected to be completed by 2013.

The Northeast LRT will extend approximately 14 miles from Uptown Charlotte to I-485 north of UNC Charlotte. This dual track system will be considered an extension of the South Corridor or LYNX BlueLine. It is expected to carry an estimated 15,500 to 17,500 persons per day. As currently planned, the alignment will follow the median on North Tryon Street past J.W. Clay Boulevard, veer east onto the UNC Charlotte campus and then come back onto North Tryon Street stopping just short of I-485. Map 2 shows the alignment for the entire Northeast Corridor. Of the 14 transit stations planned for the corridor, five will be constructed within the University City MSD, including a station internal to the UNC Charlotte campus.



Map 2-Northeast Transit Corridor Proposed Alignment and Station Locations

PLANNING CONTEXT

SUMMARY OF EXISTING CONTEXT

Demographic Profile

Due to the large number of institutional and employment uses within the University City MSD, the area's residential population is relatively small. According to the 2000 US Census, 6,847 people resided within the MSD in 2000, a 26% increase since 1990. This includes approximately 5,000 students living on the UNC Charlotte campus. Other highlights from the Census are as follows:

- The majority of the MSD's population (62%) is White (Figure 1).
- The number of households doubled from 1990 (799 households) to 2000 (1,643 households.)
- The number of owner occupied units decreased between 1990 and 2000 (Figure 2).
- 18,417 people were employed in the MSD, the majority employed by UNC Charlotte.

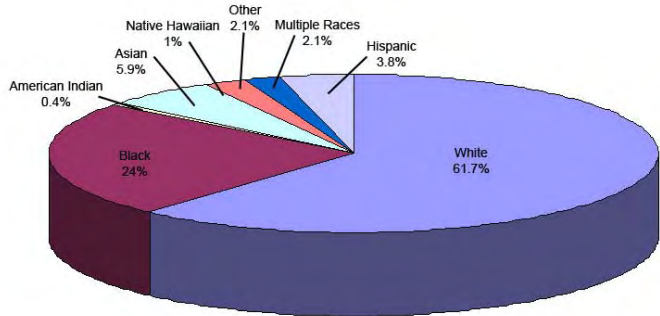


Figure 1: Demographic Profile of University City MSD
Source: U.S. Census Bureau; Census 2000 and 1990, Summary Tape File 1, <<http://factfinder.census.gov>> (2006).

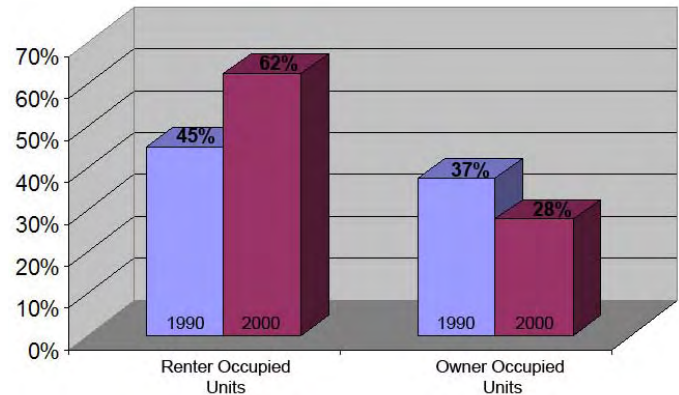


Figure 2: Renter Verses Owner Occupied Units
Source: U.S. Census Bureau; Census 2000 and 1990, Summary Tape File 1, <<http://factfinder.census.gov>> (2006).

Existing Land Use and Zoning

As shown on Map 3 and Figure 3, institutional and commercial land uses comprise the majority of the University City MSD, making up approximately 61% of the total land area. A relatively large amount of land in the MSD—325 acres or 17% of the total land area—is vacant. Much of this vacant land is located near the US29/NC 49 weave and is currently landlocked due to the configuration of the weave and lack of access to the properties. Institutional and commercial zoning are the most dominant zoning classifications in University City. Existing zoning is reflected on Map 4 with percentages shown on Figure 4.

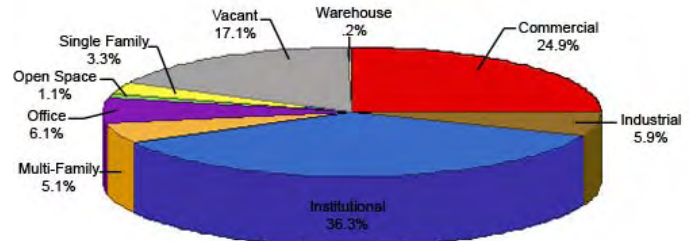


Figure 3: Percentage of Land Use Designations
Source: Charlotte-Mecklenburg Planning Department; DELD Data, (2004).

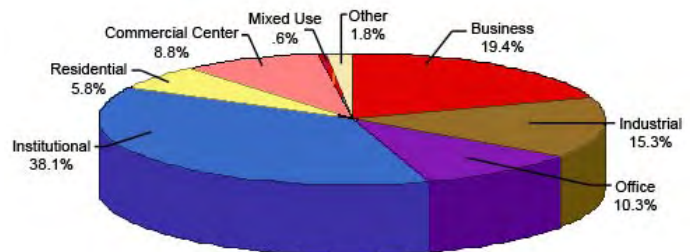
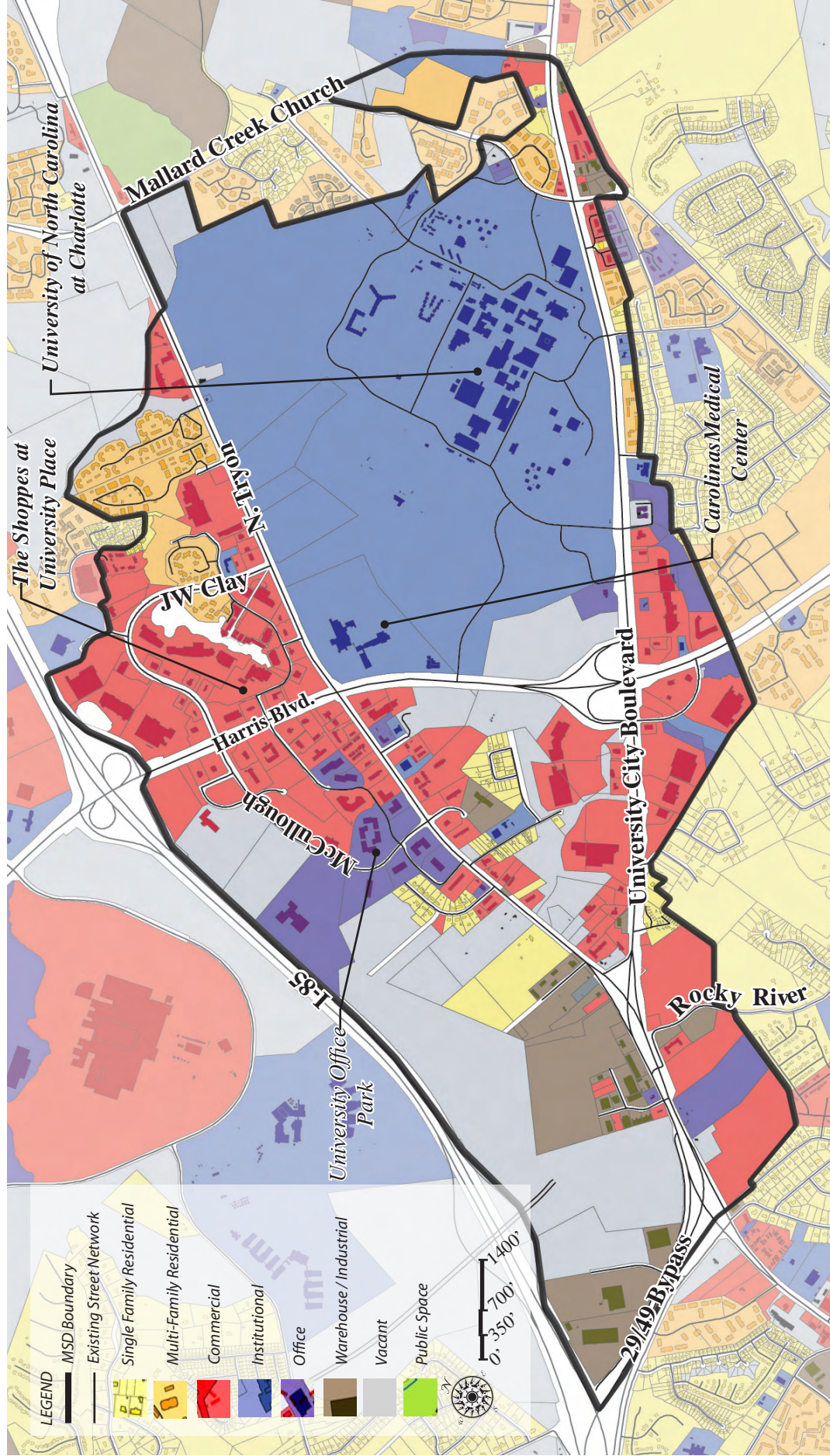


Figure 4: Percentage of Zoning Designations
Source: Charlotte-Mecklenburg Planning Department; DELD Data, (2004).

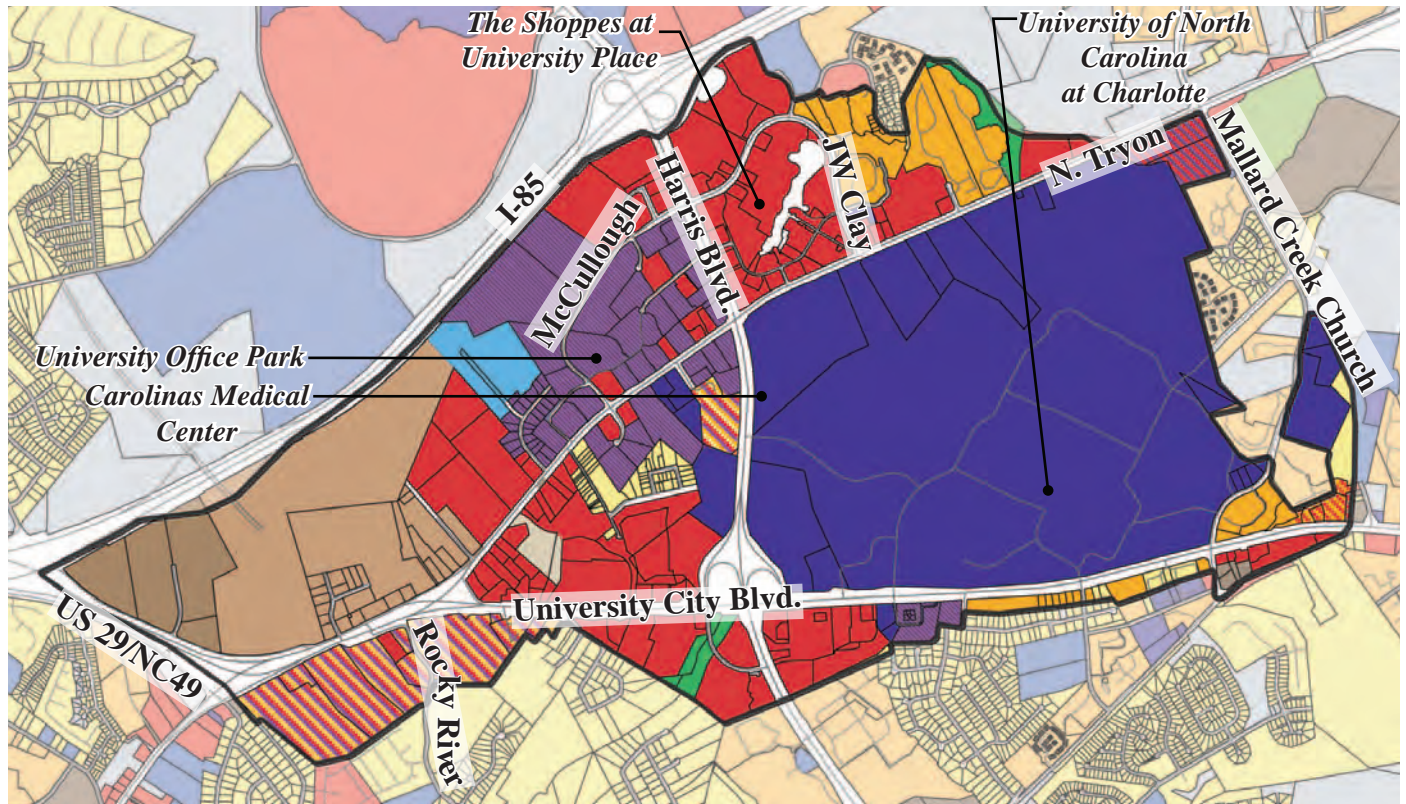
MAP #3-EXISTING LAND USE



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Adopted Land Use for University City MSD

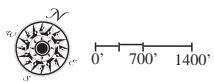
The Northeast District Plan identifies specific land uses for the future growth and development of the area as shown on Map 5.



Map 5-Adopted Northeast District Plan Land Use for the University City MSD

LEGEND

	MSD Boundary		Office
	Existing Streets		Research
	Single Family Residential		Institutional
	Multi-Family Residential		Commercial
	Multi-Family<=12 DUA		Warehouse / Distribution
	MF/Commercial		Industrial
	MF/Office/Commercial		Greenway
	Office/Commercial		Vacant
	SF/MF/Office/Commercial		



Existing Transportation Infrastructure

While excellent access to I-85 exists in University City via the US29, Harris Boulevard and Mallard Creek Church Road exits, internal access within the area has become a growing problem. The current transportation network, shown on Map 6, primarily relies on three main thoroughfares to carry the bulk of the area's increasing traffic volumes: North Tryon/US29, University City Boulevard/NC49 and Harris Boulevard. The lack of a good internal road network forces most drivers to use these major thoroughfares to move about the area, creating considerable congestion, particularly during peak driving times and creating longer trips for motorists, bicyclists and pedestrians. The current design of the "weave" where North Tryon and University City Boulevard merge exacerbates traffic flow problems in the MSD. In addition, the area is not pedestrian or bicycle-friendly. Sidewalks are limited and disconnected, and crossing the major thoroughfares is dangerous, as there are few signalized intersections to facilitate pedestrian crossings. There are no bicycle lanes and few bicycle racks can be found in the area. Several express and standard bus routes serve the larger University City area.

Existing Urban Design Character

The design character of University City MSD can be described as automobile-oriented. Buildings typically have large setbacks with parking lots fronting them, and traditional suburban style architecture is most common. In some areas, particularly along North Tryon Street south of Harris Boulevard, curb cuts are numerous, and inter-connectivity between properties is limited. While individual properties are landscaped, little, if any, landscaping or other amenities exist in the public rights-of-way. Overall, the area is devoid of design elements that would visually or functionally tie the area together. See Map 7 for Existing Community Facilities.

Environment

Tree Cover

Existing tree cover is primarily found on the vacant parcels within the study area; along the Toby Creek Greenway, which runs

between the hospital and UNC Charlotte; around the future City Boulevard extension; and on the UNC Charlotte campus. The most extensive and notable tree coverage lies within the undeveloped northern portion of the campus.

Topography

Significant grade changes and steep slopes exist in the area where the future City Boulevard extension is planned and on most of the vacant land along Toby Creek and its tributaries. There are pockets of steep slopes on both sides of North Tryon Street, north of University Place, the hospital and UNC Charlotte. There are also several steep slopes and wetlands on the vacant UNC Charlotte parcel on the north end of the campus, especially the undeveloped northern portion.

Water Quality

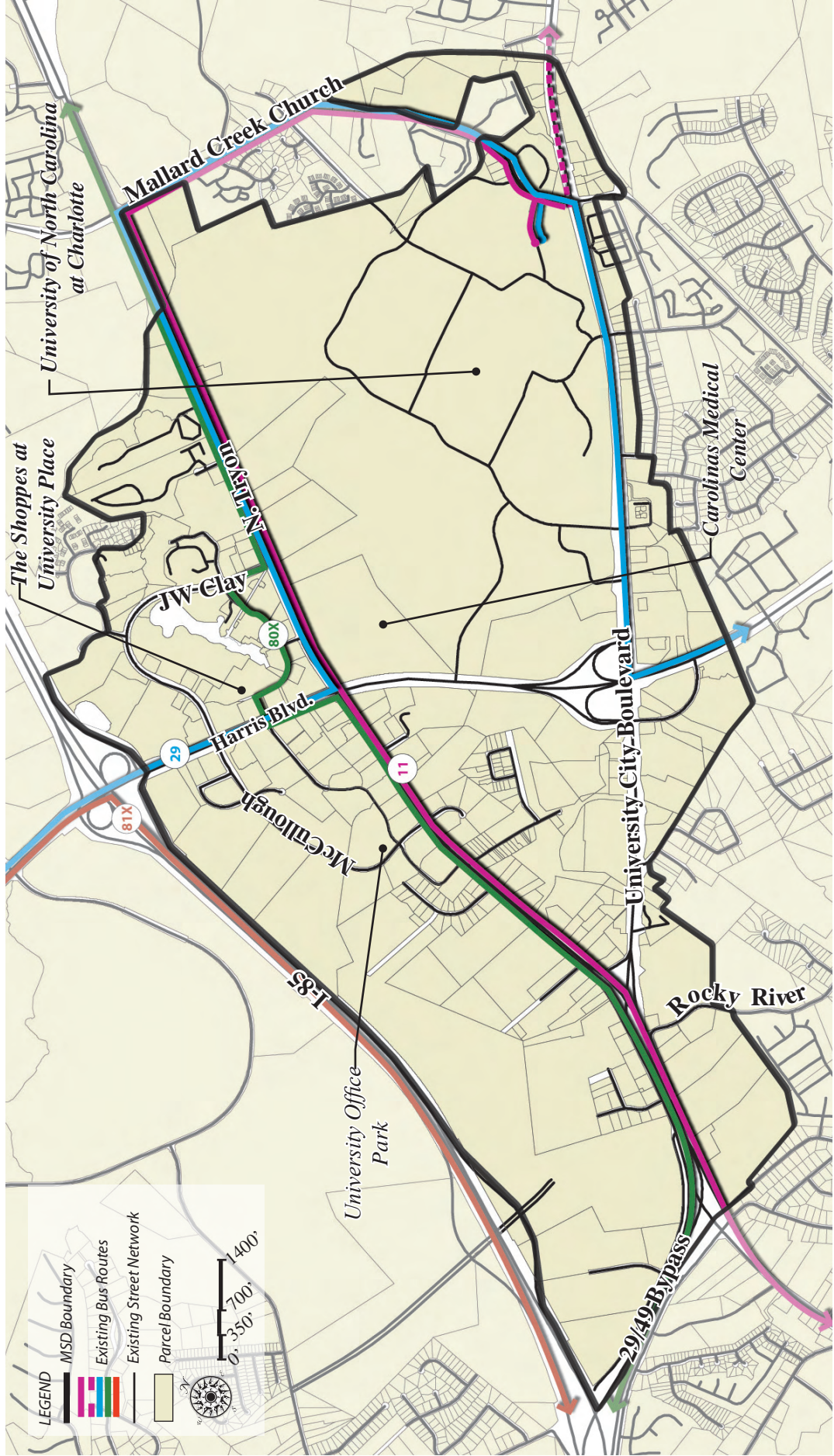
The University City MSD lies within the Mallard Creek watershed, including portions of both Mallard and Toby Creek, which traverse the MSD. This watershed meets standards of the Federal Clean Water Act. The major stream and creek pollutants are phosphorus and sediment caused, to a great extent, by urban runoff.

