



CHARLOTTE CENTER CITY CURB LANE MANAGEMENT STUDY

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Submitted by:



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Acknowledgments

The *City of Charlotte Curb Lane Management Study* was a collaborative effort between the City of Charlotte, Charlotte Center City Partners, and the Uptown community. The following individuals played a key role in the study, including the City Project Team and a larger group of project stakeholders that comprised the Project Advisory Committee.

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Special thanks go to the business owners, residents, operators, and community stakeholders who were involved throughout the process and contributed to the development of this plan and its recommendations.



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Executive Summary

Project Overview

The purpose of the City of Charlotte Curb Lane Management Study is to define the efficient use of Uptown curb lane space and improve signage that communicates the uses to the public. Whether the use is for public parking, transit, loading, passenger vehicles for hire, or valet, the City of Charlotte is eager to enhance the Uptown experience for all users of the curb lane. The following elements are included in this document:

- A review of existing curb use conditions within the Uptown
- Identification of best practices from peer cities
- Definitions for curb lane priorities for each specific curb use in Uptown
- Guidance and schematic recommendations for communicating regulatory messages
- Examples of practical implementation of recommendations
- An action plan for implementing the full set of recommendations and strategies defined in this report

The overall project goal is defined as:

Evaluate curb lane usage in the Uptown area to develop a more consistent approach to signage, parking, enforcement, and management, resulting in a more inviting and appealing Uptown experience.

For this study, there are three distinct groupings of streets and curb uses, including:

1. Core Streets – including most of the streets bounded by Church Street, College Street, 9th Street, and Stonewall Street
2. Residential Streets – including those primarily governed by Residential Permit Parking Programs within the four wards
3. Remaining Streets – those streets not covered by the first two categories

The study process involved community stakeholders from the beginning, including one-on-one stakeholder interviews, a project advisory committee, defined focus group sessions, and public outreach during the design charrette process. This public involvement level ensures that the recommendations and strategies defined through this study are consistent with the message received by the Uptown community.

Proposed Street Type Priorities

The following priority listings were developed by the City to ensure that uses are applied appropriately and that the intent of the street network is properly administered. These priorities were developed with current conditions in mind; however, as the City evolves, these priorities should also evolve to reflect their changing importance in Uptown. Consistent with the *Center City Transportation Plan*, the primary priority on all streets should be the pedestrian experience. The goal of that plan is to promote a park once mentality that transformed all drivers entering Uptown into pedestrians once they reach their first destination. While the pedestrian experience does not necessarily occur in the curb lane, management and design decisions should support the fact that all streets need to enhance the pedestrian experience.

Signature Street

1. Transit Operations
2. On-Street Parking
3. Loading (passenger, commercial, taxi, valet, etc.)
4. Traffic Capacity

Primary/Secondary Street

1. Transit Operations
2. Traffic Capacity
3. On-Street Parking
4. Commercial Loading
5. Passenger Loading

Residential Street

1. Parking (residents)
2. Transit Operations (on the periphery)
3. Residential Loading

Curb Lane Street Type Priorities

The primary method for restructuring and defining the curb lane uses in the Uptown is through the development of Curb Lane Street Type Priorities, which present specific guidelines and recommendations for various uses along the curb. A full description of the Curb Lane Street Type priorities can be found in [Chapter 3](#) of this document. The following descriptions provide a general overview of recommendations for the various curb uses.



On-Street Parking

- On-street parking uses should be grouped consistently throughout Uptown – future curb lane management decisions should try to keep on-street parking consistently focused on the center block, unless some other use (i.e. transit loading) takes precedent on that block.
- The City should evaluate the use of short term parking, or “Customer Convenience Zones” in areas adjacent to commercial uses that require a higher level of turnover.
- The City should explore raising on-street parking rates to better manage parking demand, prioritize short-term parking use, and influence parking turnover. Additionally, the City should consider extending hours of paid parking to better manage evening parking and promote turnover near retail and restaurant business. In the long term, the increase in parking rates can be used to fund on-street parking maintenance and on-street amenities above current program expense levels.
- The City should continue to implement the new meter technology, in phases, throughout the Uptown area. Based on occupancy and revenue data collected throughout the year, the City should identify areas of higher occupancy and continue to expand its pay station coverage area.
- In addition to increased coverage area for the pay station technology, the City should consider some additional add-on features for its on-street system, both to enhance customer service and operations.
- The City should also consider redefining its parking violation fine structure, to provide more leniency to first-time or occasional offenders.

Transit

- A vehicle parked at a bus stop should receive a fine similar to a traffic obstruction fine during peak hour (\$50 + tow).
- To minimize potential conflicts bus and trolley stops should be located closer to the center of the block.

- Signage should be used to regulate “Stopping or Standing” at a bus loading area.
- It is recommended that CATS evaluate ridership data and look to potentially combine bus stops where fewest boarding’s are currently occurring.

Commercial Loading

- It is recommended that commercial delivery businesses buy an annual or temporary loading zone permit in various classes to provide several choices to suit their operational needs. The permit system would include multiple tiers, with each tier providing a greater level of flexibility for the user.
- In conjunction with this tiered permit system , the City will need to implement stricter and more punitive fines related to parking violations in a commercial vehicle loading zone.
- The City should also add a handful of strategically placed “long-term” loading zones, that would allow for longer delivery times (two to three hour durations).

Passenger Loading - Taxi

- Taxi’s should be restricted from parking in paid parking spaces while on-duty or loading/unloading passengers.
- To provide a greater range of options for taxi vehicles, nighttime use of Commercial Vehicle Loading Zones should be restricted to taxi or valet use.

Passenger Loading - Valet

- Valet stands are a special use and should be located on the sides of blocks. In the event that transit is not present on the block, valet stands should be located as close to the center of a blockface as possible, to minimize traffic and pedestrian impacts. The City should continue to try to minimize valet operations to one per block face where possible.
- While the City currently collects an annual application fee of \$200 per valet operation, additional fees should be collected to monetize the valuable curb space that is being



utilized by valet services, especially if the City extends the hours of paid parking operations.

Passenger Loading - Executive

- It is recommended that limousine (or “black car”) passenger loading businesses buy an annual or temporary passenger loading zone permit in various classes to provide several choices to suit their operational needs. The permit system would include multiple tiers, with each tier providing a greater level of flexibility for the user.
- In conjunction with this tiered permit system, the City will need to implement stricter and more punitive fines related to parking violations in a “black car” loading zone.

Residential Permit Parking

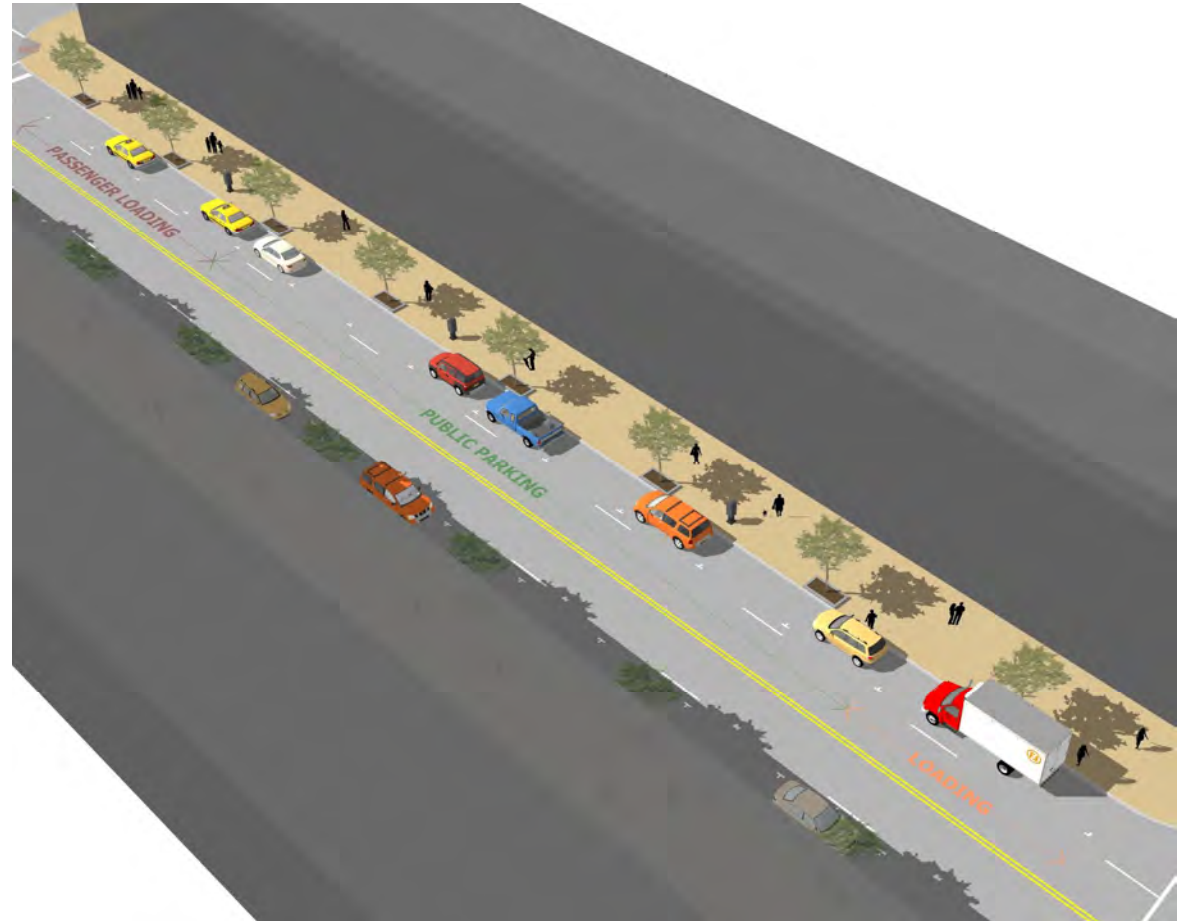
- Block faces on residential streets should be set up to maximize on-street parking, to the benefit of the adjacent residents. Loading should be interspersed throughout for larger deliveries, but most residential level deliveries can occur in short term parking spaces. Taxi and valet stands should be prohibited in residential areas.
- Because there are a limited number of on-street spaces throughout the entire City, it is recommended that the City adopt a policy where residents of new residential towers are not eligible for residential on-street parking in any Ward no matter the street designation. New residential towers are required to meet City Code requirements for parking when constructed. If the number of vehicles per household exceeds available private parking, the City is not required to provide on-street spaces for their use.

Vehicular Capacity

- It is recommended that peak hour parking restrictions be placed only on streets near the Uptown core and secondary streets where there is unacceptable vehicular congestion in addition to high parking demand.
- An evaluation of revenue lost is needed due to bagging for excessive periods both before and after special events.

Standard Block Face

Based on the street priority recommendations defined for the curb uses above, block face templates were defined for the Uptown area, including a standard block face and a residential street block face. These block face templates were designed to provide the City a starting point when evaluating new street configurations or development plans. This combination will provide guidance and the tools to evaluate and implement curb management strategies for any number of developments. Shown to the right, is an oblique aerial view of the standard block face template, which centrally groups the on-street parking for the block, buffered by commercial and passenger loading. The commercial loading is purposely placed on the entering side of the curb lane to provide better access for delivery vehicles.



Signage Recommendations

Conceptual level signage examples were developed as part of the study process, printed full size, and presented to various user focus groups during the charrette. The conceptual level example signs were developed using MUTCD guidelines, but were further adapted to meet the unique constraints of the Uptown environment. Three approaches were developed and are described further in the following sections.

It is important to note that the following concepts have not been developed, tested and standardized as required for implementation. As recommended above, before initial



implementation, these concepts need to be developed further and integrated into standards for programming, design and implementation of signs regulating the use of curb lanes in the uptown core.

The three approaches to the signage concepts include:

1. Standardization Approach – Primary recommendation using MUTCD guidelines and standards to provide a more consistent approach to regulatory messaging. This approach standardizes signage and cleans up conflicting messaging and varying sign types throughout Uptown.



2. Graphic Symbol – utilizing picture symbology to represent recurring uses along the curb, such as commercial loading, taxis, or buses. The use of symbology (supported by text) creates an easier to understand curb-side environment, including for out-of-town motorists or visitors from another country.



TAXI CAB



LIMOUSINE

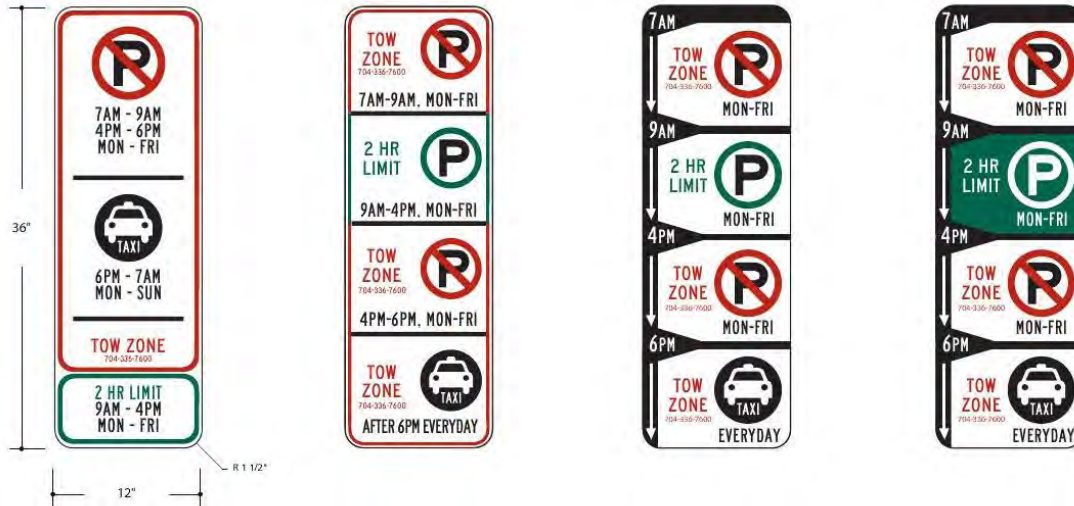


COMMERCIAL LOADING ZONE



PASSENGER LOADING ZONE

- Timeline Approach – this approach is specific to curb lanes that have multiple uses throughout a given day and in particular for lanes with peak hour parking limitations. The timeline approach uses the human tendency and instinct to respond to temporal and chronological data to present the regulatory messages in a way that is easier to comprehend, learn and follow, especially when implemented consistently throughout a large area.



Tryon Street Pilot Project

The implementation and phasing of the study recommendations will need to occur over time, as development and redevelopment needs dictate. However, one of the primary short term recommendations of this study is a pilot project of recommendations along Tryon Street. This pilot project serves to introduce the study's concepts to the Uptown community and tests and helps craft the final design of overall recommendations.

The following elements should be considered for inclusion in the Tryon Street Curb Management Pilot Study

- **Peak Hour Restrictions** – removing AM and PM peak hour restrictions
- **Curb Management** – implementation of specified curb lane uses
- **Policy and Enforcement Practices** – implement prescribed approaches to commercial vehicle loading, taxi stands, transit operations, and limousine practices. While the implementation of some of these policies might lend themselves to a pilot study, others might be tested on an area wide level. The following categories further describe the intended application:
 - **Commercial Vehicle Loading Zone Practices** – implement annual or temporary commercial vehicle loading classes on an area wide basis.
 - **Passenger Loading Practices** – for taxi operations, implement restrictions on an area wide basis to gauge their effectiveness. The removal of peak hour restrictions should serve to improve executive and general passenger loading practices as part of the Pilot Study.
- **Weekend Bagging Policies** – strongly consider removing the weekend bagging practices along all (or at least a portion) of Tryon Street.
- **Signage and Messaging** –the signage recommendations outlined in Chapter 4 should be implemented along Tryon Street, including the timeline signage (where appropriate) and the standardized approach to signage. Additional signage may be needed to compliment the Pilot Study along other streets to be determined.

The purpose of this Study is to improve curb lane usage and signage to create efficiency and to enhance the Uptown experience. To accomplish this, Curb Lane Street Type Priorities were developed for each of the Street Type Priorities. The Curb Lane Street Type Priorities were identified to determine what curb lane uses should have higher priority on certain Street Types. Based on these priorities, standard block face templates were created to provide guidance to evaluate and implement curb lane management decisions. Examples and strategies for implementing the recommendations is also discussed. To further assist with implementation, an Action Plan was developed where specific action items and potential funding opportunities are identified. The following chapters provide indepth discussions on the study process, priorities, signage recommendations, and implementation.





CHAPTER 1—EXISTING CONDITIONS



Introduction

The purpose of the City of Charlotte Curb Lane Management Study is to evaluate, define, manage, and efficiently operate the city's most valuable street right-of-way – the curb lane. Since the invention and mass production of the automobile, people in dense urban areas have jockeyed for position along the curb, whether to park their vehicle or to load passenger or commercial freight.

Business owners in a downtown setting widely consider the curbside parking space vital to the sustained health of their business (yet many businesses fail to regulate employee use, which is the primary detriment to turnover and availability of parking). Studies throughout the years have proven that this piece of right-of-way real estate is extremely valuable for adjacent businesses, reinforces that the effective regulation and management of this space can be a major factor for economic development.

This study is designed to help the City of Charlotte define the efficient use of curb lane space, structuring vehicular parking, loading zones, transit space, and passenger service in a manner that is consistent throughout Uptown, ensuring that downtown visitors and motorists can locate their particular use and identify potential regulations easier. With this approach to curb lane management, it is equally important to review signage standards and provide recommendations for new types of signage to help present a uniform message that is easy to understand and follow.

This opening chapter provides a review of existing conditions within Uptown, related to curb use. Subsequent chapters identify best practices from peer cities, define curb lane street type priorities for each specific curb use in Uptown, provide guidance and schematic recommendations for communicating regulatory messages, provide examples of practical implementation of recommendations, and define an action plan for implementing the full set of recommendations and strategies defined in this report.

Project Area Definition

The Uptown Charlotte area, located inside the I-277 loop, is a unique, dynamic, and evolving downtown that is quickly becoming a residential, retail, and employment power center. The city of Charlotte is the 18th largest city in the United States, and the area has seen a population growth of about 35 percent since the 2000 U.S. Census. The 2010 estimated population is slightly greater than 750,000 people.



The Uptown area has more than 70,000 employees based in its numerous office towers, more than 13,000 residents in a mixture of single family and multi-family dwelling units. It welcomes more than 25 million visitors annually, who come to enjoy nightlife, restaurants, and the city's many cultural and social offerings.

The city is firmly established as one of the principal U.S. financial centers, second only to New York City in the scale of its banking business. The Uptown area is home to several Fortune 500 companies, including Bank of America and Duke Energy. It also has positioned itself as the New Energy Capital of the nation, with more than 25,000 energy-related employees and many efforts made to enhance and promote sustainable, green energy initiatives.

Beyond this economic power center, Uptown also offers many opportunities for entertainment and leisure, with two major professional sports teams, the NASCAR Hall of Fame, and the Charlotte Convention Center. These venues are responsible for millions of additional visitors into Uptown each year. Beyond these major venues, Uptown provides numerous museums, galleries, and performing arts theaters for its residents and guests. The nightlife scene in Uptown is very active, with vibrant, lively scenes on Tryon, Trade, and College Streets on both weekends and weeknights.

The City of Charlotte has planned and managed the growth into and around Uptown by ensuring transportation is effective and balanced between multiple modes. The *Center City Transportation Plan* provides guidelines and recommendations for maintaining practical commuter travel through many modes of travel, including passenger car, bus, light rail, bicycling, and walking. The plan was based on the "Park Once" principle, with the goal of providing easy movement into Uptown and then the conversion of motorists to pedestrians.

The City continued this "Park Once" principle through the recent study and design of its Dynamic Parking Guidance and Vehicular Wayfinding System, soon to begin operation. The purpose of the wayfinding system is to help visitors find their way into Uptown based on their particular destination, and then to the most convenient and reasonably located off-street parking supply. This effort will be managed through dynamic message signs that provide both directional guidance and the number of available parking spaces in each facility.

The curb lane management project also supports the "Park Once" principle of the Transportation Action Plan, and to enhance customer service for motorists and downtown visitors. Through the effective management, regulation, and messaging of curb lane uses, the City can provide a more

consistent and effective street level experience for both passenger and service vehicles. Additionally, signage and graphical recommendations can create a more appealing experience for pedestrians and a cleaner, more aesthetically pleasing street front consistent with the Uptown Streetscape Standards and the definition of Signature Streets in the *Center City Transportation Plan*.

Goals and Objectives

During the initial kickoff phase of this project, the project team developed overall project goals and objectives. These goals helped define the study process and desired outcomes, and guided the project team during policies and practices review. This resulted in the formation of recommendations and strategies. The final goals and objectives are as follows.

PROJECT GOAL: Evaluate curb lane usage in the Uptown area to develop a more consistent approach to signage, parking, enforcement, and management, resulting in a more inviting and appealing Uptown experience.

PROJECT OBJECTIVES

1. Support Current and Adopted Plans and Studies

Recommendations and strategies should be consistent with previous Center City planning efforts and the strategic vision for the Uptown community. Examples include the Center City Transportation Plan and Uptown Streetscape Standards.

2. Evaluate and Redefine Curb Lane Uses

This study should develop standard implementation practices for curb uses throughout the Uptown area, and provide direct recommendations for curb lane structure for Uptown's core streets.

3. Promote Transit Usage Through Curb Lane Design Standards

Curb lane usage strategies should include thoughtful consideration of transit operations and the placement of transit loading zones in standard block definitions. Special consideration should be given to transit-oriented streets, whose primary purpose is for the efficient movement of passengers through bus, street car or rail service.



PROJECT OBJECTIVES (continued)

4. Support Adjacent Land Uses and Overall Economic Development in Center City

Curb lane recommendations and block face structuring should include consideration of adjacent business types, including the need for short term parking, loading areas, valet parking, or special needs uses.

5. Develop Curb Lane Management & Pricing Strategies that Balance Demand and Promote Turnover

Given the high value of on-street parking and curb lane right-of-way, the recommendations from this plan should promote parking uses that balance demands throughout Uptown and create turnover necessary for business use and accessibility.

6. Support Effective Parking Management and Efficient Parking Enforcement

Curb lane usage recommendations should provide a consistent approach to vehicular and service vehicle parking, creating a more effective on-street management system and allowing for easier and more efficient enforcement of parking regulations.

7. Evaluate Special Event and Meter Bagging Policies

Recommendations should address special event procedures, including stadium and arena events, and weekend traffic management policies. Recommendations should include changes to current bagging policies to create a more consistent approach to management while recognizing the needs of traffic management officials and City of Charlotte enforcement staff.

8. Create a Schematic Approach to a Consistent Presentation of Graphics

Signage recommendations, including necessary regulatory messages and thematic approaches, should provide a consistent and coherent message delivery for Uptown curb lane users. Schematic signage recommendations should be legible, consistent, maintainable, flexible, and cost-effective.

