

7.0 VISUAL AND AESTHETIC CONSIDERATIONS

Public improvement projects and facilities can have varying degrees of impact on the visual character of an area. The purpose of this chapter is to provide a general overview of visual conditions along the corridor of the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE), identify potential impacts to the visual environment that may arise from the alternatives under consideration in this Draft Environmental Impact Statement (EIS) and discuss potential mitigation measures related to visual quality.

7.1 Affected Environment

The land uses adjacent to and within 200 feet on either side of the proposed Light Rail Alternative alignment define the existing visual character and quality of this study area. In areas where grade separations would occur, as well as in proposed station areas, the study area extends to 1,000 feet on either side of the alignment in order to examine impacts from a broader viewshed.

7.1.1 Existing Visual Character and Quality

Land uses in the study area are defined in Chapter 4.0: Land Use, Public Policy and Zoning and have been grouped into six design districts that share similar environments, as shown in Figure 4-1. These districts were defined during the development of the *Design Criteria, Chapter 3, Blue Line Extension Urban Design Framework (UDF)* for the proposed project. The districts are discussed in this section to describe the existing visual character and quality of visual elements within the proposed study area.



9th Street area in Center City Charlotte.

7.1.1.1 High Intensity Urban Core District

The High Intensity Urban Core District begins at 7th Street and continues northeast toward Interstate 277 (I-277). The visual character of this district consists of large scale office buildings, entertainment complexes and multi-story hotels to the north, a few smaller-scale scattered historic warehouse buildings and surface parking lots to the south. Surface parking lots adjacent to the rail line on the east and west between 7th Street and 12th Street allow panoramic views of the Center City Charlotte skyline. The skyline is the primary visual feature of this district, enhancing the visual quality. The existing LYNX Blue Line and Charlotte Trolley station platform, canopies, pedestrian walkways and trackway are well-detailed elements of this district and are an established part of the visual environment.

7.1.1.2 Industrial Communities District

This district begins at I-277 and continues northeast to 32nd Street. This district is defined by industrial land uses that influence the visual character of the study area in this vicinity. Historically, this area developed with an orientation to the existing rail line, with textile mills and several large mill complexes that still remain; either operating as large warehouses or converted to apartments and condominiums. The proposed light rail alignment would operate through this district adjacent to the existing freight tracks.

The Industrial Communities District is largely industrial in nature. The greatest industrial use in this district is the Norfolk Southern Intermodal Yard which is a large break-in-bulk transfer facility from freight to truck transportation. Several of the areas around the industrial buildings/warehouses are used for activities such as loading, storage and parking and contribute little to the district's aesthetic quality. Many of these warehouse sites are characterized by the presence of obtrusive fencing; empty cans, crates, barrels, and boxes; storage facilities; solid waste areas and receptacles; and litter. Natural vegetation contributes minimally to the character of this segment and to the rail corridor in general, although hedgerows are present along the edge of the railroad right-of-way in some areas. These hedgerows provide a vegetated buffer between the rail alignment and adjacent parcels.

7.1.1.3 Historic Urban Communities District

This district begins at 32nd Street and continues northeast to Craighead Road. The district includes the North Charlotte Historic District, locally known as the North Davidson neighborhood and called "NoDa," an attractive, emerging neighborhood center near the intersection of North Davidson Street and 36th Street. This historic district represents a historic mill town with a distinct downtown core. The historic use and period is strongly industrial, and the buildings within the district illustrate the association with this industrial period. Several historic mills in this district are contributing resources to the National Register (NR) listed district. Some of these resources have been converted in recent years from industrial uses to a mix of residential, retail and commercial uses to create a small, vibrant urban center near the proposed project. There are a number of trucking and warehouse buildings located on the southern and northern edges of NoDa. The visual character of this area is largely characterized by these nearby industrial uses. The proposed light rail alignment would operate along the northern edge of the North Charlotte Historic District adjacent to the existing freight tracks.

7.1.1.4 Established Suburban Communities District

This district begins at Craighead Road and continues along the rail right-of-way and North Tryon Street/US-29 northeast to JW Clay Boulevard. The proposed light rail alignment would travel adjacent to the existing freight tracks through much of this district or within the median of North Tryon Street/US-29. The Light Rail Alternative - Sugar Creek Design Option would transition to North Tryon Street/US-29 just north of Sugar Creek Road. Mid-century industrial buildings surround Sugar Creek Road and the railroad right-of-way. The visual character within the district then changes from heavy industrial between Craighead Road and Sugar Creek Road to light industrial and commercial from Old Concord Road to JW Clay Boulevard. Established suburban residential communities dating back to the 1950's are located behind a layer of commercial development along either side of North Tryon Street/US-29.

A vegetative buffer adjacent to low-density residential neighborhoods east of Sugar Creek Road and west of Eastway Drive visually characterizes this segment of the alignment. Dense vegetation exists along the alignment between Eastway Drive and Old Concord Road, near Eastway Park east of Eastway Drive. A narrow hedgerow exists along the north side of the railroad right-of-way. The vegetation primarily consists of non-native and invasive deciduous trees and woody and herbaceous shrubs. Although the vegetation is overgrown and unmanaged, it serves as a visual buffer between the rail line and adjacent uses.



Vegetative buffer along the Railroad corridor (view from Eastway Drive).

North Tryon Street/US-29 is the primary roadway in this district. The development along North Tryon Street/US-29 in this portion of the study area consists of the original auto-oriented commercial development, which characterizes the urban fringe of Charlotte. There is a significant amount of commercial and retail uses such as convenience stores, restaurants and auto maintenance/repair shops along North Tryon Street/US-29. There are a number of vacant buildings and newer "big-box" developments further north along the roadway. The visual character of this area is characterized by non-descript architecture; excessive signage; overhead power lines; numerous curb cuts and driveways; and a general lack of landscaping and aesthetic design.

The light rail alignment is proposed to run in the median of North Tryon Street/US 29. The US-29/NC-49 "weave" is currently configured as two grade-separated structures roughly 3,000 feet apart where NC-49 North passes under US-29 South and NC-49 South passes under US-29 North. Both roadways carry high volumes of traffic on what resembles a grade-separated highway interchange. Since access to the land adjacent to these roadways has been limited by this design, the land to both the east and the west of the roadways is largely undeveloped and densely vegetated. The Charlotte Department of Transportation (CDOT) has completed designs to realign this intersection as two separate four-leg signalized intersections, which will increase access to the adjacent undeveloped land. Construction of this proposed project is currently underway.



North Tryon Street/US-29 between “the weave” and JW Clay Boulevard.

Just north of the US-29/NC-49 “weave” to McCullough Drive, development along North Tryon Street/US-29 consists of auto-oriented, commercial development. Beyond McCullough Drive, North Tryon Street/US-29 transitions to a high-speed, limited access arterial. The University City area is a key element of this district. Its core is located at the intersection of W.T. Harris Boulevard and North Tryon Street/US-29 and includes the Carolinas Medical Center–University (CMC–University); shopping and entertainment uses; hotels; and residential uses. Development in this area is still auto-oriented, although more cohesive in its architectural character, shared access roads, driveways, and access points and landscaping.

7.1.1.5 University District

This district begins north of JW Clay Boulevard and extends to Mallard Creek Church Road. This district is characterized by UNC Charlotte's Charlotte Research Institute (CRI) campus on the east; University Place, a mixed-use development; and new, higher-density residential developments on the west. Some of the lands east and west of North Tryon Street/US-29 are undeveloped and densely vegetated.



UNC Charlotte CRI campus.

The campus of UNC Charlotte, with its extensive landscaping and open space character, also contributes to visual quality in this district. The proposed project would pass through densely vegetated areas that include a trail system on the campus that runs beside Toby Creek. With the exception of the UNC Charlotte CRI, Laurel Hall dormitory is the only developed area on the campus along the proposed project corridor. Just to the north and northeast of the campus, are large multi-family apartment complexes. The visual character of these areas is suburban.