Air Quality

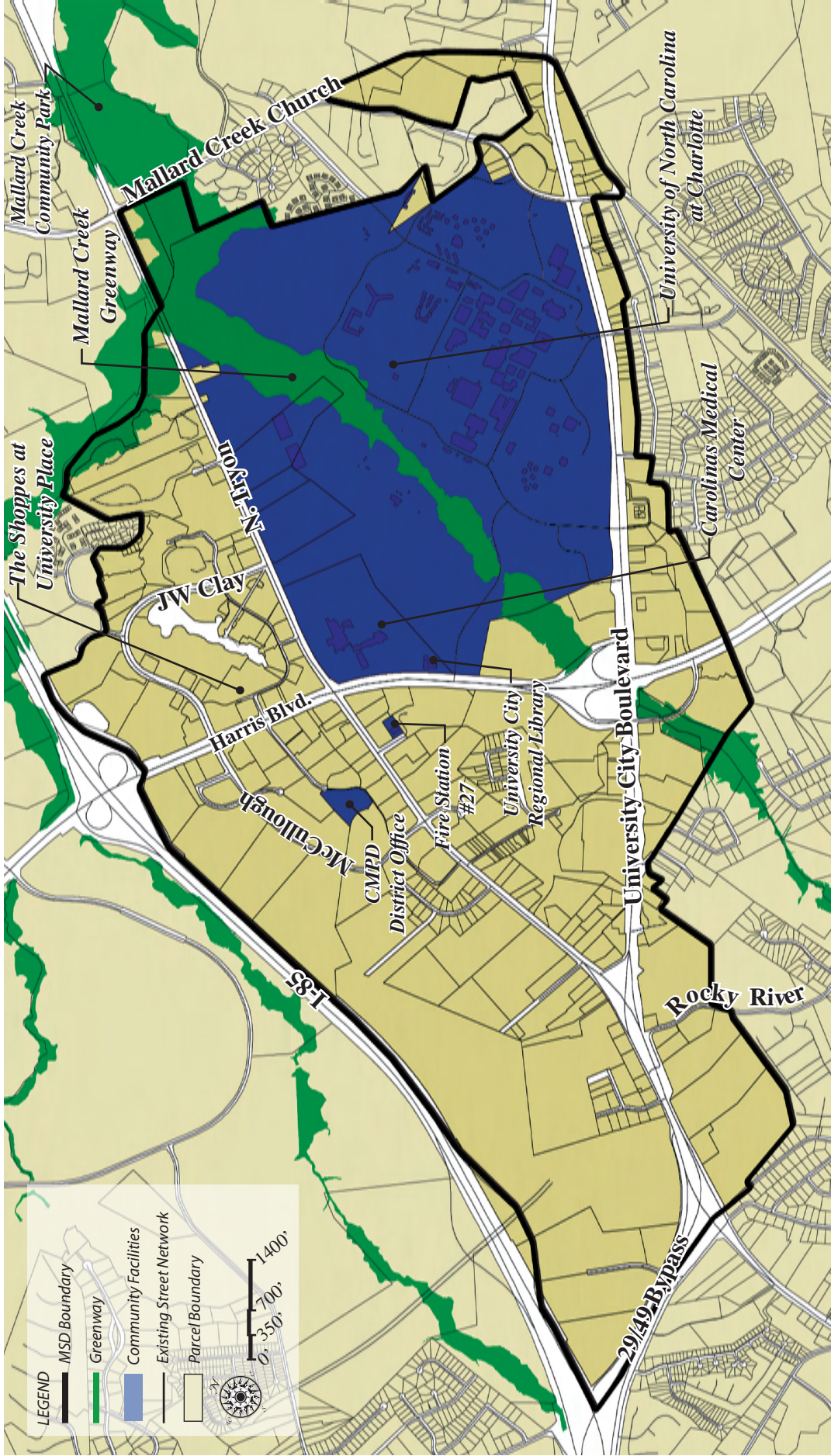
National Ambient Air Quality Standards (NAAQS) have been established by the U.S. Environmental Protection Agency for six air pollutants. Collectively, these air pollutants are known as the criteria air pollutants. The Mecklenburg County Air Quality (MCAQ) conducts monitoring for the six criteria air pollutants that threaten public health and welfare. Ozone and fine particulate matter (PM_{2.5}) pollution are the current concerns for Mecklenburg County.

The goal is to have the ozone at or below 84 parts per billion (ppb). The 8-hour ozone data for Mecklenburg County from 2001 through 2006 for the monitors nearest to the University area indicate the value used to determine compliance with the NAAQS decreased from an average of 97 ppb in 2003 to 87 ppb in 2005, but it went up slightly in 2006 to an average of 88 ppb.

MAP #6-CURRENT TRANSPORTATION NETWORK



MAP #7-EXISTING COMMUNITY FACILITIES



ISSUES AND OPPORTUNITIES

Through the various planning and public input processes that have taken place in University City in recent years, key planning issues and opportunities have been identified as follows:

Strengths of University City

- ***Strong economic “anchors”*** - Big economic generators include the CMC-University Hospital, UNC-Charlotte and the Shoppes at University Place.
- ***Excellent regional access and proximity to Uptown*** - The University City MSD is located adjacent to the I-85 corridor and has two exits within the MSD. In addition, I-485 is located within three miles of University City.
- ***Committed Infrastructure Investment*** - Several large property owners are willing to work towards providing key locations within the MSD area.
- ***Vacant Land*** - Access to approximately 300 acres of vacant land will be opened up with the elimination of the US29/49 Bypass and construction of an at-grade intersection at this location.

Weaknesses of University City

- ***Lack of street network*** - Reliance on three main arteries for vehicular circulation and the limited number of collector streets make circulation within the MSD difficult.
- ***Condition of North Tryon*** - The current design of North Tryon Street is hostile to pedestrians, cyclists and motorists due to its current layout and width, traffic volume and speeds and the lack of sidewalks and street crossing.

Opportunities to Build Upon

- ***29/49 Weave Completion*** - Construction on the extension of City Boulevard (Graham Street Connector) is scheduled to be completed by 2012. This extension will eliminate the problematic “weave” where US29 and City Boulevard currently merge. The proposed redesign of the “weave” will eliminate the high-speed ramps and provide for an at-grade intersection. Once this new intersection is in place, a road network can be established to provide access to more than 300 acres of vacant land. Major property owners along the “weave” have expressed a willingness to build a portion of the street network in this area.
- ***Strong Property Owner Interest in the Redevelopment of University Place*** - The owner of The Shoppes at University Place has discussed plans for the redevelopment of the area along the Southwest corner of J.W. Clay Blvd. and North Tryon/US29. The possibility of fronting buildings along the North Tryon Corridor and incorporating other urban design elements that will help create a more urban, pedestrian-oriented center is being considered.

- ***UNC Charlotte Address on Tryon*** - UNC Charlotte is expanding its campus as well as its Research Institute along North Tryon Street. This will place a significant student and employee population within walking distance of University Place and the proposed University City light rail station at J.W. Clay Boulevard and North Tryon Street.
- ***Northeast Light Rail Transit (LRT) Corridor*** - The Draft Environmental Impact Statement (DEIS) on the Northeast Corridor LRT and the corresponding Station Area Planning Concepts will be completed in 2007. Five of the proposed 14 stations are located within the MSD and will be major catalysts for transit-oriented development/redevelopment.

Threats to Address

- ***Current Land Development Regulations*** - The current zoning regulations and the adopted future land use (1996 Northeast District Plan) in the MSD are not supportive of transit-oriented development future.



VISION, GOALS AND PLAN RECOMMENDATIONS

VISION AND GOALS

University City will be **transformed** into a distinct and **vibrant people-oriented place** that is **urban in scale** and design. It will be **energized** by the highly successful Northeast Corridor Light Rail Transit line that will operate along the North Tryon Corridor and will be a **popular** and **accessible destination** for people of all ages, income levels and backgrounds, **offering diverse** and unique **choices** for living, shopping, working, learning and **enjoying** leisure **time**.

Achieving this vision will come about by:

Goal 1:

Promoting and designing the Northeast light rail corridor as a premier public space and gateway in University City;

Goal 2:

Identifying opportunities for and encouraging the development of lively, well designed transit station areas in which a variety of urban housing types, retail and employment uses and public open spaces are integrated to create distinct, compact and “walkable” communities;

Goal 3:

Encouraging development/redevelopment of areas at the edges of the MSD that is compatible with transit-supportive development, pedestrian-oriented and blends with adjacent uses;

Goal 4:

Improving connectivity throughout University City to reduce reliance on the major thoroughfares, accommodate transit riders, encourage walking and bicycling and better connect existing institutions with the rest of the community;

Goal 5:

Creating a network of public open spaces, parks and greenways to help define the public realm; and

Goal 6:

Supporting a healthy natural environment.

Plan Recommendations

Overview

The Northeast light rail corridor will be a major driving force of change in University City. Five transit stations will be built along the road corridor in the MSD, with one of the stations located on the UNC Charlotte Campus. In addition, a sixth light rail station will be located near the intersection of Mallard Creek Church Road, just beyond the boundary of the MSD. The final LRT alignment and specific station area locations will not be determined until completion of the National Environmental Policy Act (NEPA) process.

This plan establishes transit station areas within a ½ mile walking distance of each of the transit stations, with the station serving as the heart of development activity. As shown on Map 8, all the station areas will straddle North Tryon Street, with the exception of the campus station, creating the opportunity to establish the corridor as a grand, pedestrian-oriented boulevard that will functionally and visually bridge both sides of the transit station areas along the corridor. Transit-supportive development accommodated by a variety of transportation services and other public facilities is recommended within the station areas in accordance with the Transit Station Area Principles included in the City's General Development Policies. These principles, which

are summarized in Figure 5, focus on land use and development, mobility and community design. In accordance with these principles, the highest intensity, pedestrian-oriented development should occur in the areas closest to the transit stations.

The majority of land within the MSD is contained within the transit station areas and therefore, is the primary focus of this plan's recommendations. While not included within the official station area boundaries, the remaining edge areas of the MSD will be greatly influenced by development activity within the station areas. Recommendations for these edge areas complement and connect with those proposed for the station areas. UNC Charlotte is conducting a campus master plan that will provide specifics for the future expansion of the university and development of the campus transit station area.

The proposed land use and transportation network for the entire MSD is shown on Maps 9 and 10 and conceptually shown on Map 11. Specific land use, transportation and park and open space recommendations for each station area and the MSD edge areas follow.

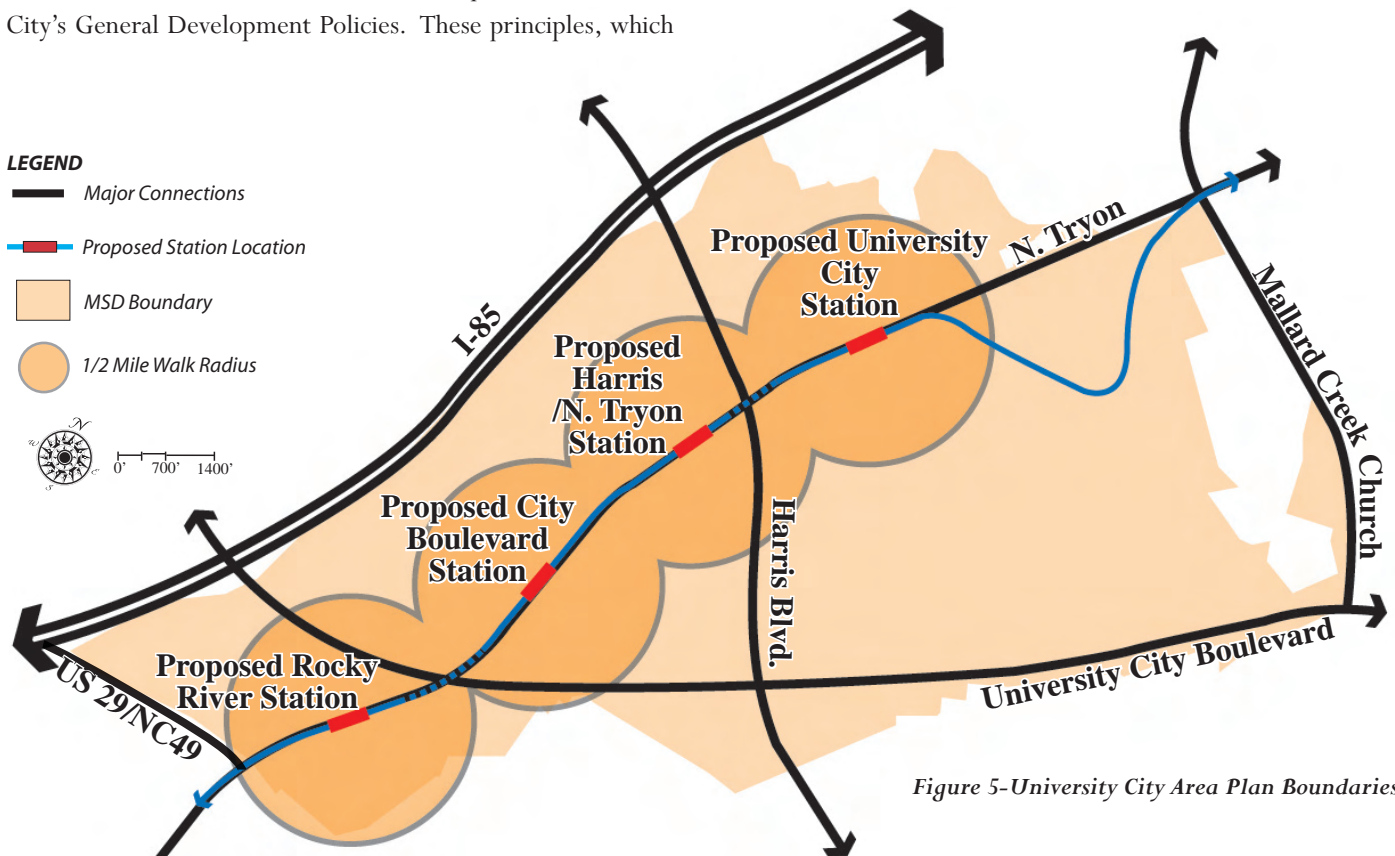
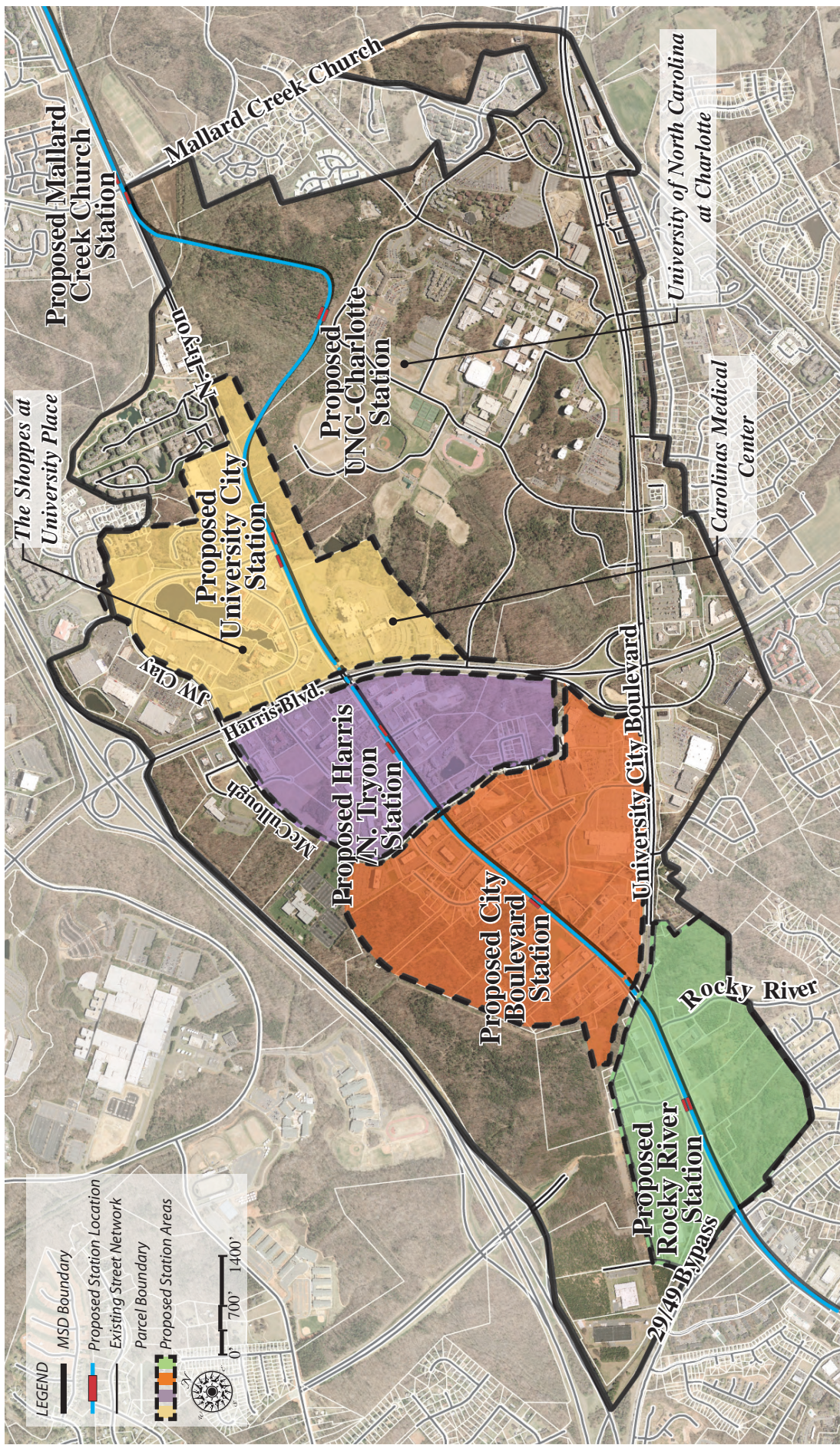
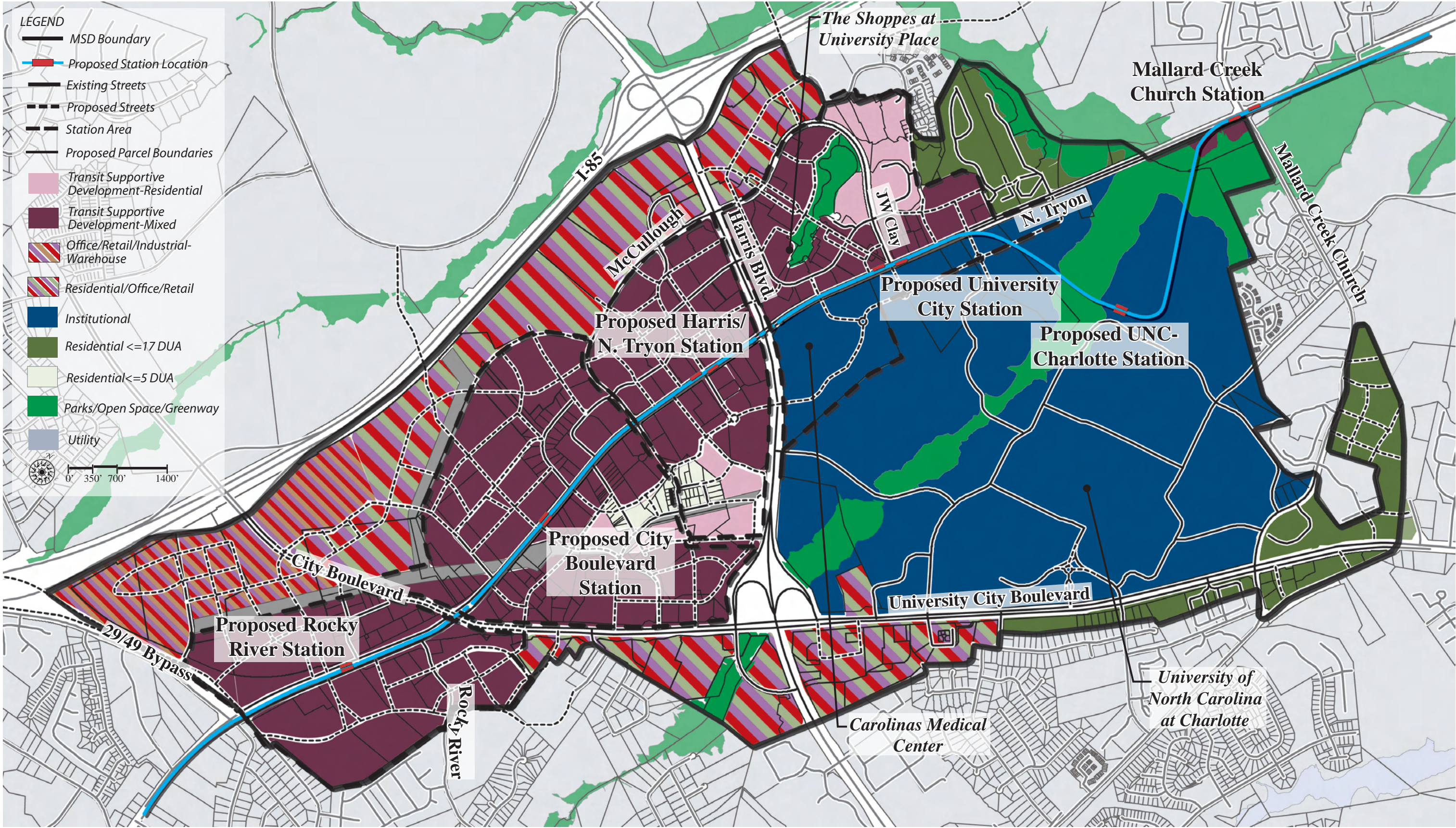