9. Consider Creative Methods for Information Broadcasting and Wayfinding

Messaging and information recommendations should look beyond static signage for effective communication methods. Example strategies include the use of City of Charlotte web portals, smart phone applications, or dynamic on-street signage.

10. Develop Consistent Implementation Protocol and Practices

Finally, recommendations should be implementable and developed in a manner that is portable throughout Uptown. The City of Charlotte Curb lane street type priorities and block face definitions should be flexible enough that they can be applied to non-core streets.

Project Study Area

Generally, the study area for the Curb Lane Management Study is within the Uptown loop, generally defined by Interstate 277 and Interstate 77. The study area is identified in Figure 1. This is the defined Uptown, or Center City area of the city of Charlotte. Uptown generally is considered the central area of the larger Charlotte Metropolitan area. As previously mentioned, this area is home to a number of cultural and entertainment venues, office towers, hotels and restaurants, and residential units including both multi-family towers and traditional single family homes.

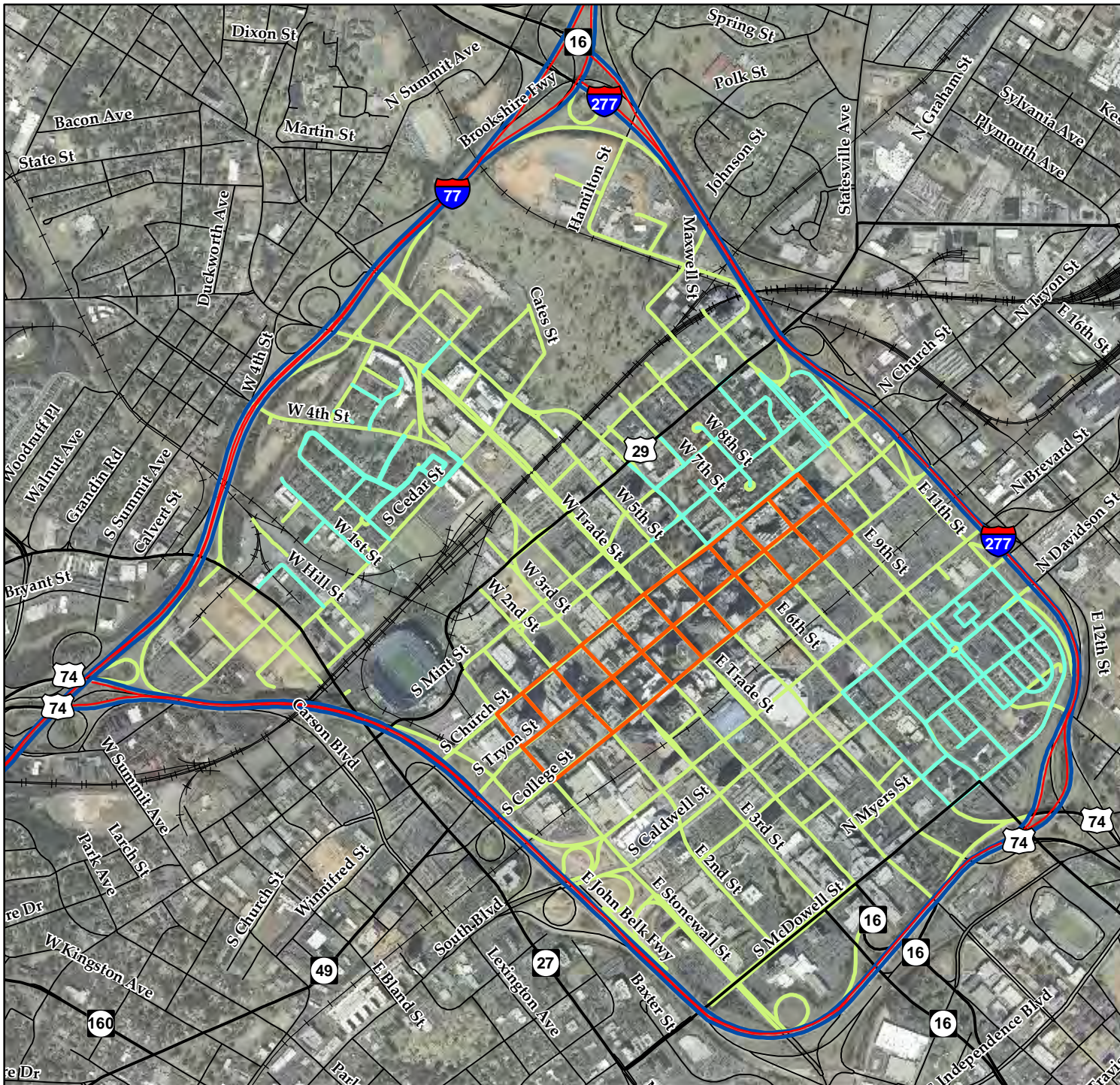
For this study, there are three distinct groupings of streets and curb uses (shown on Figure 1), including:

1. Core Streets – including most of the streets bounded by Church Street, College Street, 9th Street, and Stonewall Street
2. Residential Streets – including those primarily governed by Residential Permit Parking Programs within the four wards
3. Remaining Streets – those streets not covered by the first two categories



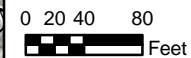
CITY OF CHARLOTTE CENTER CITY CURB LANE MANAGEMENT STUDY

Figure 1: Study Area Map



Legend

-  Interstate
-  US Highways
-  State Highways
-  State Roads
-  Railroads
-  Tier 1 - Core Streets
-  Tier 2 - Residential Streets
-  Tier 3 - Remaining Uptown Streets



The Uptown area is divided into four specific wards, generally defined by the intersection of Trade and Tryon Streets. The wards are:

- ❖ First Ward – includes many of Uptown’s existing attractions, including the Main Library, ImaginOn Children’s Learning Center, Levine Museum of the New South, and the Time Warner Cable Arena.
- ❖ Second Ward – includes Uptown’s Government District, the EpiCentre development, and NASCAR Hall of Fame.
- ❖ Third Ward – includes Bank of America stadium, Gateway Village, Johnson & Wales University, Levine Center for the Arts, (including the Mint Musuem, the Bechtler Musuem and the Gantt Center) and quaint turn of the century residential homes. The Gateway Center Station transit project is located in this ward.
- ❖ Fourth Ward – includes McColl Center for Visual Art, several 19th and 20th century churches, and a number of older Victorian-style homes.



*Uptown Ward Map
(southendcharlotte.com)*

While the study will not distinguish between wards for specific curb lane recommendations, street type priorities, and strategies related to residential parking in each ward will be identified for implementation by the City.

Personas

As part of the initial phases of this process, the project team worked to develop a set of typical users for the Uptown area, defined as Personas. These personas would help define the usage of curb lanes in Uptown while enabling the project team to envision recommendations and strategies and their impact on the set of typical users. The following personas are identified as the typical curb lane users in the Uptown.

- **Visitor to Uptown** – This person might be local to Charlotte, or from out of town; comes into Uptown for special events, museum visits, performances, or an evening out; might have a heightened anxiety related to finding available parking and paying for it.



- **The Uptown Professional** – This person is one of the professionals who spends his/her working hours in Uptown; typically in a hurry, likely to use their smart phone for information, and will be looking for a clear/concise message on regulations.
- **The Uptown Employee** – This person most likely is a service staff member or someone who is in town to work special events; is looking for available and economical parking and needs safety for late night shift changes.
- **Uptown Service and Delivery Drivers** – This person is a delivery company representative who wants a clear message and understanding of his/her regulations and needs good accessibility to destinations.
- **Uptown Residents** – This person lives in one of Uptown’s residential districts and needs to have accessible parking near their home for themselves and guests; for Uptown trips that require a car, this person wants the availability of convenient, short term spaces.
- **Uptown Vehicles for Hire** – This person depends on accessible and highly visible parking to make a living; for vehicle services with higher profile clients, these persons desire a higher level of accessibility to serve demanding clientele.

Public Participation

Stakeholder outreach and public participation are considered key cornerstones of the Curb Lane Management Study. The study process involved community stakeholders from the beginning, including one-on-one stakeholder interviews, a project advisory committee, defined focus group sessions, and public outreach during the design charrette process. This level of public involvement ensures that the recommendations and strategies defined through this study are consistent with the message received by the Uptown community.

Stakeholder Interviews

A series of stakeholder interviews were conducted early in the project process. Specific stakeholders were identified by the City of Charlotte as the initial form of public participation. The stakeholder interviews were a way for the project team to identify initial issues and concerns and begin the development of curb lane recommendations. These interviews serve as the first step in public outreach

prior to the charrette, where a majority of public opinion was gathered. The stakeholders identified and interviewed were individuals from the Uptown's major business community.

The initial list from the City of Charlotte included representation from local taxi companies; however, despite numerous attempts to contact the individuals, the project team was unable to schedule an interview. In an effort to manage the size of this document, this section contains a summary of some of the more relevant observations from the interviews. Detailed conversation notes from each specific interview are on file with the Charlotte Department of Transportation.

Stakeholder Interview Relevant Observations

- On-street parking preferences were split among the interviewees.
 - Some preferred parking in the numerous structured parking facilities throughout Uptown because parking is almost always available, while on-street parking spaces are less frequently available.
 - It should be noted that many of the interviewees have subsidized and reserved parking in the office towers maintained or leased by their employer.
 - A few interviewees preferred to use on-street parking even though it is sometimes more difficult to find a parking space. They preferred the convenience to their destination and the lower cost.
 - Several interviewees stated that the cost for parking decks was prohibitive compared to parking on-street, and that they made decisions based on time to find a parking space versus the cost to park off-street.
- Several interviewees expressed apprehension about the new centralized on-street parking pay stations. They avoid parking at these stations because they have never used them.
- A majority of interviewees explained that they have had some confusion over parking regulatory signage in Uptown.
- The interviewee from the Friends of Fourth Ward supports the current parking permit program and its regulations, and likes the current signage, adding that it works well to communicate the intended regulatory message.

- Several interviewees expressed the need for more curb cuts and pull-out zones for passenger loading or valet operations.

Advisory Committee

A project advisory committee (PAC) was assembled at the beginning of the project. The purpose of the PAC is to have a key group of individuals familiar with the Uptown challenges involved throughout the project process to provide valuable feedback, perspective, and oversight. Members were identified by project leadership and included representatives from various stakeholder bases. The project team held monthly meetings with the PAC to go over project progress and discuss specific issues or recommendations. Brief meeting summaries are provided below, with more detailed summaries of the discussions available in the documents Appendix.

Meeting #1

The first PAC meeting served as a project introduction and kickoff. Members of the PAC were given a project overview and background. Additionally, the project goals and objectives were presented and defined (see [Goals & Objectives](#)).

The remainder of the meeting served as a group discussion related to existing conditions, potential roadblocks, project priorities, and next steps for the project.

Meeting #2

The second meeting was held to provide an update on the existing conditions analysis, including preliminary discussions related to the topic. A portion of the meeting was spent discussing the initial review of signage, and how various messaging schemes might be conflicting or confusing for Uptown motorists. The meeting also included a discussion of the initial peer city review, which focused on Seattle, WA and Austin, TX. Specific discussion about these communities included the curb lane management priority system, special event policies, signage applications, and commercial vehicle loading zone policies.

During the meeting, the PAC was introduced to preliminary conceptual recommendations including curb lane uses and signage. The initial introduction was through a brief signage test, in which one PAC member was asked to decipher the ability to park based on existing signage and proposed new signage. The results of this exercise were surprising, with the PAC member requiring about 15 seconds to decipher existing signage and roughly four to five seconds for new signage. This exercise will be repeated as the charrette process is conducted, with various Uptown stakeholders asked to perform the same test.

Meeting #3

The third meeting with the PAC took place on May 26, 2011, following the completion of the project charrette and the revision of preliminary recommendations. This meeting was a final opportunity for the PAC to discuss and provide direction on the overall project recommendations. The meeting focused on the curb lane typology recommendations, specific recommendations for various areas of town, a discussion of the core streets, and pilot programs to implement initial stages of the curb lane study recommendations.

Charrette

The next major milestone in the project process was the Planning and Design Charrette held in Uptown Charlotte April 26 through 28, 2011. During this event, the project team met with the PAC, various stakeholder groups, and the general public to present initial recommendations for curb lane use, signage, residential permit policy, enforcement, and general regulations related to curb lane management. The intent of the charrette process is to provide the various outreach groups the opportunity to respond to the initial recommendations and provide the project team feedback to revise and finalize recommendations. The schedule to the right provides a breakdown of scheduled events during the charrette process.



Charrette Schedule



Existing Conditions Analysis



Existing conditions were summarized to provide an understanding of the current transportation, parking, development, and economic environment in Uptown. The review of existing conditions serves as the foundation for the development of recommendations and strategies. The existing conditions analysis includes review of:

- Previous studies
- Uptown traffic studies
- Curb lane policies, regulations, and restrictions
 - Includes parking, taxi, and loading areas
- Citation data along core streets
- Residential permit policies and usage data
- Existing signage and regulatory message types

The following sections provide a summary of these reviews.

Previous Studies

The previous studies conducted and developed for Uptown provided a thorough background of existing and projected transportation conditions throughout the area. More importantly, the findings and recommendations from these studies provide the baseline from which the project team will begin the development of recommendations.

Center City Transportation Plan

The *Center City Transportation Plan* is the City's "Blue Print" for setting strategy, policy, and implementation goals that will allow the City to grow dynamically and support a variety of transportation modes. The Center City area is defined by the I-77/I-277 freeway loop and Twelfth Street, plus the adjacent surrounding neighborhoods.

Guiding Concepts:

Seven important concepts guide the Center City Transportation Plan:

1. Everyone is a pedestrian.
2. Major destinations will be a five-minute walk from a transit station.
3. The key pedestrian streets support a direct walk from transit.
4. The key pedestrian streets also link neighborhoods and open space.
5. New office building locations should reinforce the concept of a walkable Uptown.
6. Center City can be a "park once" location, especially if motorists find a pleasant, walkable environment between their parking deck and destination.
7. Moving traffic into Center City efficiently means getting motorists to their parking destination more directly.

Fundamental to this plan is the concept that “Everyone becomes a pedestrian once they arrive Uptown”, with the primary theme to make Uptown more pedestrian-friendly. Additional goals defined within the plan include:

- Integrating the new transit system with the street network and sidewalks
- Making the walk from transit stops and parking facilities easier and more attractive
- Converting more streets to two-way operation so that Center City is easier to navigate
- Maintaining some one-way streets to move peak hour traffic to and from parking efficiently
- Encouraging more traffic to use I-277 as an internal circulator route instead of driving across Center City
- Making it easier to find parking spaces (especially for occasional visitors and major events)

The plan’s vision primarily was developed from the 2010 Vision Plan, other Uptown area plans, development trends (at the time of the study), a series of stakeholder and public workshops, and a detailed analysis of the existing conditions in Uptown.

The plan makes 25 specific recommendations under the categories of land use, urban design, vehicular circulation, parking, wayfinding, transit, pedestrian circulation, and bicycle circulation. The recommendations specific to parking and curb use in Uptown include:

- Creating a “Collaborative Parking System” for the management of private and public parking facilities with the intent of organizing and unifying private and public parking assets with a wayfinding system.
- Expanding the City-managed On-Street Parking system by increasing the number of on-street spaces, expanding hours of operation, and offering payment options.
- Developing an Off-Street Parking Policy framework for City participation in the parking component of mixed-use projects. This would establish conditions for City participation in providing public-private parking solutions for mixed use development.



On-Street Parking Program Assessment

In early 2010, Central Parking (the City's private partner in the public-private partnership that is Park It!) evaluated the management and operations of the on-street parking system in Uptown Charlotte. The assessment was performed to document existing management conditions and provide recommendations for operational and value-added improvements to the Uptown on-street parking system.

Some of the general inventory and existing conditions items that are part of the curb lane management system include:

- There are 45 Digital Luke pay stations in the Uptown area that control approximately 315 spaces. Additionally, there are 885 single-space electronic meters controlling 885 spaces in the area.
- There are six enforcement beats throughout Uptown and the residential areas that include metered and regulated parking. These beats are covered by four enforcement officers.
- Pay station areas are enforced through general expired stall reports printed from each pay station

The assessment also looked at occupancies, meter revenue, and compliance for a single weekday in December 2010. The area of analysis included streets within the central core of Uptown, one of the highest utilized areas in town. Of the 106 stalls occupied, 69 percent were full at 11 am and 85 percent were full at 1:30 pm, with several block faces completely full. During the 1:30 pm observations, the meter compliance rate for the occupied spaces was 77 percent, indicating more than 20 vehicles in violation. Almost half of these violators were taxis.

The assessment provided general recommendations, several of which are applicable to the Curb Lane Management Study. These recommendations are highlighted throughout this report, including [Chapter 3 \(Street Type Priorities\)](#) and [Chapter 4 \(Practical Implementation\)](#).

Center City Charlotte Retail Market Assessment

The Retail Market Assessment was completed in 2007 for Charlotte Center City Partners. The objective of the study was to realize the potential for an enhanced retail market in Uptown. The assessment area for the study extended along Tryon Street from West 1st Street to 9th Street and along Trade Street from Church Street to College Street.



The study determined that there was indeed a demand for an Uptown retail market, especially to serve the existing residents and employees within the core. Beyond Uptown residents and employees, the Center City retail market would draw individuals who are comfortable visiting the Uptown area and who are drawn to the experience of shopping in an urban environment. Since the Charlotte Metropolitan area is heavily saturated with retail, an Uptown retail market would not be able to fully compete with the suburban shopping center.

To better understand what it would take to draw shoppers from suburban areas, an Uptown Perception and Usage Survey was conducted (see the documents Appendix). The survey's main objective was to understand Center City's usage by residents in the metropolitan area that do not work in the core. The secondary goals defined in the survey were to "understand perceptions of cleanliness, safety, and parking convenience in Uptown Charlotte among current patrons and to probe reasons for non-use of Uptown Charlotte."

The survey included 500 telephone interviews randomly selected from a Charlotte Area telephone book. Uptown employees were not included in the interviews. More than half of people surveyed said "that 'availability of parking' is an 'important factor' in their decision to visit Uptown." In addition, more than a third of the survey group said "that the 'cost of parking' is an 'important factor' in their decision to visit Uptown." The study indicated that people would visit Uptown more often if there were more parking, more shopping options, and enhanced safety.

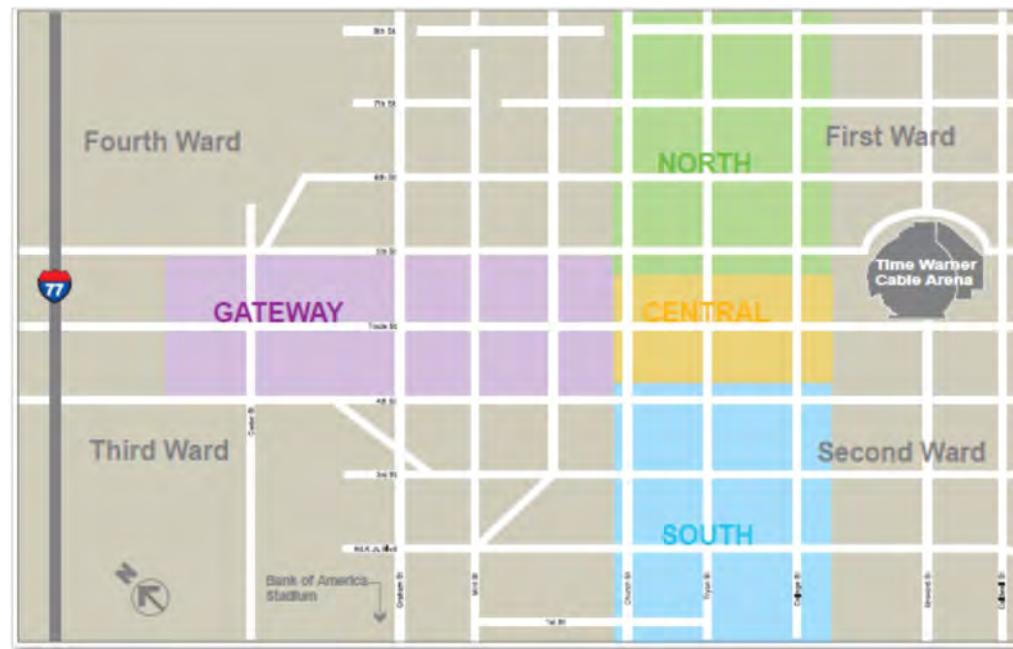
Uptown Charlotte Pedestrian Count Report

The *Uptown Charlotte Pedestrian Count Report* was conducted in 2008 and published by Charlotte Center City Partners. The study was conducted to gain a better understanding of pedestrian movements within Uptown. The study served multiple purposes, including:

- Assessing the condition of pedestrian activity,
- Creating a tool for planners, developers, and brokers to define and project pedestrian movements
- Serving as a recruiting and retaining tool for businesses (primarily retail) to Uptown

The study areas extended from First Street to Eighth Street and College Street to Gateway Village. The study area was then further broken down into activity zones. Below are the zones and a listing of the top employment and entertainment centers that produce pedestrian activity:

- North Zone- Hearst Tower, Transamerica Square, Discovery Place, and The Blumenthal Performing Arts Center
- South Zone – One Wachovia, Two Wachovia, Three Wachovia (now Wells-Fargo), and the Charlotte Plaza Building
- Central Zone – Bank of America Corporate Center, Bank of America Plaza, 101 Independence Center, 112 South Tryon, Founders Hall, The Blumenthal Performing Arts Center, and The Epicentre
- Gateway Zone – Johnson& Wales University, Gateway village, Gateway Center
- (The Government District is another high pedestrian area, but was not part of the study area.)



Surveys were conducted during weekday and weekend midday peak hours (11am – 2pm) and during weekday and weekend evening peak hours (4pm -7pm).

The study concluded that over 85% of pedestrian trips occurred on weekdays and that Center City is most active from 11am until 2pm. The heaviest pedestrian traffic occurs at the intersection of Trade and Tryon in the Central Zone and the pedestrian volume decreases as the distance from the

intersection increases. The large number of pedestrians in the Central Zone is due to the number of major employment centers and dining options located in or directly adjacent to the zone.

Core Uptown Streetscape Standards

The Core Uptown Streetscape Standards apply to an area bounded by the following streets: Southeast side of Church Street, the access ramp to I-277 (north of 11th Street), the Light-Rail Corridor, and the access ramp to I-277 (south of Stonewall Street). The standards provide guidance on the application of street trees, pavement types, curb and gutter, sidewalks, street lighting, benches, trash receptacles, and planters.

There are three general design criteria that apply to the street network. Two of these directly relate to the curb lane in Uptown:

1. In citing street trees, light poles, benches, trash receptacles, and flower pots along streets with on-street parking, every attempt shall be made to locate those elements between parking spaces to minimize potential conflicts with car door swings.
2. Recessed areas along the curb for valet or pick-up/drop-off zones are prohibited. Recessed areas for on street parking or transit should also be prohibited. When curb lane changes are proposed any options for recessed spaces should be evaluated and a determination made by City staff to approve or disapprove this configuration.

