

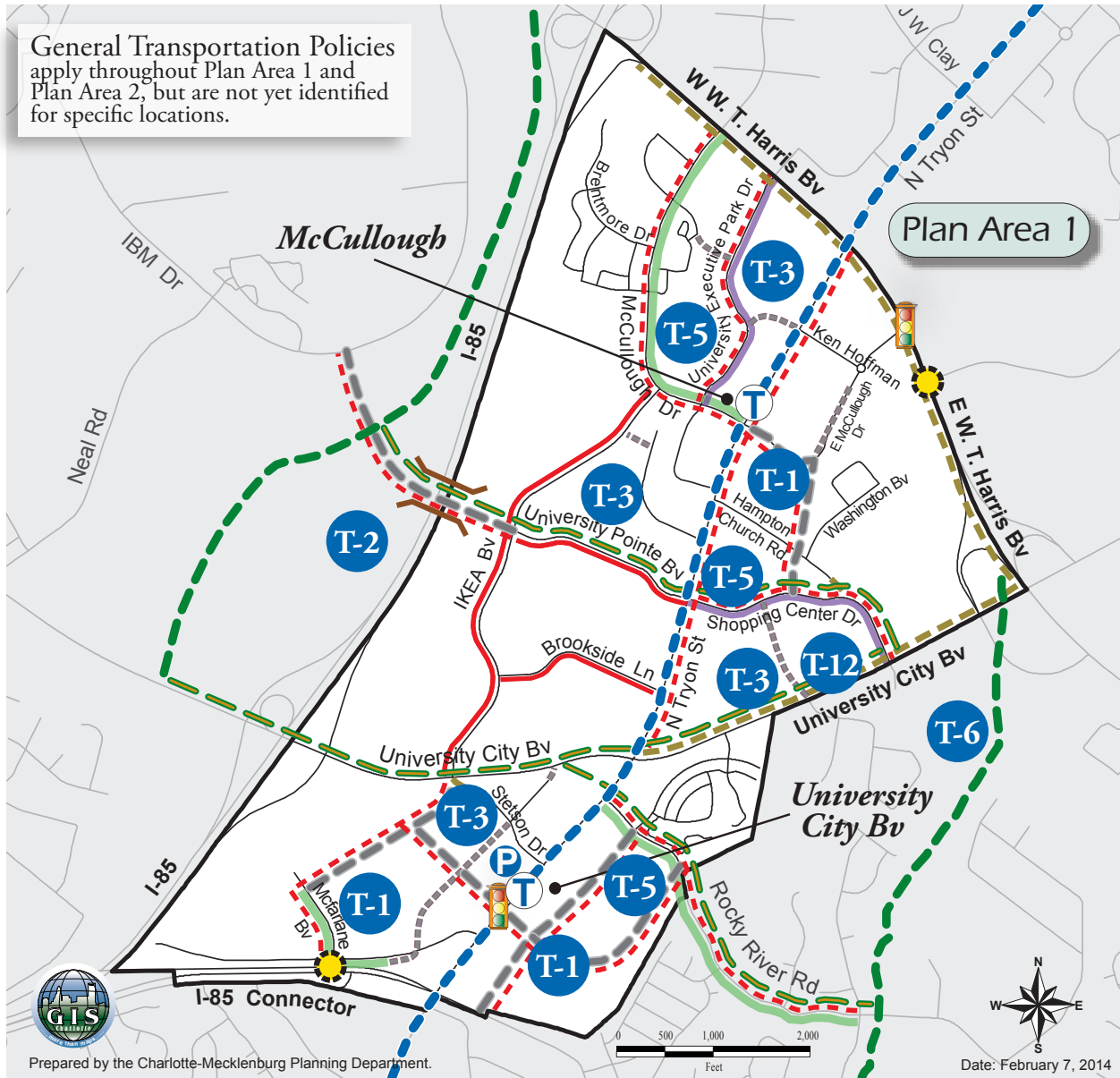
Transportation Policies

DRAFT

UNIVERSITY CITY & McCULLOUGH TRANSIT STATION AREAS

Map X: FUTURE TRANSPORTATION NETWORK ■ University City Stations

General Transportation Policies apply throughout Plan Area 1 and Plan Area 2, but are not yet identified for specific locations.



Prepared by the Charlotte-Mecklenburg Planning Department.