7.1.1.6 New Suburban Communities District

This district is located between Mallard Creek Church Road and I-485. The North Tryon Street/US-29 area near the proposed I-485/N. Tryon Station is characterized by higher vehicular speeds and more controlled access; as such this area is also less developed. Near the I-485 interchange there is a mini-storage warehouse facility, commercial center and neighborhood service uses, as well as multi-family residential developments and a mobile home community.

7.1.2 Visual Resources

As shown in Figures 7-1a and 7-1b, a number of visual resources establish the overall visual character of the study area. These include neighborhoods defined by a distinct visual character; resources listed in, or eligible for, the National Register (NR) of Historic Places; parks and recreational facilities that are within 200 feet of the proposed alignment and within 1,000 feet of proposed station areas; and, properties and areas that have been the subject of concerns regarding visual impacts expressed by stakeholders or affected parties. Properties that generally do not meet the definition for a visual resource are: resources with views of the proposed alignment or stations that would be blocked by other development; neighborhoods that lack a distinct visual character; and businesses located adjacent to the rail right-of-way with the exception of historic resources.

7.2 Environmental Consequences

Visually sensitive resources are shown in Figures 7-1a and 7-1b. Each resource was evaluated to determine whether the affected environment would be altered in a negative way by the addition of new visual elements that would be associated with the alternatives under study in this EIS. The visual resources that are expected to have an impact as a result of the proposed Light Rail Alternative and Light

Rail Alternative – Sugar Creek Design Option are listed in Table 7-1 and discussed in the sections that follow. The resources illustrated in Figures 7-1a and 7-1b, but not listed in Table 7-1 have no impact under any alternative; therefore are excluded from further discussion.

The introduction of new visual elements (described in Section 7.2.2.1) have the potential to negatively affect visual resources by altering the view to and/or from the resource, or by adding an element that would be out of scale or character of the existing visual context. Planned design treatments developed to reduce these impacts are described in Section 7.2.2.2.

Table 7-1
Summary of Potential Impacts to Visual Resources

Visual Resources	Light Rail Alternative	Light Rail Alternative – Sugar Creek Design Option
3. Alpha Mills Apartments (NR-Listed)	Potential Impact	--
7. Herrin Brothers Coal and Ice Company (NR-Eligible)	Potential Impact	--
8. North Charlotte Historic District (NR-Listed)	Potential Impact	--
10. Republic Steel Warehouse (NR-Eligible)	No Impact	Potential Impact
11. Hampshire Hills Neighborhood	Potential Impact	--
14. Businesses along North Tryon Street/US-29 (Dorton Street to Old Concord Road)	--	Potential Impact
15. Crossroads Charter School (NR-Eligible)	Potential Impact	Potential Impact
19. Businesses along North Tryon Street/US-29 (Old Concord Road to JW Clay Boulevard)	Potential Impact	--
20. Carolinas Medical Center - University	Potentially Significant Impact	--
24. Charlotte Research Institute (CRI)	Potential Impact	--
25. Toby Creek Greenway (Planned)	Potential Impact	--
26. UNC Charlotte	Potential Impact	--
28. University City South (Mallard Creek Apartments)	Potentially Significant Impact	--
30. Kirk Farm Fields	Potential Impact (Temporary)	--
31. Mallard Creek Greenway Extension (planned)	Potential Impact	--
32. Queen’s Grant Mobile Home Park	Potential Impact	--

Note: No rating (--) is indicated for properties that are not affected by a particular alternative (not applicable).

7.2.1 No-Build Alternative

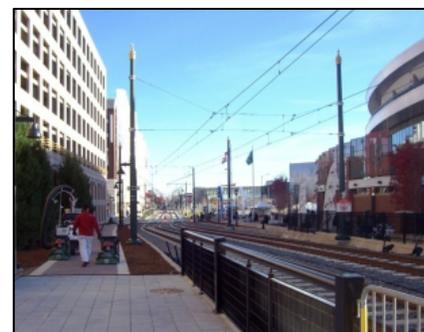
No significant changes to existing visual conditions would occur as a result of the No-Build Alternative. Therefore, there would be no impact to visual resources.

7.2.2 Light Rail Alternative

The following sections describe the visual elements of the proposed Light Rail Alternative. These elements would result in a change in the existing view of a visual resource, a change in the viewer’s perspective of a visual resource, or that would obstruct views to or from a visual resource.

7.2.2.1 New Visual Elements

The proposed Light Rail Alternative would introduce new visual elements into the proposed project corridor. These new visual elements include: the light rail vehicles and trackway; station platforms and park-and-ride lots; the overhead catenary system that powers the electric light rail vehicles; electrical substations, signal houses, and crossing cases; and, bridges and retaining walls. These elements would be similar in design to those of the existing LYNX Blue



Existing LYNX Blue Line alignment in Center City Charlotte.

Line light rail that operates in Charlotte’s South Corridor and are described in more detail in Chapter 2.0: Alternatives Considered.

Light Rail Vehicles and Trackway

New visual elements that would be introduced by the proposed Light Rail Alternative include the addition of the light rail vehicles and the trackway in which the vehicles would operate. The type of light rail vehicle, shown in Chapter 2.0: Alternatives Considered would be similar to that of the existing LYNX Blue Line. The proposed Light Rail Alternative would require the addition of two sets of steel rail tracks placed on concrete cross ties with standard rock ballast, also similar to the existing LYNX Blue Line.

Station Platforms and Park-and-Ride Lots

To accommodate passenger boarding and alighting, typical station platforms would be 300 feet long with canopies that would be approximately 12 feet in height. The parking provided at each proposed station would vary depending on the forecasted ridership and land availability. However, every station would be complemented with landscaping and public art to ensure visual compatibility with the surrounding area. (Station site plans and typical sections are presented in Section 2.2.3 of Chapter 2.0: Alternatives Considered). Workshops were held early in the project planning process to elicit input from area residents and business owners with the intention of integrating the station design into existing neighborhoods. This process will continue throughout final design of the proposed project.



Typical LYNX Blue Line center station platform.

Overhead Catenary System

The light rail vehicles would be electrically powered by an overhead catenary system that would require construction of poles to support overhead wires. The presence of these wires would have minimal visual impact since the area (particularly along North Tryon Street/US-29) is already characterized by the presence of overhead utility wires; therefore, the new elements would not be intrusive. The pole design for the proposed project generally would be similar to that used for the LYNX Blue Line, unless the station area design process indicates that a custom design would be more appropriate (e.g., in a historic district).

Substations, Signal Houses and Crossing Cases

To provide electricity throughout the proposed alignment, electric substations would need to be located within the rail right-of-way or at station locations, as discussed and shown in Section 2.2.3.7 of Chapter 2.0: Alternatives Considered. Dimensions of the proposed one-story, corrugated metal substations would be approximately 40 feet by 60 feet.

Dimensions of the proposed signal houses would be approximately ten feet by 30 feet by ten feet. These structures need to be located close to the tracks to operate the track switches.

Crossing cases would be located at each at-grade crossing to operate lights and switches. Standard colors for both the signal houses and the crossing cases would be battleship gray or stainless steel.

These structures would have little impact on the visual character of the study area from East 7th Street to east of Eastway Drive where the alignment would transition to North Tryon Street/US-29. This segment would run along the existing rail corridor adjacent to commercial and industrial properties where features such as trash receptacles, dumpsters and storage areas are currently prevalent. There also would be little or no visual impacts from substations and signal houses along North Tryon Street/US-29, as these structures would be located in places where that would typically be concealed from view or would be located in areas that are not visually sensitive.



Typical LYNX Blue Line crossing case.

Vehicle Light Maintenance Facility (VLMF)

The Vehicle Light Maintenance Facility (VLMF) is planned to provide light maintenance, repair, interior cleaning, and inspection of light rail vehicles. The facility would be located on 20 acres within the existing Norfolk Southern Intermodal Yard located just northeast of Brevard Street.