Uptown Traffic Studies

Several previously completed Uptown traffic studies were reviewed as part of this analysis, including:

- [South Mint Street Bike Lane Analysis \(Draft\)](#) – This report investigated implementing bike lanes and widened sidewalks by removing one lane of travel between W. Stonewall Street and W. Morehead Street. This section currently does not have any curb lane usage, aside from vehicular capacity and short-term parking for the Panthers Retail Store. The loss of one lane of traffic could potentially impact game day operations and the ability to provide that short term retail parking. (Note: Mint Street is typically closed to motor vehicle traffic on the 12 – 13 game days each year according to the Bank of America Stadium Operations Plan)



- [West 5th Street Road Conversion Project \(08/24/2010\)](#) – This project will eliminate one travel lane in each direction and add bicycle lanes between N. Sycamore Street and Beatties Ford Road. There currently are no curb lane uses outside of vehicular capacity. Given the nature of the roadway in this segment, it is not envisioned that this project will have major impacts on curb lanes uses or management.
- [Two-way Conversion of North Brevard Street and North Caldwell Street \(10/06/2009\)](#) – This project analyzed conversion of one-way operations on N. Brevard Street and N. Caldwell Street to two-way operations between Trade Street and 12th Street. The study recommended that the two-way conversion of Caldwell Street be deferred until improvements to I-277 are made that accommodate two-way traffic on Caldwell Street. The two-way conversion of Brevard Street is planned to occur as part of the Brevard Street Improvement Project. The proposed two-way Brevard Street typical section will include on-street parking.
- [South Tryon Road Diet \(06/18/2010\)](#) – This project will eliminate one lane of travel in each direction along S. Tryon Street, between W. Morehead Street and W. Hill Street. The road diet will replace the laneage with bicycle lanes and widened sidewalks. This section of roadway includes the overpass over I-277 and does not include any curb usage, aside from vehicular capacity. Given the nature of the roadway in this segment, it is not envisioned that this project will have major impacts on curb lanes uses or management.

Curb Lane Policies, Regulations, and Restrictions

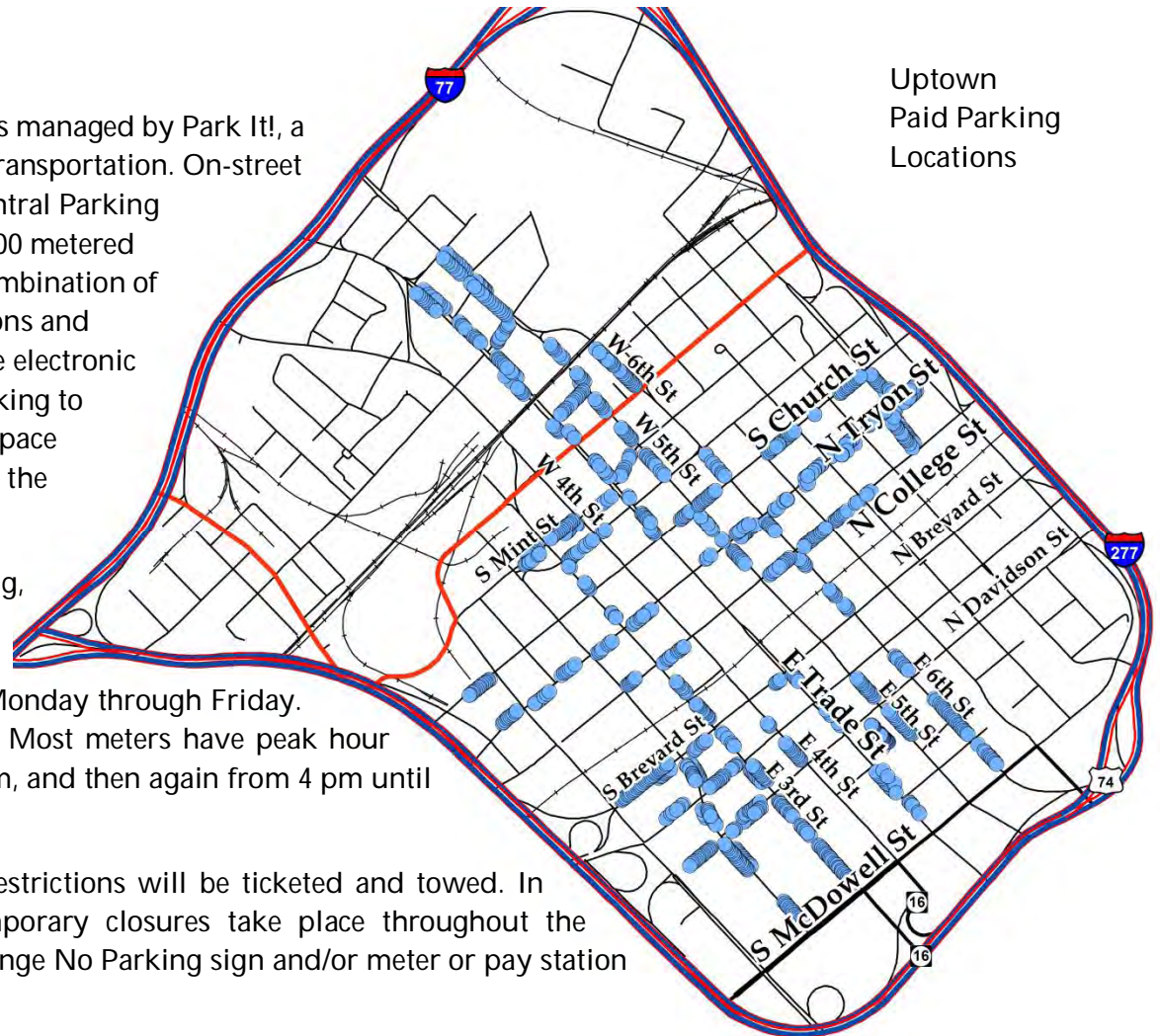
The existing conditions review included a review of curb lane regulations and policies, including parking, loading zones, special event policies, transit services, passenger loading and unloading, and the various residential permit parking programs throughout the City. The existing regulations and policies for the curb lane define its usage and structure, so any proposed changes to the curb lane management practices will need to either reflect existing policies or propose new approaches.

On-Street Parking

The on-street parking supply in Uptown is managed by Park It!, a division of the Charlotte Department of Transportation. On-street parking management is outsourced to Central Parking Corporation. There are approximately 1,100 metered parking spaces in Uptown, including a combination of spaces controlled by centralized pay stations and spaces controlled by the older single space electronic parking meters. The City currently is working to convert all spaces to the wireless pay-by-space system as occupancy and revenues enable the conversions.

The City charges \$1.00 per hour of parking, and most locations have a maximum of two-hours for on-street parking. Meters are enforced from 7 am to 6pm, Monday through Friday. Parking at night or on weekends is free. Most meters have peak hour parking restrictions between 7am and 9am, and then again from 4 pm until 6pm.

Vehicles in violation of the peak hour restrictions will be ticketed and towed. In addition to peak hour restrictions, temporary closures take place throughout the Uptown and are denoted by either an orange No Parking sign and/or meter or pay station



Uptown
Paid Parking
Locations



bagging. Motorists in Uptown are allowed three unpaid and overdue parking citations before enforcement staff can boot their vehicle.

The pay stations (as seen to the left) allow for the use of credit card payments and an aesthetic de-cluttering of the streetscape and curbside. The pay stations provide better flexibility for motorists, as they accept multiple payment forms and allow patrons to renew time at any pay station in the Uptown. Additionally, the pay stations enhance management and enforcement of on-street parking through the distribution of real-time data between pay stations and parking management staff.

The remaining single space meters located throughout Uptown accept coins and the Charlotte Coin, which is a validation program used by the City to provide free parking for Uptown patrons. The Charlotte Coin validation program began in 1999 to make it more convenient and less expensive for Uptown parkers. The coin is accepted in parking meters and various parking garages. The validation coin also is accepted on CATS buses and the Lynx Blue Line. The coin carries a \$1.00 value.

The City has a parking meter reservation policy that allows any non-profit or private entity to reserve two or more meters for a single business day at no charge. The business or entity can only reserve spaces a total of three times per year. Each additional time beyond the third occasion will cost the business or entity 80 percent of the daily maximum revenue for each meter. The general requirements for metered space reservation are:

1. Business must be located in the Center City
2. Business must provide at least two weeks notice of reservation request
3. The reservation must be for a community event

Bagging & Special Events

Special event and traffic management-related street restrictions in Uptown are classified as major or minor. Major restrictions are placed only under direction from the Charlotte Department of Transportation or the Charlotte Mecklenburg Police Department. Minor restrictions are managed by Park It! and include events such as meter maintenance and repair work or special citizen requests. Areas that allow parking for a certain time with no permanent sign restrictions are classified as

Current Pay Station Locations:

- Gateway Village (West Trade St. and North Cedar St.)
- North and South Tryon St.
- North and South College St.
- North Davidson St.
- North Church St.
- East Trade St.
- East Third St.
- East Fourth St.



“unrestricted”. An example of unrestricted parking is a meter area that becomes free at 6 pm Friday evening and is unrestricted until 7 am on Monday morning.

The placement and removal of signs by the responsible agency is timed to provide adequate notice of street restrictions and a quick return to normal operating conditions. For a routine curb closing, or for the conversion of parking spaces to valet or taxi stands specifically for a special event, the signage and lane closure must occur during peak hour or two and a half hours prior to meter expiration. The following rules provide the general guidelines for the placement and removal of signs for street closures. Figure 2 on the following page provides locations of recurring restrictions.

Placement times are generally:

- AM restrictions, or restrictions that occur in a typically unrestricted parking zone, are posted the afternoon before the event.
- PM restrictions are placed the morning of the event (unless it is an unrestricted parking zone, which would post the afternoon before the event).

Removal times are generally:

- Weekday restrictions are removed the next business day unless a second event is planned to occur within 24 hours.
- Weekend restrictions are removed on the following Monday morning unless a second event is planned to occur within 24 hours.

There are various types of regulatory instruments used for curb restrictions and street closures, including temporary signage and meter bagging. General curb restrictions in a meter zone require meters to be bagged or hooded, including every meter and/or pay station in the affected area. Meter bags (or hoods) are color coded to match the message displayed. The information to the right defines each of the bagging colors. Larger events and/or street closures require a combination of both meter hoods (if meters are present) and temporary “No Parking” signage.



Meter Bagging Definitions:

- Yellow Hood = “No Parking” Friday
- Orange Hood = “No Parking” Saturday
- Blue Hood = “No Parking” Sunday
- Red Hood = “No Parking” Anytime
 - Including Pay Station Bagging
- Dark Red Hood – “No Parking” 10pm to 4am (Cruising)



CITY OF CHARLOTTE CENTER CITY CURB LANE MANAGEMENT STUDY

Arena Restrictions:
Restrictions enforced during events at the Arena

Panther's NFL Game Restrictions:
Restrictions enforced during NFL games

NYE/4th of July Restrictions:
Restrictions enforced during the 4th of July

Cruising Restrictions:
Restrictions enforced May - September
Restrictions enforced September - May

Speed Street 2010 (footprint will change in 2011):
Setup on Tuesday (end of May)
Setup on Wednesday (end of May)
Event on Thursday (end of May)

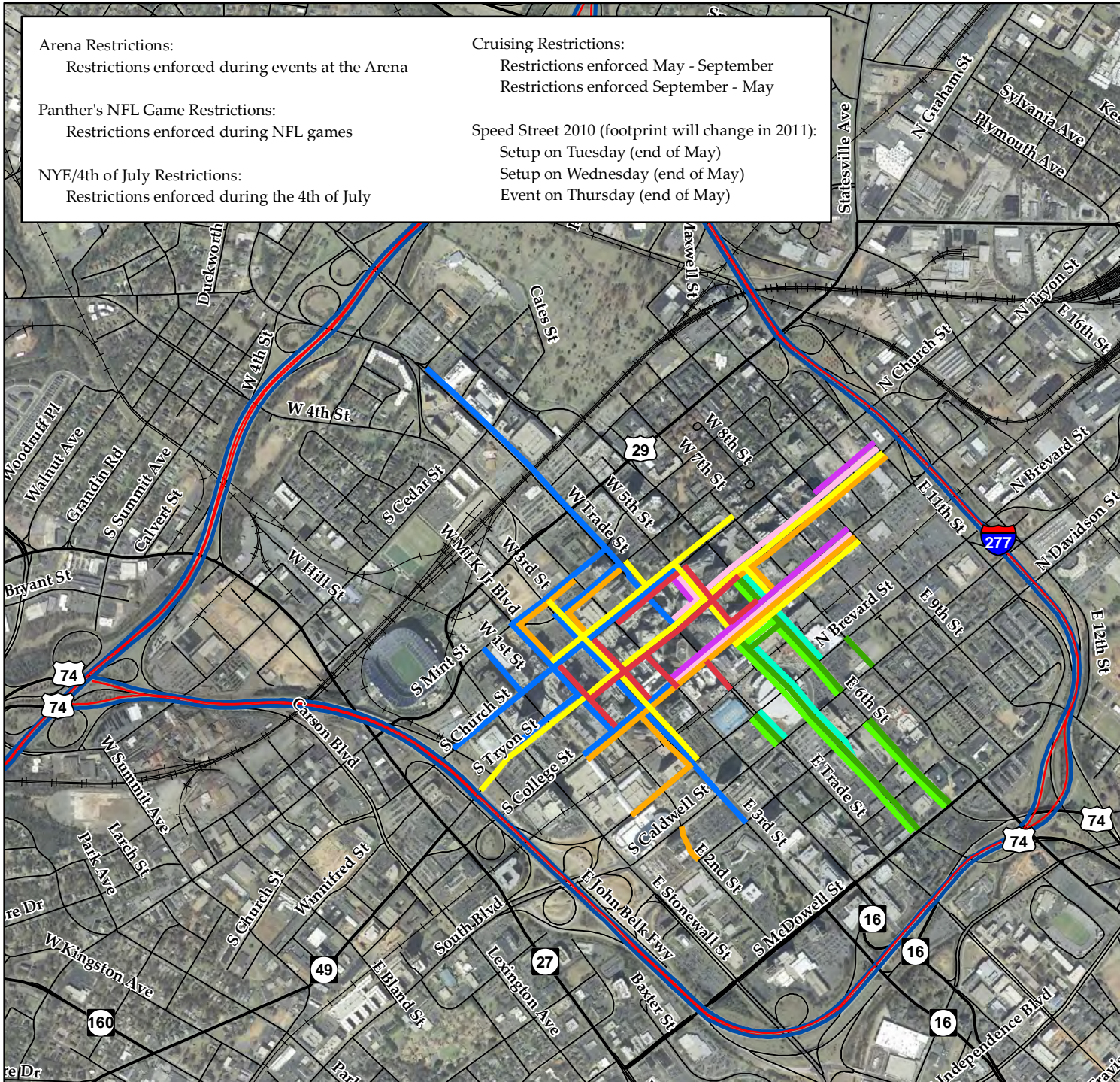


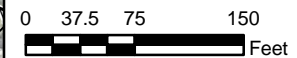
Figure 2: Street Restrictions

Legend

- Interstate
- US Highways
- State Highways
- State Roads
- Railroads

Reoccurring Event Parking Restrictions

- Panther's NFL Games
- Arena - Tier 1A
- Arena - Tier 2
- Arena - Tier 3
- Cruising: May-September
- Cruising: September-May
- Speed Street 2010 - Tuesday
- Speed Street 2010 - Wednesday
- NYE/4th of July



Taxi & Valet Operations

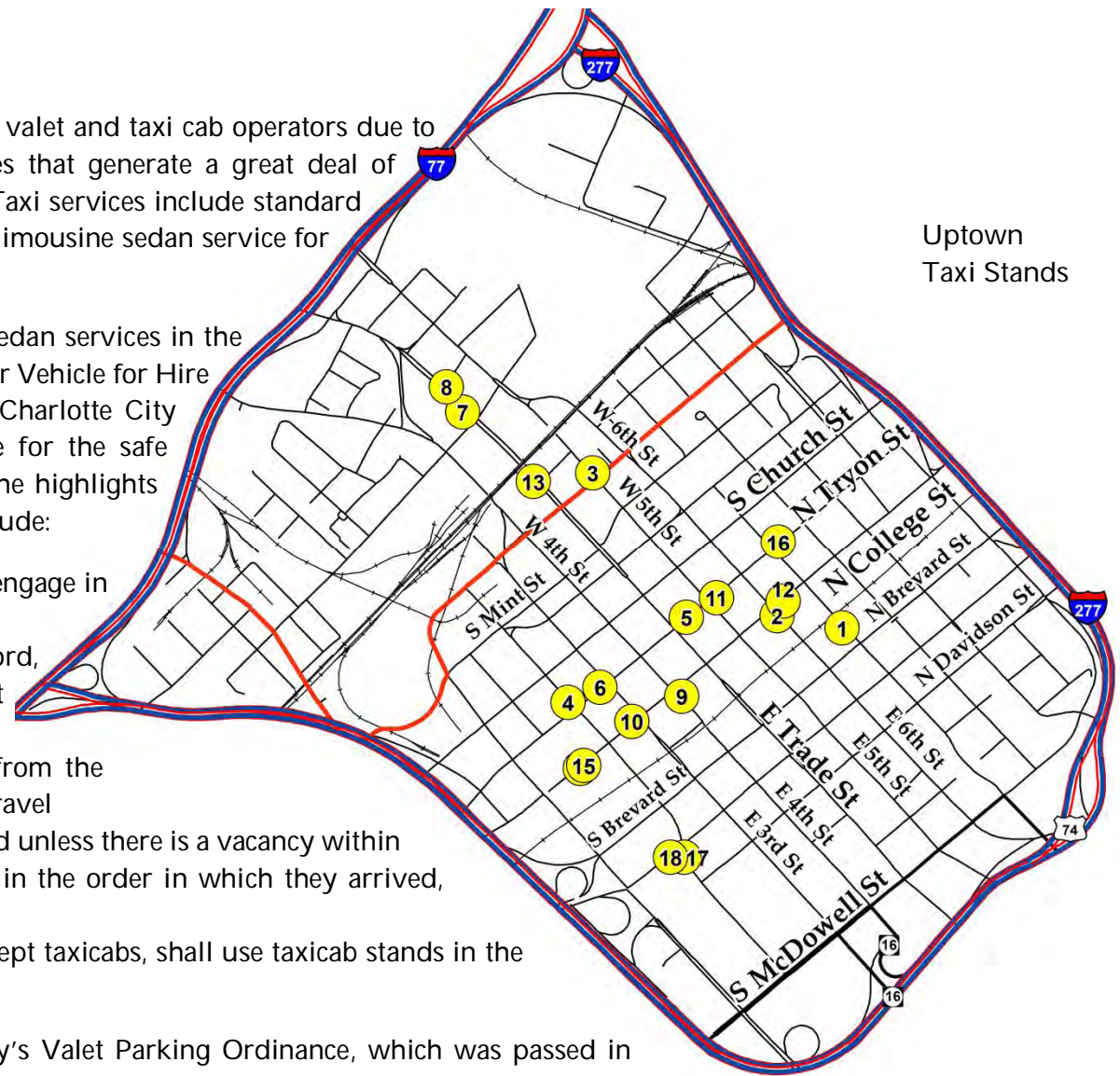
The Uptown area is served by numerous valet and taxi cab operators due to entertainment, restaurant, and retail uses that generate a great deal of demand for passenger loading services. Taxi services include standard metered services as well as limousine or limousine sedan service for the various office towers in the area.