Date: February 7, 2014

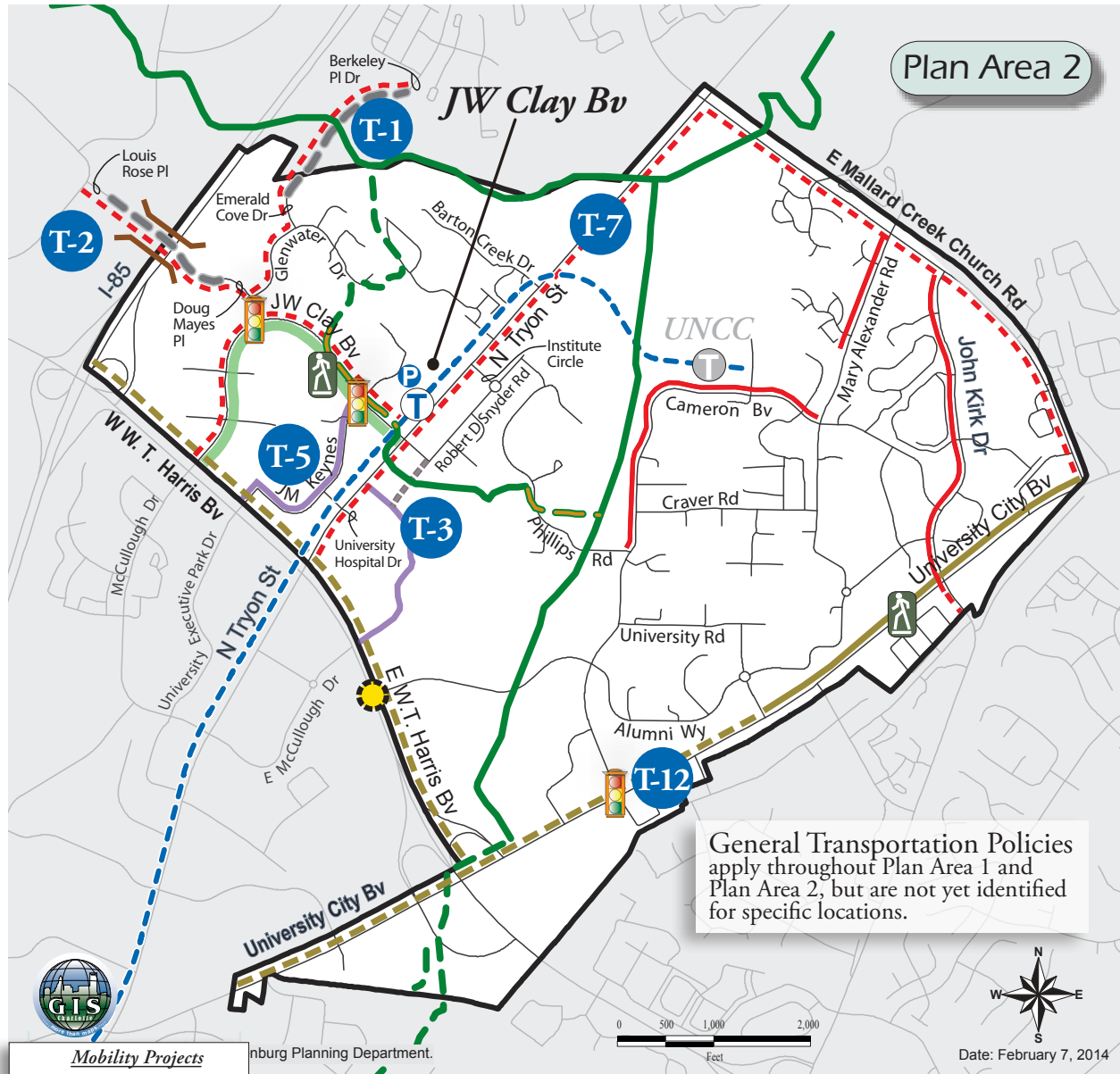
Mobility Projects	
	Proposed Transit Station and Rail Line
	Proposed LYNX Park and Ride
	Proposed Local Street
	Proposed Avenue
	Existing Bicycle Lane
	Proposed Bicycle Lane
	Proposed Upgraded Street
	Proposed Streetscape
	Proposed Multi-Use Path
	Proposed Median Opening
	Potential Signalized Intersection
	Proposed Bridge
	Proposed Greenway
	Overland Connector