Bridges and Retaining Walls

The greatest visual impact from the proposed Light Rail Alternative would result from the addition of bridges to cross over existing freight tracks, roads, or water features, and the introduction of retaining walls that are either approaches to these bridges or needed to hold back an existing slope to minimize property acquisition. These project elements and planned locations are highlighted in Figures 7-2a through 7-2f.

Existing Rights-of-Way Modifications

In addition to the introduction of new visual elements, construction of the proposed Light Rail Alternative would require street widening and modifications to existing rights-of-way in limited areas. Construction of the proposed Light Rail Alternative would also require removal of vegetation within the railroad right-of-way and the widening of North Tryon Street/US-29, which could remove business signage and physically alter private property. The changes could either expand or block a particular viewshed, or change the context of visual resources along the proposed project corridor. Within the railroad right-of-way, the proposed Light Rail Alternative would be constructed to the north of the existing Norfolk Southern freight tracks. Vegetation along this side of the right-of-way would be removed in order for the light rail tracks to be constructed. The removal of vegetation will open views to the railroad right-of-way.

Along North Tryon Street/US-29, varying amounts of right-of-way would need to be purchased from property owners for implementation of the proposed project. The total additional right-of-way required for the typical section of the roadway would average approximately 30 feet, with additional right-of-way needed for stations and turn lanes. Between Old Concord Road and the “weave,” the majority of the widening of North Tryon Street/US-29 would occur on the west side of the street. North of the “weave”, the proposed project would require a more symmetrical acquisition of right-of-way along both sides of North Tryon Street/US-29. Project elements and the potential for visual impacts are described in the following sections.

7.2.2.2 Contextual Project Design

In order to minimize the potential visual and physical effects of the proposed light rail project, the City of Charlotte and CATS have employed three key techniques aimed at providing a well-designed project that fits into the context of its surrounding environment. These include: the development of station area plans; incorporation of the *UDF* into the proposed project’s design criteria; and, the Art in Transit Program.

Station Area Planning

CATS and City staff organized an extensive station area planning process during the early stages of planning to elicit input from area residents and property owners about ways to integrate station designs into existing neighborhoods. The development of these station area concepts provided input into station design as well as the project’s design criteria. The station area planning process also served as a basis of the *UDF* which is described as follows.



LYNX Blue Line landscaping, sculpture and other treatments.

Urban Design Framework

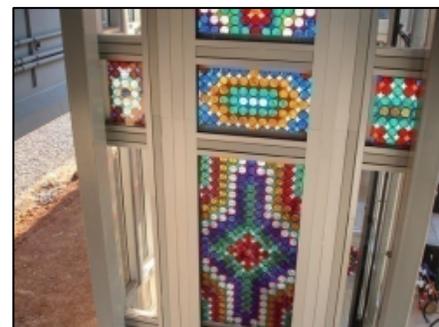
The *UDF* recommends design treatments for areas along the proposed project corridor in order to reduce visual impacts and integrate the proposed project into the context of the project setting. The recommendations set forth in this report have been incorporated into the project’s design criteria and would be incorporated into the engineering design plans at the 65 percent level of design.

The *UDF* specifies design treatments for the light rail trackway, fencing, retaining walls and embankments, bridges, traction power system components and landscaping. These design treatments were recommended based on the project setting (e.g. for areas at stations, within street right-of-way or, within railroad right-of-way). The design treatments are categorized into four levels: Station Area, Standard, Tier 1 or Tier 2. These levels have been applied based on whether the proposed project is located either within or along street or railroad right-of-way. The following design treatments are recommended for each level:

- Station Area design treatments are recommended for each station. The standard station area design would include: pedestrian crossings with stamped concrete or concrete plank inserts; minimal fencing with the consideration of art; decorative elevated track rail fencing; architectural enclosure for system elements security; decorative retaining wall fencing; decorative concrete finishes for retaining walls with the consideration of art; terracing of embankments and/or planting with vegetated slopes; signature bridges to define the system and provide district identity; painted pole with finial and standard arm; traction power substations and signal houses placed in inconspicuous places; and landscaping with a high degree of color and textural interest.
- Standard design treatments are recommended for areas within or adjacent to the railroad right-of-way, areas planned to remain in industrial use, or areas with grade-separation at the rear portions of other land uses. Along North Tryon Street/US-29, these are areas within or adjacent to the roadway where it has a posted speed limit of at least 45 miles per hour, and areas that are planned to remain in industrial use. An example of a standard design treatment related to bridges located within or adjacent to roadway right-of-way areas would be: bridge types designed with consideration given to cosmetic improvements, such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and/or caps.
- Tier 1 design treatments are recommended when the transit line is within or adjacent to the railroad right-of-way within ½-mile of a station. For North Tryon Street/US-29, Tier 1 treatments are recommended when the transit line runs within or adjacent to the roadway where it has a posted speed limit of 30 to 40 miles per hour, within ½-mile of the proposed stations and in highly visible areas. An example of Tier 1 treatments for retaining walls would be the inclusion of decorative concrete finishes in contiguous panels with landscaping where space allows.
- Tier 2 design treatments would apply within or adjacent to the railroad right-of-way when the transit line is in a high profile segment other than a station area. Tier 2 treatments are recommended within or adjacent to roadway right-of-way, including North Tryon Street/US-29, when the transit line would run within or adjacent to the roadway where it has a posted speed limit of 25 miles per hour or less, or when in a high profile segment other than a station area. An example of a Tier 2 design treatment related to bridges in right-of-way areas would be: creating signature bridges that define system and district identity by giving consideration to structural systems that are inherently more aesthetically pleasing and to cosmetic improvements, the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and/or caps.

Art in Transit Program

In accordance with Federal Transit Administration's policy Circular 9400.1A, CATS has an Art in Transit Program whereby one percent of the design and construction costs for major projects in its capital program are dedicated to integrating art into project design. The CATS Art in Transit Program would help minimize adverse visual impacts and add unique character to the stations. In addition to adding a human dimension to transit, art projects reinforce the spirit and identity of areas immediately surrounding station locations.



Example of Art in Transit
at an existing LYNX Blue Line Station.

7.2.2.3 Impacts by Visual Resource

In general, the proposed project would result in varying degrees of visual impact based on the permanence and extent of construction. Visual effects and impacts of the proposed Light Rail Alternative

on each visual resource are described below, organized by resources with either potential impacts or potentially significant impacts. A potential impacts could occur if the proposed project involves elements of different scale, color, location, or orientation from surrounding structures, or the proposed project is located within an historic district, adjacent to an historic structure, or adjacent to a major public building that is designed as a focal point (e.g., City Hall). A potentially significant impact could occur if the proposed project is out of scale in an area with a recognized visual character that is perceived by the community as an asset, or the proposed project would disrupt important views (e.g., natural areas, scenic areas or significant man-made structures). Resources listed in Figures 7-1a and 7-1b that are not described in the following sections would not experience an impact as a result of the proposed Light Rail Alternative and are therefore excluded from discussion.