The operation of taxis, limousines, and sedan services in the Uptown area is governed by the Passenger Vehicle for Hire Ordinance, found in Chapter 22 of the Charlotte City Code. The ordinance provides guidance for the safe operation of vehicle for hire. A few of the highlights that pertain to curb lane management include:

- No taxi or for hire operator shall engage in cruising for passengers
- Taxi operators cannot use any word, sign, signal, or gesture to solicit patronage
- Taxicabs shall enter taxi stands from the rear and point in the direction of travel
- No taxicab shall stop in a taxi stand unless there is a vacancy within
- Taxicabs shall exit the taxi stand in the order in which they arrived, unless requested by a passenger
- No passenger vehicle for hire, except taxicabs, shall use taxicab stands in the City

Valet operators are governed by the City's Valet Parking Ordinance, which was passed in 2006. The ordinance was enacted to accomplish the following:

- Protect citizens in the public right-of-way
- Ensure traffic safety
- Allow emergency services proper navigation room
- Accommodate restaurant and business growth in Center City

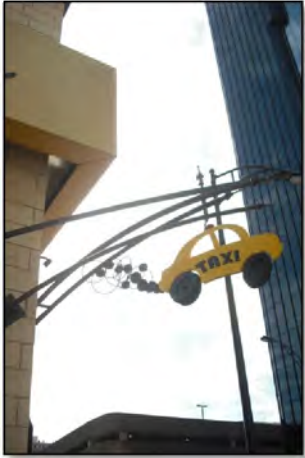


Uptown
Taxi Stands



- Provide standards and clear guidelines for operating valet services in the Uptown

Uptown Defined Taxi Stands



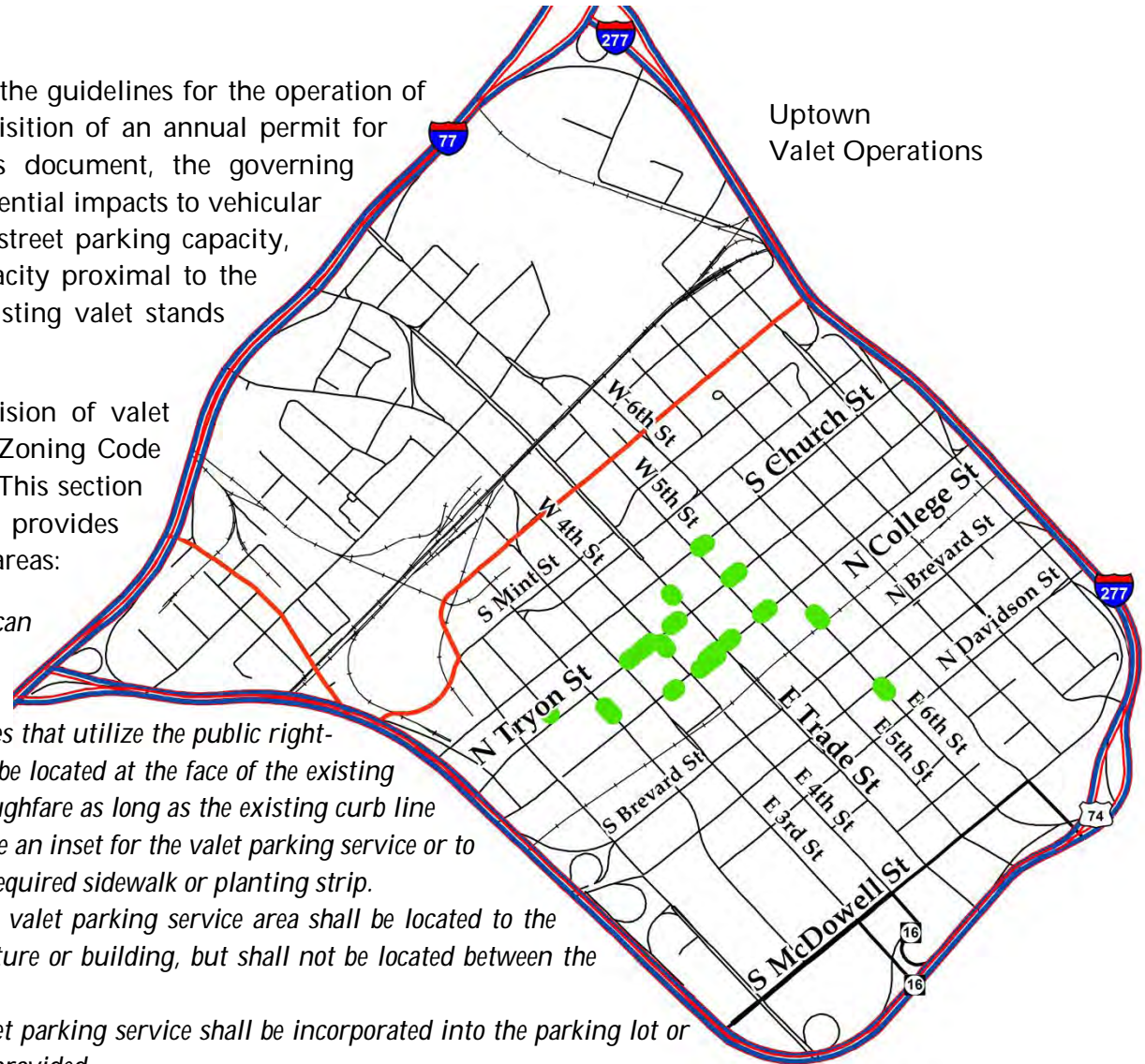
	Location	Hours of Operation
1	300 E 7th St – near Imaginon	10pm - 6am
2	6 th St/College St – beside Holiday Inn	4pm - 7am
3	500 W 5th St – In front of CANS	6pm - 6am
4	Martin Luther King Jr Blvd at S Tryon Street	Any time
5	100 N Tryon St in front of Starbucks	Any time except peak traffic times
6	S Tryon St at W 3rd St	Any time except peak traffic times
7	800 W Trade St – on Johnson & Wales side of the street	Any time except peak traffic times
8	800 W Trade St – on the Starbucks side of the street	Any time
9	W 4 th St at S College St – beside Epicenter	6pm-6am
10	W 3 rd St at S College St – on left side of street	Any time except peak traffic times
11	200 N Tryon St – In front of RiRa's	6pm - 6am
12	E 6 th St at N College St – In front of Cosmos	6pm - 7am
13	W Trade St – in front of Greyhound	Any time except peak traffic times
14	S College St – #1 in front of Convention Center	Any time except peak traffic times
15	S College St – #2 in front of Convention Center	Any time except peak traffic times
16	N Tryon St at E 7th St – In front of Rock Bottom	Any time except peak traffic times
17	Martin Luther King Jr Blvd – in front of Hampton Inn/Hilton Garden	Anytime
18	S Caldwell St – between E Stonewall St & Martin Luther King Jr Blvd (across from NASCAR Hall of Fame)	Any time except 7am - 9am
19	South College Street in front of the EpiCenter	Any time

The valet parking ordinance creates the guidelines for the operation of valet parking services and the acquisition of an annual permit for valet parking services. Within this document, the governing factors for obtaining a permit are potential impacts to vehicular and pedestrian flow, impacts to on-street parking capacity, on-street and off-street parking capacity proximal to the valet operation, and presence of existing valet stands near proposed operations.

Within the Uptown area, the provision of valet operation is further defined by the Zoning Code for the Uptown Mixed-Use District. This section of the City Code (Chapter 9, Part 9) provides the following requirements for valet areas:

- a. *The valet parking service can be located in the following areas:*
 1. *For valet parking services that utilize the public right-of-way, the service may be located at the face of the existing curb of a street or thoroughfare as long as the existing curb line is not modified to provide an inset for the valet parking service or to reduce the width of the required sidewalk or planting strip.*
 2. *On private property the valet parking service area shall be located to the side or rear of the structure or building, but shall not be located between the building and the street.*
- b. *The parking area for the valet parking service shall be incorporated into the parking lot or parking structure design, if provided.*
- c. *The valet parking service and associated structures shall not disrupt the flow of pedestrian and vehicular traffic.*
- d. *For valet parking services that are located on a public street or thoroughfare, or where the right-of-way is utilized by the service, a valet parking permit shall be obtained from the Charlotte Department of Transportation (CDOT).*

Uptown
Valet Operations





Loading Zones

The provision and use of loading zones also is defined by the City Code of Ordinances. Generally, loading zones are restricted to either passenger or material loading. Each type of loading zone requires a sign indicating the hours of regulation. Passenger loading is restricted to curb areas, and is strictly forbidden in intersections or crosswalks. Commercial loading zones typically are restricted to vehicles with some type of company logo or other indication that they are loading or off-loading material goods.

Based on the requirements in the ordinance, passenger loading zones are restricted to three minute durations, while a material loading is restricted to 30 minutes or less. If loading movements restrict street movement or access, then the restriction is set to five minutes. Loading and unloading vehicles are required to be parked parallel to the curb. Head-in or back-in parking is strictly prohibited. Loading is prohibited in several locations during peak hour movements to facilitate efficient traffic flow.

Uptown Loading Zones

Within the Uptown area, the provision of loading zones is governed by the Zoning Code for the Uptown Mixed-Use District. This section of the City Code (Chapter 9, Part 9) provides the following requirements for valet areas:

Loading standards. Buildings and structures, excluding parking structures, subject to the provisions of this section must provide a minimum number of off-street service/delivery parking spaces. These spaces must be designed and constructed so that all parking maneuvers can take place entirely within the property lines of the premises. These parking spaces must not interfere with the normal movement of

vehicles and pedestrians on the public rights-of-way, except as permitted by section 20-29[14-25] of the City Code. These parking spaces must be provided in accordance with the following list:

- a. *Multi-family dwellings (1—24 units): None required.*
- b. *Multi-family dwellings (25+ units): One space.*
- c. *Nonresidential uses with gross floor area:*
 - Less than 50,000 sq. ft.: None required.*
 - 50,000—150,000 sq. ft.: One space.*
 - Each additional 100,000 sq. ft.: One space.*
- d. *If a nonresidential use has five (5) or more off-street service/delivery parking spaces, forty (40) percent of the spaces must be large enough to accommodate vehicles greater than thirty (30) feet long.*

Residential Permit Program

The residential areas in Uptown are regulated by residential permit parking, especially in the First, Third, and Fourth Wards. The residential permit parking program allows for restricted parking during certain times of the day. The registered vehicles that are allowed to participate in the program must submit an application and, after receiving the permit, the motorist must affix a decal in their vehicle's rear window, or rear fender of motorcycles.

The decals cost \$30 annually for a permanent parking permit. Additionally, temporary permits are sold for \$3 per vehicle per day. Event parking permits are available in the First and Third Wards, and are free to residents who apply. Hardship decals are available to persons employed for emergency or essential services of qualifying residents.

The residential permit parking program is governed by the Parking Permit City Ordinance, which defines the guidelines for initiating a residential permit parking program in an area, the public process required to enact the program, and the usage, enforcement, and violations associated with the program. In terms of identifying and starting a new residential permit parking program in an area, a study must be conducted that evaluates the following elements:

- *The effect on the safety of residents of the area under consideration from intensive use by nonresidents for parking of vehicles.*
- *The need of the residents of the area to obtain adequate on-street parking adjacent to or close by their places of residence.*



- *The difficulty or inability of residents of the area to secure adequate on-street parking adjacent to or close by their places of residence because of widespread use of available parking spaces in that area by nonresident transient motorists.*
- *The impact of major public facilities and programs on the health, safety, and welfare of the residents of the area and any unreasonable burdens placed on those residents in securing adequate on-street parking and gaining access to their places of residence by virtue of such facilities and programs.*
- *The likelihood of alleviating, by use of a parking permit system, any problem of unavailability of residential parking spaces.*
- *The desire of the residents in the area for the institution of a parking permit system and the willingness of those residents to bear the administrative costs incidental to the issuance of permits authorized by this section.*
- *The fact that the residents of a contemplated parking permit area have contributed to the cost of construction and/or improvement of streets and roads in such area either by the direct assessment of costs or indirectly to the extent such costs are reflected in purchase or rental prices paid by those residents.*
- *The need for some parking spaces to be available in the area under consideration for use by visitors and the general public.*

Within the Uptown area, three of the four wards have at least one residential permit parking program, detailed below.

- The First Ward has a resident program, with teal decals for residents and mirror hangers for guests. There is no cost for residents, and they receive one permit per registered vehicle and two guest hangers per household. Permits and guest passes are only required during arena events.
- The Third Ward has a resident and guest program, with silver decals for residents and mirror hangers for guests. The cost of permits is \$30 per vehicle, with two guest passes provided per household. Permits are required from 8 am to 5 pm Monday through Friday.
- The Third Ward also has a stadium permit program,

Residential Permit Sales – FY 10

Permit Area	Total Permits Provided (FY 10)
First Ward	571
First Ward Guest	989
Third Ward	87
Third Ward Guest	150
Third Ward Stadium	358
Fourth Ward	582
Grand Total	2737

which restricts parking during stadium events. The program, which uses silver mirror hangers, is provided at no cost to residents, and includes one hanger for every registered vehicle and one mirror hanger per household for guests.

- The Fourth Ward has a resident permit program with yellow decals for residents. The cost of permits is \$30 per vehicle, with permits required 8 am to 5 pm Monday through Friday, and 8 pm to 8 am Thursday through Saturday. Visitor parking is allowed for up to two hours during these times without a decal or mirror hanger.

Transit

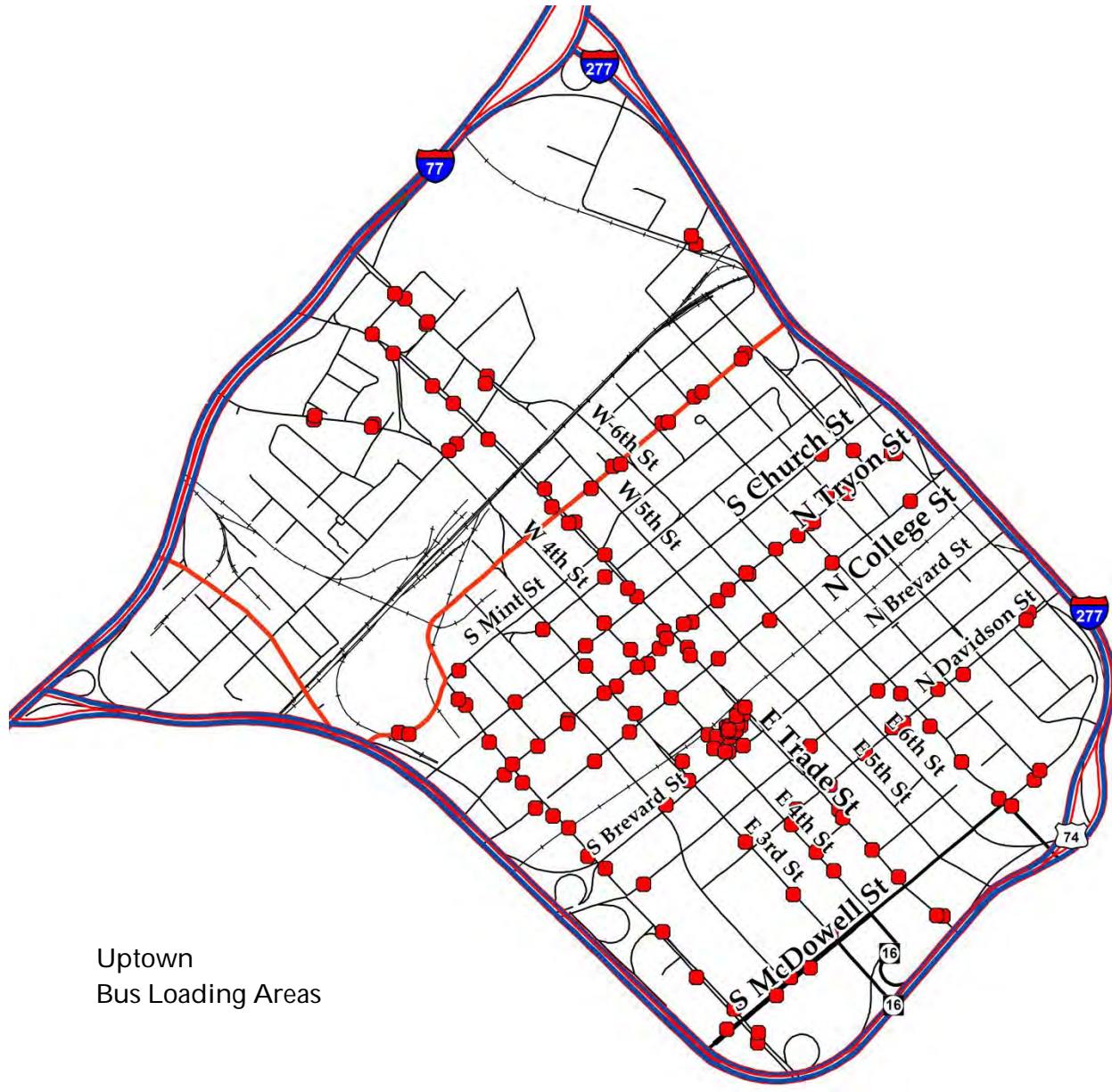
The Center City currently is served by a variety of multimodal services including several Charlotte Area Transit System (CATS) bus routes, the free Gold Rush trolley (which has two distinct routes in Uptown), and the LYNX Blue Line light rail service.

The future vision for transit in Uptown is even grander, including the construction of Charlotte Gateway Station, a proposed multimodal center in Uptown that will serve several new routes along the light rail line, Amtrak, Greyhound, and CATS buses. All of the future light rail extension plans include one of their termini in the Center City. Additionally, CATS is planning the implementation of approximately 10 miles of streetcar through the Uptown area.

From a curb lane management perspective, it is important to understand and compensate for appropriate transit movements and loading. The loading and unloading of CATS buses in Uptown requires dedicated curb space, both for vehicle storage and passenger storage at the curbside. Currently there are 159 bus stops in Uptown serving the various CATS routes throughout the Center City. The size and scale of the bus stops range from a simple sign to more elaborate shelter and bench configurations.

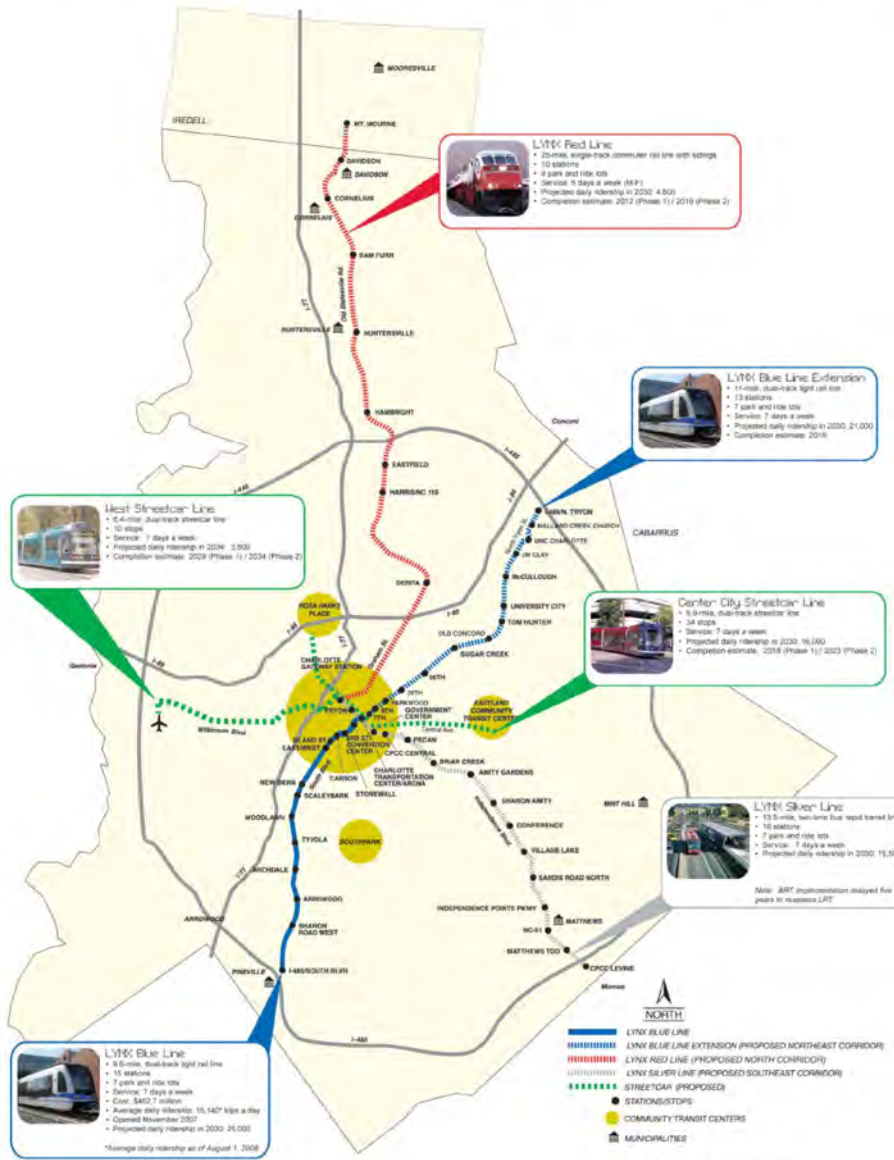


Gold Rush Transit Line



Uptown
Bus Loading Areas

2030 Transit System Plan



CATS 2030 System Plan

Curb Lane Citations

As part of the existing conditions analysis, the project team reviewed 2010 citation data for the core Uptown streets, including Church Street, Tryon Street, and College Street (between Stonewall Street and 9th Street). The City recorded the number of citations issued for five types of violations along these three streets:

- Parking Sign Violations – a vehicle is cited for a parking sign violation when it is in direct violation of an adjacent parking sign.
- Loading Zone Violations – a vehicle is cited for a loading zone violation when it is improperly parked in a loading zone. In some locations, loading zones are only in effect for a few hours during the day (typically 9am-4pm or 6am-6pm). During these times, non-commercial vehicles or vehicles not in the act of loading are not permitted to park in these locations.
- Peak Hour Violations – many streets in the Uptown area have peak hour parking restrictions where parking or loading along the curbside is prohibited between 7am-9am and 4pm-6pm. The restriction is denoted by signage. A vehicle parked along the curbside during these times will be ticketed and towed.
- Obstructing Traffic Violations – a vehicle is cited for an obstructing traffic violation when it is parked along the curb in a manner that prohibits traffic from moving freely.
- Improper Parking Violations – improper parking violations occur when a vehicle is not parked in a parking spot correctly.

Violation	Fine
Obstructing traffic (peak hour)	\$50 + tow
Obstructing traffic (off-peak)	\$25
Parking within 15' of hydrant	\$100
Parking sign violation	\$25
Parking left side of curb	\$25
Parking improperly	\$25
Meter violation	\$25
Blocking handicap curb cut	\$100
Blocking drive-way/alley	\$25
Key in unattended vehicle	\$50
Parking on sidewalk	\$25
Loading zone violation	\$25
Parking in handicap space	\$100
Parking in fire lane	\$100

Core Street Citations – FY10

The following table summarizes the citation data for each Core Street, by citation type. This table indicates which violation types are most common and which streets received the most citations in 2010.

Citations by Core Street

	Parking Sign Violation	Loading Zone Violation	Peak Hour Violation	Obstructing Traffic Violation	Improper Parking Violation	Total
Church Street	159	2	289	36	2	488
Tryon Street	1,393	8	779	37	12	2,229
College Street	1,305	1	372	39	40	1,757
Total	2,857	11	1,440	112	54	4,474

Using the same citation data, the next table shows the number of citations by type by block, along the Core Streets.

Citations by Block

	N 500 Block	N 400 Block	N 300 Block	N 200 Block	N 100 Block	S 100 Block	S 200 Block	S 300 Block	S 400 Block	S 500 Block	Total
Parking Sign Violation	75	365	560	782	288	229	227	241	54	36	2,857
Loading Zone Violation	0	0	0	0	8	2	0	0	0	1	11
Peak Hour Violation	56	141	141	428	135	66	227	222	9	15	1,440
Obstructing Traffic Violation	5	10	3	19	17	13	14	16	6	9	112
Improper Parking Violation	4	11	25	4	1	1	3	4	1	0	54
Total	140	527	729	1,233	449	311	471	483	70	61	4,474

It is evident from the above tables that parking sign violations are the most common type of violation with 2,857 citations, the N. 200 Block received the most citations (1,233), and Tryon Street received the most citations (2,229).



To better illustrate where the on-street parking violations occur, maps were created to show the percentage of each citation for each block on each of the three streets. Note that the citation type percentages are based on the total parking citations for each street. The number of citations issued for each block is included next to the percentage in parenthesis. These maps are provided on the following pages as Figures 3-7.

Parking Sign Citations

The highest amount of citations issued in 2010 were for parking sign violations with 2,857 total citations, as shown in the previous tables. The following blocks received the most parking sign citations:

- The S. 100 Block of Church Street – 47% of the parking sign citations on Church Street (75 citations)
- The N. 200 Block of Tryon Street – 37% of the parking sign citations on Tryon Street (527 citations)
- The N. 300 Block of College Street – 40% of the parking sign citations on College Street (524 citations)

Loading Zone Citations

The least number of citations were issued for loading zone violations, with only 11 citations issued in 2010, which may be a function of the looser regulation and restrictions associated with loading zones. However, it is worth noting that only one block on each of the three streets received citations.

- The S. 100 Block of Church Street – 100% of the loading zone citations on Church Street (2 citations)
- The N. 100 Block of Tryon Street – 100% of the loading zone citations on Tryon Street (8 citations)
- The S. 500 Block of College Street – 100% of the loading zone citations on College Street (1 citation)

CITY OF CHARLOTTE
 CENTER CITY
 CURB LANE
 MANAGEMENT STUDY

Figure 4:
 Loading Zone Citations



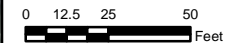
Legend

- Interstate
- US Highways
- State Highways
- State Roads
- Railroads

Percentage of Loading Zone Citations*

- No Citations
- Less than 10%
- Between 10% and 29%
- Between 30% and 49%
- Between 50% and 79%
- 80% and Greater

*Percentages are based on the total parking citations for each street.