Figure 5-University City Area Plan Boundaries

MAP #8-THE STUDY AREA AND STATION BOUNDARIES



MAP #9-FUTURE LAND USE

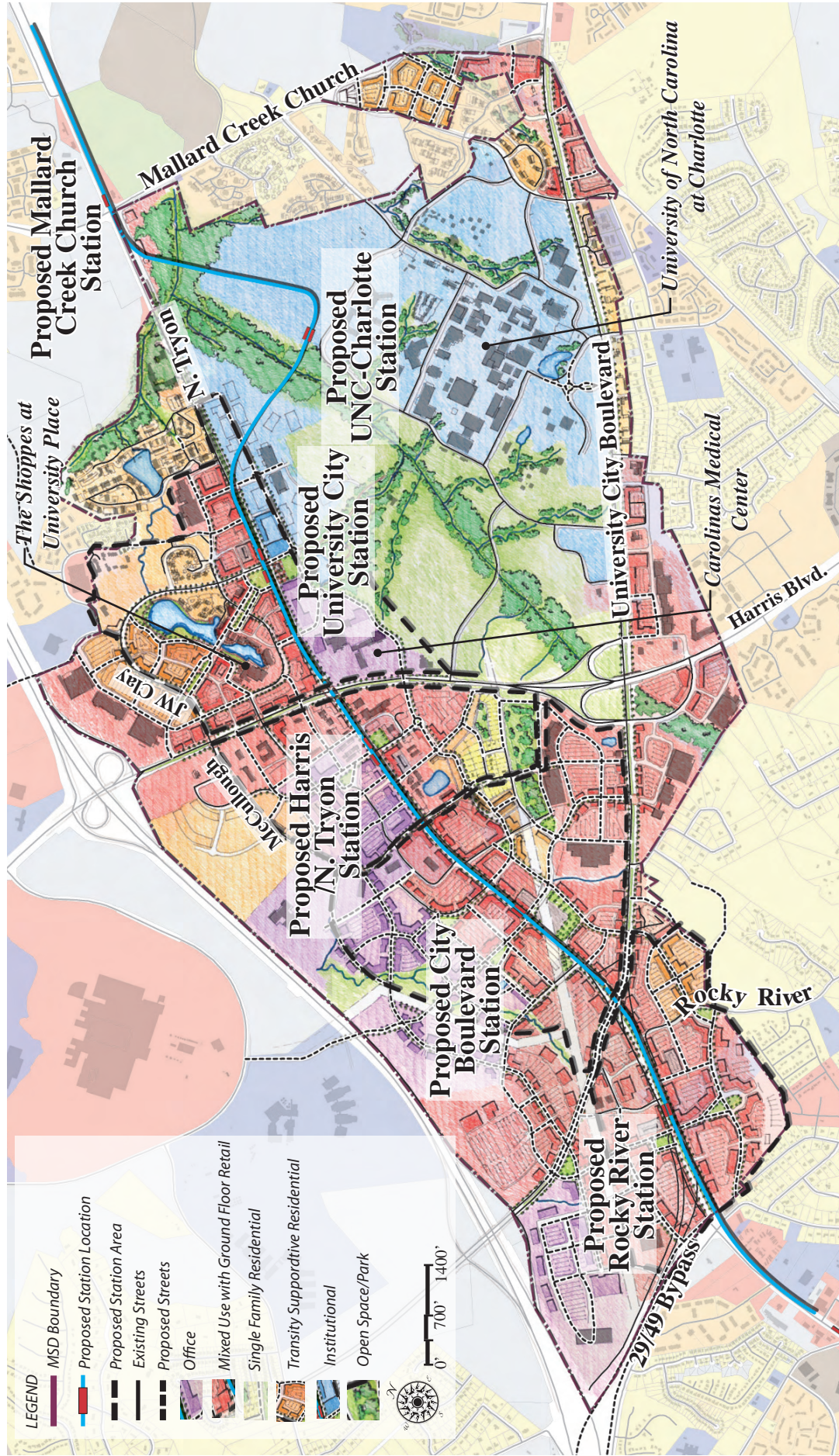


MAP #10- PROPOSED STREET NETWORK*



* This is a conceptual graphic representation of how the University City Area's street network could develop.

MAP #11- PUTTING IT ALL TOGETHER: A POTENTIAL DEVELOPMENT SCENARIO*



* This Illustrative is a conceptual graphic representation of how the University City Area could develop.

Figure 6: Summary of Transit Station Area Principles

The complete text of the Transit Station Area Principles was adopted by City Council in 2001 and can be found in the first chapter of the General Development Policies.

Land Use

- **Encourage highest density uses** (15-20/du/ 0.5-0.75 FAR) closest to the transit station and transition to lower densities adjacent to existing single family neighborhoods.
- **Encourage a mixture of residential, office, service-oriented retail and civic uses**, either through mixed or multi-use development.
- **Disallow automobile-dependent uses**, such as automobile sales lots, car washes and drive-thru windows.
- **Consider special traffic generators-** such as cultural, educational, entertainment or recreation uses-to locate in station areas.
- **Preserve existing stable neighborhoods.**
- **Encourage a mixture of housing types**, including workforce/affordable housing.

Community Design

- **Orient buildings to front on public streets or open spaces.**
- **Minimize setbacks and locate parking to rear.**
- **Provide windows and doors at street level** and minimize walking distance to entrances.
- **Screen unsightly elements**, such as dumpsters, loading docks, service entrances and outdoor storage from the transitway.
- Include **active uses on the ground floor** of parking structures.
- Include streetscape elements such as trees, pedestrian lighting and benches to **encourage pedestrian activity.**
- **Place utilities under ground**, wherever possible.
- **Establish public open spaces** that act as development catalysts and serve as focal points around transit stations.
- **Design open spaces to be centers of activity** that include items such as benches, fountains and public art.

Mobility

- **Create a multi-modal environment** that emphasizes pedestrians, bicyclists and vehicles.
- Provide an **extensive pedestrian system** throughout the station area to minimize walking distances, connect to neighborhoods, accommodate large groups of people, and eliminate sidewalk gaps.
- **Design the pedestrian system to be accessible, safe and attractive**, by using planting strips, street trees, on-street parking and bicycle lanes.
- **Develop an interconnected street network** with maximum block lengths of 400': provide mid-block crossings if blocks are larger.
- **Establish parking maximums**, rather than minimums.
- **Minimize surface parking** and encourage shared parking facilities.

STATION AREA RECOMMENDATIONS

Rocky River Road Station Area

Highlights

- Locate the transit station on North Tryon Street midway between the proposed 29 Bypass and the proposed City Boulevard extension.
- Create a new street network in the station area, including a new internal street network that connects with the City Boulevard extension.
- Create a pedestrian-oriented “main street” adjacent to the transit station that extends east and west of North Tryon.
- Promote transit-supportive mixed uses throughout the station area and transit-supportive residential adjacent to existing single family neighborhoods off Rocky River Road.
- Locate a significant CATS park-and-ride station on the west side of North Tryon near the transit station.
- Provide access to Rocky River Road and existing neighborhoods to the south.

Land Use Recommendations

- **West Side of North Tryon:** Develop with transit-supportive mixed uses (employment, retail and residential). Higher intensity pedestrian-oriented office and/or residential uses with ground floor retail are proposed along this area’s new “main street” and generally within ½ mile walking distance of the station. In addition, Charlotte Area Transit System (CATS) plans to locate an LRT station and park and ride lot/garage in this area. This station/garage should be well designed and integrated with surrounding uses.
- **East Side of North Tryon:** Develop with transit supportive mixed uses, with the highest intensity pedestrian-oriented uses with ground floor retail located along the main street and within ½ mile walking distance of the station, transitioning to predominantly residential uses next to the existing single family neighborhoods off Rocky River Road and the vacant residentially zoned land located closer to University City Boulevard.

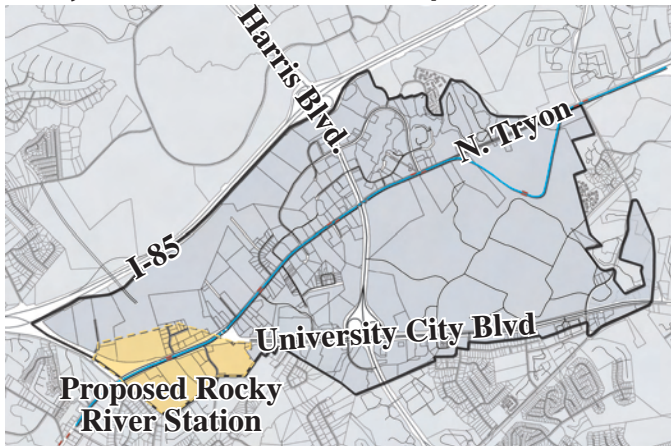
Transportation Recommendations

- Develop an **internal, interconnected network of local streets** to provide connectivity throughout this station area, including:
 - A **new street located adjacent to the transit station** that would extend on both sides of North Tryon Street and serve as the station area’s retail and pedestrian “main street.” It would connect with the proposed City Boulevard connection near I-85.
 - **Local streets running parallel to North Tryon** Street to connect the US 29/I-85 Bypass with the future City Boulevard extension.
 - A **number of local streets on the west and east sides of North Tryon Street** that provide internal connections within the station area and connections to adjacent station areas.
- Create **street blocks** that are no longer than 500 feet with a maximum block perimeter of 1,800 feet.

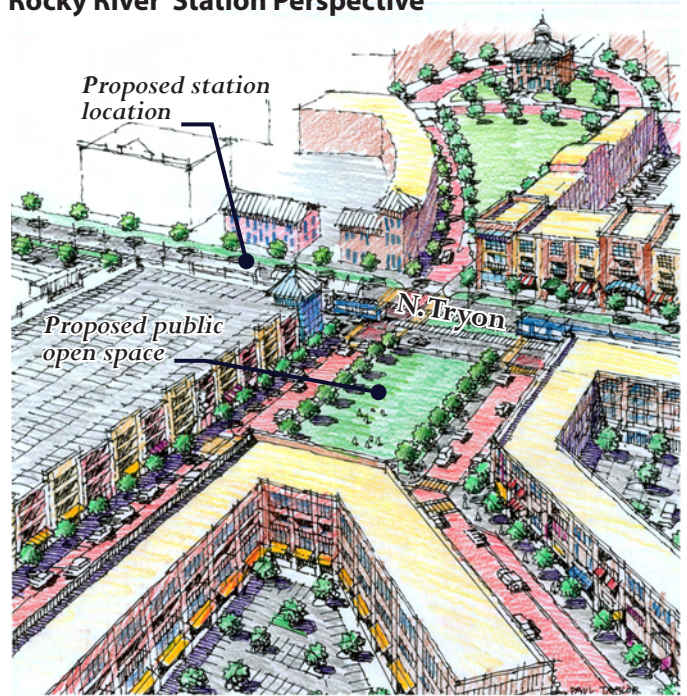
Parks/Open Space Recommendations

- **Create public/private open spaces or small urban parks** (1/2-5 acres) adjacent to the transit station, along the station area’s “main street” and within the residential area along Rocky River Road.

Rocky River Station Location Map



Rocky River Station Perspective



This sketch represents how a potential build-out of the Rocky River Station area could occur.

Rocky River Station Future Land Use Map

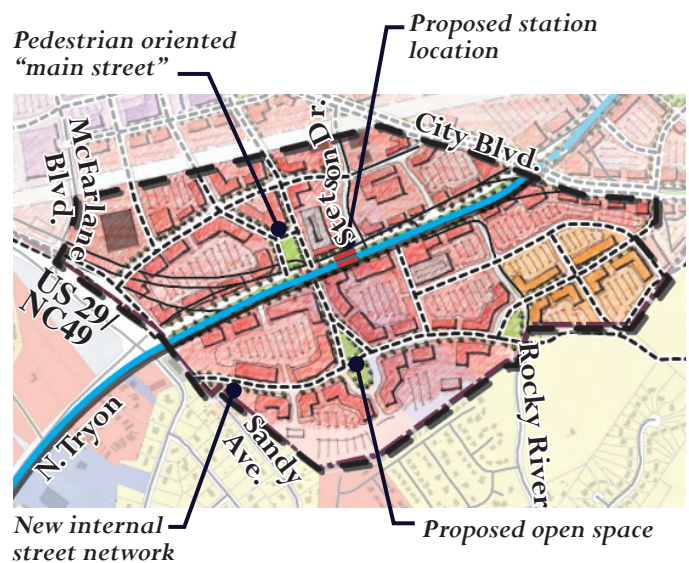


LEGEND

- Proposed Station Areas
- Transit Supportive Development-Mixed
- Proposed Station Location
- Existing Streets
- Proposed Streets

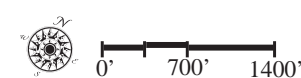


Rocky River Station Illustrative



LEGEND

- Proposed Station Areas
- Open Space/Park
- Proposed Station Location
- Mixed-use
- New Streets
- Transit Supportive Residential
- Existing Streets



City Boulevard Station Area

Highlights

- Locate the LRT station near Shopping Center Drive and North Tryon Street.
- Establish Shopping Center Drive as the station area's pedestrian-oriented main street and extend it west across I-85 to provide access to prime development sites on the west side of North Tryon and to create an alternative to Harris Boulevard.
- Promote transit supportive mixed-uses within ½ mile walking distance of the transit station on both sides of North Tryon. Transition to a more employment oriented mix along the western edge of the station area.
- Consider locating a district park east of North Tryon and establishing a new overland greenway on the western edge of the station area that will connect to the future Doby Creek greenway west of I-85.

Land Use Recommendations

- **West Side of North Tryon:** Develop/redevelop with transit-supportive mixed uses with employment uses an important component of the mix along the western edge of the station area. The highest intensity uses with ground-floor retail should develop along Shopping Center Drive, the station area's main street.
- **East Side of North Tryon:** Develop/redevelop with transit supportive mixed uses along North Tryon and City Boulevard, with the highest intensity uses and ground floor retail along Shopping Center Drive. The existing Hampton Park neighborhood should be preserved as residential up to 5 DUA; however, with full consensus of neighborhood property owners, the neighborhood should be considered for redevelopment to transit supportive residential. The area surrounding Hampton Park to the south and east should develop/redevelop with transit supportive residential uses.

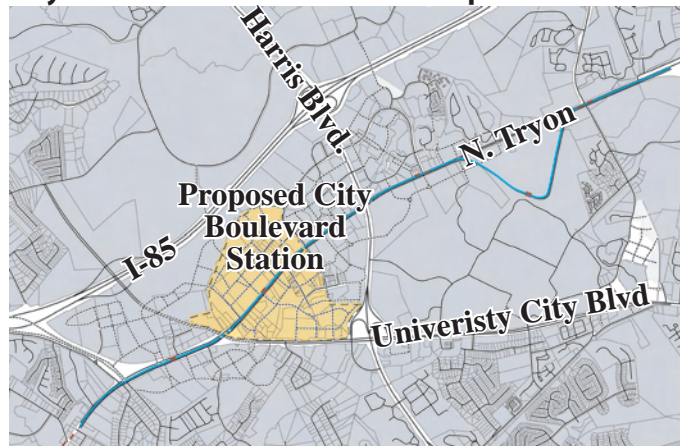
Transportation Recommendations

- Develop an internal, **interconnected network of local streets** to provide connectivity throughout this station area, including:
 - **The extension of Shopping Center Drive**, the station area's main street, on the west side of North Tryon. This street extension should continue west of the station area over I-85 to connect with IBM drive near the CMS campus, providing a much needed local alternative to Harris Boulevard.
 - **The extension of McCullough Drive** on the western edge of the station area to the future City Boulevard extension. McCullough Drive will provide an important alternative to North Tryon Street.
 - **A number of local roads on the west and east sides of North Tryon** that provide internal connections within the station area and connections to adjacent station areas.
- Create **street blocks** that are no longer than 500 feet with a maximum block perimeter of 1,800 feet.

Parks/Open Space Recommendations

- **Create public/private open spaces or small urban parks** (½-5 acres) adjacent to the transit station, along the station area's "main street" and in other appropriate locations in the station area.
- **Consider creating a district park**, or a portion of a district park, in this station area.
- **Consider establishing a new overland greenway along the western edge of the station area** that would go under I-85 and connect with the future Doby Creek Greenway that will run parallel to I-85 on the west side of the interstate.

City Boulevard Station Location Map

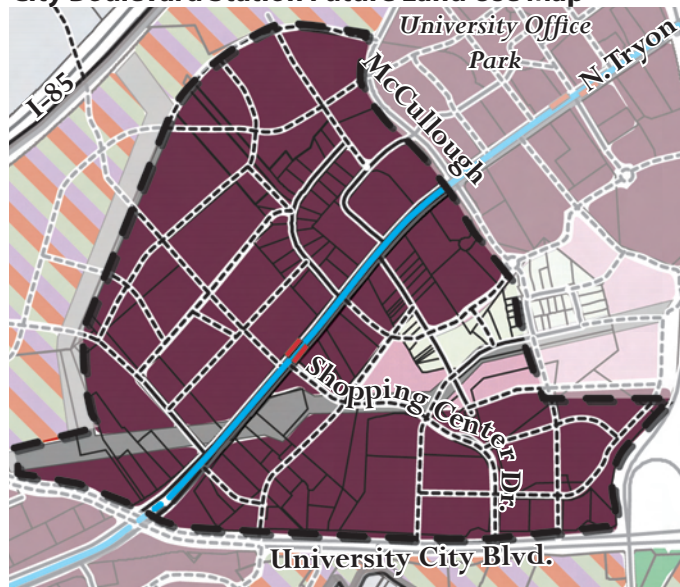


City Boulevard Station Perspective



This sketch represents how a potential build-out of the City Boulevard Station area could occur.