Transportation Policies

DRAFT

JW CLAY BOULEVARD TRANSIT STATION AREA

Map X: FUTURE TRANSPORTATION NETWORK ■ University City Stations



- Mobility Projects**
- Proposed Transit Station and Rail Line
 - Proposed LYNX Park and Ride
 - Proposed Local Street
 - Proposed Avenue
 - Existing Bicycle Lane
 - Proposed Bicycle Lane
 - Proposed Upgraded Street
 - Proposed Streetscape
 - Proposed Multi-Use Path
 - Existing Multi-Use Path
 - Proposed Median Opening
 - Potential Signalized Intersection
 - Proposed Pedestrian Hybrid Beacon
 - Proposed Bridge
 - Existing Greenway
 - Proposed Greenway
 - Overland Connector

Street Network

T-1 Develop new, parallel and perpendicular avenues to N. Tryon St. The vehicle capacity of N. Tryon St. is not expected to substantially increase in the future. Additional network is important in order to provide additional route options and reduced dependence on N. Tryon St. for many local trips. The following extensions or re-alignments should be designed as avenues for accessibility and circulation throughout the area:

- Berkeley Place Dr. extension to Emerald Cove Dr.
- E. McCullough Dr. extension to Shopping Center Dr.
- Macfarlane Blvd. extension to the I-85 connector with possible median opening and connection to N. Tryon St. (if allowed by the NCDOT)
- Rocky River Rd. West re-alignment to the signal at the University City light rail station

T-2 Provide additional connectivity over Interstate 85 between University City and the University Research Park with the University Pointe Blvd. and Doug Mayes Pl. extensions. These street connections over I-85 will better link the University City area with the activity center at University Research Park by providing additional route options for pedestrians, bicyclists and motorists and reduce reliance on WT Harris Blvd.

T-3 Construct key street connections to provide accessibility to the transit stations, as well as create a smaller block structure supportive of denser development. The existing street network lacks connectivity between different land uses, as well as to N. Tryon St. and the light rail stations. The NECI program identified key street connections that would provide important accessibility throughout the station areas.

Important street connections include, but are not limited to:

- Ikea Blvd. extension between University City Blvd. and McFarlane Blvd.
- Connection between Ikea Blvd. and Clark Blvd.
- Connection between I-85 Service Road and Stetson Dr.
- Ken Hoffman Dr. extension between N. Tryon St. and University Executive Park Dr.
- Collins-Aikman Dr. extension to University Executive Park Dr.
- Emerald Cove Dr. extension to Berkeley Place Dr.
- E. McCullough Dr. extension between E. McCullough Dr., N. Tryon St. and Shopping Center Dr.
- Carolyn Ln. extension between University City Blvd. and Shopping Center Dr.
- Connection between University Hospital Dr. and Robert D Snyder Rd.
- Connection between Rocky River Rd. and N. Tryon St. at University City Blvd. Transit Station

T-4 Develop a network of local streets as development occurs, with block lengths of generally no more than 400', consistent with the Transit Station Area principles and Urban Street Design Guidelines. A more robust system of local streets offers alternatives to thoroughfares for shorter trips, as well as supporting denser development and pedestrian accessibility. For example, redevelopment of the large retail parcels on the west side of JW Clay Blvd. will provide the opportunity to create a local street paralleling JW Clay between Village Shopping Center Dr. S and Doug Mayes Place. (* General Transportation Policy)

T-5 Upgrade key streets to provide accommodations for pedestrians and bicyclists. When new streets are built, they are required to have sidewalks per City ordinance. However, many existing roads within the study area, both publicly and privately owned, lack facilities that safely accommodate pedestrians and bicyclists. Providing sidewalks and bicycle facilities on these roads will provide important access from light rail stations to destinations throughout the area.

- Macfarlane Blvd.
- I-85 Service Rd.
- Rocky River Rd. West
- Shopping Center Dr.
- McCullough Dr.
- University Executive Park Dr.
- JM Keynes Dr.
- JW Clay Blvd.
- Mary Alexander Rd.

T-6 Develop a multi-use trail linking Uptown and the University area. The extension of the Toby Creek greenway south of UNCC, as well as the construction of the Cross Charlotte Trail from Uptown to Toby Creek, will ultimately provide a seamless multi-use trail connection from the Town of Pineville, through the University City area, and into Cabarrus County.

T-7 Create new bicycle-pedestrian connections. Where street connections are not possible or where even greater pedestrian/bicycle connectivity is desired, consider providing bicycle-pedestrian connections.