Peak Hour Citations

Peak hour violations were the second highest in terms of the number of citations issued in 2010, with 1,440 citations. One general observation is that even though there were significantly more citations issued on Tryon Street for peak hour violations, they were fairly balanced between the S. 500 block and the N. 500 block. Conversely, the majority of the citations issued on Church Street were along one block, and the majority of citations issued on College Street were on two adjacent blocks. The following blocks received the most peak hour citations:

- The N. 200 Block of Church Street – 51% of the peak hour citations on Church Street (148 citations)
- The S. 200 Block of Tryon Street – 28% of the peak hour citations on Tryon Street (219 citations)
- The N. 200 Block of College Street – 32% of the peak hour citations on College Street (119 citation)

Obstructing Traffic Citations

In total, there were 112 citations for obstructing traffic in 2010. The number of citations issued is comparable along all three streets, ranging between 36 and 39 citations for each street. The following blocks received the most obstructing traffic citations:

- The N. 100 Block of Church Street – 39% of the obstructing traffic citations on Church Street (14 citations)
- The S. 200 Block of Tryon Street – 24% of the obstructing traffic citations on Tryon Street (9 citations)
- The N. 200 Block of College Street – 30% of the obstructing traffic citations on College Street (12 citation)

Improper Parking Citations

In 2010, there were 54 total Improper Parking Citations along the three core streets. These citations appear to be much more clustered than any of the other citations, with the exception of loading zone citations. All of the citations on Church Street were issued between 4th Street and 5th Street. On Tryon

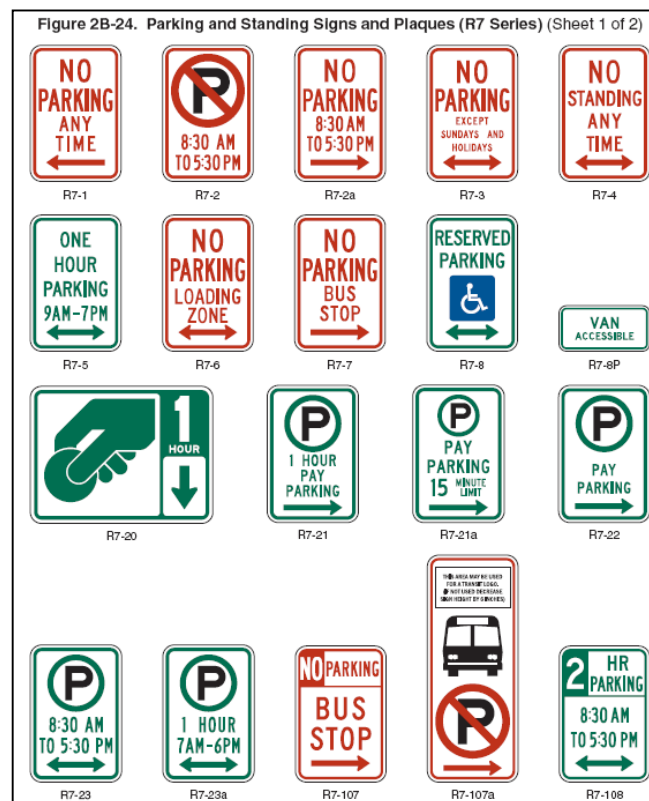
Street the citations were divided between the northern portion of the street and the southern portion, but the majority of the citations were issued among three consecutive blocks in the south. On College Street, all of the citations were issued between 5th Street and 9th Street. The following blocks received the most obstructing traffic citations:

- The N. and S. 100 Blocks of Church Street – 50% (each block) of the obstructing traffic citations on Church Street (1 citation on each block)
- The S. 300 Block of Tryon Street – 34% of the obstructing traffic citations on Tryon Street (4 citations)
- The N. 300 Block of College Street – 63% of the obstructing traffic citations on College Street (25 citation)

Manual on Uniform Traffic Control Devices – Parking Signage

The MUTCD, a document issued by the Federal Highway Administration (FHWA), specifies standards for traffic signs, road surface markings, and traffic signals. Guidelines include shapes, colors, and fonts used in regulatory signage. Specifically related to parking and curbside signage, MUTCD Sections 2B.46 – 48 provide general guidelines for regulatory signage. The general guidelines are stated as:

Signs governing the parking, stopping, and standing of vehicles cover a wide variety of regulations, and only general guidance can be provided here. The word “standing” when used on the R7 and R8 series of signs refers to the practice of a driver keeping the vehicle in a stationary position while continuing to occupy the vehicle.



MUTCD Parking Guidance Signs

The MUTCD does not provide specific regulations related to parking signage, but rather general guidelines that should inform the development of regulatory messages and signage. Some of the general guidelines found in the document include:

Signage Design/Regulatory Messages



- The legend on parking signs shall state the applicable regulations
- Parking signs should display the following information from top to bottom, in the order listed:
 - The restriction or prohibition
 - The times of day it is applicable, if not all hours, and
 - The days of the week it is applicable, if not every day
- If colors are used for color coding of parking time limits, the colors green, red, and black should be the only colors that are used.
- Parking signs shall comply with the standards of shape, color, and location
- Where parking is prohibited at all times or at specific times, the basic design of the parking sign shall have a red legend and border on a white background
- Where only limited-time parking or parking in a particular manner are permitted, the signs shall have a green legend and border on a white background
- Where parking is prohibited during certain hours and time-limited parking or parking in a particular manner is permitted during certain other time periods, the red Parking Prohibition and green Permissive Parking signs may be designed as follows:
 - A. Two 12 x 18-inch parking signs may be used with the red Parking Prohibition sign installed above or to the left of the green Permissive Parking sign; or
 - B. The red Parking Prohibition sign and the green Permissive Parking sign may be combined to form a landscape sign on a single 24 x 18-inch sign, or a vertical sign on a single 12 x 30-inch sign.
- The words NO PARKING may be used as an alternative to the No Parking symbol. The supplemental educational plaque, NO PARKING, with a red legend and border on a white background, may be used above signs incorporating the No Parking symbol.
- To make the parking regulations more effective and to improve public relations by giving a definite warning, a TOW-AWAY ZONE plaque may be appended to, or incorporated in, any parking prohibition sign.
- Where parking spaces that are reserved for persons with disabilities are designated to accommodate wheelchair vans, a VAN ACCESSIBLE plaque shall be mounted below the

handicap sign. The handicap sign shall have a green legend and border and a white wheelchair symbol on a blue square, all on a white background.

Paid Parking

- If a fee is charged for parking and a midblock pay station is used instead of individual parking meters for each parking space, pay parking signs should be used. Pay Parking signs should be used to define the area where the pay station parking applies. Pay Station signs should be used at the pay station or to direct road users to the pay station.
- If the pay parking is subject to a maximum time limit, the appropriate time limit (number of hours or minutes) shall be displayed on the Pay Parking and Pay Station signs.

Directional Guidance

- If the parking restriction applies to a limited area or zone, the limits of the restriction should be shown by arrows or supplemental plaques. If arrows are used and if the sign is at the end of a parking zone, there should be a single-headed arrow pointing in the direction that the regulation is in effect. If the sign is at an intermediate point in a zone, there should be a double-headed arrow pointing both ways. When a single sign is used at the transition point between two parking zones, it should display a right and left arrow pointing in the direction that the respective restrictions apply.
- As an alternate to the use of arrows to show designated restriction zones, word messages such as BEGIN, END, HERE TO CORNER, HERE TO ALLEY, THIS SIDE OF SIGN, or BETWEEN SIGNS may be used.

Signage Placement, Orientation, and Placement

- When signs with arrows are used to indicate the extent of the restricted zones, the signs should be set at an angle of not less than 30 degrees or more than 45 degrees with the line of traffic flow in order to be visible to approaching traffic.
- Spacing of signs should be based on legibility and sign orientation.
- At the transition point between two parking zones, a single sign or two signs mounted side by side may be used.
- If the zone is unusually long, signs showing a double arrow should be used at intermediate points within the zone.



- If the signs are mounted at an angle of 90 degrees to the curb line, two signs shall be mounted back to back at the transition point between two parking zones, each with an appended THIS SIDE OF SIGN supplemental plaque.
- If the signs are mounted at an angle of 90 degrees to the curb line, signs without any arrows or appended plaques should be used at intermediate points within a parking zone, facing in the direction of approaching traffic. Otherwise the standards of placement should be the same as for signs using directional arrows.
- To minimize the number of parking signs, blanket regulations that apply to a given district may, if legal, be posted at district boundary lines.



Existing Signage Review

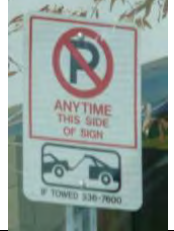

As part of the existing conditions review, the project team reviewed existing signage within Uptown, based on an inventory provided by the City of Charlotte. The evaluation included a review based on the general preferences of the Charlotte Department of Transportation (CDOT) and the Project Advisory Team, and a sign-by-sign review.

In terms of general signage preferences, the following observations were made:




- CDOT displays a preference for using plain language directions over arrows for designating extent and direction of regulations along the curb lane.
- Plain Language directions such as “Other Side of Sign” and “Beyond Sign” can be very ambiguous if used in conjunction with “This Side of Sign” or “Between Signs”.
- All signs with Tow-In information need to contain “if towed, 704-336-7600” or a similar variation.
- Color is generally used on regulatory signs to communicate the nature of the messages
 - Red signifies prohibition
 - Green signifies permission
 - Black is sometimes used for both prohibitory and permissive messages on CDOT signs (designated as neutral by MUTCD)
 - Yellow is sometime used for LOADING ZONE on CDOT signs
- Whole hour increments are used for specific parking restrictions i.e. 7AM – 9AM

The tables of signs on the following pages were inventoried by the City of Charlotte and can be found throughout Uptown.

GENERAL SIGNAGE – NO PARKING, ETC

Sign	Regulatory Message	Project Team Note
	No Parking Anytime – Tow In	<ul style="list-style-type: none"> Should be mounted 30-45 degrees from curb face approaching traffic
	No Parking Anytime – This Side of Sign, Tow In	<ul style="list-style-type: none"> Mount 90 degrees from curb facing approaching traffic Includes towing phone number Requires sign on back specifying regulations other side of sign.
	No Parking Anytime – Other Side of Sign, Tow In	<ul style="list-style-type: none"> Use of “OTHER SIDE OF SIGN” message is in question
	<p>A. No Parking Anytime, This side of sign, Tow In, in conjunction with</p> <p>B. No Parking, U. S. Court Security Vehicles Only, Tow In</p>	<ul style="list-style-type: none"> Mount 90 degrees from curb facing approaching traffic Includes towing phone number Requires sign on back specifying regulations other side of sign. No Parking Anytime sign is redundant and confusing given the permission to US Court Security Vehicles to use lane for parking.




GENERAL SIGNAGE – NO PARKING, ETC

Sign	Regulatory Message	Project Team Note
	<p>Parking Permitted at Numbered Spaces Only</p>	<ul style="list-style-type: none"> ▪ Relates to centralized parking meters ▪ Mount 30 – 45 degrees from curb facing approaching traffic ▪ Consider combining or including information on Pay to Park signs
	<p>2-Hr, Pay to Park</p>	<ul style="list-style-type: none"> ▪ Relates to centralized parking meters ▪ Mount 30 – 45 degrees from curb facing approaching traffic ▪ Consider combining or including information on Pay to Park signs ▪ Use of Credit Card image would be more consistent ▪ Down pointing arrow can be ambiguous as it relates to location of payment machine but all other arrows on parking signs relate to boundaries of parking areas defined by signs.
	<p>No Parking Any Time, Violators Will Be Towed <i>(Temporary, orange, tie-on sign)</i> <i>(Sometimes these signs will have a blank area to fill in the day)</i></p>	




NO PARKING – WITH RESTRICTIONS

Sign	Regulatory Message	Project Team Note
	<p>No Parking, 7am-9am, Mon-Fri, 2HR limit 7am-6pm Mon-Fri</p>	<p>This sign is ambiguous in language content and in presentation:</p> <ul style="list-style-type: none"> ▪ The green background and 2HR limit message indicate parking is allowed but message is contained within No Parking Border. ▪ 2HR limit includes time when parking is not allowed 7AM – 9AM
	<p>No Parking – 7-9AM, 4-6PM, Mon-Fri, 2HR limit 9am-4pm Mon-Fri Tow in</p>	<p>Ambiguous in presentation:</p> <ul style="list-style-type: none"> ▪ The green background and 2HR limit message indicate parking is allowed but message is contained within No Parking Border.
	<p>A. No Parking 4pm-9am, Tow In, in conjunction with B. Parking, 2 Hr Limit, 9am-4pm, Mon-Fri</p>	<ul style="list-style-type: none"> ▪ This presentation is more in line with MUTCD than examples above.
	<p>A. No Parking Anytime, Other Side of Sign, Tow In, in conjunction with B. No Parking 7am-9am, 4pm-6pm Mon-Fri, This Side of Sign, Tow In</p>	<ul style="list-style-type: none"> ▪ Parking information relating to other side of sign may not be allowed, See MUTCD 2B.47.10 ▪ This Side of Sign message requires 90degree mounting to curb and additional sign on back specifying regulations on other side of sign.



NO PARKING – WITH RESTRICTIONS

Sign	Regulatory Message	Project Team Note
	<p>A. No Parking Anytime, This Side of Sign, in conjunction with</p> <p>B. No Parking 7am-9am, Mon-Fri, 2 Hr limit, 7am-6pm, Mon-Fri, Tow In</p>	<ul style="list-style-type: none"> ▪ Messages are contradictory. Remove No Parking Anytime sign to give legitimacy to No Parking sign with limits. <p>No Parking sign with limits is ambiguous in language content and in presentation:</p> <ul style="list-style-type: none"> ▪ The green background and 2HR limit message indicate parking is allowed but message is contained within No Parking Border. ▪ 2HR limit includes time when parking is not allowed 7AM – 9AM
	<p>A. 30 Minute Parking, 9am-4pm, Mon-Fri, At Meters Only, Other Side of Sign, Tow In, in conjunction with</p> <p>B. No Parking Anytime Other Side of Sign, Tow In</p>	<ul style="list-style-type: none"> ▪ Parking information relating to other side of sign may not be allowed, see MUTCD 2B.47.10 ▪ This Side of Sign message requires 90-degree mounting to curb and additional sign on back specifying regulations on other side of sign.
	<p>A. No Parking 4-6pm, Mon-Fri, 30 minute limit other times, Other side of Sign, Tow-In, in conjunction with</p> <p>B. No Parking Anytime This side of Sign, Tow-In</p>	<ul style="list-style-type: none"> ▪ Parking information relating to other side of sign may not be allowed, see MUTCD 2B.47.10 ▪ This Side of Sign message requires 90-degree mounting to curb and additional sign on back specifying regulations on other side of sign.

TAXIS AND LIMOUSINES

Sign	Regulatory Message	Project Team Note
	<p>A. Taxis Only 6pm-7am, Tow In, in conjunction with</p> <p>B. No Parking, 7am-9am, Mon-Fri, 2HR limit 7am-6pm Mon-Fri</p>	<p>No Parking sign with limits is ambiguous in presentation:</p> <ul style="list-style-type: none"> The green background and 2HR limit message indicate parking is allowed but message is contained within No Parking Border.
	<p>A. 30 Minute Parking, 9am-4pm, Mon-Fri, At Meters Only, Other Side of Sign, Tow In, in conjunction with</p> <p>B. No Parking, 7am-9pm, 4pm-6pm, Mon-Fri, Taxi Stand All Other Times This side of Sign, Tow In</p>	<ul style="list-style-type: none"> Parking information relating to other side of sign may not be allowed, see MUTCD 2B.47.10 This Side of Sign message requires 90degree mounting to curb and additional sign on back specifying regulations on other side of sign.
	<p>A. No Parking 7am-9am, 4pm-6pm, Mon - Fri, Taxi Stand All other Times, Other Side of Sign, Tow In, in conjunction with</p> <p>B. Parking, 2 Hr Limit, 9am-4pm, Mon-Fri, No limit after 6pm & weekends, in conjunction with</p> <p>C. No Parking 7-9am, 4-6pm, Mon-Fri, Tow In</p>	<ul style="list-style-type: none"> Too Many Messages Restriction signage at top and bottom is confusing

TAXIS AND LIMOUSINES

Sign	Regulatory Message	Project Team Note
	<p>A. No Parking 7-9am, 4-6pm, Mon-Fri, Taxi Stand All Other Times, Other Side of Sign, Tow-In, in conjunction with</p> <p>B. No Parking Anytime, This side of sign, Tow In</p>	<ul style="list-style-type: none"> Consider moving Taxi Stand sign to other side of post and change language to “This Side of Sign”, or Consider using R7-200a configuration with arrows, mounted 30 degrees off face of curb. The green background and 2HR limit message indicate parking is allowed but message is contained within No Parking Border.
	<p>No Parking Except Limo/Non-metered, For Hire, Staging Only, 10 Min Maximum Limit, Other Side of Sign, Tow In</p>	<ul style="list-style-type: none"> The wording on this sign is very complicated Black copy used for prohibitory message




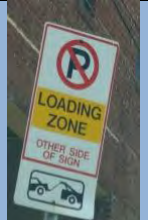


LOADING ZONES

Sign	Regulatory Message	Project Team Note
	<p>A. No Parking Except Loading Zone, 9am-6pm, and Taxi Stand 6pm-7am, Other side of sign, Tow In, in conjunction with</p> <p>B. No Parking Anytime, Tow In</p>	<ul style="list-style-type: none"> Sign uses yellow background for permissive message within prohibitive color (red) border Use of "THIS SIDE OF SIGN" & "OTHER SIDE OF SIGN" is less confusing here
	<p>No Parking, Except Loading Zone, 9am-4pm, Mon-Fri, 30 minute limit, Tow In</p>	<ul style="list-style-type: none"> Sign uses yellow background for permissive message within prohibitive color (red) border
	<p>A. No Parking Except Loading Zone, 9a-4p, 30 minute limit, Mon-Fri, Other Side of Sign with Tow In, in conjunction with</p> <p>B. No Parking Passenger Loading Zone 9a-4p, 10 min. Limit, This side of Sign, Tow In</p>	<ul style="list-style-type: none"> PASSENGER LOADING ZONE – contradictory to three minute regulations from ordinance





LOADING ZONES		
Sign	Regulatory Message	Project Team Note
	<p>A. No Parking, 4pm-6am, 2 Hr Limit 9am-4pm, Mon-Fri, Tow In, in conjunction with</p> <p>B. No Parking Except Loading Zone, 9am-4pm, 30 minute limit Mon-Fri, This Side of Sign, Tow In</p>	<ul style="list-style-type: none"> ▪ Contradictory message ▪ The green background and 2HR limit message indicate parking is allowed but message is contained within No Parking Border. ▪ Sign uses yellow background for permissive message within prohibitive color (red) border
	<p>A. No Parking Anytime, This Side of Sign, in conjunction with</p> <p>B. No Parking 6am-6pm Except Loading Zone 9am-4pm, 30 Min Limit, Tow In</p>	<ul style="list-style-type: none"> ▪ Contradictory Message ▪ Sign uses yellow background for permissive message within prohibitive color (red) border
	<p>No Parking 6am-6pm, Mon-Fri, Except Loading Zone 9am-4pm, 30 Min. Limit, Tow In</p>	<ul style="list-style-type: none"> ▪ Confusing Message – “Am I allowed to park after 6pm” ▪ Sign uses yellow background for permissive message within prohibitive color (red) border
	<p>No Parking, 6am-6pm, Mon-Fri, Except Loading Zone 9am-4pm, Mon-Fri, This Side of Sign</p>	<ul style="list-style-type: none"> ▪ Confusing Message – “Am I allowed to park after 6pm” ▪ Use of “THIS SIDE OF SIGN” – what is other side of sign ▪ Sign uses yellow background for permissive message within prohibitive color (red) border






LOADING ZONES

Sign	Regulatory Message	Project Team Note
	<p>A. No Parking Except Loading Zone, 9a-4p, 30 minute limit, Mon-Fri, Other Side of Sign with Tow In, in conjunction with</p> <p>B. No Parking Anytime, This Side of Sign</p>	<ul style="list-style-type: none"> Sign uses yellow background for permissive message within prohibitive color (red) border
	<p>No Parking Loading Zone, Other side of sign, Tow In</p>	<ul style="list-style-type: none"> Sign uses yellow background for permissive message within prohibitive color (red) border Use of "OTHER SIDE OF SIGN" is confusing here
	<p>No Parking, 7-9am, Mon-Fri, Loading Zone, Trucks Only, Other Side of Sign, Tow In</p>	<ul style="list-style-type: none"> Sign uses yellow background for permissive message within prohibitive color (red) border Use of "OTHER SIDE OF SIGN" is confusing here
	<p>A. No Parking Anytime Other Side of Sign, Tow-In, in conjunction with</p> <p>B. No Parking, Except Loading Zone, 30 minute Limit, This Side of Sign, Tow-In</p>	<ul style="list-style-type: none"> Sign uses yellow background for permissive message within prohibitive color (red) border Use of "THIS SIDE OF SIGN" & "OTHER SIDE OF SIGN" is less confusing here





PASSENGER LOADING ZONES

Sign	Regulatory Message	Project Team Note
	<p>A. No Parking Anytime This Side of Sign, Tow-In, in conjunction with,</p> <p>B. No Parking, Passenger Loading Zone, Tow-In, in conjunction with</p> <p>C. Reserved Parking (Handicap Symbol) 7am-1pm, Sunday, Other Side of Sign, Maximum Penalty \$250</p>	<ul style="list-style-type: none"> Too many messages Addition of Sunday parking is slightly confusing when regulatory messages state “No Parking Anytime” in top sign
	<p>A. No Parking, Passenger Loading Zone, Tow-In, in conjunction with</p> <p>B. Sunday Parking Permitted, 7am-1pm</p>	<ul style="list-style-type: none"> Addition of Sunday parking is slightly confusing when regulatory messages state “No Parking Anytime” in top sign
	<p>No Parking, Passenger Loading Zone, 9a-4p, 10 min. limit, Other side of Sign, Tow-In</p>	<ul style="list-style-type: none"> Sign uses yellow background for permissive message within prohibitive color (red) border
	<p>A. No Parking Except Discovery Place Buses, Loading/Unloading Only, Other side of Sign, Tow In, in conjunction with</p> <p>B. No Parking Except Loading Zone 9a-6pm, This Side of Sign, Tow In</p>	<ul style="list-style-type: none"> Confusing Message – “Am I allowed to park after 6pm” – which side of sign?