City Boulevard Station Future Land Use Map

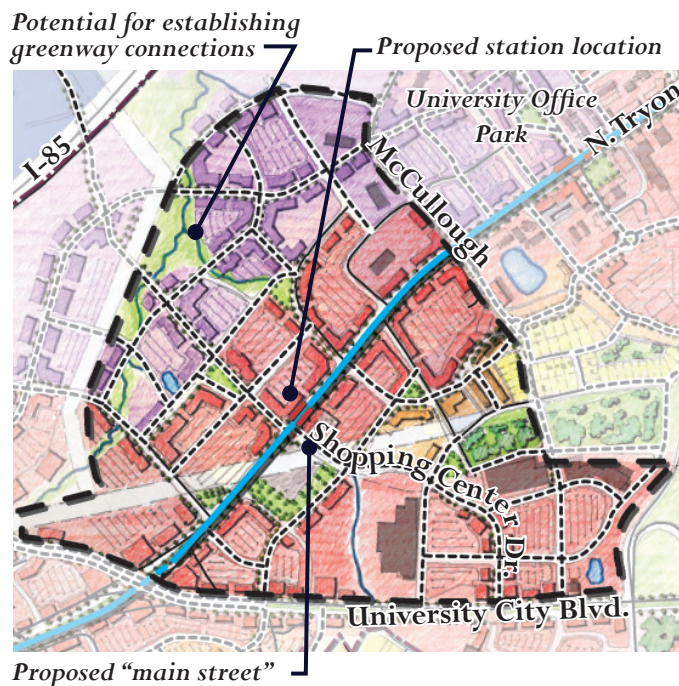


LEGEND

- Proposed Station Areas
- Proposed Station Location
- Existing Streets
- Proposed Streets
- Transit Supportive Development-Residential
- Transit Supportive Development-Mixed
- Residential <= 5 DUA
- Utility

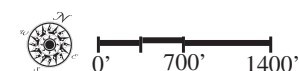


City Boulevard Station Illustrative



LEGEND

- Proposed Station Areas
- Proposed Station Location
- New Streets
- Existing Streets
- Open Space/Park
- Mixed-use
- Residential
- Transit Supportive Residential
- Office



Harris/North Tryon Station Area

Highlights

- Locate the LRT Station at the intersection of Ken Hoffman Drive and North Tryon Street.
- Establish Ken Hoffman Drive as the station area's pedestrian-oriented main street, extending it west of North Tryon Street to University Executive Park Drive.
- Promote transit-supportive mixed use development along North Tryon Street on both sides of the station area transitioning to a more employment oriented mix along Ken Hoffman Drive on the west side of the station area.
- Consider creating a district park east of North Tryon Street.

Land Use Recommendations

- **West Side of North Tryon:** Develop/redevelop with transit supportive mixed uses with a concentration of pedestrian-oriented higher intensity employment uses an especially important component of the mix along Ken Hoffman Drive. Over time, existing suburban-scale office developments should be considered for redevelopment with higher intensity employment uses.
- **East Side of North Tryon:** Develop/redevelop with transit supportive mixed uses along North Tryon and Harris Boulevard. Highest intensity uses including ground-floor retail should occur along Ken Hoffman Drive and elsewhere within ½ mile walking distance of the transit station. The existing Hampton Park neighborhood should be preserved for residential development up to 5 DUA; however, with full consensus of neighborhood property owners, the neighborhood should be considered for redevelopment to transit supportive residential. The area surrounding Hampton Park to the north and east should develop/redevelop with transit supportive residential uses.

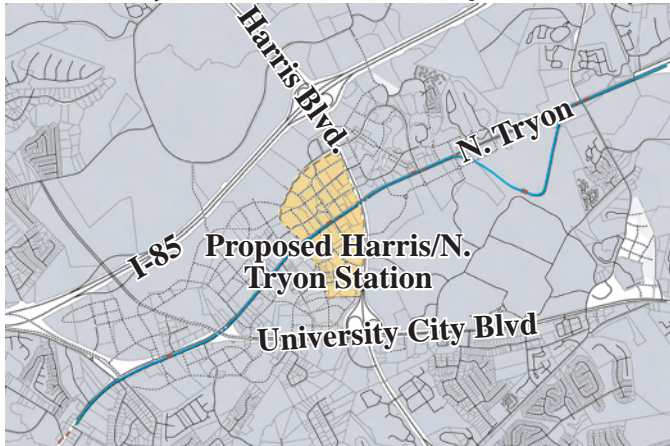
Transportation Recommendations

- Develop an **internal, interconnected network of local streets** to provide connectivity throughout this station area, including:
 - **The extension of Ken Hoffman Drive to Executive Park Drive** on the eastern side of the station area.
 - **A number of local streets on the west and east sides of North Tryon** that provide internal connections within the station area and connections to adjacent station areas.
- Create **street blocks** that are no longer than 500 feet with a maximum block perimeter of 1,800 feet.

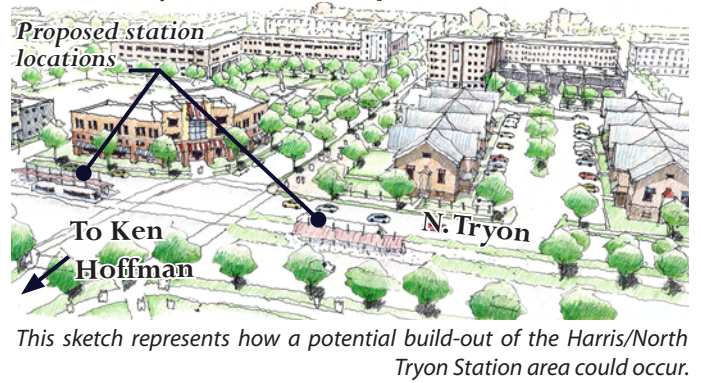
Parks/Open Space Recommendations

- **Create public/private open spaces or small urban parks** (1/2-5 acres) adjacent to the transit station, along the station area's "main street" and in other appropriate locations in the station area.
- **Consider creating a district park**, or a portion of a district park, in this station area.

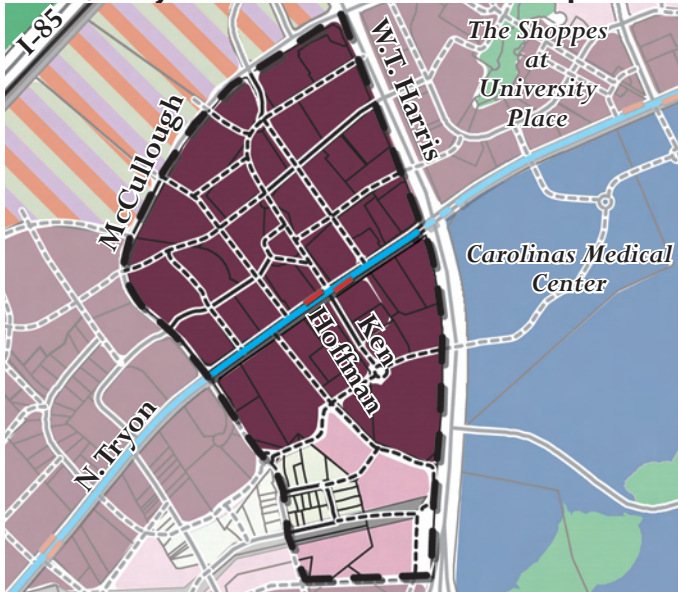
Harris/N. Tryon Station Location Map



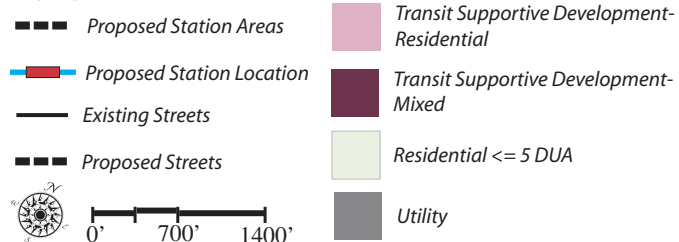
Harris/N. Tryon Station Perspective



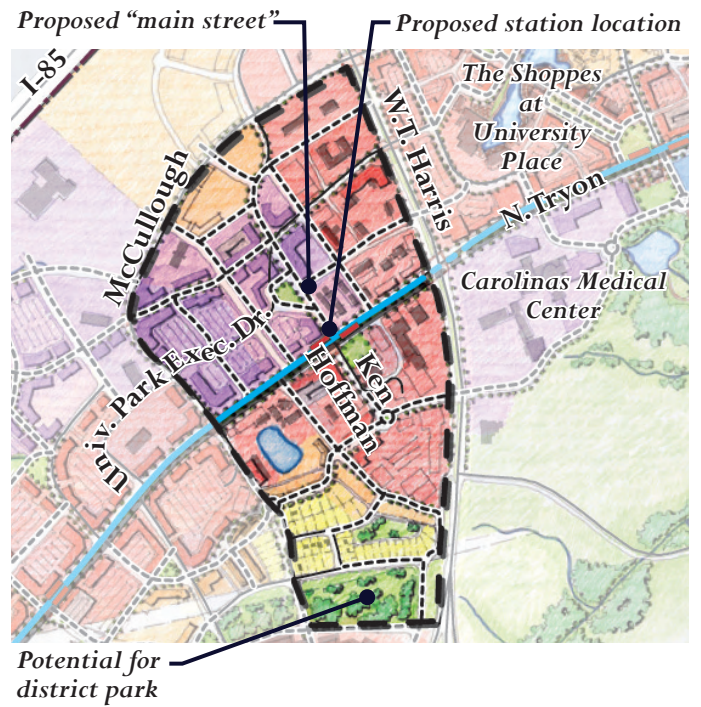
Harris/N. Tryon Station Future Land Use Map



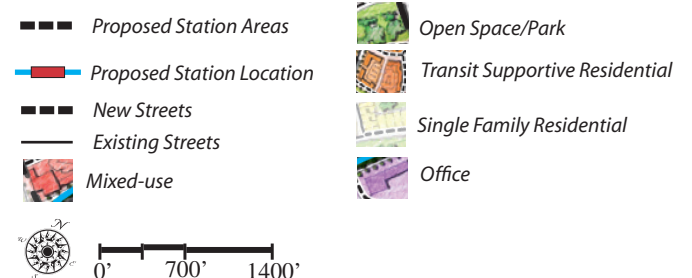
LEGEND



Harris/N. Tryon Station Illustrative



LEGEND



University City Station Area

Highlights

- Locate the LRT Station at the intersection of J.W. Clay Blvd. and North Tryon Street.
- Establish J.W. Clay as the station area's main street, extending the road to the east side of North Tryon. Attractive urban "entrance parks" should be developed on the east and west sides of the intersection of J.W. Clay and North Tryon.
- Promote mixed use development with a concentration of pedestrian-oriented uses with ground floor retail west of North Tryon and expansion/intensification of institutional uses east of North Tryon.
- Connect J.W. Clay to the hospital loop road and create a signalized intersection with Harris Boulevard.
- Relocate the library to the west side of J.W. Clay. (A land swap with the hospital would be required.)
- Create an interconnected street network through University Place to enhance connectivity, encourage infill development and elevate University Places' role as University City's Town Center.

Land Use Recommendations

- **West Side of North Tryon:** Redevelop or redesign a portion of University Place and other properties fronting on North Tryon to encourage more intensive infill development that includes a mix of pedestrian-oriented uses. Such development should include residential units with ground-floor retail; office uses should also be considered. Over time, consideration should also be given to redeveloping some of the existing multi-family housing along J.W. Clay Boulevard with higher density transit-supportive housing (minimum of 20 dwelling units per acre.)
- **East Side of North Tryon:** Institutional uses should remain here with expansion of the hospital and pedestrian-oriented intensification of the Charlotte Research Institute Campus focused on the transit station and the extension of J.W. Clay. Strong consideration should be given to relocating the library to the J.W. Clay extension adjacent to the University City Station area where it would be more accessible to pedestrians and better integrated with other uses.

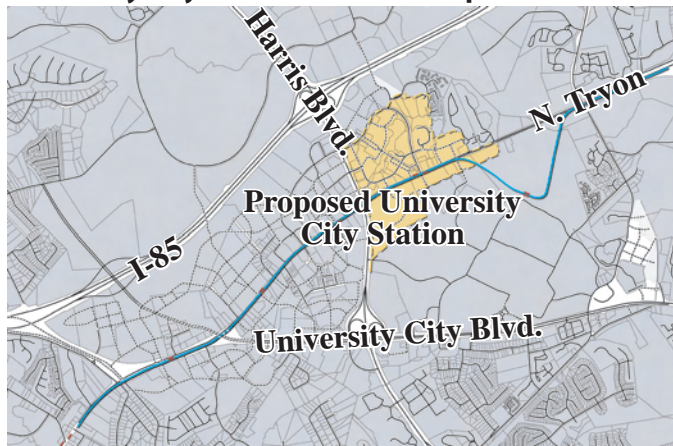
Transportation Recommendations

- Develop an **internal, interconnected network of local streets** to provide connectivity throughout this station area, including:
 - **The extension of J.W. Clay Boulevard across North Tryon** where it would connect to a new loop road that crosses the hospital property and intersects with Harris Boulevard at a signalized intersection.
 - **The extension of Doug Mayes Place west over I-85 to Louis Rose Place**
- Create **street blocks** that are no longer than 500 feet with a maximum block perimeter of 1,800 feet.

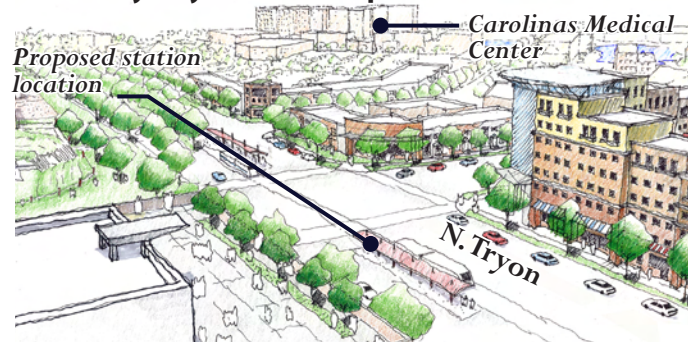
Parks/Open Space Recommendations

- Establish **"entrance parks" on both sides of the J.W. Clay/North Tryon intersection** to serve as an attractive focal point at this major pedestrian crossing. This is an ideal location for public art that would help showcase the entrances to the campus and to University Place.
- **Provide a connection from the Toby Creek Greenway on the UNC Charlotte campus to North Tryon** along the proposed J.W. Clay extension on the east side of North Tryon.
- **Create a greenway along Barton Creek** on the west side of North Tryon that will become an overland connector at J.W. Clay Blvd, cross North Tryon Street and connect to the fitness trails at UNCC and ultimately Toby Creek Greenway.

University City Station Location Map

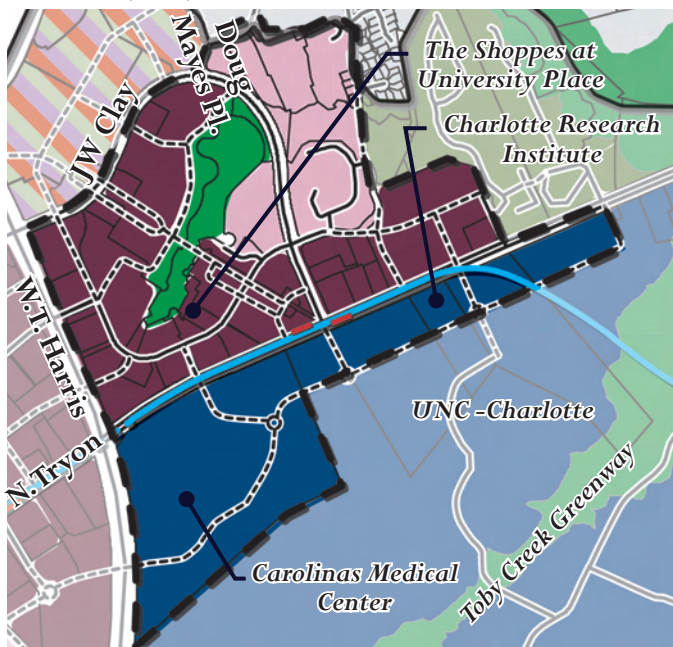


University City Station Perspective



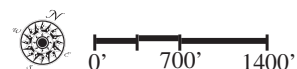
This sketch represents how a potential build-out of the UNC-Charlotte Station area could occur.