Potential Impacts

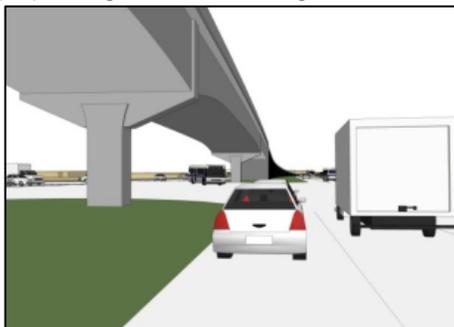
- Alpha Mill Apartments (NR-Listed) (3): These apartments, historically known as the Orient Manufacturing Company/Chadwick Hoskins No.3, are located just to the east of I-277 in a former and historic warehouse building that has been adaptively re-used. A potential impact would be expected at this resource due to the proposed elevated tracks and proposed retaining wall immediately behind this building that would alter the existing views to and from this resource. A 100-foot long bridge is planned to carry the alignment over the existing CSX Corporation tracks and approximately 400-foot of retaining wall would be introduced in the vicinity of this resource. The proposed elevated tracks and retaining wall would cause noticeable changes to the views to and from the Alpha Mill Apartments' buildings. However, while the proposed elevated tracks and retaining walls would cause a potential impact, the impact to this resource is not anticipated to be significant as similar structures from I-277 are located within this resource's viewshed.
- Herrin Brothers Coal and Ice Company (NR-Eligible) (7): This historic resource is located on the east side of 36th Street just north of the existing railroad tracks and the proposed light rail alignment and the 36th Street Station. The resource is a former coal and ice facility and has several buildings, storage tanks, and outbuildings associated with its use. The depression of 36th Street under the proposed light rail tracks and the 36th Street Station would be new visual elements for viewers at this resource. The views to and from this resource would not be altered by proposed project; therefore, the potential impact is not anticipated to be significant.
- North Charlotte Historic District (NR-Listed) (8): This historic district is locally known as an arts district called "NoDa." It is generally located centered on 36th Street and North Davidson Street and is oriented towards the rail tracks. Due to the size of this NR-listed district, the North Charlotte Historic District would experience visual impacts from several project elements that would be introduced on the northern edge of the district and views to and/from the proposed project that would be different than what currently exists.

Near the western end of the district, around Faison Avenue and Mallory Street, a retaining wall would be introduced. Northeast of 30th Street, views of an approximately 100-foot long proposed bridge over a rail spur and an approximately 400-foot long proposed bridge over a depressed 36th Street would be introduced to views from the vicinity of the historic district. An approximately 750-foot long bridge over Craighead Road that would be introduced near North Davidson Street and East Craighead Road would also be a prominent new visual element adjacent to this visual resource. Although this area is industrial with prominent views of overhead utilities and the railroad crossing at Craighead Road, the introduction of additional bridges would cause a noticeable change in the visual landscape adjacent to this historic district. Near 36th Street, views of the 36th Street Station would be new visual elements located on the northern edge of the district while the depression of 36th Street would occur within the district boundaries.

Views of the proposed project from the NoDa area and other nearby residential areas would be generally shielded by existing industrial uses adjacent to the rail corridor. Since this resource is associated with early mill development and associated industry, the light rail project elements would not be out of character with surrounding development and existing transportation uses. Therefore, although a potential impact would result, the impact is not considered to be significant.

- Hampshire Hills neighborhood (12): This resource is located to the north of the existing railroad tracks between Sugar Creek Road and Eastway Drive. The impact would occur only at six properties that abut the railroad right-of-way and where a retaining wall would be used to allow for the existing slope behind these houses to be cut out for the future light rail tracks. These six homes are located closest to Eastway Drive and are located between St. Anne Place and Eastway Drive. At this location, an existing vegetative buffer would be removed as a result of the proposed project. The retaining wall would have protective fencing placed on the top of the wall and would extend from St. Anne Place to Eastway Drive. These changes would result in a potential visual impact to these six homes as it would alter the views from this resource to the proposed project and make the existing railroad tracks more visible.
- Crossroads Charter School (NR-Eligible) (15): This historic resource and school is located on the east side of North Tryon Street/US-29 just south of Old Concord Road. Views of the proposed Old Concord Road Station and park-and-ride lot would be present in the vicinity of this NR-eligible resource known as the former GM Training Center. The proposed station and park-and-ride would be located behind the building. A new track alignment would pass along the backside of the property and through a small portion of it as the alignment approaches North Tryon Street/US-29. An approximately 400-foot long proposed bridge over Old Concord Road would be visible just north of this resource. Views of the Crossroads Charter School from North Tryon Street/US-29 would not be blocked or substantially altered other than the site’s context at the rear portion of the property and alteration of the context of the overall area with the added bridge at Old Concord Road to the north. As such, the impact to this resource is not anticipated to be significant.

- Businesses along North Tryon Street/US-29 between Old Concord Road and JW Clay Boulevard (19): Bridges with retaining walls within the median of North Tryon Street/US-29 would be constructed



Simulation of light rail bridge in the median of North Tryon Street/US-29.

to allow the light rail to pass over existing roads at: Old Concord Road as the light rail transitions from the railroad right-of-way into North Tryon Street/US-29; the realigned I-85 Connector Road; University City Boulevard; and W.T. Harris Boulevard. These bridges would obstruct the views across North Tryon Street/US-29 and could block views to neighboring businesses. Business signage may also be relocated due to partial property acquisitions. Businesses may be monetarily compensated for signage replacement/relocations if a portion of the property is acquired to accommodate the light rail project, or may be paid damages if the views are permanently obstructed by a light rail

bridge/retaining wall. These sites will be identified during final design (see Chapter 17.0: Acquisitions and Displacements). As business owners would be provided replacement or relocated signage or paid damages, the impacts would not be considered significant.

- Charlotte Research Institute (CRI) (24): This resource is located on the northern end of the proposed alignment north of W.T. Harris Blvd and south of Mallard Creek Church Road. The proposed light rail alignment would travel in front of CRI within the median of North Tryon Street/US-29. The trackway and the catenary poles and wires would be visible from the existing and planned CRI buildings. This high quality, visually sensitive resource would experience a potential impact with the alteration of views from the building. The potential impact would not be considered a significant impact because the light rail would be located in the median of a major thoroughfare with utility poles and wires located on both sides of the street. In addition, views of the building from other vantage points would not be interrupted.



Rendering of planned Charlotte Research Institute (CRI).

- Toby Creek Greenway - planned (25): This resource will be located near the northern end of the alignment along the UNC Charlotte campus and other private properties. The proposed project would cross this planned greenway on an approximately 550-foot long bridge that would also cross over Toby Creek. This would disrupt views of a natural setting and result in vegetation removal along the bridge and light rail trackway. However, the visual character would be similar to existing trails located in the immediate vicinity. As result, the potential impacts would not be considered significant.
- UNC Charlotte (26): This resource is located near the northern end of the alignment between University City Blvd./US-49 and North Tryon Street/US-29. The proposed Light Rail Alternative would introduce a new visual element along the edge of the CRI campus and within the UNC Charlotte campus. The proposed UNC Charlotte Station would be located on the UNC Charlotte campus, introducing a new visual element on campus. The station would be located next to Laurel Hall dormitory. Potential visual impacts from lighting could result at this station. Within the campus, the alignment would represent a new visual element. The alignment would require the construction of a new bridge to cross over Toby Creek and the planned Toby Creek Greenway. The alignment would also require the construction of a new bridge to cross over an unnamed tributary of Mallard Creek. A substation would be required on the UNC Charlotte campus in an area currently developed as a parking lot. The visual impact resulting from construction of this substation would be minimal. A signal house is also proposed near the station, which has a potential visual impact. CATS has coordinated the proposed light rail alignment with UNC Charlotte and the newly updated Campus Master Plan. Potential exists for visual impacts within the UNC Charlotte campus since the proposed project would introduce a new visual element into a high-quality viewshed. This impact is not expected to be significant as it is consistent with the UNC Charlotte Campus Master Plan.
- Kirk Farm Fields (30): This resource is located just north of Mallard Creek Church Road on the south side of Mallard Creek that is just south of North Tryon Street/US-29. The proposed Mallard Creek Church Station and park-and-ride lot would be located immediately adjacent to this recreational facility. The area closest to the proposed station is a boardwalk for wetland and wildlife viewing. The proposed station platform and park-and-ride lot would significantly alter the natural setting as currently viewed from the boardwalk. Wooded views and views of natural areas would be replaced by views of the proposed station and park-and-ride lot. However, as the trees and vegetation that have been planted in this restored wetland mature, the views of the station and park-and-ride lot would be screened. Since it is projected that this growth could occur within 10-years, the potential impacts would be temporary in nature. Therefore, the potential impact is not anticipated to be significant.
- Mallard Creek Greenway Extension - planned (31): This resource is planned to be located along Mallard Creek extending from the end of the existing Mallard Creek Greenway at Kirk Farm Fields. The proposed project would cross this planned greenway on an approximately 700-foot long bridge. This structure would disrupt views of a natural area but similar structures exist along the Mallard Creek Greenway, as it travels under major roadways in a largely urban environment. Therefore, the disruption of the view to the natural area of the planned greenway would be similar to the other greenways within the MCPR greenway system. As a result, the potential impact would not be significant.
- Queen’s Grant Mobile Home Park (32): This resource is located just to the north and east of the proposed I-485/N. Tryon Station parking garage. Residents of this resource currently have wooded views to the west towards North Tryon Street/US-29. Minor removal of vegetation would be required to construct the park-and-ride lot access drive and retain the alignment of Morningstar Place Drive. The proposed parking garage would be five-stories but would be located approximately 400 feet from the closest mobile home. Dense vegetation that is approximately 300 feet wide would screen the majority of the view to and from the mobile homes within this park. However, because of the elevation change between the mobile homes located on Esplanade Street and the top of the parking garage, it