PARKING ALLOWED

Sign	Regulatory Message	Project Team Note
	<p>A. Parking, 2 Hr Limit, 9am-4pm, Mon-Fri, No Limit after 6pm & weekends, in conjunction with</p> <p>B. No Parking 7am-9am, 4pm-6pm, Mon-Fri, Tow in</p>	<ul style="list-style-type: none"> ▪ A lot of regulatory messages within these two signs – could be simplified ▪ Different paid parking sign than other examples
	<p>2 Hr Parking, 7am-6pm Mon-Fri, Tow In</p>	<ul style="list-style-type: none"> ▪ Sign is clear – but time and days appear to be small font ▪ Different paid parking sign than other examples
	<p>Parking Enforced 7am-6pm, Mon-Fri, 8 Hr Limit</p>	<ul style="list-style-type: none"> ▪ Sign is clear – good information ▪ Different paid parking sign than other examples



NEIGHBORHOOD, ARENA, OR STADIUM PARKING		
Sign	Regulatory Message	Project Team Note
	<p>A. No Parking during Arena Events Except by Permit, Tow In, in conjunction with</p> <p>B. No Parking Anytime, Other side of sign, Tow In</p>	<ul style="list-style-type: none"> What is the method for knowing when an arena event is happening? What constitutes an arena event?
	<p>No Parking during Stadium Events without Permit, Tow In</p>	<ul style="list-style-type: none"> What is the method for knowing when a stadium event is happening or is about to happen?
	<p>A. No Parking Anytime This Side of Sign, Tow In, in conjunction with</p> <p>B. No Parking During Stadium Events Except By Permit, Tow In</p>	<ul style="list-style-type: none"> What is the method for knowing when a stadium event is happening or is about to happen?
	<p>Residential Parking By Permit Only, 8am-5pm, Mon-Fri, 8pm-8am, Thurs-Sun, Two Hour Visitor Parking Anytime Without Permit, Tow In</p>	<ul style="list-style-type: none"> Good sign – the use of blue differentiates from other parking signage Provides a lot of information

NEIGHBORHOOD, ARENA, OR STADIUM PARKING

Sign	Regulatory Message	Project Team Note
	<p>A. Residential Parking by Permit Only, 8am-5pm, Mon-Fri, 8pm-8am, Thurs-Sun, Two Hour visitor Parking Anytime Without Permit Other Side of Sign, Tow In, in conjunction with</p> <p>B. No parking Anytime This Side of Sign</p>	<ul style="list-style-type: none"> ▪ Good sign – the use of blue differentiates from other parking signage ▪ Use of “THIS SIDE OF SIGN” & “OTHER SIDE OF SIGN” is less confusing here
	<p>A. No Parking Anytime Other Side of Sign, in conjunction with</p> <p>B. Residential Parking by Permit Only, 8am-5pm, Mon-Fri, 8pm-8am, Thurs-Sun, Two Hour visitor Parking Anytime Without Permit This Side of Sign, Tow In</p>	<ul style="list-style-type: none"> ▪ Good sign – the use of blue differentiates from other parking signage ▪ Use of “THIS SIDE OF SIGN” & “OTHER SIDE OF SIGN” is less confusing here
	<p>No Parking Between Signs, Thursday Only, Tow In</p>	<ul style="list-style-type: none"> ▪ Good sign – communicates specific regulatory message



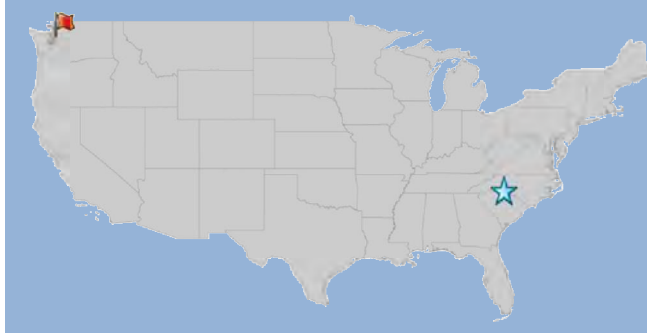


CHAPTER 2—PEER CITY REVIEW

Peer city interviews were conducted to solicit best management practices for curb lane use, regulation, enforcement, and operations. Four peer cities were identified by the project team as cities that have either integrated innovative curb management policies or have similar characteristics to the Charlotte Uptown area. The results of the interviews are provided in the following sections and will be used to establish implementable best management practices and provide comparable baselines for the development of study recommendations.



Seattle, Washington



Seattle was selected because of its innovative curb lane management practices and policies. The City of Seattle and the Seattle Department of Transportation have developed a curb lane priority system that they use to structure curb uses and provide guidance for the curb lane users. Seattle also has a unique approach to signage, relying more on graphics and less on text.

Seattle has worked over the last two decades to improve and effectively manage their curb lanes, especially in their downtown area where they have approximately 5,000 paid parking spaces. As part of their comprehensive planning process in the early 1990's, Seattle began prioritizing the use of their curb space. This approach to managing curb use provided the city a strategic tool to utilize when addressing demands for the finite amount of curb space available in the growing city. The following priorities address curb use in the business and residential districts.

CITY OF SEATTLE CURB SPACE PRIORITY	
BUSINESS OR COMMERCIAL DISTRICTS	RESIDENTIAL AREAS
<ol style="list-style-type: none"> 1. Transit use (bus stops and spaces for bus layover), 2. Passenger and commercial vehicle loading zones (click here for more information on load zones), 3. Short-term customer parking (time limit signs and paid parking typically for 1- or 2-hours); 4. Parking for shared vehicles 5. Vehicular capacity 	<ol style="list-style-type: none"> 1. Transit use (bus stops and spaces for bus layover), 2. Passenger and commercial vehicle loading zones (click here for more information on load zones), 3. Parking for local residents and for shared vehicles 4. Vehicular capacity

On-Street Parking Regulations

Within the downtown core, the City of Seattle has 5,000 paid parking spaces. The City provides short term parking, usually two hours, near core businesses to provide accessibility and promote turnover. The City mainly employs parallel parking, but does have locations where back-in angle parking is used for cycling and pedestrian safety.

The City provides a few unique restricted parking areas, including carpool parking and carshare parking. Carpool parking is provided in designated areas throughout the City to qualified carpool groups. There are several restrictions to qualification, including number of passengers, minimum number of days for carpool commuting, and proximity of live/work arrangements. Carpool spaces are assigned by the City and are restricted between 7 am and 10 am to allow priority for morning carpool commuters. After these times, the spaces are opened to the general public for use. Carshare parking generally is reserved 24 hours per day for the vehicle rental services.

The City charges different rates throughout, ranging from \$1 to \$4, depending upon which area of town you are in. The City implemented the new price structure in early 2011, based on occupancy data collected in 2010. The City also is investigating the use of dynamic pricing, with prices changing in conjunction with occupancy levels to help balance demands and provide available short-term parking throughout town.

Paid parking hours of operation are from 8 am to 6 pm, Monday through Saturday. The City soon will be extending enforcement and paying hours in several districts to 8 pm. Pay-and-Display parking pay stations are used, requiring the motorist to display a receipt in their vehicle to indicate valid parking.

Similar to Charlotte, the City of Seattle implements peak hour drive time restrictions, in which vehicular use of the curb lane for parking or standing is prohibited. In some areas, the peak hour windows are slightly larger, extending three hours in the morning or evening commute times. Unlike Charlotte, the peak restrictions are not provided for vehicular capacity, but rather for the efficient movement of transit services throughout town.

The City allows handicap parking within its parking areas at no cost to the motorist. The City does limit parking in these spaces to four hours. Handicap parking is not allowed in loading zones, restricted parking areas, peak hour restricted areas, or car-sharing and carpool parking zones. Within the City's residential zones, disabled residents can request the installation of a handicap parking space





adjacent to their residence. However, the space is not considered reserved, and anyone with a handicapped placard can park there.

Residential Permit Parking

In addition to the 5,000 paid spaces in its downtown, Seattle has another 8,500 paid spaces and many more time regulated spaces throughout its various neighborhood districts. There are more than 30 Restricted Parking Zones (RPZ), which operate as the residential permit parking program in the City. An RPZ typically is implemented in residential areas to restrict long-term parking by non-residents. Generally, the RPZ parking time limits or prohibitions are posted and vehicles displaying an RPZ permit are exempt. Residents are allowed one permit per registered vehicle and one guest pass. The permits cost \$65, and are good for one permit cycle (mostly two years, although there are some one year cycles).

Residential permits are not allowed within the downtown core by municipal code; however, downtown residents are allowed to park on-street overnight. In some residential zones, the spaces are metered; however, permit holders can park without paying. The variable price structure also is implemented in the residential zones.

Loading Zones

The City has loading zones defined as the number two priority within both its commercial/business and residential areas. Within the City, there are four distinct types of loading zones:

- The Generic Loading Zone – 30 minute time limit, and can be used for passenger loading, loading of items from personal vehicles (private or public), and commercial delivery loading
- The Passenger Loading Zone – 3 minute or 15 minute limits, may be metered, and can be used for quick passenger drop-offs or pickups, but not loading of items
- The Truck Only Loading Zone – 30 minute time limit, unmetered, and can only be used by vehicles licensed as trucks
- The Commercial Vehicle Load Zone (CVLZ) – 30 minute time limit, metered, and can only be used by commercial service delivery vehicles to conduct loading and unloading activities. A Commercial Vehicle Permit is required to use the CVLZ.

The CVLZ concept was established in 1989 by the City to help provide a structure and location for the efficient delivery of goods within the City’s busy curb space network. The CVLZ is defined by yellow paint on the curb and a yellow parking meter. When the CVLZ is in use, the commercial delivery driver (who must hold a valid CVLZ permit) is required to pay for the 30-minute use of the space by depositing coins in the meter. A commercial vehicle is defined as:

- A motor truck (passenger cars with a truck license do not qualify).
- A station wagon or a van permanently modified to carry no more than three seated passengers that is licensed as a truck.
- A motor vehicle, the business name of which is permanently displayed on both sides of the vehicle, in, at a minimum, two-inch lettering.

Permits are transferable within a single company if it owns more than ten commercial vehicles. For each ten vehicles, the company can purchase one permit. Below ten vehicles, a company must purchase a permit for each vehicle it intends to use in CVLZ locations. The first permit purchased by a company costs \$150, with each additional permit priced at \$90.

Standard Block Faces

City officials stated that they did not necessarily use a standard block face (like the one shown below), but tried to structure blocks in a manner that were consistent and easy to comprehend for motorists. The preference for loading zones always was at the end of each block, with paid or restricted parking located in the center of the block. The City also tries not to mix time limitation within one block, so the example below, with both 2 hour and 30 minute parking would not be typical of a Seattle block face.

After Block Standardization





Signage

The City recently reorganized their sign codes to reduce conflicting or unnecessary signage. Two years ago, their sign inventory had over 500 sign types – after the reduction, the inventory has somewhere between 100 and 200 sign types. Of the remaining signs, a majority of the signs are for loading zone areas, primarily because of the different type, configuration, and time limits for loading zones.

Over the past several years, the City of Seattle has attempted to move away from typical MUTCD guidelines for curb lane signage, which rely heavily on text for communicating regulations. The new approach to signage relies on less text and more easily recognizable symbols and pictograms. The picture to the right is an example of this concept, applied to regulations for improperly parking in a streetcar zone. The City still struggles with signage messaging issues, especially in locations where regulations and uses change by time of day.



Special Events

The City of Seattle has altered its approach to special event curb lane restrictions over the past few years. Previously, the City used the bagging and hooding method to indicate when parking was not allowed in the curb lane. Now it utilizes gorilla posts (like the ones seen in the photograph to the right). In some situations, the City sells special event permits to allow for on-street parking near businesses. The revenue generated from these permits helps pay for lost revenue during the special

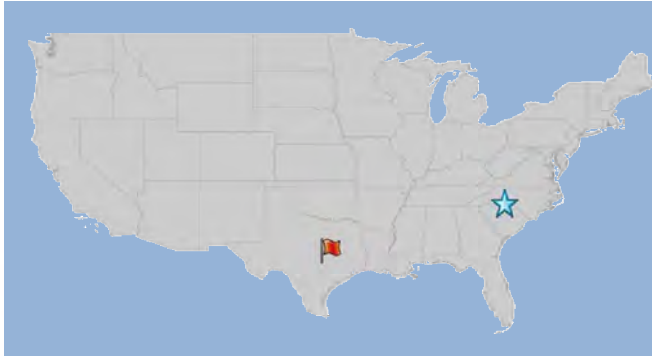
event and also funds the purchase of gorilla posts.



Additional Best Management Practices

The City has developed an online web resource that provides real time parking information for its entire system, including curb lane restrictions, parking signage locations, locations for RPZ permits, off-street parking locations, and locations for their real-time dynamic wayfinding signage. The City updates the map nightly, so any changes in use and signage are documented as they occur.

Austin, Texas



Austin was selected because of its unique approach to curb lane management, including bicycle, carsharing, and special event parking. The City of Austin has worked over the recent years to implement technology and management improvements to better align and structure the curb lane system. The City continues to look forward, and currently is investigating and applying new approaches to its curb lanes.

Over the past few years, the City of Austin has implemented new on-street management applications, including new parking meter technology, as well as new approaches to valet, loading, and taxi uses. The City also deals with a very active nightlife, supported by the adjacent University of Texas, which has over 50,000 undergrad and graduate students.

On-Street Parking Regulations

The City of Austin has approximately 5,100 metered spaces in its downtown core. Metered parking is set at \$1.00 per hour and parking is limited to 3 hours throughout the City and 5 hours in the university areas. Hours of enforcement currently are 8:30 am to 5:30 pm, Monday through Friday. However, the City soon will implement extended hours of charging and enforcement, from 8 am to midnight, Monday through Saturday. This extension is being implemented to provide better management and turnover of parking during the heavily occupied evening hours, especially in the entertainment district.

The City recently has implemented new parking revenue control technology to manage its on-street spaces, including 700 pay and display pay stations and 550 single space credit-enabled meters. The combination of technologies was used to allow for increased payment flexibility and more efficient enforcement. The City implemented the pay stations wherever there were at least four parking spaces to be managed. In places with fewer than four spaces, the City utilized the single space meters to allow flexibility without investing in the more expensive pay station technology.



The City has “Customer Service Zones” along its blocks that allow short-term parking for quick in-and-out transactions at area businesses. The use of these spaces is limited to 15 minutes. Additionally, the City has “Commercial Service Zones” that are designated for loading and restricted to properly signed vehicles only. The use of these spaces is limited to 30 minutes. The City has structured many of these locations to be joint uses throughout the downtown, with the Commercial Zones and Customer Zones operating in alternating peaks. This process saves on space along the curb lane dedicated to alternative parking, and provides these convenient spaces when motorists or delivery drivers need them the most.

Austin has several dedicated on-street handicap accessible spaces within its downtown core. These parking spaces are free of charge to motorists displaying a valid handicap plate or hangtag. The locations for the dedicated handicap spaces are determined based on need by the City’s transportation engineers. Additionally, disabled motorists can park for free at any metered space throughout the downtown.

The City of Austin is working with its local transit service, CAPMETRO, to evaluate curb lane usage for transit loading and unloading. One of the more recent changes they have implemented is the removal of certain stops to increase mobility and transit service (through reduced travel times). This effort has reduced some of the curb lane needs, freeing up space for additional parking, loading, or valet locations. The decision to remove stops occurs on a case by case basis, and typically is based on ridership surveys and data.

Residential Permit Parking

The City has a residential permit parking program. The City of Austin Traffic Engineer has the ability to designate permit parking streets, through an ordinance passed in May 1996 by the City Council. The general purpose of the program is to limit the overflow of commuter or non-resident parking in residential areas.

The City has a variety of residential permit parking programs in place that vary by location. Some of the permit areas have time of day restrictions, allowing public parking only during certain times of day. For example, there are some neighborhoods around the University that allow for daytime public parking, but restrict parking on-streets to residents only.

Taxi and Valet Operations

Austin has a number of valet companies that operate in its downtown. As recently as last year, there were approximately 30 permitted valet service companies operating in Austin. The cost to obtain a valet permit is \$250 and allows the operator to use up to one-third of the nearby spaces to park cars, if the operations don't impact adjacent travel. Valet operators pay the cost to hood specific meters reserved for valet spaces.

Recently, the City made the decision to review valet operations in an effort to clean up curbside use and provide adequate service to downtown patrons. One of the more recent changes to valet operations by the City was to minimize the number of valet stands along a block to one per block face. The valet stands are located in the center of the block to accommodate all businesses on the block and minimize impacts to traffic at adjacent intersections.

The City gives less priority to taxi operations in its downtown, locating taxi stands approximately two to three blocks away from the valet stands to avoid competing use or illegal queuing by taxis. The City's philosophy on taxi stand locating is to assume that patrons will be willing to walk a few blocks to find a dedicated taxi stand. The Austin Police Department heavily enforces illegal stopping, standing, and queuing of taxis.

Loading Zones

The City of Austin is re-evaluating its loading zone policies and practices. Currently, the City uses Commercial Service Zones, as indicated in a previous section. The Commercial Service Zones are regulated between 7 am and 7 pm Monday through Saturday. The use of these spaces is restricted to Commercial Service Vehicles and taxis. The City ordinance requires that all Commercial Service Vehicles display a company logo on the side of their vehicle. The City also provides passenger loading facilities, with a time limit of 5 minutes.

As part of the re-evaluation of loading zone policies, the City is considering the loading zone practices of the City of Houston as a potential implementation strategy. The information on the following page provides a closer look at the City of Houston Commercial Vehicle Loading Policies.



City of Houston Commercial Vehicle Loading Policies

The City of Houston approach to Commercial Vehicle Loading allows operators and companies to make their own decision on how they are allowed to operate within Houston’s downtown. The City sells Commercial Vehicle Loading Zone permits, with four classes available to meet the needs of its commercial operators.

- Class A - \$1,200 annual fee – this annual permit allows the operator to park in any commercial vehicle loading zone or two metered spaces for one to two hours
- Class B - \$300 annual fee – this annual permit allows the operator to park in any commercial vehicle loading zone for up to one hour
- Class C - \$150 annual fee – this annual permit allows the operator to park in any commercial vehicle loading zone for up to 30 minutes
- Class D - \$25 for 21 days – this temporary permit allows the operator to park in any commercial vehicle loading zone for up to one hour



In addition to the commercial vehicle loading zone permits, Houston also allows parking at commercial meters for the occasional delivery vehicle. The red meters are placed in the commercial vehicle loading zone and only accept quarters. The prices are set very high at \$5 per hour to dissuade non-delivery vehicle parking and long-term use of the spot.



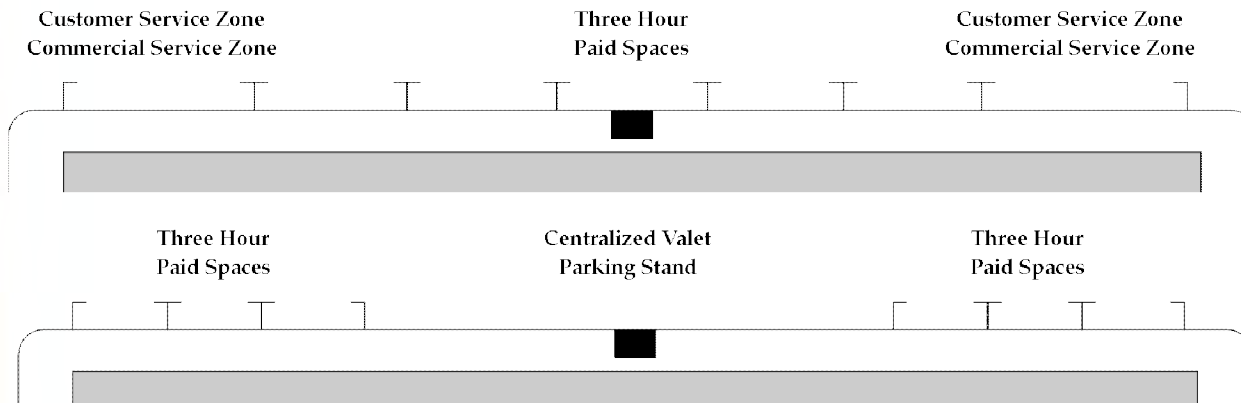
Violations for the Commercial Vehicle are also set very high to discourage parking violations by normal motorists or delivery drivers. The following fine schedule applies to Commercial Vehicle Loading Zones:

<u>Violation</u>	<u>Fine</u>	<u>After 45 Days</u>
Parked non-commercial vehicle in CVLZ	\$250	\$350
Parked using CVLZ without loading/unloading	\$250	\$350
Parked in a CVLZ without permit or paying	\$300	\$400

The first violation applies to private vehicles, while the second two apply to commercial vehicles.

Standard Block Faces

Austin tries to keep their block face implementation consistent, whenever possible. The City prefers Customer and Commercial service zones to be located at the end of the block. Valet parking operations are placed at the center of the block. Paid parking is implemented in the center block as well. The diagrams below provide a depiction of the standard Austin block face.



Signage

The City of Austin signage conforms to the general guidelines provided by the MUTCD. They currently are looking at the implementation of both static and dynamic wayfinding in the hopes that this effort will help them provide better guidance throughout the City.

Special Events

Like Seattle, the City of Austin has moved away from bagging or hooding meters during special events. The City uses a technique unique to their community, in which they set up temporary signage at each end of the closed block. The temporary signs are constructed out of a waterproof cardboard composite material labeled to say "SPECIAL EVENT- NO PARKING". Additionally, the multi-space meters (pay stations) are wrapped in cellophane to discourage people from attempting to pay. The City implemented this policy to avoid the cost of pay station bags and gorilla posts.



Additional Best Management Practices

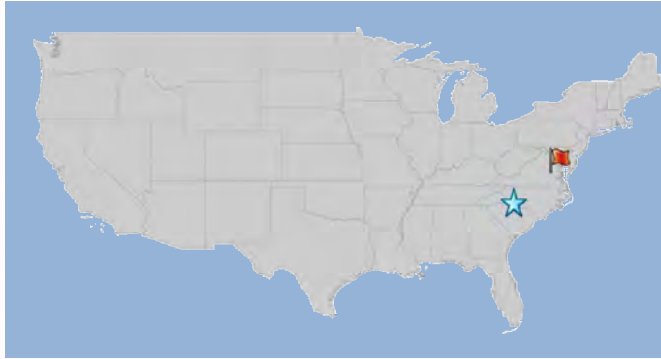
In areas where the City has implemented bike lanes or wide outside lanes, back-in angle parking was implemented to provide better safety and visibility for cyclists and motorists alike. This type of parking requires a more involved entry maneuver, which has required the City to implement traffic calming measures along the streets with back-in angle parking to allow motorists a safer environment to enter the space. The City also provides bicycle parking throughout the downtown, to serve the large portion of its population that utilizes bicycle as a primary form of transportation.

The City also has a carsharing service for downtown residents who choose not to own a car. The service provides available vehicles 24 hours per day. The City provides spaces along its curb for these vehicles and their use.