Important bicycle-pedestrian connections include, but are not limited to:

- The planned Barton Creek greenway between Mallard Creek greenway and JW Clay Blvd.
- Between Ikea Blvd. and Stetson Dr.
- Between N. Tryon St. and the Mallard Creek greenway
- Between Toby Creek Greenway and N. Tryon St. through the UNCC and CMC-Northeast campuses

T-8 Provide pedestrian crossings to access station areas and facilitate pedestrian crossings along long blocks. With the implementation of light rail in the median of N. Tryon St., additional crossings are unlikely along this street. For other streets within the station areas, mid-block or non-signalized crossings may be considered on block lengths longer than 400'. Along longer blocks of N. Tryon St., consider providing a pedestrian connection between adjacent parcels and the sidewalk. The cost of constructing connections across a retaining wall may preclude frequent individual connection, but occasional pedestrian passages should be built where appropriate. (* General Transportation Policy)

T-9 Consider new signalized intersections and/or pedestrian hybrid beacons to enhance access, circulation and provide crossing opportunities for pedestrians. With the implementation of light rail in the median of N. Tryon St., additional signalized intersections are unlikely along this street. However, future signalized intersections should be considered along other streets in the University City area. (* General Transportation Policy)

T-10 Create bicycle lanes along Avenues via street conversions and streetscape projects. Bicycle lanes are the expected bicycle facility along avenues and boulevards. Where an identified streetscape project does not exist but the streetscape plan includes bicycle lanes, adequate right-of-way should be acquired through the land development process in order to implement bicycle lanes in the future. (* General Transportation Policy)

T-11 Add shared lane markings to Main Streets and physically constrained Avenues. Main Streets provide a mixed travel environment for cyclists. Shared lane markings on Main Streets may help remind motorists to share the road and direct cyclists to ride outside the door zone of parked automobiles. Avenues, on the other hand, ideally have bicycle lanes. However, where major redevelopment is largely not envisioned by the Plan, shared lane markings provide an opportunity to connect gaps in the thoroughfare bicycle network until such time as bicycle lanes or other bicycle specific facilities are provided through reconstruction of the street. (* General Transportation Policy)

T-12 Create multi-use paths along WT Harris Blvd. and University City Blvd. Due to a lack of parallel street network to WT Harris, a parallel, 12' wide **multi-use path** should be constructed at the edge of the right-of-way. **Multi-use paths** are also recommended along University City Blvd. due to the adjacent UNCC campus, student-oriented housing, and supporting services that create a demand for a separate, bicycle-pedestrian facility. This bicycle treatment will require the consolidation of intersecting driveways to maintain a safe, acceptable level-of-service for pedestrians and bicyclists. The preferred access spacing to safely accommodate **multi-use paths** is recommended at 880' or greater for street intersections and 440' or greater for driveways.

T-13 Facilitate cross-access and parallel connections to N. Tryon St., University City Blvd., and WT Harris Blvd. New development should limit driveways along these major streets, while incorporating multiple access points through secondary driveways located on perpendicular streets, cross-access driveways and parallel street connections. While short blocks are generally preferred in station areas, the presence of multi-use paths along University City Blvd. and WT Harris Blvd. make cross-access and driveway consolidation particularly important. (* General Transportation Policy)

T-14 Consider innovative bicycle treatments on a case-by-case basis. Buffered bicycle lanes, cycletracks, bicycle boulevards and other non-standard bicycle treatments may enhance the bicycle network recommended as part of this plan, and should be considered where conditions allow their implementation. (* General Transportation Policy)

T-15 Eliminate gaps within the sidewalk system. The City's Sidewalk Program prioritizes construction of sidewalks along thoroughfares. Among the many public and private local streets within the area without sidewalks, land redevelopment may provide opportunities to upgrade streets to include sidewalks. If implemented via the Sidewalk Program, sidewalk construction on local streets would require residential support through a petition-based process prior to implementation. Other City programs may assist with sidewalk construction as well. (* General Transportation Policy)

✱ General Transportation Policy

applies throughout Plan Area 1 and Plan Area 2, but are not yet identified for specific locations on the Future Transportation Network maps.