Future Mallard Creek
Greenway Extension area.

is possible that the top two stories may be visible from this row of mobile homes. The grade change does not apply to the mobile homes located further to the north near Morningstar Place Drive as these homes currently have views of Morningstar Place Drive and North Tryon Street/US-29. As a result, the impacts to the mobile homes located closest to the parking garage have the potential for an impact, but the impact would not be significant due to the natural vegetative screen that would remain.

Potentially Significant Impacts

Potentially significant impacts as a result of the proposed Light Rail Alternative would be anticipated to occur at the following locations along the corridor.

- CMC–University (20): This resource is located at the intersection of W.T. Harris Boulevard and North Tryon Street/US-29. The proposed project would block views of this hospital due to the proposed bridge over W.T. Harris Boulevard and the bridge's associated retaining walls. The views to and from approximately the first three floors of the building and the emergency room would be blocked, resulting in a potentially significant visual impact due to the importance of way-finding by non-emergency personnel in emergency conditions and by patient visitors.



Simulation of the light rail bridge over W.T. Harris Boulevard (view from CMC-University).

- University City South/Mallard Creek Apartments (28): This resource is an apartment complex located off of Mallard Creek Church Road. One apartment building, a portion of another apartment building and a substantial portion of wooded area would be removed as a result of construction of the proposed project. For the building that would only be half demolished, re-facing of the remaining building portion would occur as part of the proposed Light Rail Alternative. These changes would expose views of light rail to viewers residing in apartments along Michelle Linnea Drive who currently face the natural area. In addition, the curvilinear street layout and site design of the Mallard Creek Apartment complex would be disrupted as a result of the proposed alignment cutting through the northeastern corner of apartment complex. A potentially significant impact would result as views from these apartments would be significantly altered.

7.2.3 Light Rail Alternative – Sugar Creek Design Option

For the Sugar Creek Design Option, a change in the proposed alignment and the location of two stations would be made as described in Section 2.2.3.5. When compared to the proposed Light Rail Alternative alignment, the Sugar Creek Design Option would have no difference in impacts to the Standard Chemical Products Plant (9) and the Crossroads Charter School (15). However, the Sugar Creek Design Option would have a potential impact on the businesses along North Tryon Street/US-29 (Dorton Street to Old Concord Road) (14) and a greater negative visual impact than the proposed Light Rail Alternative on the Republic Steel Warehouse (10).

Under the Light Rail Alternative – Sugar Creek Design Option there would be potential visual impacts on the following resources:

- Republic Steel Warehouse (NR-Eligible) (10): This historic resource is a one-story office and an expansive, brick and corrugated steel warehouse located to the west of Sugar Creek Road and north of the existing railroad tracks. The proposed alignment would pass through the middle of this NR-eligible property. In addition, views of the proposed station and park-and-ride lot associated with this option would be introduced looking north of the warehouse. The addition of the light rail project alignment through this property is a potential impact. The impact would not be significant since the association of this historic property with the railroad precedes the proposed Light Rail Alternative.
- Businesses along North Tryon Street/US-29 between Dorton Street and Old Concord Road (14): Bridges, and the bridges' associated retaining walls, would be constructed within the middle of North Tryon Street/US-29 in order for the light rail to pass over existing roads, including Eastway Drive, and

to enter the middle of North Tryon Street/US-29 just north of Mellow Drive. The design includes approximately 705 linear feet (lf) of bridges and 5,800 lf of retaining walls. These bridges would obstruct the views across North Tryon Street/US-29. Business signage may also be relocated due to partial property acquisitions on the west side of roadway. Buildings that would not be fully acquired for this design option would be closer to the realigned southbound lanes of North Tryon Street/US-29. Business owners may be paid relocation/replacement costs and damages in areas where views to existing buildings would be blocked by the light rail retaining walls and bridges. These sites will be identified during final design (see Chapter 17.0: Acquisitions and Displacements). As a result of these efforts to minimize business impacts, the impacts would not be considered to be significant.



Simulation of light rail entering the median of North Tryon Street/US-29 on a bridge near Dorton Street.

- Crossroads Charter School (NR-Eligible) (15): This historic resource is located on the east side of North Tryon Street/US-29 just south of Old Concord Road. The proposed Old Concord Road Station – Sugar Creek Design Option would be located in the median of North Tryon Street/US-29, adjacent to this resource. In addition to this new visual element, the proposed park-and-ride lot for this option would be adjacent to this resource. Due to the existing context of this resource, the impacts would not be considered to be significant.

7.3 Mitigation

7.3.1 Light Rail Alternative

The *UDF* recommends specific treatments for trackway, fencing, retaining walls and embankments, bridges, catenary and other system components, as well as landscaping. The *UDF* treatments will provide an aesthetically pleasing experience for viewers of the proposed project as well as viewers from the proposed project. The design treatments will vary between different sections of the alignment based on the designation in the *UDF*, which has been incorporated into the project's Design Criteria. In all but three cases, the *UDF* design treatment tier will sufficiently minimize impacts to visual resources.

- For the six affected properties in the Hampshire Hills neighborhood, landscaping is recommended along the project fencing. This landscaping may need to be placed on private property, if there is not sufficient public right-of-way available.
- Additional directional signage will be added to the project design in order to improve way finding to the CMC-University.
- Additional landscaping will also be added, where practical, near the rear buildings of the University City South (Mallard Creek Apartments) that are closest to the light rail trackway.

7.3.2 Light Rail Alternative – Sugar Creek Design Option

No additional mitigation beyond the *UDF* recommended design treatments proposed will be required to address potential visual impacts of the Light Rail Alternative – Sugar Creek Design Option.

7.4 Coordination

CATS has extensively coordinated with the Charlotte-Mecklenburg Planning Department to develop the Urban Design Framework for the project and to ensure context sensitive design that fits into the context of the surrounding station areas. CATS has discussed the proposed project and potential visual impacts with representatives of the Mecklenburg County Parks and Recreation Department, the Charlotte Research Institute, Carolinas Medical Center-University, University City Partners, and UNC Charlotte. CATS has also produced visualizations of key areas of the project and used these at public and neighborhood meetings, as well as with stakeholders, to aid in understanding the proposed project.