The City also shares a similar problem with Uptown Charlotte. In the entertainment district, the City has an issue with “cruising” vehicles who circle the area as a form of entertainment. Austin’s approach to curbing this issue is to close some of the primary streets within the core entertainment district during the highest nightlife activity periods. The one caveat they provided is the need to have good side street access for taxis and valet operations to facilitate the efficient movement of people and their vehicles.



Richmond, Virginia



Richmond was selected because it has two similar aspects to the Uptown area's curb lane management system. First, both cities use an outsourced parking enforcement and management staff housed under the City. Second, the Richmond downtown area includes a handful of residential districts, educational institutions, and an abundance of office and mixed-use development.

Richmond, the capital of Virginia, is a historic community that attracts many visitors because it is within a day's drive for over half of the US population. It also is home to six Fortune 500 companies. Like Charlotte, Richmond is rich in history, arts, culture, employment, and entertainment.

On-Street Parking Regulations

The City's on-street parking network includes approximately 1,100 metered parking spaces, most with two hour time limits. There are a variety of time-limit restrictions throughout town, including two hour, one hour, 30 minute, and 15 minute time allowances. The time-of-day restrictions vary throughout the City as well, including:

- 8 am to 6 pm – normal peaking conditions
- 9 am to 6 pm – to account for morning peak hour capacity
- 8 am to 4 pm – to account for evening peak hour capacity
- 9 am to 4 pm – to account for both peak hours
- 10 am to 4 pm – secondary road adjacent to apartment buildings
- 7 am to 9 pm – Fan District residential parking
- 7 am to 10 pm – Carver District residential parking

Parking is not permitted during peak-hour restrictions, even though a parking meter may be present at that location. The City tickets drivers in the curb lane during peak hour restrictions \$60.00 for parking in a tow zone. The drivers are subject to towing for the violation. The map on the following page provides a breakdown of Richmond's on-street parking classifications.





Richmond outsources the enforcement of their on-street parking to a private contractor. Under this arrangement, City officials feel that only twenty percent of the actual streets are enforced. The private contractor focuses their enforcement efforts in the downtown Richmond core and the adjacent college campus areas. Violators who exceed the one hour time limit in residential areas without a residential permit are fined \$50.00 and can be ticketed up to three times in one day. Vehicles parked in peak restricted or bus stop areas are fined \$60.00, but typically aren't towed even though they are in a tow zone. Towing exceptions occasionally are made for areas with excessive violations.

Richmond's approach to addressing issues related to competing curb lane uses is to study each issue over a period of time and attempt to create a compromise for the competing uses. Transportation and parking officials consider traffic flow and vehicle parking as the highest and best uses of the curb lane, and tend to restrict other uses. There is only one known location in the downtown where the curb use changes by time of day (other than peak time restrictions) – in this location two hour parking is allowed between 8 am and 6 pm, but from 6 pm until midnight the location is reserved for a valet operation.

The City allows handicap parking at any metered location, free of charge, for up to four hours. There are no dedicated handicap accessible spaces along the curb. The City recently has ramped up enforcement efforts related to improper handicap parking to \$200 per violation, which doubles the previous fine.

Residential Permit Parking

The City has two distinct residential permit parking areas in the Fan District and the Carver District. The process for requesting and creating a residential permit district requires that either a) at least 75 percent of the curb parking spaces in the area of the proposed residential parking district are utilized during peak conditions, or b) at least 35 percent of the curb parking spaces in the defined area of the proposed residential parking district are utilized by persons who do not reside within the district and who are parked for two or more hours.

Homeowners are allowed to purchase permits for each of the vehicles they own and two annual visitor passes. Renters, with consent of the landlord, can purchase permits for only the vehicles they own. The resident decal costs \$25, while the visitors pass costs \$35. Violators of the residential restrictions receive a \$50 fine and can be fined up to three times in one day.



The Fan District has two restricted zones within its boundaries, and parking is restricted to residents and guests on designated residential streets. Without a permit, motorists are allowed to park for one hour between 7 am and 9 pm Monday through Thursday and 7am to 6 pm on Friday. The Carver District has one restricted parking zone, and parking is restricted to residents and guests on designated residential streets. Without a permit, motorists are allowed to park for one hour between 7 am and 10 pm Monday through Saturday.

Loading Zones

Loading zones in the City are restricted to 30 minutes, and are governed by the following ordinance language:

No person shall stop, stand, or park a vehicle for any purpose or length of time longer than 30 minutes, other than for the expeditious unloading and delivery or pickup and loading of materials, in any place properly marked as a curb loading zone during hours when the provisions applicable to such zones are in effect.

Passenger loading in the City is less restrictive and allows for the temporary stopping and loading/unloading of passengers in any marked curb loading space as long as it does not interfere with any vehicle used for commercial loading.

Taxi Stands

City code restricts the use of taxi stands to either taxis or vehicles stopping to expeditiously load or unload passengers, as long as that movement does not interfere with the operation of taxi services.

Signage

Parking signage in the Richmond area is printed and installed per the prescribed MUTCD parking signage guidelines. City staff attempt to implement signage in the most efficient manner possible, but there are no formal policies to consolidate signage.

Special Events

Temporary signage and meter bags are implemented for special events by the Richmond Police Department and the Richmond Department of Public Works.

Charleston, South Carolina



Charleston was selected because it faces unique challenges due to the historical nature of the City's infrastructure and because it is a premier tourist attraction with over 4 million visitors per year. Charleston also has several residential districts, a state college, is host to many large scale special events, and has a strong retail center in the downtown core.

Charleston, South Carolina is a city rich with history and tradition. The City attracts nearly 4 million visitors every year. Much of the infrastructure and architecture is still in place from the colonial era when horse and buggy was the most common form of transportation, aside from walking. The narrow cobblestone streets and granite curbs lead to modern day challenges for visitors and residents, particularly when it comes to on-street parking.

On-Street Parking Regulations

Within downtown Charleston, there are approximately 1,800 paid parking spaces. The City provides short term 15-minute, 30-minute, 1-hour, and 2-hour on-street parking near core businesses to provide accessibility and promote turnover. The City also offers 10-hour on-street parking on the outskirts of the City. All on-street parking, no matter the time limit, is set at \$0.75 per hour.

The primary complaint from businesses in the central business district is the general availability of on-street parking for their customers. In order to ensure vehicle turnover, the City's parking enforcement strictly enforces overtime parking (i.e. plugging the meter). A meter feeding violator is typically fined \$14.

Parking is generally enforced between 9 am and 6 pm, Monday through Friday. Similar to Charlotte, the City of Charleston implements peak hour drive time restrictions. Vehicular use of the curb lane for parking or standing is prohibited on streets that are heaviest with commuter traffic. Peak hour times are generally 7 am – 9 am and 4 pm – 6 pm.



The only automatic pay stations in Charleston are located in an off-street parking garage. The City explored changing individual meters to centralized pay stations, but found that they were happier with individual meters because the meters act as bollards protecting their historic granite curb.

The City has established fifteen handicap accessible parking spaces in strategic locations throughout the central business district. The City also allows handicap parking within all of its parking areas at no cost to the motorist. Handicap parking is not allowed in loading zones, restricted parking areas, and peak hour restricted areas.

A new street sweeping program was recently implemented and signage was posted to communicate the date and time where parking is restricted. Sweeping now occurs on either the second Tuesday or Wednesday of each month. On that day, parking is restricted between 9 am and 11 pm.

Residential Permit Parking

In addition to the paid on-street spaces in the central business district, Charleston has nine residential parking districts. The boundaries for the residential parking districts are defined by City ordinance. Each residence within the district is allowed up to two on-street parking permit decals for their specific district.

Residential parking enforcement varies by district. Typically the enforcement ranges from either 8 am – 8 pm, 9 am – 6 pm, or, in some cases, all day. During these times guest parking is generally allowed for either two or four hours, depending on the specific district.

Homeowners in the residential districts also have several options for guest parking passes. The City offers homeowners the option to purchase the following guest passes for long term visitors:

- One day pass,
- Two week pass, or
- A booklet of 30 single day passes at a discounted rate

These guest passes must be filled out and initialed by the homeowner and placed on the vehicles dashboard.

Loading Zones

Commercial loading zones in Charleston are available only to vehicles with a commercial tag or some other commercial designation (such as a logo) on the vehicle. All commercial loading zones are limited to 30 minutes. Commercial loading zones are available free of charge between 5 am and 7 pm, Monday through Friday.

May 9th, 2011 will kick off Charleston's first valet service operation. The valet service is being implemented to encourage people to visit Charleston without having to worry about finding parking. Currently there are no valet stands anywhere in the curb lane of Charleston's central business district. Some hotels and businesses have valet service, but generally these valet operations are located in a driveway, not specifically in the curb lane.

In the first phase of implementation, the City will locate four valet stands strategically throughout the central business district. The stands will operate between 6:30 pm and 12:30 am daily. Local companies initially bid on the valet service operation, with one company selected and hired by the City to operate the service. The valet service will require patrons to pick-up their vehicle in the same location where it was dropped-off.

Special Events

The City of Charleston uses a meter bagging policy during special events. The bags used for special events are yellow and have a window that shows the meter display. The meters are programmed to communicate to the customer the specific times when parking is prohibited.

During special events, street barricades are used if street closure is required. To avoid communication overload, temporary signage is typically not posted. The City relies solely on meter bags and street barricades.

The City offers meter bags to contractors who hold a current building permit. The contractor must put down a \$20 deposit and pay \$10 per bag per day.





CHAPTER 3—STREET TYPE PRIORITIES

The purpose of this chapter is to provide blanket recommendations for curb lane policies and standards. These recommendations will provide the City with the framework for implementing curb lane management decisions throughout Uptown.

Curb lane management is currently defined by the Uptown Streetscape Standards with the following statement:

Vehicular Activities at Curb:

Wherever permitted by pavement width and traffic operations, the “curb lane” shall be used for vehicular activities which support adjacent land uses and transit operations. Automobile parking and transit operations shall be the primary uses of the curb lane. Uses may vary throughout the day consistent with permitted uses and operational plans.

This statement provides direct and simple management rules for Uptown curb lanes. Vehicular activities should support adjacent land uses, transit and vehicular parking receive the highest priority, and operations plans and time of day will dictate the actual uses, which may vary throughout the day.

All of these statements will continue to drive the priorities and recommendations that follow. However, this document intends to build upon this guiding principle by defining strategies and recommendations for each of the specific curb users, including:

- On-Street Parking
- Transit
- Commercial Loading Zones
- Passenger Loading (Taxi, Valet, Executive, and Commuter)
- Residential Parking
- Vehicular Capacity

The following sections in this chapter outline the proposed recommendations at the planning level. These recommendations are intended to be the starting point for implementation of curb lane management practices. The sections include:

- Street Definitions
- Curb Lane Street Type Priorities
- Curb Lane Recommendations



- Standard Block Faces

Center City Transportation Plan

The Center City Transportation Plan is the “Blue Print” for setting strategy, policy, and implementation goals that will allow the Center City to grow dynamically and support a variety of transportation modes. One of the fundamental concepts of the Plan is that everyone becomes a pedestrian once they are uptown. The following are the guiding principles for vehicular circulation, stated in the Transportation Plan:

- Center City is a destination and I-77/I-277 loop is a primary thoroughfare and distributor.
- The street network is not intended to carry traffic rapidly through Center City, but to enable motorists to reach their destinations within Center City as efficiently as possible on a circulation system shared with pedestrians, transit users and bicyclists.

Finally, in [Chapter 4](#), signage standards that will help to communicate these recommendations are presented. The last chapter of the report, [Chapter 5](#), will provide an example of how these recommendations are implemented along the core streets.

Street Definitions

[Chapter 1](#) defined the street network in terms of this study, including Core Streets, Residential Streets, and All Other Streets. These definitions apply to the recommendations development process for this study, which includes specific curb lane recommendations for the Core Streets, and recommended policies and block face templates for the other street networks.

Another set of definitions exist for the Uptown street network, as defined by the *Center City Transportation Plan*. The Transportation Plan identified street classes and defined standards for each to meet the needs of pedestrian and vehicular traffic. The following categories define the Uptown street network:

- Signature Streets – the focus for Signature streets is creating a pedestrian-friendly environment with access to the many businesses and destinations in Uptown. Tryon Street is an example of a signature street. Priority is given to pedestrians and transit users over the use of vehicles.
- Primary Streets – these streets provide a balance between pedestrian and vehicular movement, where slightly more priority is given to the efficient flow of vehicular movement over the pedestrian environment. College Street is an example of a primary street.
- Secondary Streets – these streets are identified to move vehicular traffic from Center City to I-77/I-277 or to specific destinations in Uptown. 3rd and 4th Streets are an example of a secondary street.

These street definitions are used in this study to identify categories of streets to define

priorities and standard curb face implementations. In addition to these three, the following definition is included for this study's purpose:

- Residential Streets – these streets are defined as the residential permit program streets and their function is to provide support to adjacent residences, primarily through parking capacity.

The following section defines curb lane priorities for each street type defined above.

Proposed Street Type Priorities

The first step in defining curb lane recommendations and policy strategies is to define how curb lanes should operate in each street type. The following priority listings were developed by the City to ensure that uses are applied appropriately and that the intent of the street network is properly administered. These priorities were developed with current conditions in mind; however, as the City evolves, these priorities should also evolve to reflect their changing importance in Uptown.

Consistent with the *Center City Transportation Plan*, the primary priority on all streets should be the pedestrian experience. The goal of that study is to promote a park once mentality that transformed all drivers entering Uptown into pedestrians once they reach their first destination. While the pedestrian experience does not necessarily occur in the curb lane, management and design decisions should support the fact that all streets are primarily for pedestrian use.

Signature Street

1. Transit Operations
 2. On-Street Parking
 3. Loading (passenger, commercial, taxi, valet, etc.)
 4. Traffic Capacity
- Other** – car sharing, electric vehicle charging and bicycle facilities*

*** Other types (car sharing or electric vehicle charging stations in this example) are an unknown commodity in Uptown at this time, but the City recognizes that these uses will play an important role in Charlotte's future. Their inclusion signifies that they will have a place in the Uptown curb lane. In addition, bicycle facilities are being studied along some Center City streets and may use a portion of the curb lane.*



Primary/Secondary Street

1. Transit Operations
2. Traffic Capacity
3. On-Street Parking ^A
4. Commercial Loading
5. Passenger Loading (including taxi, valet, etc.)
*Other** – car sharing, electric vehicle charging stations and bicycle facilities*

^A Outside of peak roadway usage, the curb lane priority may be switched with parking higher on the list than traffic capacity (depending on the road type). However, during peak travel times, traffic capacity should carry highest significance.

Residential Street

1. Parking (residents) ^A
2. Transit Operations (on the periphery)
3. Residential Loading ^B
*Other** – car sharing and electric vehicle*

^A Parking is reserved for residents in this priority, but could very well include some time limited short-term parking for non-residents if the residential permit parking program stipulates that type of usage.

^B Residential loading is defined as quick and efficient loading or unloading of household goods, mail or parcel delivery, or passenger loading. In some instances, move-in and move-out activities may occupy these spaces.

Curb Lane Recommendations

The following sections provide the core recommendations for the various curb lane uses throughout Uptown. These recommendations are intended to drive implementation and management decisions. These strategies are built from existing policies, best management practices from peer cities, and creative strategies that intend to further define the curb uses and provide a more consistent and comprehensible curb lane experience.

On-Street Parking

Throughout Uptown, the most predominant curb use and type is on-street parking. This use makes up the majority of the available curb space, which is appropriate because it is the most sought after and utilized curb use throughout Uptown. In the previously defined curb space priorities, on-street parking is considered to be one of the primary priorities, only behind transit operations and pedestrian/vehicular experience (depending upon street type). One of the primary goals of the *Center City Transportation Plan* is to provide additional on-street parking capacity. Many of the recommendations in this section are focused on that desire. As one of the first implementation steps of this study, the City should initiate an inventory of all curb space uses, which help to identify locations of existing parking and potential areas for new on-street parking supply.

On-street parking should be regulated in a manner that provides accessible and convenient spaces, with logical structure, signage, regulation, and payment options. As an example, it is not feasible to have short duration parking in the same area as longer duration parking, because motorists could confuse the two, leading to unwanted enforcement issues or an unsatisfying Uptown experience.

The following sections provide recommendations related to the location, orientation, regulation, and application of on-street parking throughout Uptown.

Block Face Location

Because of the abundance of on-street parking throughout Uptown, it is difficult to define a specific location for on-street parking along the curb face. In an ideal setting, on-street parking would be the central use along a block, buffered by loading zones or taxi stands. However, in some locations it may be necessary to locate on-street spaces at the end of a block to account for transit loading or commercial vehicle loading. In other locations, especially in evening operations, it may be necessary to locate on-street parking on the end of blocks, buffering valet parking operations.

Of all the curb uses identified in this document, on-street parking needs to remain the most flexible in its location and placement. However, one constant that should be applied throughout Uptown is to provide similar groupings of on-street spaces. Short duration parking (e.g. 30 minute limits) should not be included within the same block that has mostly two-hour parking. Similarly, passenger loading, commercial vehicle loading, and taxi stands should not be placed in the center of on-street parking sections. Rather, these uses should be located to buffer on-street uses from the intersection. The

application and location of on-street parking should be decided based on adjacent land uses and competing curb lane needs.

Orientation

Throughout Uptown, parking is primarily oriented parallel to the curb face. This is a factor of available right-of-way and road space, which is not likely to change dramatically as Uptown continues to evolve. As development and redevelopment continues to occur, parallel parking should remain the orientation of choice. This provides for varying uses throughout the day (e.g. on-street parking to vehicular capacity during peak hours), and allows for the most efficient movement of transit throughout the area. The City should be aware of alternative parking orientations which could be considered in new or redeveloped locations, either as a means to provide additional parking capacity or street traffic calming. For those areas of Uptown considering traffic calming or road conversions, other methods may be appropriate based upon the available street right-of-way.

Time Limits and Restrictions

The use of time limits and restrictions is a tool used to enact turnover and circulation within parking spaces, providing greater exposure for adjacent retail throughout the day. Within Uptown, the time limits are generally two hours or less. There are a very limited number of metered locations with 30 minute time limits. Generally, this policy is appropriate and should be maintained throughout the community. However, in certain locations, especially with a higher influence of “short-term” retail stores (e.g. coffee shops, dry cleaners, take-out food), the City could consider using short term Customer Convenience Zones to provide a larger capacity of parking that turns over quickly.

By implementing a shorter duration time limit, such as 30 minutes rather than two hours, a parking space could turnover sixteen times in an eight hour period, rather than four times. If an average shopping trip takes 30 minutes and an average purchase level is \$5, a retailer could make an additional \$60 per day, or a little more than \$15,000 per year. Conversely, on the fringe areas of Uptown, where parking utilizations are lower, the City could consider providing longer term parking based on demand.

Parking Rates

In an ideal parking system, on-street parking rates are set higher than the off-street rates to entice motorists to direct long-term parking trips into off-street parking facilities. However, with the current structure of parking management in Uptown, the City is not in a position to influence off-street parking rates to a level that would balance with the on-street system. As it is, the current on-street rate of \$1 per hour is slightly below average parking rates, especially when compared to peer cities throughout the United States. The City should explore raising on-street parking rates to better manage parking demand, prioritize short-term parking use, and influence parking turnover. Additionally, the City should consider extending hours of paid parking to better manage evening parking and promote turnover near retail and restaurant business.

Technology

The City began implementing pay-by-space meter technology several years ago, in an effort to make the on-street parking experience more consumer friendly, as well as enhance revenue collection, operations, enforcement, and administration. The City should continue to implement the new meter technology and real time space availability, in phases, throughout the Uptown area. Based on occupancy and revenue data collected throughout the year, the City should identify areas of higher occupancy and continue to expand its pay station coverage area.

In an effort to justify the implementation of the machines, the City should review historic revenue data to understand how pay stations have affected revenue stream. This review should also include a quantification of the reduction in collection, operations, and administration cost related to the implementation of the new meters. Using this data, the justification for increased pay station coverage should be more apparent.

In addition to increased coverage area for the pay station technology, the City should consider some additional add-on features for its on-street system, both to enhance customer service and operations. The first is the addition of a pay-by-cell phone feature, connected to the current meters and pay stations. This feature provides an additional payment option for consumers, and can serve to lower transaction fees for credit card transactions, as those fees are generally passed on to the consumer in a

Location	Hourly Rate
Charlotte, NC	\$1.00
Raleigh, NC	\$1.00
Atlanta, GA	\$2.00
Seattle, WA	\$1.00 - \$4.00
Austin, TX	\$1.00
San Antonio, TX	\$1.50
Houston, TX	\$0.10 - \$5.00
Phoenix, AZ	\$1.50
Salt Lake City, UT	\$1.00
Denver, CO	\$1.00
Riverside, CA	\$1.00
Portland, OR	\$1.60



pay-by-cell phone system. Many current pay-by-cell systems require little to no infrastructure or capital cost for the City.

Additional technology options could include the use of smart phone applications or in-car navigation systems to direct motorists to available parking, and to communicate changes to curb lane restrictions.

The data used to drive this type of application could be collected at a basic level through simple revenue collection data from the pay stations or at a more advanced and accurate level through wireless vehicle detection sensors. With either approach, the City can begin to provide real-time information for Uptown motorists, helping to guide them to specific parking spaces or areas, ultimately reducing congestion and cruising for parking.

Enforcement

From an enforcement standpoint, Park It! and its contracted agency provided several good recommendations and strategies for improving and enhancing parking and curb lane enforcement in the 2010 On-Street Parking Assessment. Many recommendations from that report have already been implemented. The following remaining recommendations from that report should be implemented in an effort to enhance enforcement operations.

- Apply additional training to Park It! enforcement officers regarding city-specific information related to events, attractions, and general Uptown knowledge and orientation. This recommendation is intended to have enforcement officers serve as ambassadors to promote the Center City and provide assistance for Uptown visitors.
- Adding Saturday as an additional enforcement day
- Extending current enforcement times from 6pm to 10pm
- Renewing focus on expired meter violations in 2011
- Rotating enforcement officers to different beats on regular intervals
- Utilizing automated boot removal service to provide a more customer-friendly immobilization program – this technology allows motorists to remove the boot after payment is received
- Adding a \$50 charge to each immobilized vehicle to account for standard processing fees
- Changing City Code to allow for booting of scofflaw vehicles, even without an ongoing violation
- Utilizing License Plate Recognition software to actively seek out scofflaws

The City should also consider redefining its parking violation fine structure, to provide more leniency to first-time or occasional offenders. By providing a tiered parking violation structure, first-time offenders are warned of potential violations and the citation is used more for education than enforcement. Higher tiered violations would be more substantial, and would be aimed at curbing habitual violators and scofflaws. An example fine structure is shown in the table to the right.