Transportation Cross-Sections



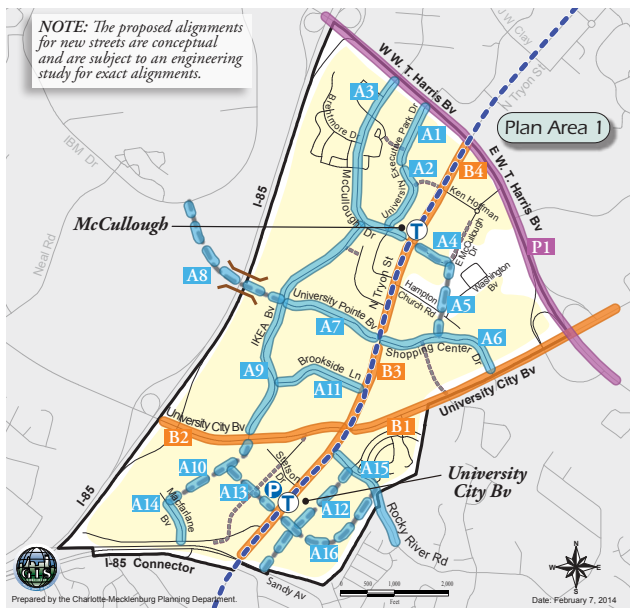
Concept Plan Transportation



UNIVERSITY CITY & McCULLOUGH TRANSIT STATION AREAS

Map 27: CROSS-SECTION LOCATIONS ■ University City Stations

NOTE: The proposed alignments for new streets are conceptual and are subject to an engineering study for exact alignments.



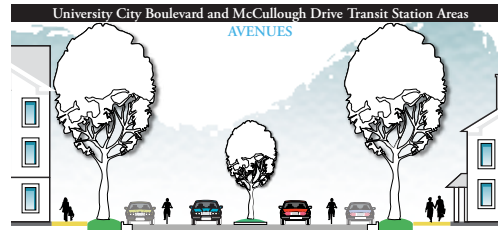
PLAN AREA 1 University City Boulevard and McCullough Cross-Sections Locations

- | | | | |
|---|--|---|--|
| A1 University Executive Park Dr (WT Harris Bv to Collins-Aikman Dr extension) | A5 East McCullough Dr extension (new) (E McCullough Dr to Shopping Center Dr) | A9 IKEA Bv (McCullough Dr to University City Bv) | A13 University City Station Parking Deck street (new) (IKEA Bv to N Tryon St) |
| A2 University Executive Park Dr (Collins-Aikman Dr extension to McCullough Dr) | A6 Shopping Center Dr (N Tryon St to University City Bv) | A10 IKEA Bv (new) (University City Bv to Macfarlane Bv) | A14 Macfarlane Bv (IKEA Bv to I-85 Connector) |
| A3 McCullough Dr (WT Harris Bv to N Tryon St) | A7 University Pointe Bv (N Tryon St to IKEA Bv) | A11 Brookside Ln (IKEA Bv to N Tryon St) | A15 Rocky River Rd West (N Tryon St to Fortescue Dr) |
| A4 East McCullough Dr (existing) (N Tryon St to E McCullough Dr extension) | A8 University Pointe Bv extension (new) (IKEA Bv to IBM Dr) | A12 Kemp St extension (new) (Rocky River Rd W to Sandy Av) | A16 New Street (Rocky River Rd W to N Tryon St) |

- | | | |
|--|--|---|
| B1 University City Bv (N Tryon St to Mallard Creek Church Rd) | P1 WT Harris Bv (I-85 to University Ridge Dr) | Local Streets Transit-Supportive/Mixed-Use Areas |
| B2 University City Bv (I-85 to N Tryon St) | | |
| B3 North Tryon St (Sandy Av to Shopping Center Dr/University Pointe Bv) | | |
| B4 North Tryon St (Shopping Center Dr/University Pointe Bv to WT Harris Bv) | | |

Local streets in these areas are expected to be designed to either the residential-wide or office/commercial-wide cross-section, depending on the adjacent land use. The cross-section of local streets outside of the transit-supportive/mixed-use areas are best determined by Charlotte's land development ordinances.

University City Area Plans/LYNX Blue Line Extension Transit Station Area Plans Update