University City Station Future Land Use Map

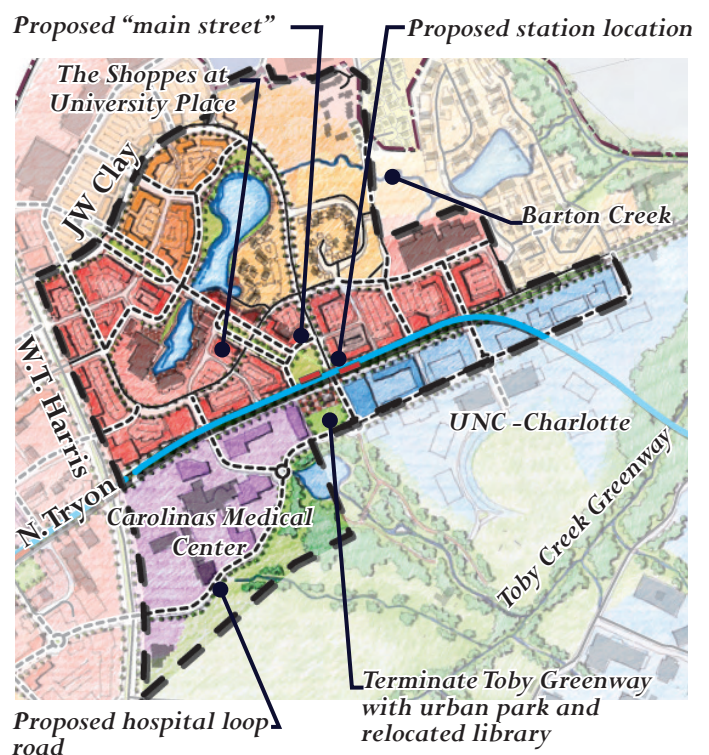


LEGEND

- Proposed Station Areas
- Proposed Station Location
- Existing Streets
- Proposed Streets
- Transit Supportive Development-Residential
- Transit Supportive Development-Mixed
- Institutional
- Parks/Open Space/Greenway

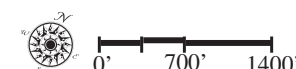


University City Station Illustrative



LEGEND

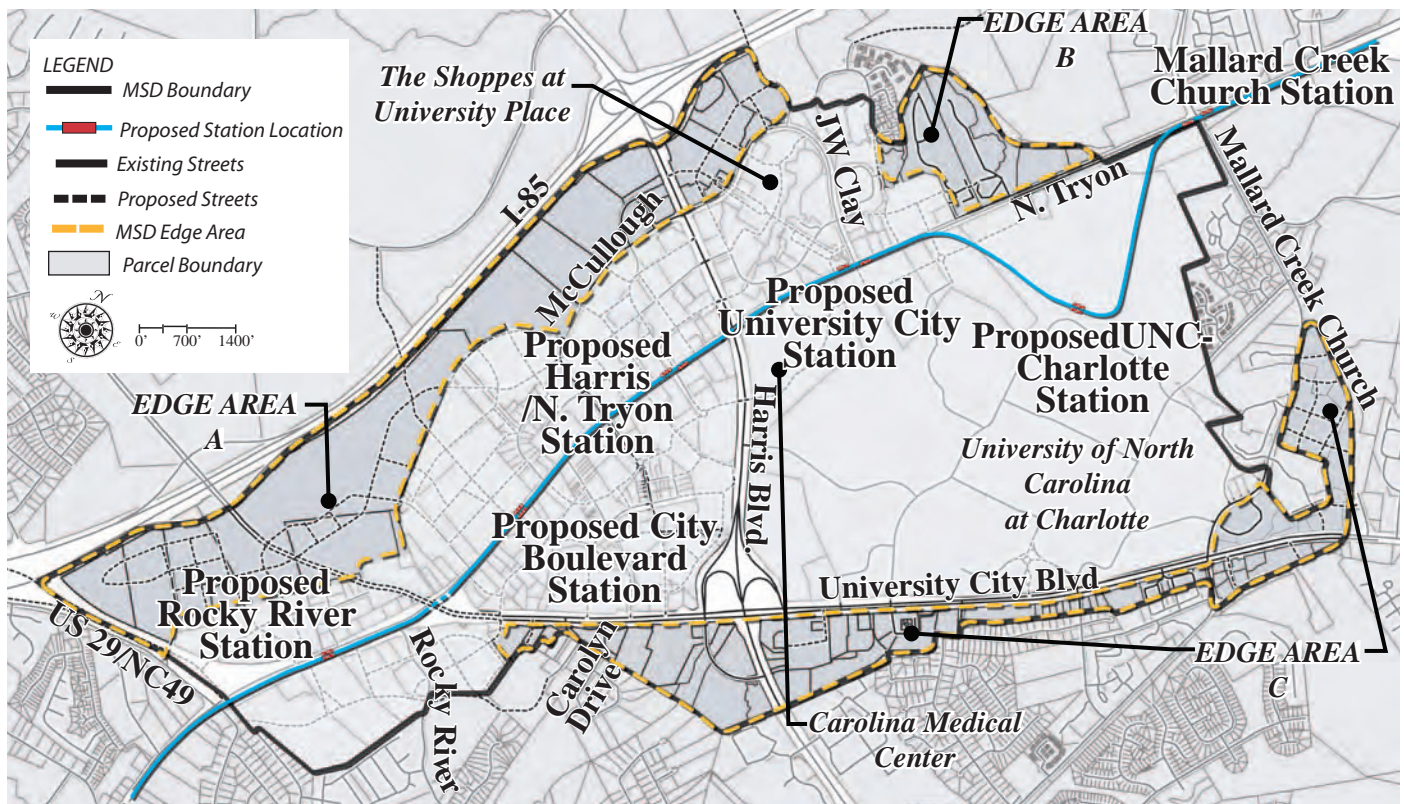
- Proposed Station Areas
- Proposed Station Location
- New Streets
- Existing Streets
- Open Space/Park
- Retail/Commercial
- Residential
- Institutional
- Office



MSD EDGE AREA RECOMMENDATIONS

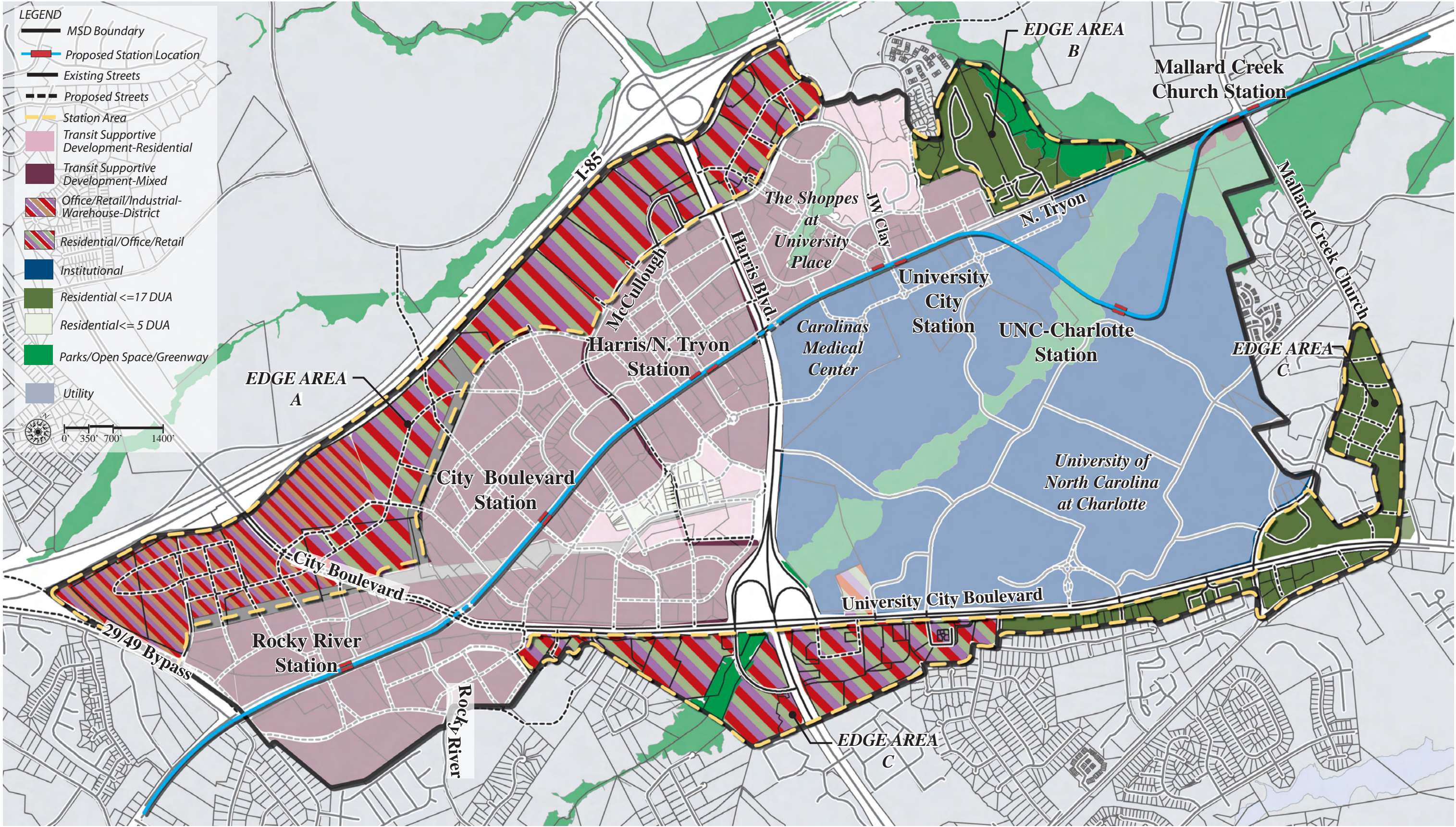
Development along the edges of the University City MSD should complement and connect well with the transit-supportive development planned for the station areas. These edge areas are delineated on Maps 12 and 13 and include:

- **Area A:** The I-85 frontage area, which extends along the entire western boundary of the MSD and is adjacent to the four station areas;
- **Area B:** Residential area on the west side of North Tryon Street between the northern boundary of the University City Transit Station Area and Mallard Creek.
- **Area C:** The City Boulevard edge, which includes the properties on the south side of City Boulevard extending from near Carolyn Drive to East Mallard Creek Church Road and several properties along the south side of East Mallard Creek Church Road;



Map 12 - MSD Edge Areas

MAP #13- MSD EDGE AREAS-FUTURE LAND USE



I-85 Frontage Area (Area A)

Highlights

- This area borders the LRT station areas along North Tryon and Interstate 85. The development pattern for this area will be influenced by both Interstate 85 and light rail transit.
- Although outside the boundaries of the station areas, development in this edge area should be designed to accommodate pedestrians from the area who will be accessing the station area.
- Numerous connections to North Tryon are encouraged. Key connections will include City Boulevard extension, and the Shopping Center Drive and Doug Mayes Place extensions west over I-85.
- A 100-foot buffer should be encouraged along I-85 for properties developing along the interstate.

Land Use Recommendations

- ***I-85/City Boulevard Interchange Area (US 29 Bypass and Large Utility Easement):*** Because of their high visibility along I-85 and proposed new points of access via City Boulevard and the McCullough Drive extension, the properties around this interchange, north of the proposed City Boulevard, should develop with large scale retail and/or office uses. The availability of large tracts of land, visibility and access make this area desirable for regional-serving commercial uses. South of the proposed City Boulevard is appropriate for retail, office, and/or light industrial/warehouse. Site design should encourage a transition between this site and pedestrian-friendly environments of the nearby transit stations. The area immediately to the south of the utility easement and west of the proposed McCullough Drive extension should develop with a high density residential/office and retail mix.
- ***Area North of Utility Easement and West of McCullough Drive to Harris Boulevard:*** A mixture of office, retail and moderate density (up to 17 DUA) residential development is recommended for this area. Auto-oriented uses should be permitted for properties located directly around the Harris Boulevard/I-85 interchange. The remainder of the area should be pedestrian-focused with buildings along the public sidewalk system and parking to the rear.
- ***Between Harris Boulevard and Northern Boundary of MSD:*** The existing shopping center (University Place II) is suburban in scale and form. Over time, the area should redevelop or be redesigned to allow for a more intense mix of retail, office and moderate intensity housing (up to 17 DUA) that is more integrated and pedestrian-oriented.
- Where feasible, a 100-foot buffer should be encouraged along I-85 for properties developing along the interstate.

Area North of University City Transit Station (Area B)

Highlights

- This area borders the LRT station areas along North Tryon Street and the Mallard Creek Greenway.
- The area is influenced by its proximity to the greenway, proposed transit stations and the existing development pattern. Existing moderate density residential development over time should be redesigned or redeveloped to accommodate pedestrians accessing these properties from light rail stations along North Tryon Street.
- Additional connections to University Place and North Tryon Street are encouraged including a new north/south road connecting this area to Mallard Creek Church Road.

Land Use Recommendations

- Predominately residential development (up to 17 DUA), with some smaller-scale retail and/or office development at the northern edge, reflecting the existing land use, is appropriate for this area. However, redevelopment to better integrate uses through pedestrian connections should be considered in the long-term.

City Boulevard/East Mallard Creek Church Road Edge Area (Area C)

Highlights

- This area borders the transit station areas located across City Boulevard. Development in this area will be influenced by both City Boulevard and light rail transit along North Tryon Street.
- Numerous connections to North Tryon Street are encouraged.

Land Use Recommendations

- *Existing Commercial Area on Southeast Side of City Boulevard:* Over time, this currently zoned and developed commercial area should redevelop with an integrated mix of retail, office and moderate density residential (up to 17 DUA) that connects with and transitions well with surrounding residential development.
- *Existing Residential Frontage Properties Across From/Adjacent to UNC Charlotte:* Residential development (up to 17 DUA) should seek reinvestment and remain in this area.
- *Residential Area Between East Mallard Creek Church Road and John Kirk Drive:* Residential development (up to 17 DUA) should remain in this area.

RECOMMENDED INFRASTRUCTURE IMPROVEMENTS

Transportation/Streetscape Design

Establishing North Tryon as a light rail transit corridor will greatly enhance mobility into and throughout University City as well as provide tremendous opportunities for more urban scale development and redevelopment in the district. The preliminary alignment of the dual tract LRT and locations of transit station locations for the Northeast Corridor were approved by the MTC in 2006 as part of the 2030 Corridor System Plan in 2006; this included plans for the approximate three-mile stretch that traverses University City. Refinement of the LRT alignment and station locations will take place over the next several years as the detailed design work for the corridor is completed. Construction of the Northeast LRT is scheduled for completion in 2013.

As part of the design and construction of the LRT along North Tryon Street, major improvements to North Tryon Street will be considered, not only to accommodate the LRT and transit stations, but to serve as the “spine” of the transit-supportive, urban environment envisioned for much of University City. Providing easy access via foot, bicycle, transit and/or motor vehicles is essential for the successful implementation of the urban land use and transportation vision for the district. Such access must be provided throughout the district, not just along North Tryon Street. It will rely on the creation of a new local street network that will provide greater connectivity throughout University City and much needed alternatives to North Tryon, City Boulevard and Harris Boulevard where congestion is already heavy. As proposed, the transportation network shown on Map 10 will consist of existing and future streets designed as part of an urban block system, particularly within transit station areas.

Creating attractive and functional streetscapes that connect the transportation system to the surrounding land uses will also be vitally important. The following are recommendations for future street cross-sections, streetscape development standards and infrastructure improvements to help define the function and visual appeal of the MSD’s proposed streets network. While the street cross-sections define the future character of streets from the face of building to face of building. The streetscape development standards specifically define the character and width of

the area behind the curbs, between buildings and the existing or future curb line, including accommodations for sidewalks and landscaping. When this area plan is approved, the streetscape development standards specified herein will become the official streetscape plan for University City. Therefore, all new development on sites with urban zoning districts, such as MUDD, TOD, TS, PED, NS must be designed in accordance with these standards.

Street Cross -Sections

Based on the City’s Urban Street Design Guidelines (pending adoption), the future cross-sections for all streets located within the University City station areas have been determined including:

- 1) the required building setbacks,
- 2) streetscape, sidewalk and street tree requirements and
- 3) the future character of the streets regarding the number of lanes, bicycle, pedestrian and transit accommodations and provisions for on-street parking.

Cross-sections are designed to accommodate all future roadway users, including motorists, pedestrians and bicyclists.

Figure 7: Street Cross Sections for University City MSD

Street Type	Description/Function	Existing Streets in University City Future Road Network
Main Streets	“Destination” streets that provide access to and function as centers of civic, social and commercial activity. Development along main streets is dense and focused toward the pedestrian realm.	<ul style="list-style-type: none"> • Shopping Center Drive • Ken Hoffman Drive
Avenues	The most common (non-local) street providing access from neighborhoods to commercial areas. Designed to provide a balance of service for all modes of transportation, including accessibility for transit, pedestrians and bicyclists in addition to carrying significant automobile traffic.	<ul style="list-style-type: none"> • McCullough Drive • JW Clay Boulevard • Shopping Center Drive • Jm. Keyes Drive • North Tryon
Parkways	The most auto-oriented of the street types primarily designed to move motor vehicles efficiently from one part of the larger metropolitan area to another and to provide access to major destinations.	<ul style="list-style-type: none"> • Harris Boulevard • City Boulevard extension • University City Boulevard
Local Streets	Provide access to residential, industrial, commercial or mixed-use districts. The majority of Charlotte’s streets are classified as local streets and are typically built through the land development process.	<ul style="list-style-type: none"> • Rocky River Road • Russell Street • Washington Boulevard • Barton Creek Drive • Hampton Church Road • Grove Lake Drive • Clark Drive • Graduate Lane • Tyner Street • Stetson Drive • Olmstead Drive • University Executive Park Dr.

Streetscape Development Standards

Streetscape Development Standards address the required building setbacks, sidewalk widths and street-tree plantings required for new developments and existing development where major changes take place in all areas zoned TOD (Transit-Oriented Development), MUDD (Mixed Use Development), NS (Neighborhood Services) or any other zoning district that refers to “an adopted streetscape plan” or “station area plan”. These standards, also apply in areas where the TS (Transit-Supportive) Overlay or PED (Pedestrian) Overlay Districts have been officially designated. They are designed to complement the proposed land uses for each street and the function of the adjacent street as defined by the Urban Street Design Guidelines.

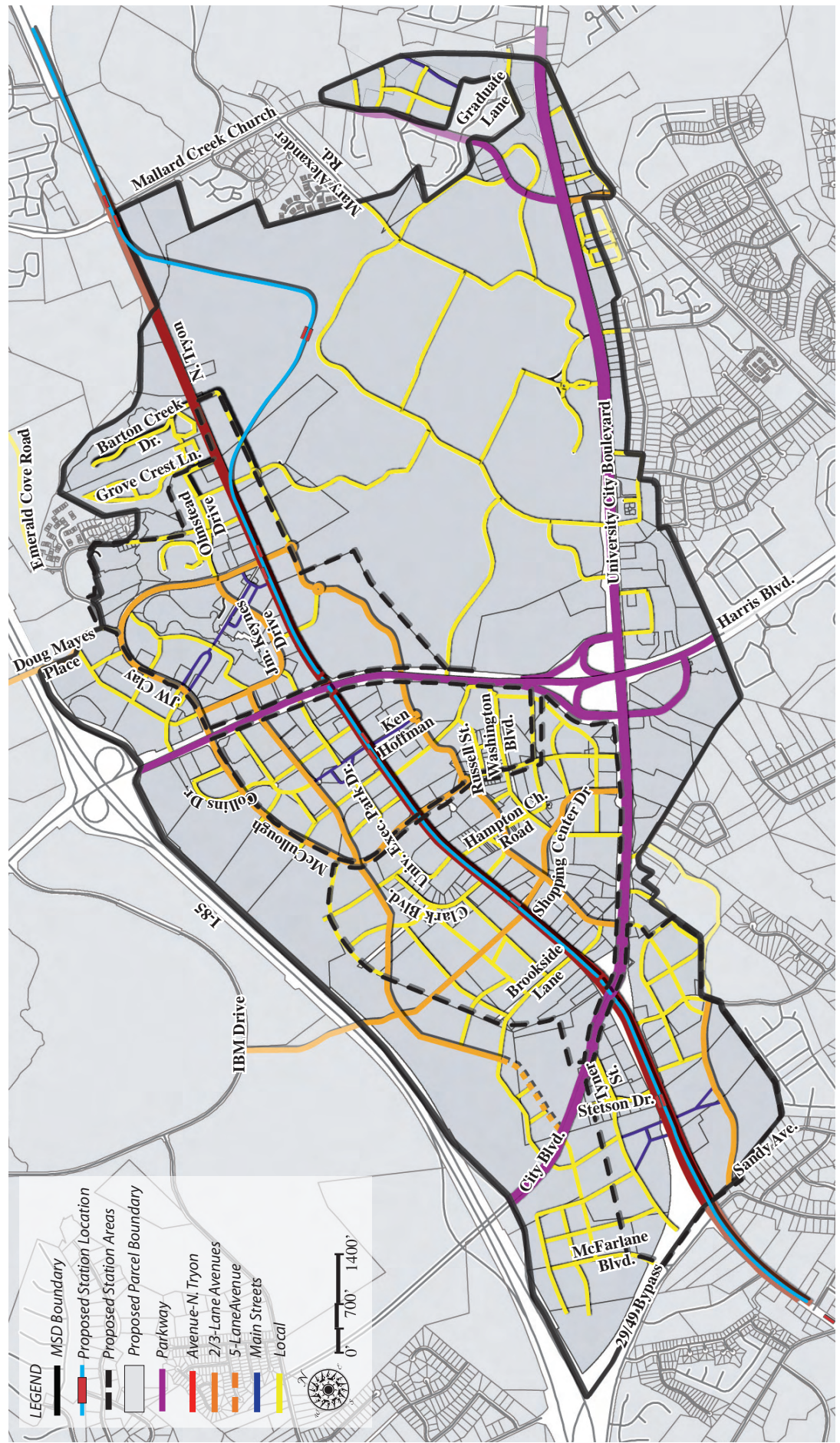
Figure 7 provides a brief description of the street type, the proposed width for each street and the classification of existing streets in the MSD. Map 14 shows the different street types proposed as part of the University City’s proposed future street network and Figures 8-17 illustrates the various proposed street types within the MSD.