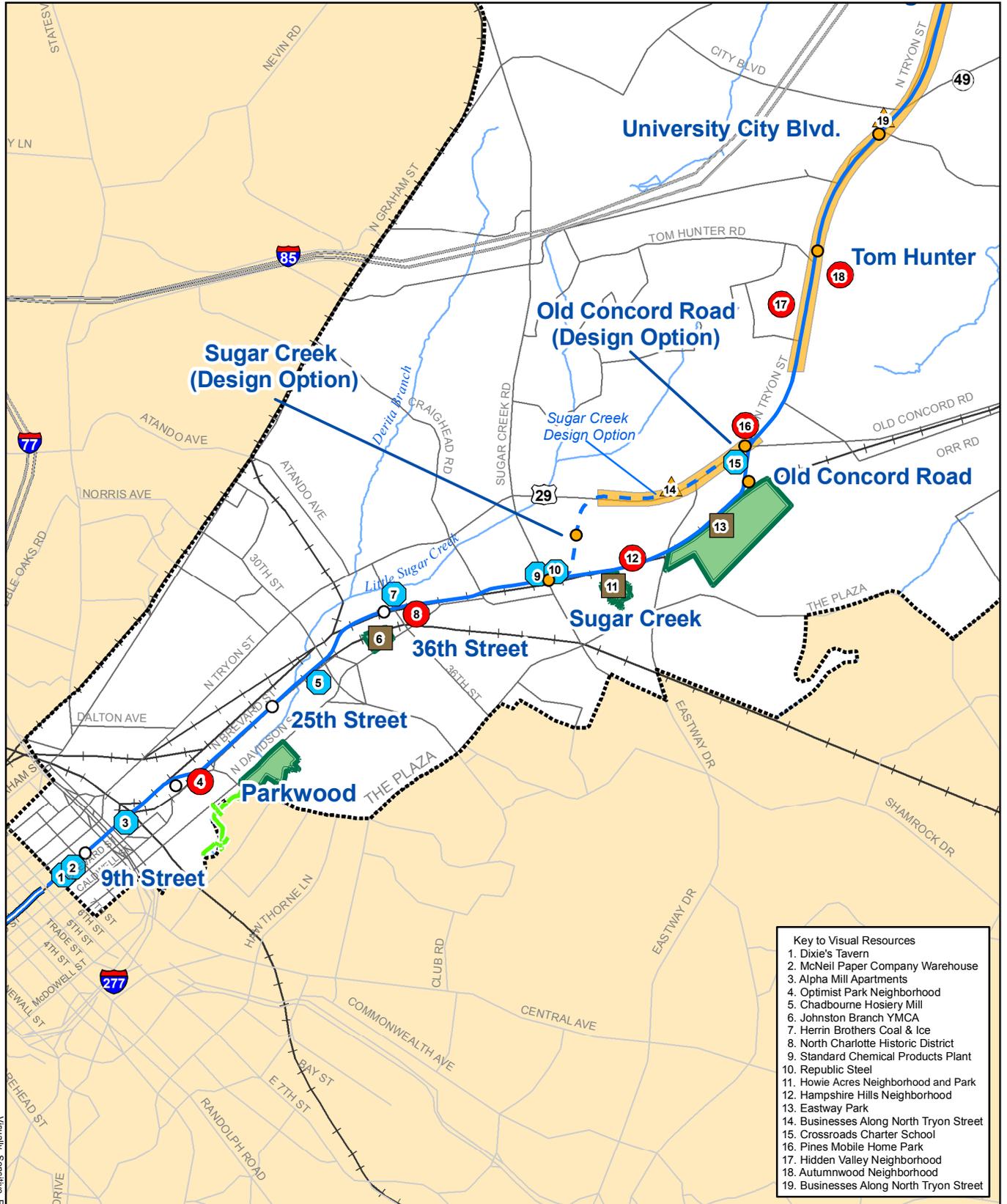
Community outreach efforts are described more fully in Chapter 22.0 Public Involvement and Agency Coordination.

CATS will continue to coordinate with project stakeholders and interested and affected parties. Specific coordination is needed with the following agencies and/or groups in order to gain additional input on the impacts of the proposed Light Rail Alternative, as well as to finalize mitigation plans. Further coordination will occur for the proposed Light Rail Alternative with:

- The six affected property owners (one house on St. Anne's Place and five houses on Prince Charles Street) in Hampshire Hills neighborhood on the north side of the alignment to offer landscaping along the project fencing for the six affected properties to minimize potential visual effects;
- Businesses along North Tryon Street/US-29 between the "weave" and University City Boulevard to relocate signage and discuss design elements to minimize visual impacts;
- The MCPD Department to develop coordinated design efforts for the planned greenways;
- The Charlotte Research Institute (CRI), including coordination of CRI's plans for expansion;
- CMC-University to coordinate the appropriate type and location of additional directional signage necessary to retain visibility of the hospital entrances ;
- University City Partners to provide information to affected businesses along North Tryon Street/US-29 regarding the property acquisition program;
- UNC Charlotte to coordinate the design of light rail on campus, including bridge over Toby Creek and station design, to address potential visual impacts and ensure consistency with master plan and campus design guidelines; and,
- The property owner of the University South (Mallard Creek Apartments) to develop landscape treatments, where practical, near the buildings that are closest to the trackway to minimize potential visual effects.

In addition to the previously mentioned coordination efforts, the Light Rail Alternative – Sugar Creek Design Option would require coordination with businesses on North Tryon Street/US-29 between Dorton Street and Old Concord Road.

Visual Resources in Southern Portion of Corridor



- Key to Visual Resources**
1. Dixie's Tavern
 2. McNeil Paper Company Warehouse
 3. Alpha Mill Apartments
 4. Optimist Park Neighborhood
 5. Chadbourne Hosiery Mill
 6. Johnston Branch YMCA
 7. Herrin Brothers Coal & Ice
 8. North Charlotte Historic District
 9. Standard Chemical Products Plant
 10. Republic Steel
 11. Howie Acres Neighborhood and Park
 12. Hampshire Hills Neighborhood
 13. Eastway Park
 14. Businesses Along North Tryon Street
 15. Crossroads Charter School
 16. Pines Mobile Home Park
 17. Hidden Valley Neighborhood
 18. Autumnwood Neighborhood
 19. Businesses Along North Tryon Street

Legend		Visual Resources	
Northeast Corridor Limits	Lynx Blue Line	NR-Eligible or Listed Property	Streams
Light Rail Transit	Highway	Neighborhood / Residential Area	5yr Future Greenways
Design Options	Highway (Future)	Park / Recreational Facility	10yr Future Greenways
Proposed Stations	Major Roads	Business / Institutional	Existing Greenways
Proposed Stations with Park-and-Ride	Railroads	Mecklenburg County Parks	