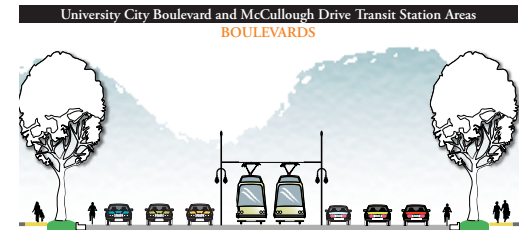


	Sidewalk	Planting Strip	Parking	Bike Lane	Travel Lane	Medialand/turning Lane	Travel Lane	Bike Lane	Parking	Planting Strip	Sidewalk
A1: University Executive Park Drive (WT Harris Bv to Collins-Aikman Dr extension)	6'	8'	7*	6'	11'	n/a	11'	6'	7*	8'	6'
16' or 24' setback *Option to widen for recessed parking											
A2: University Executive Park Drive (Collins-Aikman Dr extension to McCullough Dr)	6'	8'	7*	4'	10'	n/a	10'	4'	7*	8'	6'
16' or 24' setback *Option to widen for recessed parking, in which case bike lanes shall be 6'											
A3: McCullough Drive (WT Harris Bv to N Tryon St)	6*	8'	n/a	5'	11'	11'	11'	5'	n/a	8'	6*
16' or 24' setback *8' sidewalks and 18' setback between IKEA Bv and N Tryon St											
A4: East McCullough Drive (N Tryon St to E McCullough Dr extension)	6'	8'	7'	n/a	11'	n/a	11'	0'	7'	8'	6'
16' or 24' setback											
A5: East McCullough Drive extension (new) (E McCullough Dr to Shopping Center Dr)	8'	8'	7*	5'	11'	n/a	11'	5'	7*	8'	8'
16' or 24' setback *Option to widen for recessed parking, in which case bike lanes shall be 6'											
A6: Shopping Center Drive (N Tryon St to University City Bv)	6'	8'	7*	5'	11'	11'	11'	5'	7*	8'	6'
16' or 24' setback *Option to widen for recessed parking, in which case bike lanes shall be 6'											
A8: University Pointe Boulevard extension (new) (IKEA Bv to IBM Dr)	6'	8'	n/a	5'	11'	11'	11'	5'	n/a	8'	6'
16' or 24' setback Along bridge span, provide 8.5' sidewalks with no planting strips											
A9: IKEA Boulevard (McCullough Dr to University City Bv)	8'	8'	7*	5'	11'	Varies	11'	5'	7*	8'	8'
16' or 24' setback *Option to widen for recessed parking, in which case bike lanes shall be 6'											
A10: IKEA Boulevard (new) (University City Bv to Macfarlane Bv)	6'	8'	n/a	5'	11'	Varies	11'	5'	n/a	8'	8'
16' or 24' setback											
A11: Brookside Lane (IKEA Bv to N Tryon St)	6'	8'	n/a	5'	11'	11'	11'	5'	n/a	8'	6'
16' or 24' setback											
A12: Kemp Street extension (new) (Rocky River Rd W to Sandy Av)	6'	8'	7*	5'	11'	11'	11'	5'	7*	8'	6'
16' or 24' setback *Option to widen for recessed parking, in which case bike lanes shall be 6'											
A13: University City Station Parking Deck street (new) (IKEA Bv to N Tryon St)	8'	8'	n/a	4'	11'	Varies	11'	4'	n/a	8'	8'
16' or 24' setback											
A14: Macfarlane Boulevard (IKEA Bv to I-85 Connector)	6'	8'	7*	5'	11'	n/a	11'	5'	7*	8'	6'
16' or 24' setback *Option to widen for recessed parking, in which case bike lanes shall be 6'											
A15: Rocky River Road West (N Tryon St to Fortescue Dr)	6'	8'	n/a	5'	11'	n/a*	11'	5'	n/a	8'	6'
16' or 24' setback *11' left turn lanes where necessary											
A16: New Street (Rocky River Road W to N Tryon St)	6*	8'	**	5'	11'	Varies	11'	5'	**	8'	6*
* 8' sidewalks and 18' setbacks within ¼ mile of LYNX station ** Option to widen for recessed parking, in which case bike lanes shall be 6'											

NOTE: ► Setbacks for avenues should be 16' if mixed-use and non-residential uses, 24' if residential uses.
► Cross-section reflects mid-block location elements and dimensions will vary at intersections.

Urban Street Design Guidelines (2007) recommends:
Posted Speed – 25-30 mph, with 35 mph allowable.
Design Speed – 30-40 mph.