Figure 8: Streetscape Development Standards

Street Type	Minimum Building Setback From Back-of-Curb (future)	Sidewalk Width	Planting Strip
Main Streets	20’-0”	12’-0”	8’-0” Amenity Zone (street trees with tree grate)
Avenues	16’-0”	8’-0”	8’-0”
N. Tryon Street	24’-0”	8’-0”	10’-0”
Parkways	32’-0”	5’-0” to 10’-0”	15’-0”
Local Streets	24’-0”	8’-0”	8’-0”

The above standards are illustrated for each street type in the following cross-sections.

MAP #14-NEW STREET NETWORK CLASSIFICATIONS*



* This is a conceptual graphic representation of how the University City Area's street network could develop.

PROPOSED STREET CROSS-SECTIONS

Figure 9: Main Street

Proposed Streetscape Details

Width: 41'-0" back-of-curb to back-of-curb.

Cross Section: One vehicle lane in each direction with on-street parking, curb and gutter on both sides, 8'-0" amenity zone with curbed planter on both sides, and 12'-0" sidewalk on both sides. Buildings should be set back a maximum of 20'-0" from back-of-curb.

Land Uses: Ground floor retail is encouraged along Main Streets.



	MAIN STREETS	AVENUES				PARKWAY	LOCAL- RESIDENTIAL	LOCAL- COMMERCIAL
Number of Lanes	2	2	3	5	Tryon	C.B/U.C.B/Harris	2	2
Width of Lanes	13'-0"	11'-0"	11'-0"	11'-0"	11'-0"	Varies	10'-0"	13'-0"
Bike Lane	No	6'-0"	6'-0"	6'-0"	6'-0"	No	No	No
Sidewalk	12'-0"	8'-0"	8'-0"	8'-0"	8'-0"	5'-0"-10'-0"	8'-0"	8'-0"
Planting Strip	8'-0"	8'-0"	8'-0"	8'-0"	10'-0"	15'-0"	8'-0"	8'-0"
On-street Parking (from face of curb)	7'-0"	7'-0"	7'-0"	7'-0"	No	No	7'-0"	7'-0"
Curb & Gutter	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
Median	No	No	Optional	Yes	Yes	Yes	No	No
Width of Median	No	No	16'-0"	16'-0"	58'-0" (LRT)	Varies	No	No

PROPOSED STREET CROSS-SECTIONS

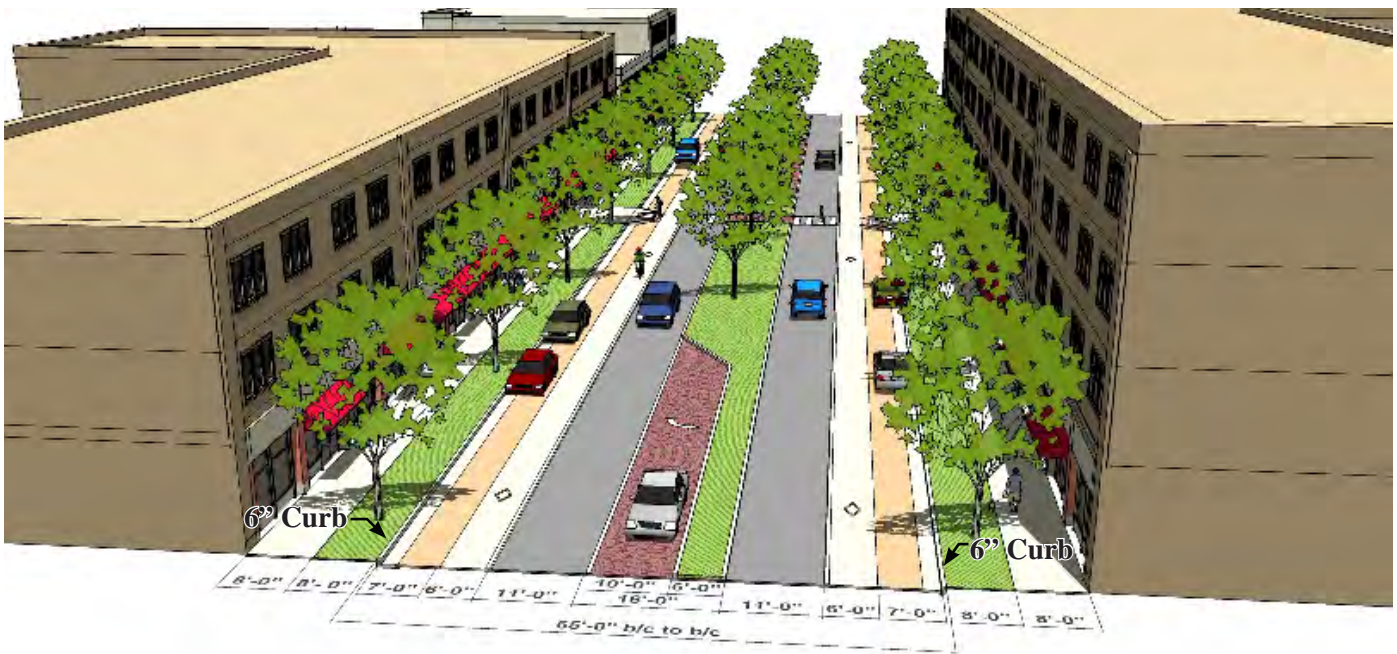
Figure 10: Avenues- 2/3 Lanes

Proposed Streetscape Details

Width: 65'-0" back-of-curb to back-of-curb (with median). 49'-0" back-of-curb to back-of-curb without median.

Cross Section: One vehicle lane in each direction with option for designated left turn lane or 16'-0" median. Curb and gutter on both sides of the street, on-street parking, 8'-0" planting strip required on both sides unless along retail edge (8'-0" additional setback with curbed planters), 8'-0" sidewalk on both sides, designated bike lanes on both sides.

Land Uses: A mixture of residential (medium-intensity), retail and office uses are encouraged for this cross-section.



Note: Median is optional

	MAIN STREETS	AVENUES				PARKWAY	LOCAL- RESIDENTIAL	LOCAL- COMMERCIAL
Number of Lanes	2	2	3	5	Tryon	C.B/U.C.B/Harris	2	2
Width of Lanes	13'-0"	11'-0"	11'-0"	11'-0"	11'-0"	Varies	10'-0"	13'-0"
Bike Lane	No	6'-0"	6'-0"	6'-0"	6'-0"	No	No	No
Sidewalk	12'-0"	8'-0"	8'-0"	8'-0"	8'-0"	5'-0"-10'-0"	8'-0"	8'-0"
Planting Strip	8'-0"	8'-0"	8'-0"	8'-0"	10'-0"	15'-0"	8'-0"	8'-0"
On-street Parking (from face of curb)	7'-0"	7'-0"	7'-0"	7'-0"	No	No	7'-0"	7'-0"
Curb & Gutter	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
Median	No	No	Optional	Yes	Yes	Yes	No	No
Width of Median	No	No	16'-0"	16'-0"	58'-0" (LRT)	Varies	No	No

PROPOSED STREET CROSS-SECTIONS

Figure 11: Avenues-5 Lanes

Proposed Streetscape Details

Width: 87'-0" back-of-curb to back-of-curb.

Cross Section: Two vehicle lanes in each direction with designated left turn lane/median. Curb and gutter on both sides of the street, on-street parking, 8'-0" planting strip on both sides, 8'-0" sidewalk on both sides, 6'-0" designated bike lanes on both sides.

Land Uses: A mixture of residential (medium-intensity), retail and office uses are encouraged for this cross-section.



	MAIN STREETS	AVENUES				PARKWAY	LOCAL- RESIDENTIAL	LOCAL- COMMERCIAL
Number of Lanes	2	2	3	5	Tryon	C.B/U.C.B/Harris	2	2
Width of Lanes	13'-0"	11'-0"	11'-0"	11'-0"	11'-0"	Varies	10'-0"	13'-0"
Bike Lane	No	6'-0"	6'-0"	6'-0"	6'-0"	No	No	No
Sidewalk	12'-0"	8'-0"	8'-0"	8'-0"	8'-0"	5'-0"-10'-0"	8'-0"	8'-0"
Planting Strip	8'-0"	8'-0"	8'-0"	8'-0"	10'-0"	15'-0"	8'-0"	8'-0"
On-street Parking (from face of curb)	7'-0"	7'-0"	7'-0"	7'-0"	No	No	7'-0"	7'-0"
Curb & Gutter	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
Median	No	No	Optional	Yes	Yes	Yes	No	No
Width of Median	No	No	16'-0"	16'-0"	58'-0" (LRT)	Varies	No	No

PROPOSED STREET CROSS-SECTIONS

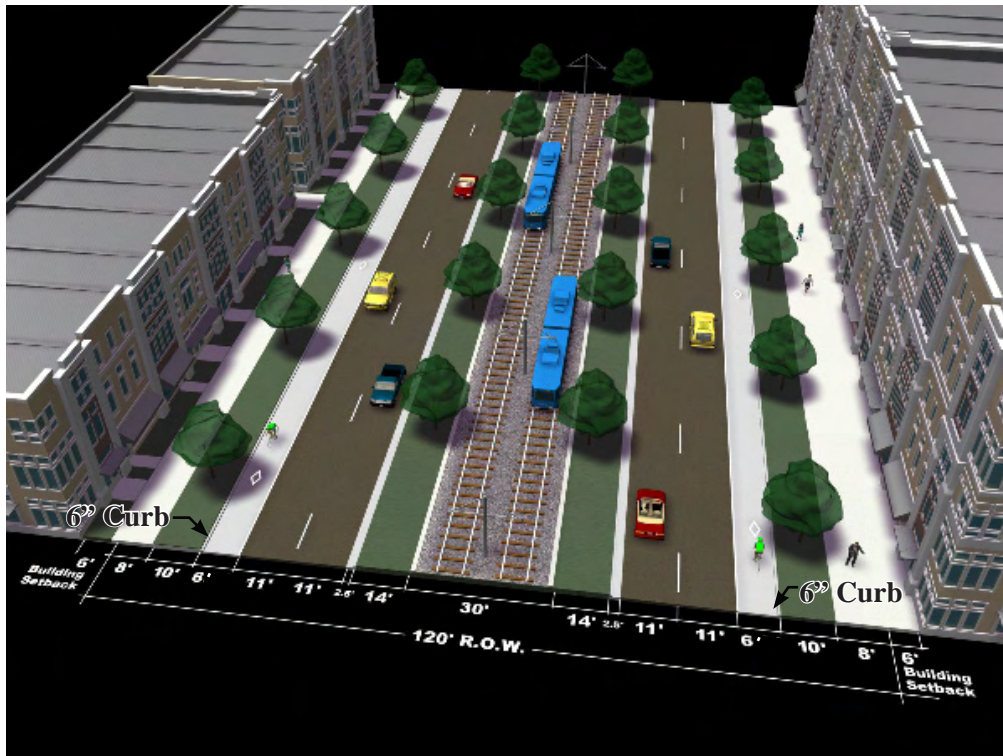
Figure 12: Avenue-Tryon

Proposed Streetscape Details

Width: 120'-0" Feet back of curb-to-back-of-curb; Right-of-Way is 156'-0".

Cross Section: Two 11'-0" vehicle lanes in each direction with 58'-0" median for proposed light rail, curb and gutter on both sides, 6'-0" designated bike lanes, 10'-0" planting strip on both sides, and 8'-0" sidewalks on both sides. Buildings should be set back 24'-0" from back-of-curb that would allow a 6'-0" extension of the sidewalk or an additional planting strip.

Land Uses: A mixture of retail, office and medium-intensity residential uses are encouraged for this cross-section.



	MAIN STREETS	AVENUES				PARKWAY	LOCAL- RESIDENTIAL	LOCAL- COMMERCIAL
Number of Lanes	2	2	3	5	Tryon	C.B/U.C.B/Harris	2	2
Width of Lanes	13'-0"	11'-0"	11'-0"	11'-0"	11'-0"	Varies	10'-0"	13'-0"
Bike Lane	No	6'-0"	6'-0"	6'-0"	6'-0"	No	No	No
Sidewalk	12'-0"	8'-0"	8'-0"	8'-0"	8'-0"	5'-0"-10'-0"	8'-0"	8'-0"
Planting Strip	8'-0"	8'-0"	8'-0"	8'-0"	10'-0"	15'-0"	8'-0"	8'-0"
On-street Parking (from face of curb)	7'-0"	7'-0"	7'-0"	7'-0"	No	No	7'-0"	7'-0"
Curb & Gutter	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
Median	No	No	Optional	Yes	Yes	Yes	No	No
Width of Median	No	No	16'-0"	16'-0"	58'-0" (LRT)	Varies	No	No

PROPOSED STREET CROSS-SECTIONS FOR EXISTING STREETS

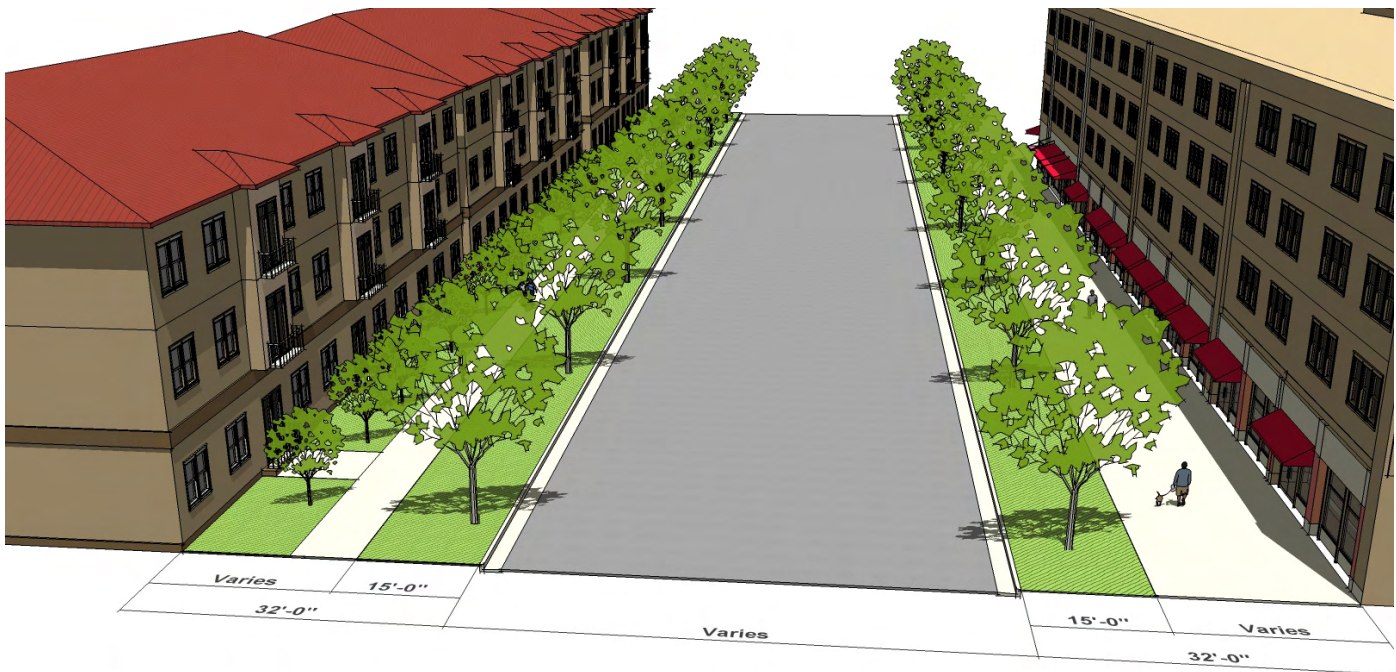
Figure 13: Existing Parkways- City Boulevard, University City Boulevard and W.T. Harris

Proposed Streetscape Details

Width: Varies

Cross Section: Varies. 15'-0" planting strip on both sides, 5'-0" to 10'-0" sidewalk on both sides (10'-0" in commercial and/or office land uses) and 32'-0" setback from back-of-curb.

Land Uses: A mixture of retail and office uses are encouraged for this cross-section. Residential uses of medium intensity are allowed.



	MAIN STREETS	AVENUES				PARKWAY	LOCAL- RESIDENTIAL	LOCAL- COMMERCIAL
Number of Lanes	2	2	3	5	Tryon	C.B/U.C.B/Harris	2	2
Width of Lanes	13'-0"	11'-0"	11'-0"	11'-0"	11'-0"	Varies	10'-0"	13'-0"
Bike Lane	No	6'-0"	6'-0"	6'-0"	6'-0"	No	No	No
Sidewalk	12'-0"	8'-0"	8'-0"	8'-0"	8'-0"	5'-0"-10'-0"	8'-0"	8'-0"
Planting Strip	8'-0"	8'-0"	8'-0"	8'-0"	10'-0"	15'-0"	8'-0"	8'-0"
On-street Parking (from face of curb)	7'-0"	7'-0"	7'-0"	7'-0"	No	No	7'-0"	7'-0"
Curb & Gutter	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
Median	No	No	Optional	Yes	Yes	Yes	No	No
Width of Median	No	No	16'-0"	16'-0"	58'-0" (LRT)	Varies	No	No

PROPOSED STREET CROSS-SECTIONS

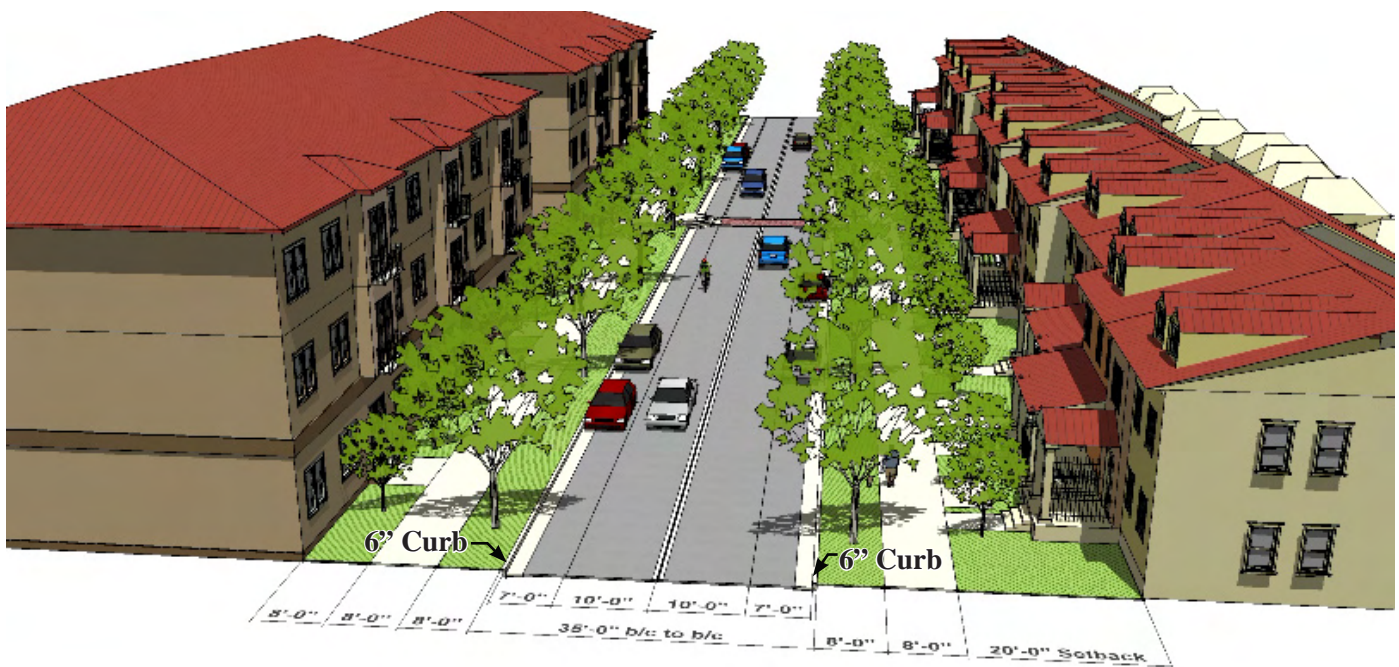
Figure 14: Local-Residential

Proposed Streetscape Details

Width: 35'-0" back-of-curb to back-of-curb.