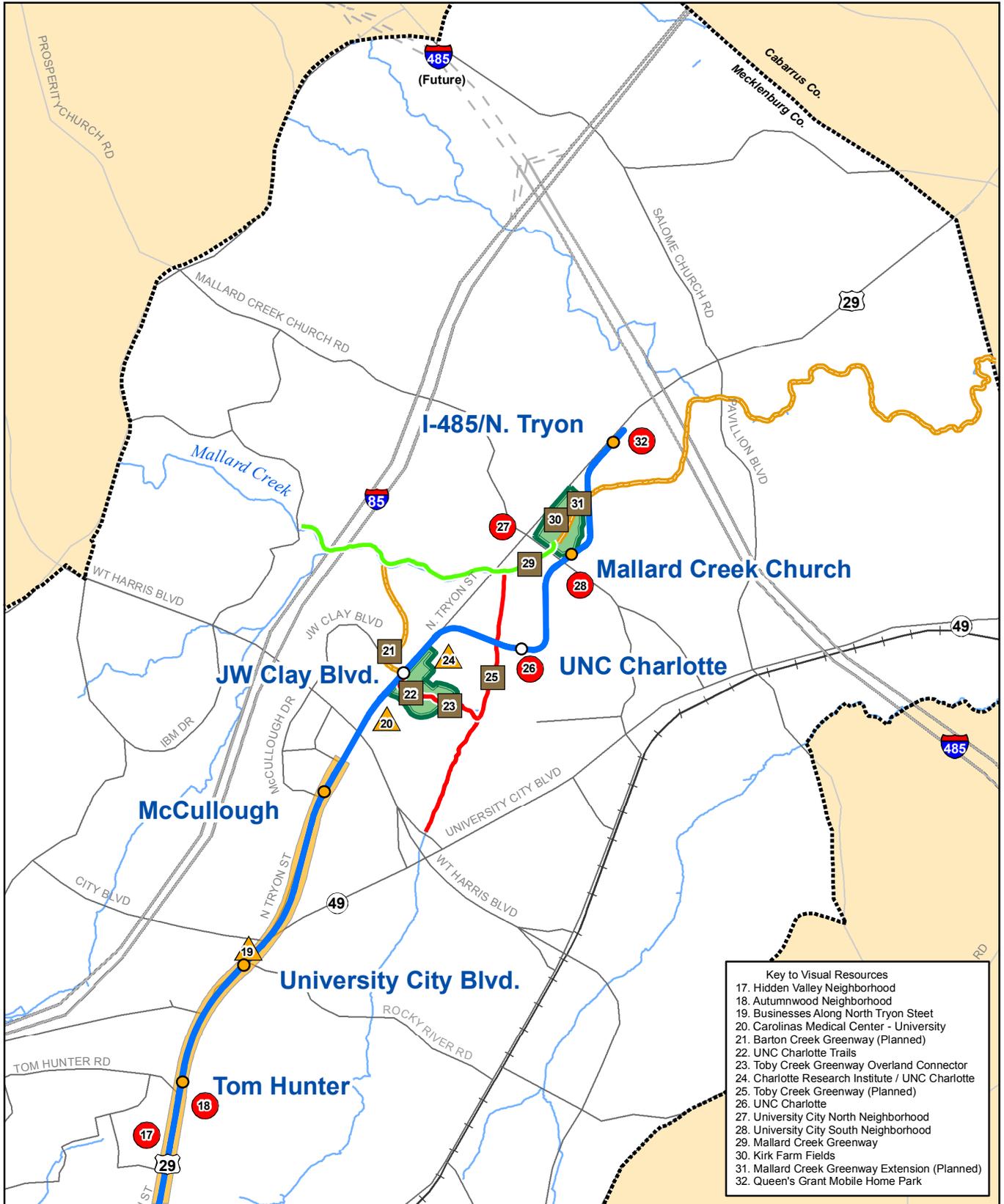
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Data Source:
 CATS, City of Charlotte GIS, and Mecklenburg County
 GIS, Mulkey Field Investigation, 2009

Visually_Sensitive_Resources_Southern_Map_CB_100809.pdf

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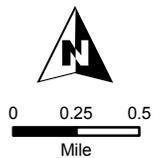
Visual Resources in Northern Portion of Corridor



- Key to Visual Resources**
- 17. Hidden Valley Neighborhood
 - 18. Autumnwood Neighborhood
 - 19. Businesses Along North Tryon Street
 - 20. Carolinas Medical Center - University
 - 21. Barton Creek Greenway (Planned)
 - 22. UNC Charlotte Trails
 - 23. Toby Creek Greenway Overland Connector
 - 24. Charlotte Research Institute / UNC Charlotte
 - 25. Toby Creek Greenway (Planned)
 - 26. UNC Charlotte
 - 27. University City North Neighborhood
 - 28. University City South Neighborhood
 - 29. Mallard Creek Greenway
 - 30. Kirk Farm Fields
 - 31. Mallard Creek Greenway Extension (Planned)
 - 32. Queen's Grant Mobile Home Park

Legend

- | | | | |
|--------------------------------------|------------------|---------------------------------|-----------------------|
| Northeast Corridor Limits | Lynx Blue Line | NR-Eligible or Listed Property | Streams |
| Light Rail Transit | Highway | Neighborhood / Residential Area | 5yr Future Greenways |
| Design Options | Highway (Future) | Park / Recreational Facility | 10yr Future Greenways |
| Proposed Stations | Major Roads | Business / Institutional | Existing Greenways |
| Proposed Stations with Park-and-Ride | Railroads | Mecklenburg County Parks | |



Data Source:
CATS, City of Charlotte GIS, and Mecklenburg County
GIS, Mulkey Field Investigation, 2009

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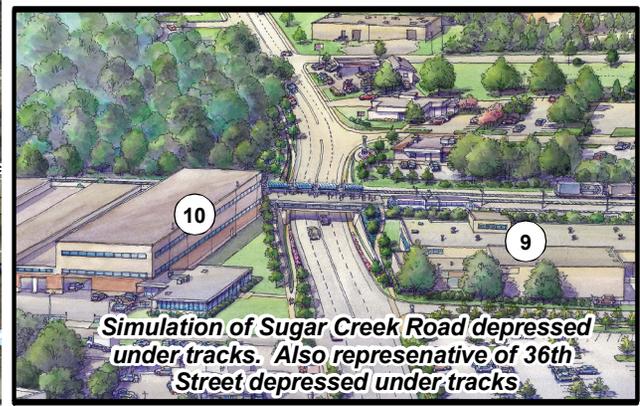
Figure 7-2a
Light Rail Alternative Grade Separations and Retaining Walls



<p>Legend</p> <ul style="list-style-type: none"> — Light Rail Transit — Sugar Creek Design Option Proposed Station Platform — Proposed Retaining Walls — Proposed ROW 		<ul style="list-style-type: none"> Railroads Proposed Substation Proposed Signal Houses Roads — Streams 		<ul style="list-style-type: none"> Proposed Park-and-Ride Facilities Proposed Structures # Business/ Institutional along North Tryon Street/US-29 # NR-Eligible or Listed Property # Neighborhood / Residential Area # Park / Recreational Facility 		<p>Map Vicinity</p>	<p>400 200 0 400 Feet 1 inch = 800 feet</p>
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Data Source: Charlotte Area Transit System, STV/RWA, Mecklenburg County GIS Aerial (2007)

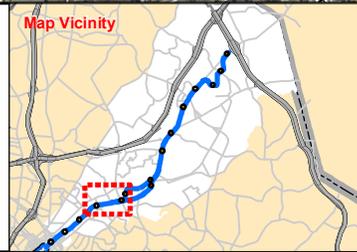
Light Rail Alternative Grade Separations and Retaining Walls



- Key to Visual Resources**
- 6. Johnston Branch YMCA
 - 7. Herrin Brothers Coal and Ice
 - 8. North Charlotte Historic District
 - 9. Standard Chemical Products Plant
 - 10. Republic Steel