Sources: Charlotte Department of Transportation (CDOT), 2014

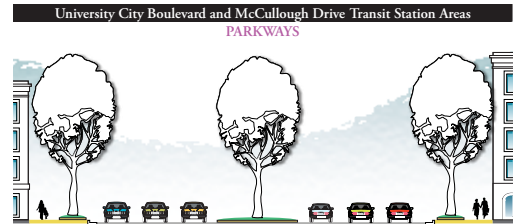


	Sidewalk	Planting Strip	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Median only or LYNX within Median	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Planting Strip	Sidewalk
B1: University City Boulevard (N Tryon St to Mallard Creek Church Rd)	10'	15'	5'	11'	11'	11'	14'	11'	11'	11'	5'	15'	10'
45' setback Preferred access spacing to safely accommodate sidepaths would be > 880' street intersection spacing and > 440' residential driveway spacing													
B2: University City Boulevard (I-85 to N Tryon St)	6'	8'	0'	11'	11'	11'	30'	11'	11'	11'	0'	8'	6'
24' setback													
B3: North Tryon Street (Sandy Av to Shopping Center Dr/University Pointe Bv)	6'-8"	8'	5'	11'	11'	11'	Varies	11'	11'	11'	5'	8'	6'-8"
24' setback * 8' sidewalks within ¼ mile of LYNX transit stations													
B4: North Tryon Street (Shopping Center Dr/University Pointe Bv to WT Harris Bv)	6'-8"	8'	5'	11'	11'	n/a	Varies	n/a	11'	11'	5'	8'	6'-8"
24' setback * 8' sidewalks within ¼ mile of LYNX transit stations													

NOTE: ► Additional setback footage may be required for additional improvements.
► Cross-section reflects mid-block location elements and dimensions will vary at intersections.

Urban Street Design Guidelines (2007) recommends:
Posted Speed – 35-40 mph.
Design Speed – up to 45 mph.

Sources: Charlotte Department of Transportation (CDOT), 2014



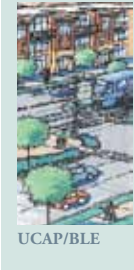
	Multi-Use Path	Planting Strip	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Planting Strip	Multi-Use Path
P1: WT Harris Boulevard (I-85 to University Ridge Dr)	12'	30**	n/a	12'	12'	12'	30'-40'	12'	12'	12'	n/a	30**	12'
55' setback *30' buffer preferred, 15' buffer allowed in constrained circumstances													

NOTE: ► Additional setback footage may be required for additional improvements.
► Cross-section reflects mid-block location elements and dimensions will vary at intersections.

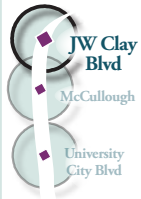
Urban Street Design Guidelines (2007) recommends:
Posted Speed – 45-50 mph.
Maximum Design Speed – 55 mph.

Sources: Charlotte Department of Transportation (CDOT), 2014

Transportation Cross-Sections



Concept Plan
Transportation



JW CLAY TRANSIT STATION AREA

Map 28: CROSS-SECTION LOCATIONS

■ University City Stations



PLAN AREA 2

JW Clay Cross-Sections Locations

Avenues

- A1:** Mary Alexander Rd (Mallard Creek Church Rd to UNCC campus property)
- A2:** John Kirk Dr (Mallard Creek Church Rd to Old Concord Rd)
- A3:** Doug Mayes/Louis Rose Place extension (new) (Research Dr to JW Clay Bv)
- A4:** Berkeley Pl Dr/Emerald Cove Dr/Glenwater Dr (new) (Doug Mayes Pl to existing Berkeley Place Dr)
- A5:** JW Clay Bv (WT Harris Bv to N Tryon St)

Boulevards

- B1:** Mallard Creek Church Rd (N Tryon St to University City Bv)
- B2:** University City Bv (N Tryon St to Mallard Creek Church Rd)
- B3:** North Tryon St (WT Harris Bv to Institute Circle)
- B4:** North Tryon St (Institute Circle to Mallard Creek Church Rd)

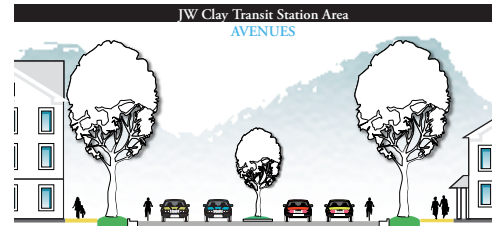
Parkways

- P1:** WT Harris Bv (I-85 to University Ridge Dr)

Local Streets

Transit-Supportive/Mixed-Use Areas

Local streets in these areas are expected to be designed to either the residential-wide or office/commercial-wide cross-section, depending on the adjacent land use. The cross-section of local streets outside of the transit-supportive/mixed-use areas are best determined by Charlotte's land development ordinances.