Cross Section: One vehicle lane in each direction. On-street parking, 8'-0" planting strip on both sides, and 8'-0" sidewalk on both sides. Setbacks for townhomes should be a maximum of 20'-0" from right-of-way to building face and for multi-family 8'-0".

Land Uses: Residential uses are encouraged along local-residential cross-sections.



	MAIN STREETS	AVENUES				PARKWAY	LOCAL- RESIDENTIAL	LOCAL- COMMERCIAL
Number of Lanes	2	2	3	5	Tryon	C.B/U.C.B/Harris	2	2
Width of Lanes	13'-0"	11'-0"	11'-0"	11'-0"	11'-0"	Varies	10'-0"	13'-0"
Bike Lane	No	6'-0"	6'-0"	6'-0"	6'-0"	No	No	No
Sidewalk	12'-0"	8'-0"	8'-0"	8'-0"	8'-0"	5'-0"-10'-0"	8'-0"	8'-0"
Planting Strip	8'-0"	8'-0"	8'-0"	8'-0"	10'-0"	15'-0"	8'-0"	8'-0"
On-street Parking (from face of curb)	7'-0"	7'-0"	7'-0"	7'-0"	No	No	7'-0"	7'-0"
Curb & Gutter	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
Median	No	No	Optional	Yes	Yes	Yes	No	No
Width of Median	No	No	16'-0"	16'-0"	58'-0" (LRT)	Varies	No	No

PROPOSED STREET CROSS-SECTIONS

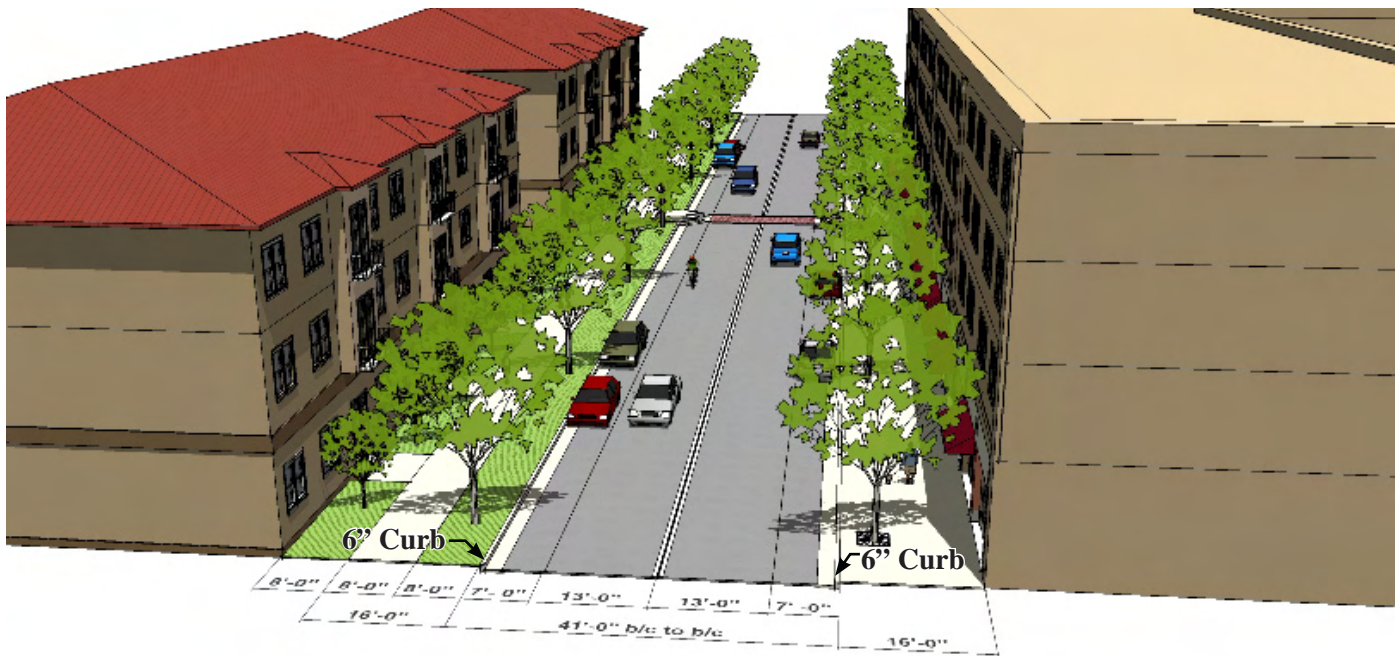
Figure 15: Local-Commercial

Proposed Streetscape Details

Width: 41'-0" back of curb to back of curb.

Cross Section: One vehicle lane in each direction. On-street parking, 8'-0" planting strip required unless along retail edge (8'-0" additional sidewalk with curbed planters), and 8'-0" sidewalk on both sides.

Land Uses: A mixture of retail, office and medium-intensity residential uses are encouraged for this cross-section.



	MAIN STREETS	AVENUES				PARKWAY	LOCAL- RESIDENTIAL	LOCAL- COMMERCIAL
Number of Lanes	2	2	3	5	Tryon	C.B/U.C.B/Harris	2	2
Width of Lanes	13'-0"	11'-0"	11'-0"	11'-0"	11'-0"	Varies	10'-0"	13'-0"
Bike Lane	No	6'-0"	6'-0"	6'-0"	6'-0"	No	No	No
Sidewalk	12'-0"	8'-0"	8'-0"	8'-0"	8'-0"	5'-0"-10'-0"	8'-0"	8'-0"
Planting Strip	8'-0"	8'-0"	8'-0"	8'-0"	10'-0"	15'-0"	8'-0"	8'-0"
On-street Parking (from face of curb)	7'-0"	7'-0"	7'-0"	7'-0"	No	No	7'-0"	7'-0"
Curb & Gutter	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
Median	No	No	Optional	Yes	Yes	Yes	No	No
Width of Median	No	No	16'-0"	16'-0"	58'-0" (LRT)	Varies	No	No

PROPOSED STREET CROSS-SECTIONS FOR EXISTING STREETS

Figure 16: Existing Local-Residential

Proposed Streetscape Details

Existing Streets Include: Rocky River Road, Washington Boulevard, Hampton Church Road, Russell Street, Graduate Lane, Louise Rose Place, Grove Lake Drive, Barton Creek Drive and Clark Boulevard.

Width: Varies

Cross Section: 8'-0" planting strip on both sides, and 8'-0" sidewalk on both sides.

Land Uses: Residential uses are encouraged along local-residential cross-sections.



	MAIN STREETS	AVENUES				PARKWAY	LOCAL- RESIDENTIAL*	LOCAL- COMMERCIAL*
Number of Lanes	2	2	3	5	Tryon	C.B/U.C.B/Harris	2	2
Width of Lanes	13'-0"	11'-0"	11'-0"	11'-0"	11'-0"	Varies	10'-0"	13'-0"
Bike Lane	No	6'-0"	6'-0"	6'-0"	6'-0"	No	No	No
Sidewalk	12'-0"	8'-0"	8'-0"	8'-0"	8'-0"	5'-0"-10'-0"	8'-0"	8'-0"
Planting Strip	8'-0"	8'-0"	8'-0"	8'-0"	10'-0"	15'-0"	8'-0"	8'-0"
On-street Parking (from face of curb)	7'-0"	7'-0"	7'-0"	7'-0"	No	No	7'-0"	7'-0"
Curb & Gutter	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
Median	No	No	Optional	Yes	Yes	Yes	No	No
Width of Median	No	No	16'-0"	16'-0"	58'-0" (LRT)	Varies	No	No

*Varies for Existing

PROPOSED STREET CROSS-SECTIONS FOR EXISTING STREETS

Figure 17: Existing Local-Commercial

Proposed Streetscape Details

Existing Streets Include: Tyner Street, Stetson Drive, Olmstead Drive, and University Executive Park Drive.

Width: Varies

Cross Section: 8'-0" planting strip on both sides, 8'-0" sidewalk on both sides, designated bike lanes on both sides. Set-back can be up to 8'-0".

Land Uses: A mixture of retail, office and medium-intensity residential uses are encouraged for this cross-section.



	MAIN STREETS	AVENUES				PARKWAY	LOCAL- RESIDENTIAL*	LOCAL- COMMERCIAL*
Number of Lanes	2	2	3	5	Tryon	C.B/U.C.B/Harris	2	2
Width of Lanes	13'-0"	11'-0"	11'-0"	11'-0"	11'-0"	Varies	10'-0"	13'-0"
Bike Lane	No	6'-0"	6'-0"	6'-0"	6'-0"	No	No	No
Sidewalk	12'-0"	8'-0"	8'-0"	8'-0"	8'-0"	5'-0"-10'-0"	8'-0"	8'-0"
Planting Strip	8'-0"	8'-0"	8'-0"	8'-0"	10'-0"	15'-0"	8'-0"	8'-0"
On-street Parking (from face of curb)	7'-0"	7'-0"	7'-0"	7'-0"	No	No	7'-0"	7'-0"
Curb & Gutter	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
Median	No	No	Optional	Yes	Yes	Yes	No	No
Width of Median	No	No	16'-0"	16'-0"	58'-0" (LRT)	Varies	No	No

*Varies for Existing

PROPOSED STREET CROSS-SECTIONS FOR EXISTING STREETS

Figure 18: Existing Avenues

Proposed Streetscape Details

Existing Streets Include: McCullough Drive, JW Clay, Shopping Center Drive, and Jm. Keyes Drive.

Width: Varies

Cross Section: 8'-0" planting strip on both sides, 8'-0" sidewalk on both sides, designated bike lanes on both sides. Set-back can be up to 10'-0" for residential areas.

Land Uses: A mixture of residential (medium-intensity), retail and office uses are encouraged for this cross-section.



	MAIN STREETS	AVENUES				PARKWAY	LOCAL- RESIDENTIAL	LOCAL- COMMERCIAL
Number of Lanes	2	2	3	5	Tryon	C.B/U.C.B/Harris	2	2
Width of Lanes	13'-0"	11'-0"	11'-0"	11'-0"	11'-0"	Varies	10'-0"	13'-0"
Bike Lane	No	6'-0"	6'-0"	6'-0"	6'-0"	No	No	No
Sidewalk	12'-0"	8'-0"	8'-0"	8'-0"	8'-0"	5'-0"-10'-0"	8'-0"	8'-0"
Planting Strip	8'-0"	8'-0"	8'-0"	8'-0"	10'-0"	15'-0"	8'-0"	8'-0"
On-street Parking (from face of curb)	7'-0"	7'-0"	7'-0"	7'-0"	No	No	7'-0"	7'-0"
Curb & Gutter	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
Median	No	No	Optional	Yes	Yes	Yes	No	No
Width of Median	No	No	16'-0"	16'-0"	58'-0" (LRT)	Varies	No	No

Transportation Infrastructure Improvements

Changes to Streets

Creating a new street network that provides greater connectivity throughout the MSD is a priority strategy of this plan. This network will consist of streets designed in accordance with the proposed cross-sections for University City. Converting existing thoroughfares to conform to the new cross-sections will not occur immediately. Improvements to North Tryon and the extension of City Boulevard, including construction of an at-grade intersection in the “weave” area, are the top infrastructure priorities for the MSD.

The proposed roadway and streetscape changes to North Tryon Street and its major intersections will be implemented, in part, in conjunction with the corridor’s light rail transit construction project. As currently planned, North Tryon Street should have a four-lane cross-section south and north of W.T. Harris Boulevard. However, the four-lane cross-section north of Harris should be designed to not preclude six lanes.

In addition, several intersections, particularly the North Tryon/W.T. Harris Boulevard intersection, may require additional treatments in the long-term to maintain reasonable levels of mobility. CDOT should continue to monitor intersections in this area to determine if any additional improvements are necessary over time. In 2007, CDOT will initiate a detailed intersection analysis of the North Tryon/W.T. Harris intersection to determine design options that may need to be considered if the anticipated street network is not implemented in the UCP area.

Construction of the extension of City Boulevard and improvement to the “weave” area are also planned for the near-term future, with completion expected no later than 2012. Improvements to other existing streets in the district will be considered for implementation when major portions of the necessary rights-of-way and/or funding are available. Other recommended priority roadway improvements that should be considered for construction within the next ten years include:

- Extension of J.W. Clay Boulevard to Harris Boulevard (on east side of North Tryon), including a signalized intersection at Harris Boulevard;
- Extension of McCullough Drive to the NC 29/I-85 Bypass ramp;
- Improvements to the I-85 bridge south of Harris Boulevard; and
- Improvements to the I-85 bridge north of Harris Boulevard.

Most of the new local streets proposed for the MSD will be constructed by the private sector through the development/redevelopment process. However, the City of Charlotte will need to construct those segments of local roads that developers will not be required to build. Such segments cannot be identified until specific developments are planned and approved. The Transportation Action Plan’s (TAP) Street Connectivity Program will be a necessary tool to implement these street connections. The recommendations contained in this plan simply provide the policy basis for protecting and/or acquiring future rights-of-way based on the future road network plan when development does occur.

Improvements for Safety and Convenience of Pedestrians and Cyclists

The vision and recommendations of this plan support the creation of a safe, inviting pedestrian environment in University City. Major sidewalk and other pedestrian improvements will be needed for this vision to be realized. While this plan provides general guidance for such improvements, a more detailed pedestrian circulation analysis of the MSD is needed during the plan implementation phase to determine the specific improvements needed. The following are the general infrastructure recommendations that address both pedestrian and cyclist needs.

Sidewalks and Curb Ramps

The cross-sections proposed for all roads within the MSD call for sidewalks on both sides of the street and curb ramps on corners at intersections. Sidewalks are currently limited on existing

streets in University City. Map 15 provides an inventory of existing sidewalks in the MSD. As part of a pedestrian circulation analysis, a detailed inventory should be completed to identify specific locations where sidewalks and curb ramps need to be built, replaced or repaired. Some of the sidewalks will be provided by developers through the development process; however, the City will need to provide the sidewalk improvements elsewhere.

Recommended priorities for making sidewalk improvements include North Tryon Street, University City/City Boulevard, J.W. Clay Boulevard and Shopping Center Drive. In addition, when transit stations are built, all areas within at least ¼ mile walking distance of the station should be immediately accessible to the station via sidewalks, including Harris Boulevard. Areas within a ½ mile walking distance should ultimately have sidewalk accessibility as properties develop/redevelop. The TAP's Sidewalk Program will help implement these improvements.

Street Crossings

Ensuring that pedestrians can safely cross major thoroughfares in University City is essential for adapting the existing automobile-oriented environment that exists today into a much more urban, pedestrian-oriented place. As the spine of the four transit stations planned for the MSD, North Tryon will have a number of key locations where pedestrians will need to cross the street to get from the east and west sides of the transit station areas. Pedestrian crossings will also be needed at locations along University City/City Boulevard, Harris Boulevard, McCullough Drive and J.W. Clay Boulevard. Recommended locations for future crosswalks are shown on the Proposed Infrastructure Map (Map 16.)

The high traffic volume along North Tryon and the other thoroughfares traversing the MSD will make safe pedestrian movement a challenge, but it can be accomplished by employing various types of transportation improvements and crosswalk enhancements, including the following:

Crosswalks: Crosswalks should be established at all the existing and future signalized intersections and should include such enhancements as:

- high-visibility crosswalk markings;
- “countdown” pedestrian lights;
- “no turn on red” regulations;
- pedestrian refuge islands; and
- “pedestrian zone” signage.

Charlotte Department of Transportation (CDOT) and Planning Department staff should determine the specific treatment appropriate at each intersection during the implementation phase of this plan. Pedestrian crossings of the light rail transit line should occur at signalized intersections.

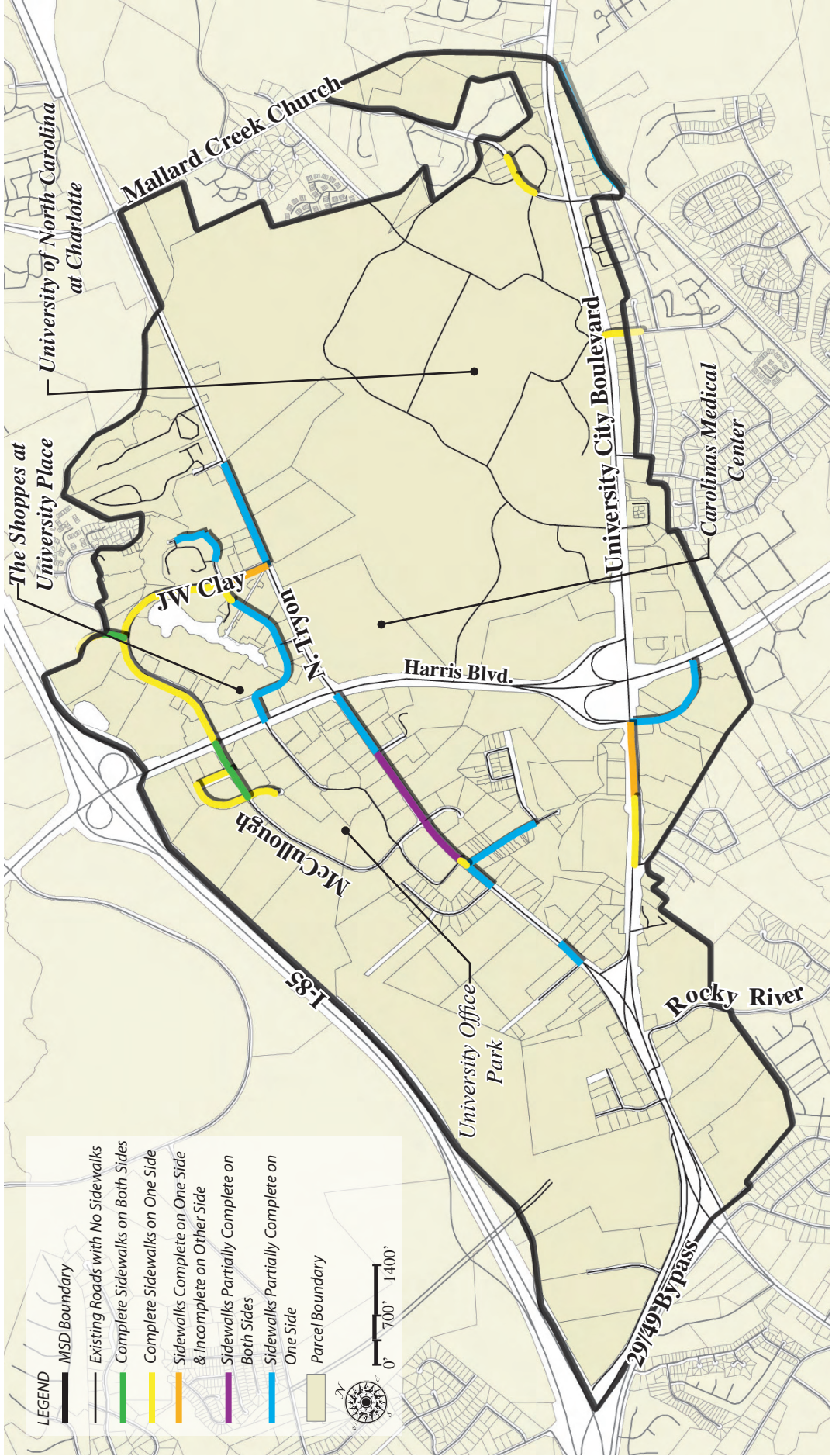
Pedestrian Refuge Islands: Refuge islands provide one of the safest ways for pedestrians to cross streets with higher traffic volumes and are frequently constructed between signalized intersections. Such islands should be considered for the MSD, particularly near station location crossings where signalized crossings are lacking. The TAP's Pedestrian Connectivity Program will be a key tool in implementing these improvements.