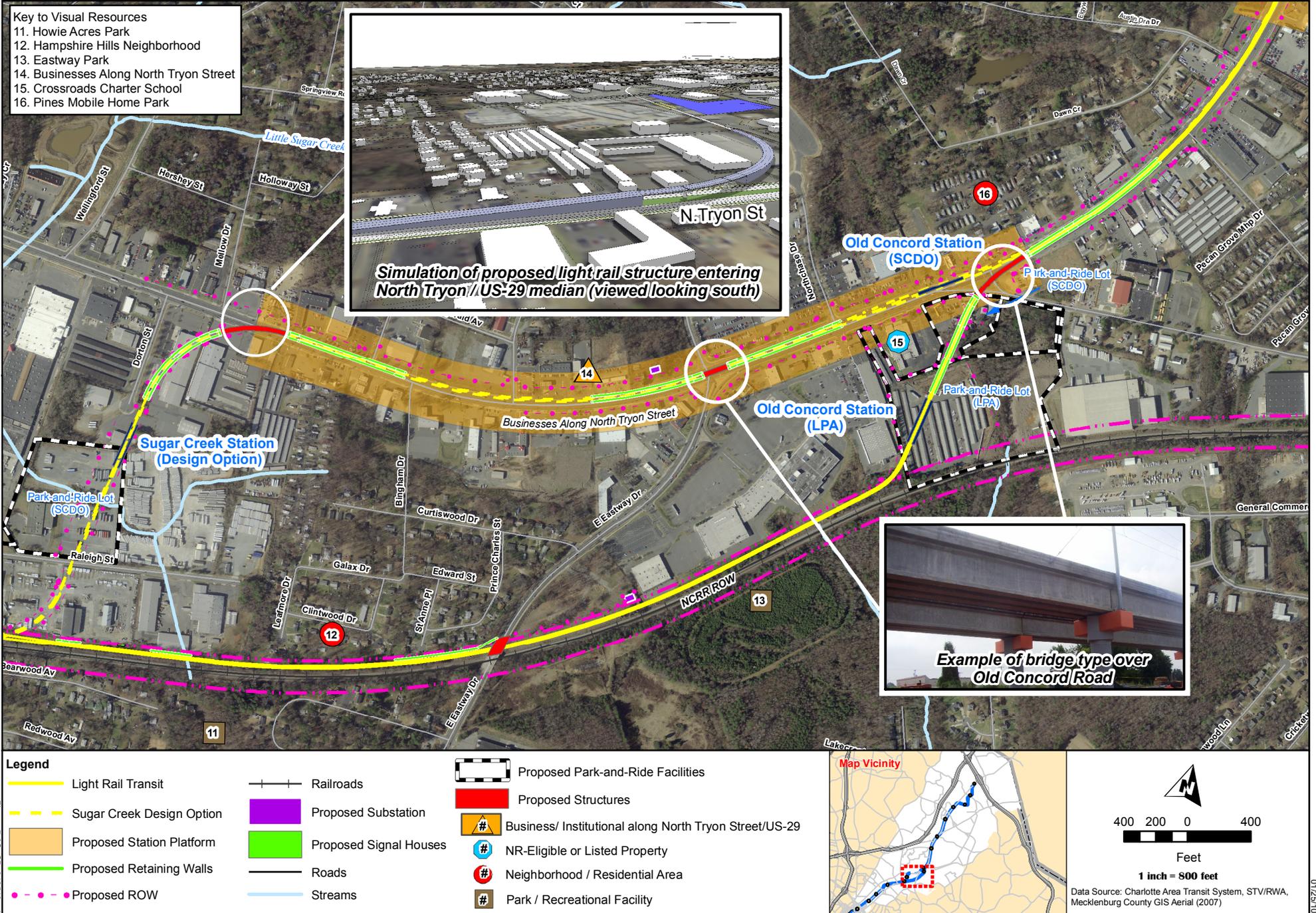
- Legend**
- Light Rail Transit
 - Sugar Creek Design Option
 - Proposed Station Platform
 - Proposed Retaining Walls
 - Proposed ROW
 - Railroads
 - Proposed Substation
 - Proposed Signal Houses
 - Roads
 - Streams

- Proposed Park-and-Ride Facilities
- Proposed Structures
- Business/ Institutional along North Tryon Street/US-29
- NR-Eligible or Listed Property
- Neighborhood / Residential Area
- Park / Recreational Facility



400 200 0 400
Feet
1 inch = 800 feet
Data Source: Charlotte Area Transit System, STV/RWA, Mecklenburg County GIS Aerial (2007)

Light Rail Alternative Grade Separations and Retaining Walls



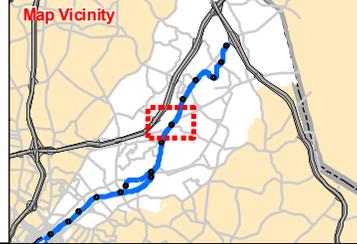
Light Rail Alternative Grade Separations and Retaining Walls



Example of bridge type proposed over I-85 Connector & US-49

Key to Visual Resources
19. Businesses Along North Tryon Street

- | | | |
|---------------------------|------------------------|-----------------------------------|
| Light Rail Transit | Railroads | Proposed Park-and-Ride Facilities |
| Sugar Creek Design Option | Proposed Substation | Proposed Structures |
| Proposed Station Platform | Proposed Signal Houses | Business / Institutional |
| Proposed Retaining Walls | Roads | NR-Eligible or Listed Property |
| Proposed ROW | Streams | Neighborhood / Residential Area |
| | | Park / Recreational Facility |

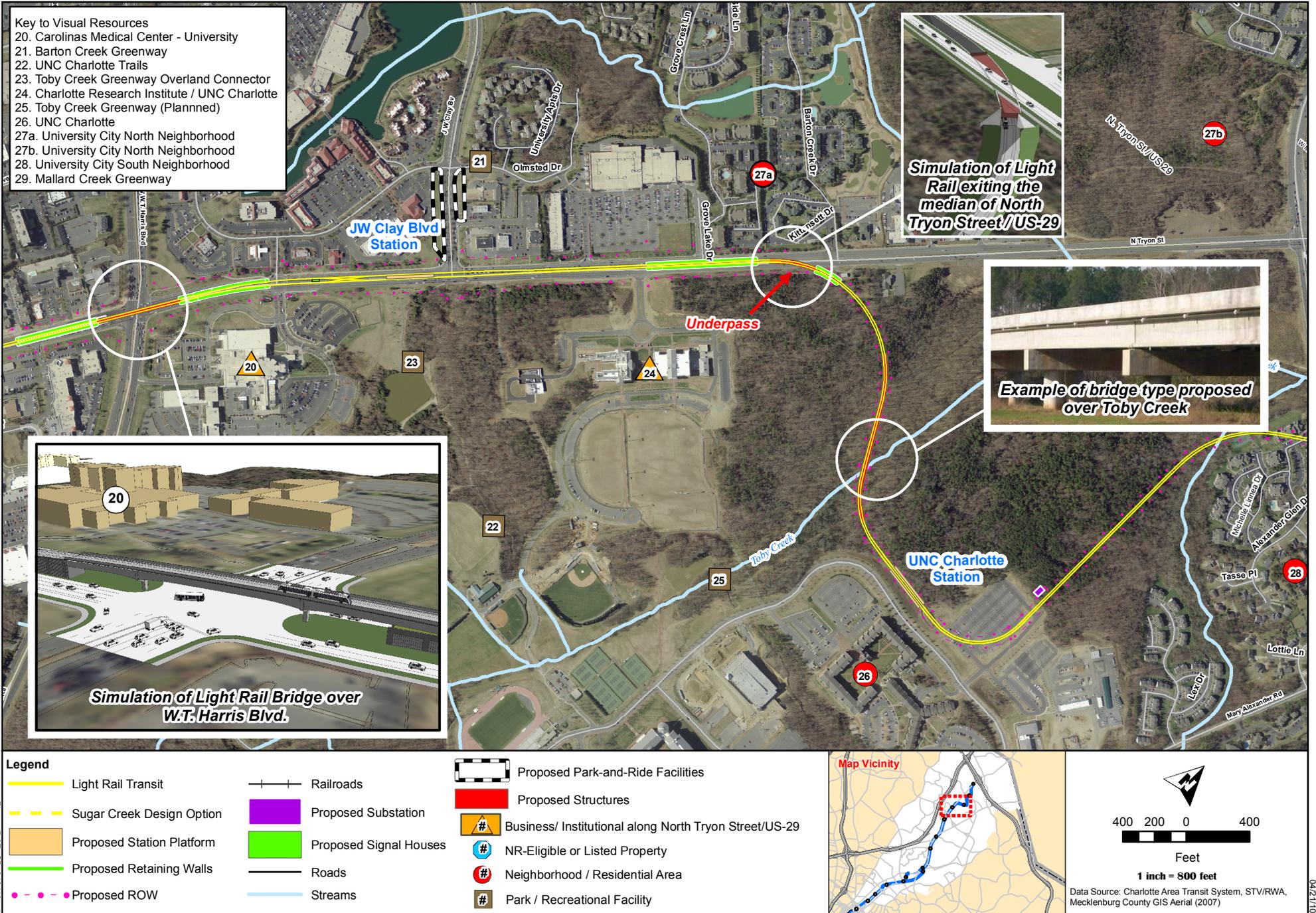


Map Vicinity

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Feet
1 inch = 800 feet

Data Source: Charlotte Area Transit System, STV/RWA, Mecklenburg County GIS Aerial (2007)

Light Rail Alternative Grade Separations and Retaining Walls



Light Rail Alternative Grade Separations and Retaining Walls



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