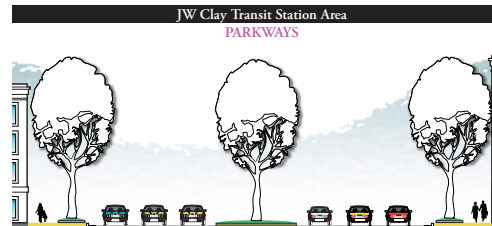


Sidewalk	Planting Strip	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Median/turning Lane	Travel Lane	Travel Lane	Bike Lane	Planting Strip	Sidewalk
6'	8'	5'	11'	n/a	n/a	n/a	10'	5'	8'	6'	16' or 24' setback
8'	8'	5'	11'	n/a	11'	n/a	11'	5'	8'	8'	16' or 24' setback
6'	8'	5'	11'	n/a	n/a	n/a	11'	5'	8'	6'	16' or 24' setback
6'	8'	5'	11'	n/a	n/a	n/a	11'	5'	8'	6'	16' or 24' setback
6'	8'	5'	11'	10'	16'	10'	11'	5'	8'	6'	16' or 24' setback

NOTE: ▶ Setbacks for Avenues should be 16' if mixed-use and non-residential uses, 24' if residential uses.
▶ Cross-section reflects mid-block location elements and dimensions will vary at intersections.

Urban Street Design Guidelines (2007) recommends:
Posted Speed – 25-30 mph, with 35 mph allowable.
Design Speed – 30-40 mph.

Sources: Charlotte Department of Transportation (CDOT), 2014

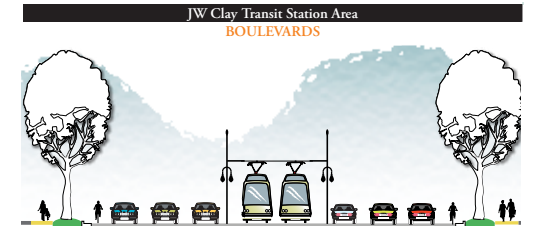


Multi-Use Path	Planting Strip	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Planting Strip	Multi-Use Path
12'	30''*	n/a	12'	12'	12'	30'-40'	12'	12'	12'	n/a	30''*	12'
55' setback			15' buffer allowed in constrained circumstances						55' setback			

NOTE: ▶ Additional setback footage may be required for additional improvements.
▶ Cross-section reflects mid-block location elements and dimensions will vary at intersections.

Urban Street Design Guidelines (2007) recommends:
Posted Speed – 45-50 mph.
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Sources: Charlotte Department of Transportation (CDOT), 2014

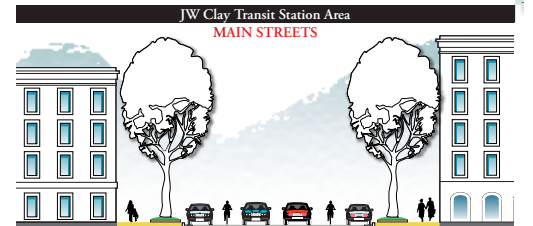


Sidewalk	Planting Strip	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Median only or LYNX within Median	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Planting Strip	Sidewalk
6'	8'	4'	11'	10''	0'	15'	0'	10''	11'	4'	8'	6'
24' setback			*Retain existing curb; 10' inside lane if approved by NCDOT. Otherwise, stripe 14' outside lane.						24' setback			
10'	15'	5'	11'	11'	11'	14'	11'	11'	11'	5'	15'	10'
45' setback			Preferred access spacing to safely accommodate sidepaths would be > 880' street intersection spacing						45' setback			
6'-8''	8'	5'	11'	11'	n/a	Varies	n/a	11'	11'	5'	8'	6'-8''
24' setback			* 8' sidewalks within 1/4 mile of LYNX transit stations						24' setback			
6'	8'	5'	11'	11'	11'	LYNX 22'	11'	11'	11'	5'	8'	6'
24' setback									24' setback			

NOTE: ▶ Additional setback footage may be required for additional improvements.
▶ Cross-section reflects mid-block location elements and dimensions will vary at intersections.

Urban Street Design Guidelines (2007) recommends:
Posted Speed – 35-40 mph.
Design Speed – up to 45 mph.

Sources: Charlotte Department of Transportation (CDOT), 2014



Sidewalk	Planting Strip	Parking	Travel Lane	Travel Lane	Planting Strip	Sidewalk		
10'	8'	7'	13'	13'	7'	8'	10'	
20' setback							20' setback	

NOTE: ▶ Additional setback footage may be required for additional improvements.
▶ Cross-section reflects mid-block location elements and dimensions will vary at intersections.

Urban Street Design Guidelines (2007) recommends:
Maximum Posted Speed – 25 mph.
Design Speed – 25 mph, equal to posted speed.

Sources: Charlotte Department of Transportation (CDOT), 2014