Pedestrian Zone Signage: Pedestrian zone signage in targeted locations is recommended in the rights-of-way for of major thoroughfares where high level of pedestrian travel is anticipated to alert motorists that pedestrians are present and that caution in driving is needed. Such signage is most important near the major pedestrian crossings, as well as in other locations within transit station areas where pedestrian activity is high, generally on every street within ¼ mile walking distance of the stations.

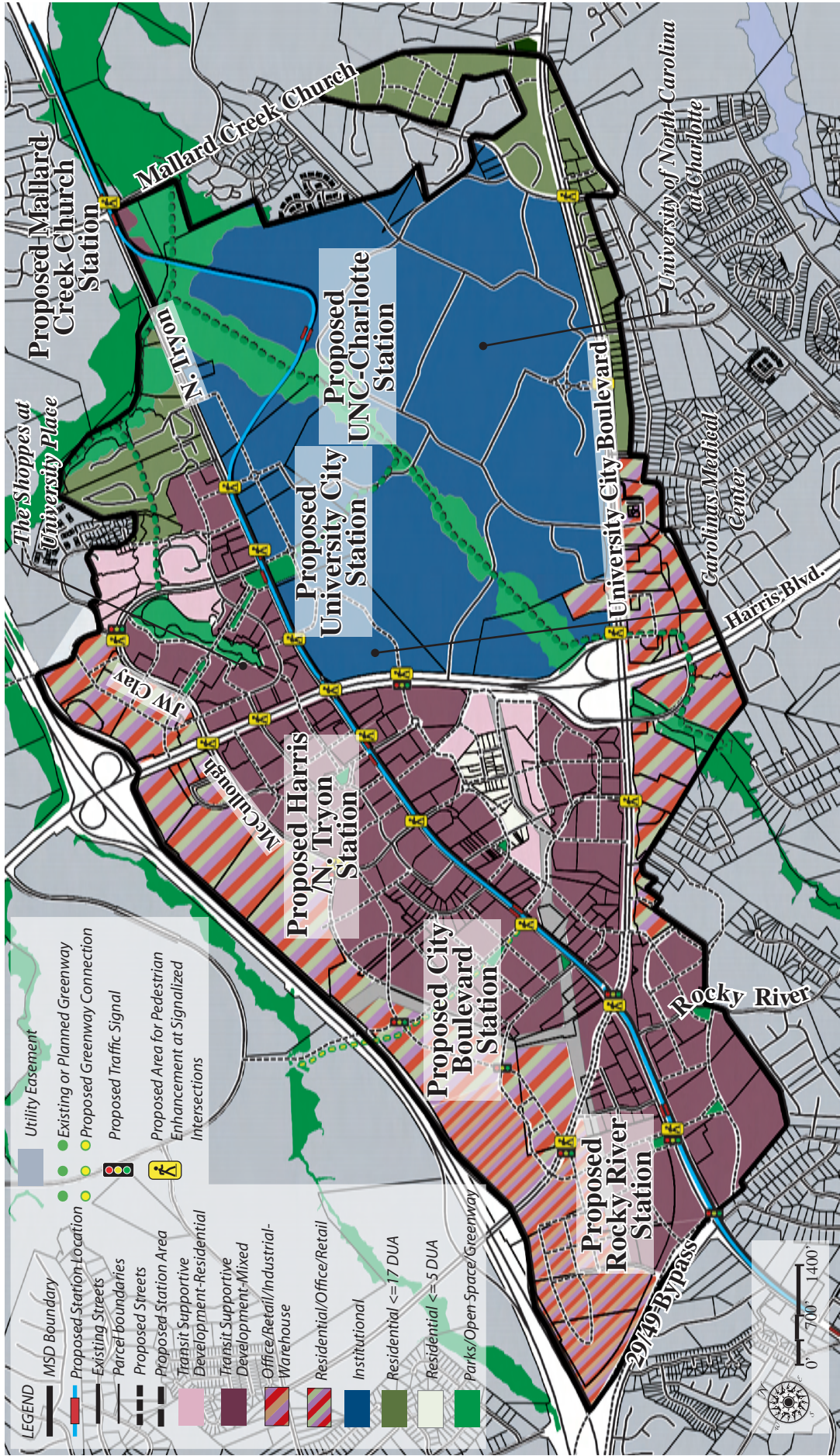
Speed Limit Reductions: Reducing traffic speed is a means for improving pedestrian safety. This plan recommends that the maximum speed limit be 35 mph along North Tryon and City Boulevard, 45 mph along Harris Boulevard and 25 mph for all other streets in the area.

Bulb Outs: Bulb outs should be constructed on two or three-lane avenues or local streets where blocks are longer than 600 feet to provide pedestrian crossings and vehicular speed reductions.

MAP #15-LOCATION OF EXISTING SIDEWALKS



MAP #16-PROPOSED INFRASTRUCTURE IMPROVEMENTS



Pedestrian-Scale Lighting: Installing decorative pedestrian-scale lighting to illuminate pedestrian areas will be important for the future transit station areas and pedestrian districts. Such lighting is shorter than typical streetlights and, in addition to lighting pedestrian areas, is generally designed as a visual amenity within the streetscape. Pedestrian-scale lighting should be placed within the public-right-of-way of streets throughout the MSD, with priority given to the areas having the highest volume of pedestrian activity. These priority areas should include:

- The entire length of North Tryon Street, with the highest concentration of lighting at transit stations and crosswalks;
- All streets within ¼ mile walking distance of each transit station, including Harris Boulevard; and
- On the proposed greenway trail between University Place and the UNC Charlotte campus.

When selecting the design of pedestrian lighting, CDOT should solicit input from University City Partners and its constituents.

Bike Lanes: A comprehensive, inter-connected bicycle network is proposed for University City to accommodate and encourage cycling throughout the district. Bike lanes designed in accordance with the street cross-sections identified for the district should be established. Map 17 highlights recommended bicycles lanes in the University City area.



An example of buildings fronting the street and pedestrian scale amenities along Tryon.



A designated bike lane adjacent to on-street parking along the Embarcadero San Francisco

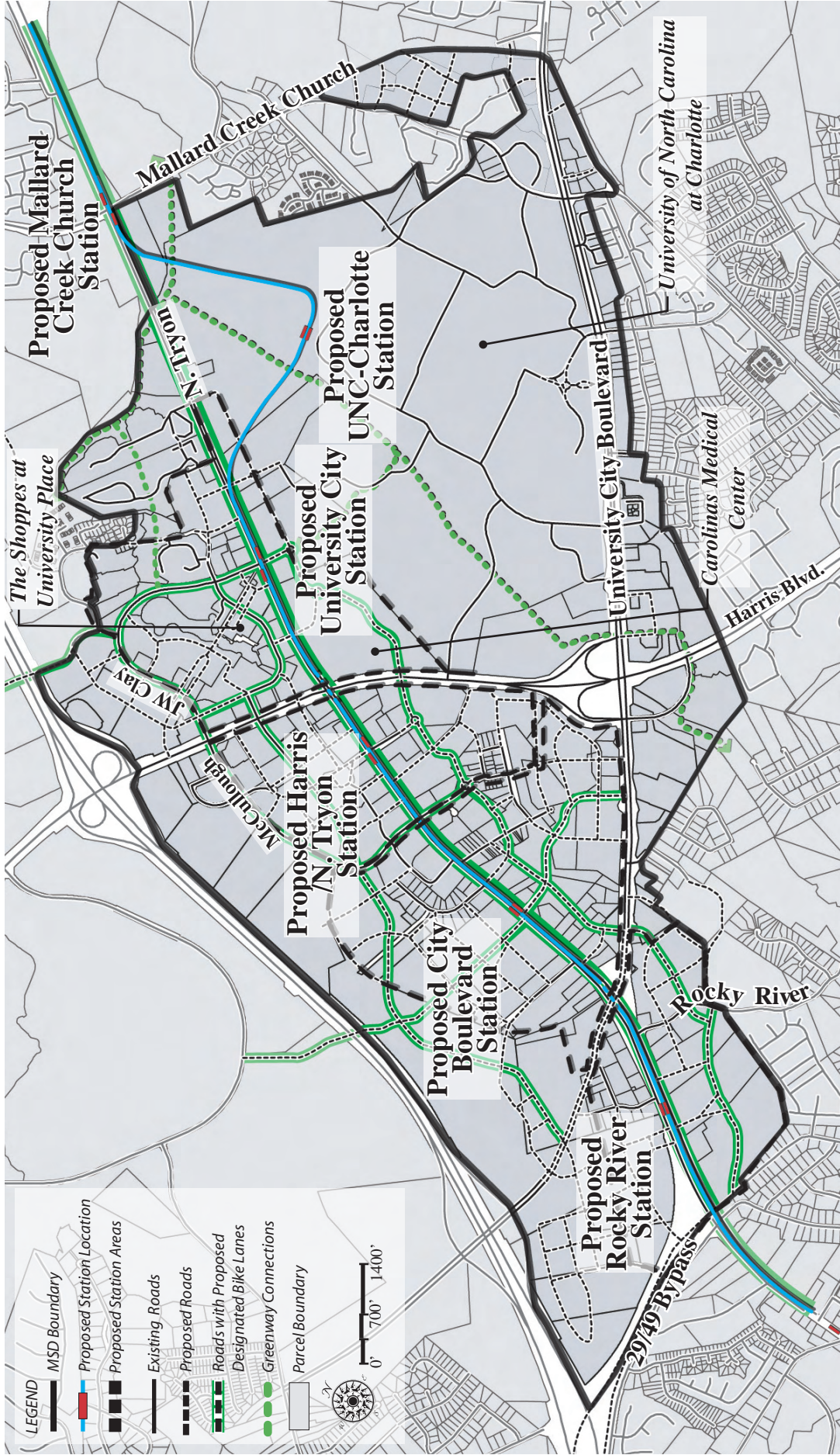
Bicycle Parking: The City of Charlotte Zoning Ordinance requires that bicycle parking be provided in new developments. However, many existing businesses will not redevelop, thus they will not be required to provide bicycle parking. Therefore, this plan recommends that the City install racks for short-term bicycle parking in the public rights-of-way in key locations within transit station areas, particularly close to retail and office uses and where the highest levels of pedestrian activity are anticipated. For existing buildings with entrances set back from the right-of-way, the City should work with business owners to share the cost of installing bicycle parking. The TAP's Bicycle Program will be a key tool in implementing bicycle parking.

Bicycle Route Signage: Signs that identify bicycle routes and connections are recommended for locations throughout the MSD. Charlotte Department of Transportation should identify the locations of such signage during the implementation phase of this plan. The TAP's Bicycle Program will be a key tool in implementing bicycle routes and bicycle lanes.

Public Art: City policy requires that, for many capital projects, one percent of the project costs be spent for public art. Therefore, any future eligible capital projects in the MSD should include funds for public art. To determine appropriate locations and designs for art installations for the MSD, City staff should work with the UCP, its constituents and area arts organizations. Transit stations are likely locations for public art.

Benches and Trash Cans: The City should install benches and trash cans in appropriate locations where pedestrian activity is highest, including transit station locations.

MAP #17-BICYCLE NETWORK MAP



Parks and Greenways

Parks and greenways will be an important amenity for University City as it becomes more intensely developed with pedestrian-oriented uses. Recommendations for such infrastructure improvements are as follows and included on the Proposed Infrastructure Map 13:

The Mecklenburg County Parks and Recreation Department should consider locating a district park in University City to accommodate future population growth. Currently there are no active parks in University City. A district park ranges from 40 to 200 acres in size, typically has a 1-2 ½ mile service radius and includes active and passive recreational uses. The area in or around the Hampton Park neighborhood may be a possible location to consider.

Encourage development of small urban pocket or mini-parks and/or pedestrian plazas within transit station areas to provide outdoor spaces for daily activities and special events. These small parks/plazas should be located in highly accessible and active areas. They should be developed with streetscape design elements such as lighting, paving, landscaping, benches, public art and other amenities. Where possible, they should connect with greenways.

The current Parks Master Plan does not address urban parks. However, the Parks and Recreation Department staff has identified the need for such parks and is considering potential development standards that can guide development of small urban parks. The Planning Department staff should work with CDOT, the County Park and Recreation Department and other relevant agencies to design and develop these plaza areas. Specific locations would be identified once funding is secured for park development in the MSD.

In addition, such parks/plazas should be encouraged to be developed as part of private development plans. For example, commercial centers should incorporate attractive open spaces for seating and gathering as part of their design, and good pedestrian and bicycle connections should be made. In areas designated with Transit-Oriented Development (TOD) zoning, private developers will be required to include open space in all develop-

ments over 50,000 square feet. Private developers may also work with local government to participate in the development of public open spaces that would benefit their developments and surrounding development.

Provide new greenway connections within the MSD. Currently, the Mallard Creek Greenway provides a 4.3 mile walking/cycling trail linking the UNC Charlotte soccer fields to areas west of I-85. Future greenways should include:

■ *Toby Creek Greenway:* Phase I of the Toby Creek Greenway project has been designed and construction will begin in summer 2007. This section of the greenway will extend from its connection with the Mallard Creek Greenway adjacent to North Tryon Street across the UNC Charlotte campus to the south side of City Boulevard in the commercial area near the intersection of City and Harris Boulevards. As part of this phase, a sidewalk connection will be provided to establish the critical link between the greenway on the campus and University Place. Phase II of the Toby Creek Greenway project will continue the greenway from the City Boulevard area to Rocky River Road West. While out of the MSD boundaries, Phase II will provide important connections between the MSD and residential areas to the south and east of the district. Phase II has not been funded.

■ *Barton Creek Greenway:* This proposed greenway will include sidewalk connections along J. W. Clay Boulevard on the west side of North Tryon and will then follow along Barton Creek where it will wrap around to and cross over North Tryon via a pedestrian crossing where it will then connect with the fitness trails on the UNC Charlotte campus. This project is not funded; however, it is considered a high priority for implementation by the County.

■ *Proposed Overland Connection from Doby Creek Greenway to City Boulevard Transit Station:* This plan recommends that a new overland greenway connection be considered that would link the future Doby Creek Greenway west of I-85 with the City Boulevard Transit Station. The Doby Creek Greenway will eventually provide a connection to the recreation area and schools located off IBM Drive and Neal Road in the University Research Park.

Environment

Air Quality

Motor vehicles are the primary culprit for Mecklenburg County's air quality problems. Monitoring devices closest to University City indicate that this part of the county has consistently exceeded the 8-hour ozone standard set by the Environmental Protection Agency, along with much of the rest of the county and region. Reducing the time and distance people spend traveling in automobiles, known as vehicle miles traveled (VMT) per capita, is the key to improving air quality. The main strategies to reduce VMT per capita include:

- Concentrating a variety of land uses in close proximity to one another;
- Filling in vacant land or redeveloping underutilized parcels;
- Providing the infrastructure and density to support alternative modes of transportation, including bicycles, walking and transit; and
- Shortening travel distance by increasing street connections.

These strategies are being promoted in Charlotte-Mecklenburg. The introduction of rapid transit and focus on creating compact, pedestrian-oriented transit station areas are major steps being taken to improve the region's air quality.

Water Quality

One of the by-products of rapid urban growth is increased run-off including everything from lawn fertilizers to petroleum products. As development occurs, less pervious land exists to absorb excess rainfall. The runoff surges across paved areas toward storm drains and ditches, picking up pollutants and sediment along the way that end up in our community's streams and creeks. Hence, the water quality in our lakes, streams and creeks are degraded. In addition, the increased speed of flow into our streams and creeks often results in erosion and flash flooding.

Overall strategies for reducing the impact of non-point pollution in the streams, creeks and lakes in Mecklenburg County include:

- Reducing impervious surface area;
- Improving the quality of storm water run-off; and
- Reducing erosion and sedimentation.

Land Quality

Charlotte is one of the fastest growing cities in the country. As it becomes increasingly populated, more and more land is being consumed, often resulting in the loss of critical environmental features such as the area's tree canopy, open spaces and natural habitat. As this growth continues, these limited natural resources will be even more threatened than they already are. Therefore, protecting and enhancing them is essential for maintaining the area's ecosystem and its quality of life.

Recommendations

Implementing the land use, design and transportation plans and recommendations proposed in this area plan, in addition to the environmental recommendations included in the General Development Policies (in draft stage), will help ensure that University City has as a healthy environment as possible. The following summarizes these recommendations, which can have multiple and concurrent environmental benefits:

- Cluster development along a grid street system to preserve and create meaningful open spaces, reduce the total paved surfaces and encourage walking and cycling.
- Promote pedestrian activity and cycling by developing a comprehensive and cohesive system of sidewalks and bicycle facilities that provide access throughout the MSD.
- Provide open spaces that link natural resources, public and private open spaces and parks and greenways to create the area's "green infrastructure."

- Encourage new development/redevelopment that minimizes clearing, grading and soil compaction to lessen impacts to environmentally sensitive areas and decrease erosion and sedimentation.
- Encourage infill development on underutilized sites and on vacant sites within built up areas.
- Use shared parking to ensure that public facilities are well-connected to the surrounding area and to each other.
- Enforce Mecklenburg County's Surface Water Improvement Management System (SWIM) program to implement the basic steps necessary to stabilize water quality and prevent further degradation.
- Use innovative practices to collect, treat and disperse storm water run-off, such as Low Impact Design (LID), which includes integrated storm water practices that combine physical, chemical and biological processes at the lot level.
- Encourage floodplain preservation and support floodplain reclamation along the major creeks in the area.
- Identify environmentally sensitive areas, such as significant wetlands, tree canopy and topography, in development site plans and specify measures for protecting them.
- Incorporate environmentally sensitive areas into open space areas and provide undisturbed buffers for natural features where feasible.
- Target environmentally sensitive areas when acquiring land for public purposes that could incorporate preservation of these areas.
- Encourage the use of native plants in landscaping and erosion control measures.
- Maintain and enhance the existing tree cover where feasible and promote opportunities to "re-vegetate" areas that were previously developed.
- Consider relocating or burying overhead utilities where feasible, particularly along North Tryon Street and in other areas within ¼ walking distance of the transit stations.
- Preserve natural drainage patterns and use natural topographic features to slow down, store and infiltrate water run-off.
- Ensure that public projects are designed and constructed to minimize environmental impacts, while recognizing the need to balance the environmental and economic costs and benefits.

Conclusion

Nearly 40 years ago, the idea of creating a "University City" in northeast Charlotte was birthed. Now, with light-rail transit imminent along the North Tryon Corridor, this flourishing suburban area is primed for a significant rebirth. Over the next ten to twenty years, the University City MSD has the opportunity to evolve into one of Charlotte's most vibrant, diverse and desirable urban places. However, for this vision of transformation to take place as the LRT is developed, the seeds of positive change must be planted today. By adopting this concept plan and its land use, transportation and other key development policies, elected officials are preparing the soil. It will be up to the public and private sectors working together to implement this plan and help University City grow into the thriving urban community envisioned.