Fine Number	Violation Rate
1 st Violation	\$25.00 or warning
2 nd Violation	\$30.00
3 rd Violation	\$35.00
4 th Violation	\$40.00
5 th Violation or higher	\$50.00 + booting (motorists must pay all outstanding tickets to get boot removed)

Electric Vehicle Charging Stations

A new application in on-street parking is the provision of electric vehicle charging stations. The City of Charlotte is currently working to implement two pilot on-street locations on Tryon Street. The use of on-street parking for electric vehicle charging stations is a relatively new concept in the United States, with San Francisco, CA being one of the first implementers. In the picture to the right, vehicle charging stations require a specific permit for parking privileges.

As the City begins to implement these charging stations, special thought needs to be given to time limits, parking charges, and vehicles restrictions. Initially, the use of this technology may be low and the City can operate the spaces like any others in Uptown. However, as demand for these spaces increases, the City will need to restrict usage to electric vehicles that are charging only. Enforcement of these spaces should include a fine high enough to deter regular vehicles from parking in the space (~\$50).

As the City reviews time limits for these spaces, it may need to expand beyond the traditional two hour limit to allow for sustained charging operations. However, the City should not allow unregulated parking by charging vehicles, as some parkers will take advantage of the free service for numerous hours. The City should work with the charging system vendor to identify appropriate time limits that allow for suitable charging without losing the space to a lone charger for an extended period. As with all other spaces, electric vehicle charging spaces should be subject to peak hour restrictions and associated fines and towing.



Transit

General recommendations and standards for locating transit stops along the curb lane in Uptown were developed in response to the review of existing conditions and discussions with CATS planning staff about passenger loading/unloading priorities. Transit operations in Uptown Charlotte include several bus lines, the free Gold Rush trolley service, and the LYNX light rail. Design for a proposed streetcar line along Trade Street is currently underway. Clearly, transit use is growing in presence and priority in Uptown, and curb lane regulations need to be responsive to that growth such as the Charlotte Gateway Station.

Bus and Trolley

The bus and trolley services in Uptown currently require dedicated space along the curb lane to load and unload passengers. For the day-to-day operations to run smoothly and to provide reliable service to passengers, CATS relies upon their stop locations to be clear and unobstructed at all times. The provision of efficient transit operations and reliable service to passengers promotes multimodal operations, sustaining Charlotte's growth as a dynamic "park once" City. Because vehicles illegally parked or encroaching onto stop locations are detrimental to transit operations, these vehicles should receive heavy fines. Currently a vehicle parked at a bus or trolley stop receives the same fine as a vehicle parked at an expired meter (\$25). A vehicle parked at a bus stop should receive a fine similar to a traffic obstruction fine during peak hour (\$50 + tow). The space markings and signage should clearly communicate this message to motorists.

The locations of bus and trolley stops are important to system operations. Locating stops close to intersections is recommended for CATS operations. Existing bus and trolley stop locations in Uptown are currently at arbitrary locations on each block face. To minimize potential conflicts bus and trolley stops should be located at the ends of the block to the extent practicable.

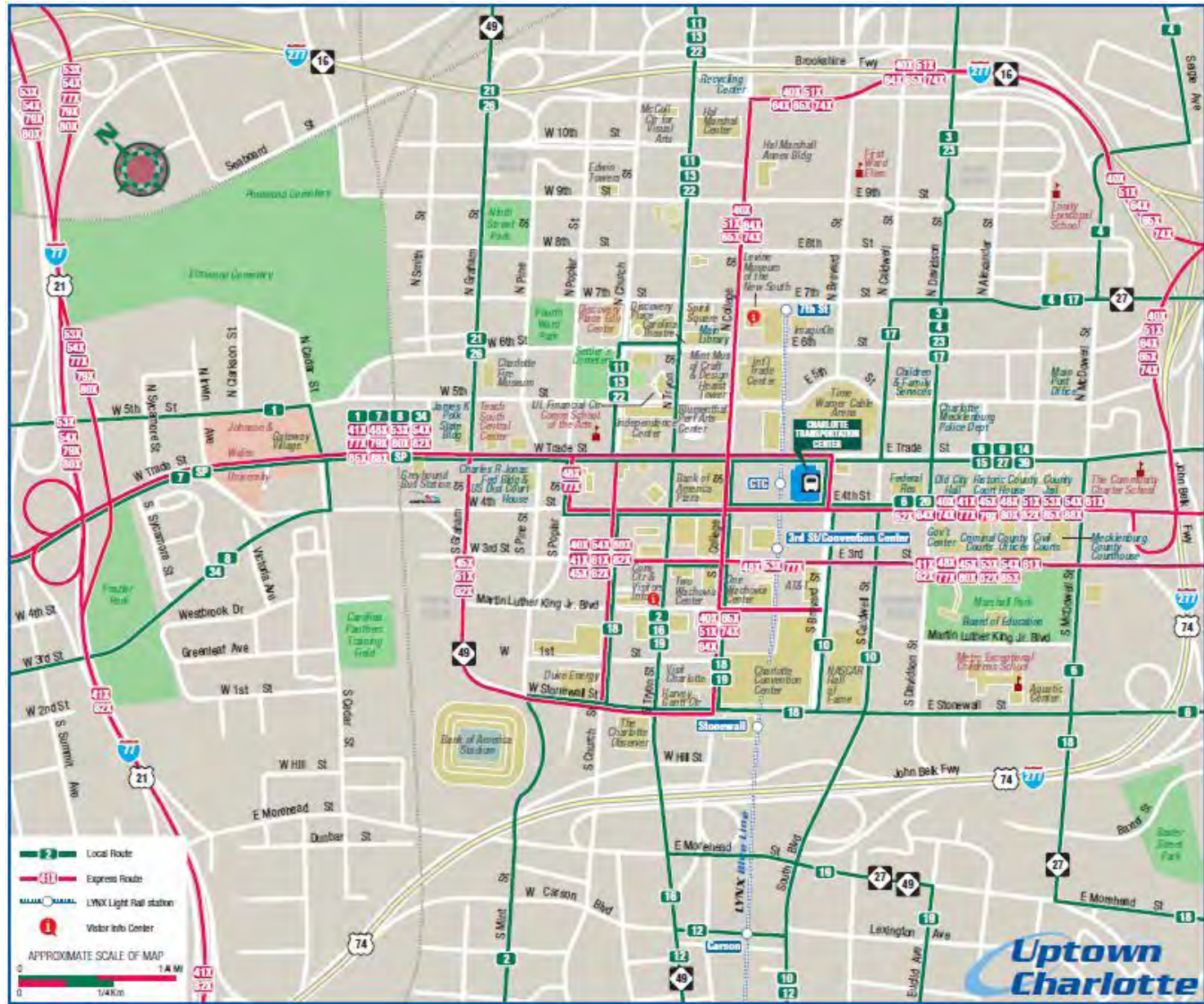
It is recommended that CATS evaluate ridership data and look to potentially combine bus stops where fewest boardings are currently occurring. By minimizing the number of bus stops, the operation of the bus route becomes more efficient and the disruptions to vehicular traffic could be minimized. This not a unique and new recommendation for CATS – CATS routinely evaluates bus stop locations and uptown bus routing, typically combining bus stops with the least number of boardings and making changes as needed. CATS works closely with Center City businesses and organizations to locate bus stops to meet the needs of passengers, business patrons, and the public.

Going forward, CDOT should work with CATS to determine locations where feasible as the study is implemented, without disrupting operations and rider expectations.

Proposed Streetcar

There are also plans for a Streetcar service along Trade Street, which will load and unload a majority of passengers along the curb. However, median stops will also be used in certain locations. Streetcar engineering and design for the Uptown segment is currently 30% complete. Most curb stops have been proposed for center block locations, to minimize potential conflicts at nearby intersections. Illegally parked vehicles at a streetcar stop should receive the same fine recommended above for bus and trolley stops (\$50 + tow).





Uptown Charlotte CATS Route Map

Commercial Loading Zones

To increase the usage of curb space in Uptown, the placement of commercial loading zones needs to be managed to support the pedestrian environment and vehicular flow. For Signature, Primary, and Secondary streets it is recommended that commercial loading zones be placed at the end of the block face, closest to the intersection to provide a buffer for pedestrians using on-street parking or transit stops.

As part of the peer city review for this study, the City of Houston's commercial loading zone policy was reviewed and found to provide a balance that allowed delivery-based business to choose how they operate. Based on the City of Houston's policy, the following changes to Uptown's existing commercial loading zone policy are recommended.

It is recommended that businesses buy an annual or temporary loading zone permit in various classes to provide several choices to suit their operational needs. The following Commercial Loading Zone (CLZ) permits are recommended for the Uptown area to meet the shipping needs of businesses.

- Tier 1 - \$1,200 annual fee – this annual permit allows the operator to park in any commercial vehicle loading zone or two metered parking spaces for up to two hours at a time
- Tier 2 - \$300 annual fee – this annual permit allows the operator to park in any commercial vehicle loading zone for up to one hour
- Tier 3 - \$150 annual fee – this annual permit allows the operator to park in any commercial vehicle loading zone for up to 30 minutes
- Tier 4 - \$25 for 21 days – this temporary permit allows the operator to park in any commercial vehicle loading zone for up to one hour

***These fees are examples only and are primarily based upon fees used in Houston, Texas. If adopted, these fees should be studied and potentially adjusted to be based on the Charlotte market.*

By providing four different permit tiers, businesses will be allowed to park for longer periods of time and will have more flexibility on where they are allowed to park. The fees for the permit also provide additional revenue for the City. For additional flexibility, the fourth tier is provided for those businesses that have occasional deliveries and would not benefit from purchasing a commercial zone

permit. Delivery vehicles would be allowed to park at “Commercial Meters” placed in commercial loading zones that have a much higher rate than other on-street parking meters (Houston’s is set at \$5 per hour). The purpose for this is to discourage non-delivery vehicle parking and long-term use of the spaces. For the same purpose, the violation fines are also set higher. The recommended violation rates for the City of Charlotte are provided below. The first violation applies to private vehicles, while the second two apply to commercial vehicles.

<u>Violation</u>	<u>Fine</u>	<u>After 45 Days</u>
Parked non-commercial vehicle in CLZ	\$250	\$350
Parked using CLZ without loading/unloading	\$250	\$350
Parked in a CLZ without permit or paying	\$300	\$400

***These fees are examples only and are primarily based upon fees used in Houston, Texas. If adopted, these fees should be studied and potentially adjusted to be based on the Charlotte market.*

In addition to the above changes, it is also recommended that loading zones remain restricted to commercial loading vehicles, with the exception of taxis, which can be allowed to operate within a loading zone after 6pm when loading restrictions are no longer effective. Combining commercial loading space and taxicab space allows more curb space to be allocated for on-street parking, and provides a distinct separation between on-street parking and loading (whether passenger or commercial).

Passenger Loading – Taxis

One of the primary conflicts in Uptown streets is the operation of taxis in the curb lane. Existing policies do not prohibit taxis from stopping or standing in on-street parking spaces, which is an issue when a private vehicle cannot park on the street because a taxi is using the space. The following are recommended additions to the existing taxicab policy, which are based on the parking needs in Uptown.

- No vehicle shall stop, stand or park a vehicle other than a taxi in a taxicab stand.
- Taxis shall not stand or park on any street at any place or parking space other than in designated taxicab stands except while actually engaging in the expeditious loading and unloading of passengers.
- Taxis will be allowed to utilize curb space in commercial loading zones after 6pm, when commercial loading restrictions are no longer effective.

Separating taxi operations from other users along the curb allows for better curb management practices while still providing space for passenger loading. In addition, it is not always necessary to provide taxicab parking along every block since not every land use requires the need for taxicab services. Future efforts to locate taxicab stands should assume that people will be willing to walk a few blocks to a dedicated taxicab stand.

When taxicab stands are required on a block, it is recommended that they be located at the end of blocks, near intersections, to provide a buffer for pedestrians utilizing on-street parking spaces or transit passengers loading and unloading. This is consistent with the recommended placement of commercial loading zones, which taxis can utilize after 6pm, and will reduce confusion about where taxis are allowed to stop or stand on the street. Creating dedicated taxicab stands and locating the stands near intersections will clean up the curbside use and provide adequate service to downtown patrons. Furthermore, these recommendations will reduce conflicts with competing uses and illegal queuing by taxis.



Passenger Loading – Valet

There are numerous valet passenger operations located throughout Uptown. Existing policies related to valet operations define basic operations, but don't provide much detail for the use and management of curb lane areas. As part of the peer city review for this study, the City of Austin's valet operations policy was reviewed and found to provide regulations that create a more consistent and manageable approach to valet operations.

The recommendations developed most closely resemble the valet permit and operation model that is currently used in Austin, Texas, but have been modified to better meet the need of Charlotte users. Adopting recommendations will require updates to the current valet ordinance in place.

Location and Limitations

Valet stands should be located at or near the center of a block face, where vehicular queuing is less likely to impact traffic operations at nearby intersections. Centralized placement of valet stands will minimize conflicts and create uniformity in Uptown. Using a centralized location also allows multiple valet stands to be combined, serving several businesses on one block face.

Building upon this centralized approach, valet stands should be restricted to one operation per block face, which should limit the pedestrian and traffic flow disruption. More importantly, limiting to one valet stand per block will minimize the number of on-street parking spaces removed for valet transfer.

Valet Fee Structure

While the City currently collects an annual application fee of \$200 per valet operation, additional fees should be collected to monetize the valuable curb space that is being utilized by valet services, especially if the City extends the hours of paid parking operations. Suggested fees include both Operations and Parking Obstructions:

Centralized Valet Operation

An alternative recommendation would be to create a centralized valet service throughout Uptown with either a sole valet vendor or combination of a few vendors. A centralized valet service would offer customers multiple drop-off and pick-up locations across Uptown for one flat rate. Customers could drop their car off in one location and then pick up their car at the valet stand closest and most convenient to their final destination. Cities like Coral Gables, FL; Beverly Hills, CA;

Culver City, CA; New Haven, CT; Chapel Hill, NC and others offer a centralized valet service in an attempt to improve the visitor parking experience. Coral Gables also offers free valet for disabled permit patrons.

Using a centralized valet service under a single operation would allow multiple businesses on a block face to utilize valet parking without removing more on-street spaces for valet transfer locations.

The single operation would also allow the City to market valet services more effectively. There would be one uniform valet charge, one operator and one system. Under this scenario, the City would grant the valet operator exclusive rights to operate valet parking and they would be free to decide (with the approval of the City) where to locate transfer locations. The City would not be responsible for the cost of the valet services and the sole revenue would come from user fees. The City would oversee the valet services and issue the request for proposals.



Operations Fee

The Operations Fee would require the valet companies to pay a basic fee to operate a valet stand in Uptown. This fee would be collected annually and would be paid for per valet stand. If a valet company operates multiple stands in Uptown, a premium price would be paid for the first stand and reduced fee would be assessed for additional stands.

Parking Obstruction Fee

The Parking Obstruction Fee would require the valet parking operator to pay for the valuable on-street parking spaces that would be removed for valet services. This fee is intended to encourage the valet operators to efficiently utilize the curb space and minimize impacts to on-street parking. The parking obstruction fee would be assessed annually and be paid for per removed space.

An example of the fee schedule can be found below:

FEE TYPE	ANNUAL COST*
Application Fee	\$200
Parking Obstruction	\$250 per space
Operational Fee	\$50
Each additional location	\$10 per additional stand

These fees are examples only and are primarily based upon fees used in Austin, Texas. If adopted, these fees should be studied and potentially adjusted to be based on the Charlotte market.

Passenger Loading - Executive

Beyond typical taxicab and valet operations, an additional passenger loading issue exists in Uptown. Executive loading service, whether limousine or sedan services, is very active in Uptown's financial and office community. The primary problem with these services is the need to be proximal and flexible. The drivers need to be proximal, locating themselves as close as possible to office tower entry and exit points, as their customer base requires easy access and service. The drivers also need to be flexible in time, waiting on their customer base to exit.

The recommendation for this street type priority includes a permitting structure similar to the commercial loading zone policies. The main distinction is that there are no dedicated executive passenger loading spaces recommended in this plan. A sample of the annual permit tier would include:

- Tier 1 - \$300 annual fee – this annual permit allows the operator to park in any metered parking spaces for up to one hour at a time
- Tier 2 - \$200 annual fee – this annual permit allows the operator to park in any metered space for up to 30 minutes
- Tier 3 - \$20 for 21 days – this temporary permit allows the operator to park in any commercial vehicle loading zone for up to one hour

These permits would allow both proximity and flexibility for drivers and would still allow for efficient use of on-street parking spaces. Peak hour restrictions would still limit usage during peak drive times. Fines would need to be set high enough to entice drivers and sedan operation companies to opt into the system.



Residential Permit Parking

The residential parking permit program in Uptown neighborhoods is critical to the ability of Center City residents to park near or adjacent to their homes. General recommendations for these programs were developed based on the review of existing conditions and feedback (phone interviews, surveys, and public outreach) from residents. The residential wards considered in this study include First, Third, and Fourth. Second Ward currently has little to no residential development and was not considered in the residential portion of the study

Block Face

When determining how a block face should look on residential designated streets within the wards, on-street parking should be the first priority to serve residents. Taxi and valet stands should be prohibited on residential streets, because their use and operation is detrimental to the residential nature of the areas. Loading zones should be allowed and interspersed throughout the residential neighborhoods to assist delivery vehicles and moving trucks, with the caveat that commercial loading is prohibited in these areas.

Residential Permit Policy

The residential parking permit policies vary per residential ward. This is due to the varying demands for parking and special event conditions within each location. Some wards have denser residential development. Other wards are impacted by special event conditions from the arena or stadium.

First Ward has the lowest residential density of the three residential wards and the current system serves the current residents. However, as First Ward grows the City should consider making the following changes:

- Charge an annual fee for residential permits
- Enforce and require parking permits and guest passes 8am – 6pm, Monday through Friday.

The Fourth Ward neighborhood has the highest residential density. It is a mix of historic Victorian homes, urban apartment complexes, and luxury condominium towers. The neighborhood is bordered by employment centers and entertainment districts. As Fourth Ward has developed, the number of on-street parking spaces has remained consistent, even with the greater demand for resident and guest parking created by the new residential towers. Currently, residents in several of the new high density residential towers are not eligible for parking permits or guest passes because the residences are not located on a residential designated street. The residential street boundaries that are in place help to serve many of the older homes and small apartment complexes who currently have limited parking and should not be adjusted at this time.

Because there are a limited number of on-street spaces throughout the entire City, it is recommended that the City adopt a policy where residents of new residential towers are not eligible for residential on-street parking in any Ward no matter the street designation. In previous development and construction processes for these residential towers, ample parking was planned and built based on City codes and assumed building occupancies. In situations where multiple roommates create excessive demand, transit encouragement policies should focus on these needs to reduce personal vehicle dependency. The City streets cannot provide parking for the growing number of residents living in high density condos. A condo/apartment tower ineligible for residential permits should be defined as any residential complex with specific density (as defined by City of Charlotte Planning staff) constructed any time after 2010.

Residential Benefit District

As an alternative approach to residential parking management, in an effort to monetize the curb space in the residential areas, the City should consider installing parking meters in each ward, especially in Fourth Ward where parking demand is highest. Parking meter fees would be waived for anyone with a visible parking permit (or guest parking pass). In order for this program to be successful, a portion of the revenue generated should be returned to the ward in which the parking meters are installed. The returned revenue can be utilized by the ward for roadway, streetscape, and aesthetic improvements. A few criteria that could be set:

- Parking meters are only operational between 8am and 5pm Monday through Friday. All other times are restricted to residents.
- Guest parking could be extended beyond the two hour limit (primarily in Fourth Ward) by charging for parking beyond the two hour limit of the guest pass.

Vehicular Capacity

Although a goal of the *Center City Transportation Plan* is to discourage traffic moving rapidly through Uptown, there are times of the day when traffic peaks and congestion on roads increases and it becomes critical to move vehicles in and out of the City. The following recommendations are intended to maintain efficient traffic flow during the peak hours, while also maintaining a pedestrian-friendly environment.

In relation to the curbside, there are two types of parking restrictions that enable increased vehicular flow in Uptown: peak hour restrictions and special event restrictions. These restrictions are placed so that vehicular capacity is not diminished by vehicles making parking maneuvers or by slower moving vehicles “cruising” for a parking space.

Typically, morning peak traffic hours occur between 7am and 9am and evening peak hours occur between 4pm and 6pm. It is recommended that peak hour parking restrictions be placed only on streets near the Uptown core and secondary streets where there is more vehicular congestion in addition to high parking demand. Prohibiting on-street parking in these areas during the peak hours eliminates parking maneuvers that inhibit the flow of traffic. Furthermore, prohibiting on-street parking will open up all lanes of traffic and will decrease congestion. However, the City’s overall goal should be to eliminate peak hour restrictions where possible.

Towards the outskirts of Uptown, peak hour parking restrictions are not necessary since parking demand and congestion are lower. As the fringe areas develop and parking demand in these areas increase, it is recommended that the placement of peak hour parking restrictions be revisited.

There are many special events in Uptown including NFL games, events at the Arena, Speed Street, New Year’s Eve, and 4th of July. During these events, on-street parking in certain areas is prohibited. It is the current policy of the City to bag or hood every meter and pay station in the restricted area. Some parking signs also designate that parking is not allowed during special events. Since many of the restrictions occur on weekends or holiday, it is recommended to maintain these parking restrictions.

Bagging policies should be reviewed to limit bagging occurrences and evaluate losses due to bagging for excessive periods of time. The current weekend bagging period is typically 72 hours (verify) for special events that seldom exceed three hours during the 72-hour period.



Standard Block Faces

Based on the previous discussion of curb lane uses and structure, several key criteria for curb lane uses and block structure have been identified, including transit stop locations, on-street parking orientation and grouping, taxi operations, and commercial loading zones. In an effort to standardize the approach and structure to locating these uses, the following block faces have been identified.

- Standard Block Face – includes on-street parking, commercial, and passenger loading zones.
- Residential Parking – includes on-street parking and residential loading zones

These block faces apply to all three street priority types (Signature, Primary/Secondary, and Residential). Obviously some street types will not require all of these uses, but the structure and approach is consistent for all street types.

It should be noted that these are “ideal” block faces. Under these concepts, various uses are grouped to maximize consistency and curb lane efficiency. The City should work to implement these recommendations in the manner described, but there will be instances where adjacent land uses, competing curb uses, or vehicular capacity dictate a modified approach to locating curb uses. These block faces should be used as an implementation starting point.

The Standard Block Face represents the template that would most likely be implemented throughout the core of Uptown. This block face provides maximized parking capacity, while recognizing the need for both commercial and passenger loading areas.

The two block face layouts, including both a plan view and an oblique aerial rendering, are found on the following pages. These block faces are not to scale (i.e. a block face showing two spaces for loading does not literally mean two spaces for loading operations). They are intended to show orientation and location of various curb uses.

Standard Block Layout



The intent of this block face is to provide on-street parking capacity, centrally located and grouped for easy location by Uptown users. The parking is buffered by loading zones, both commercial and passenger (taxi in this example). Under this example, the City can use one Pay-by-Space pay station, while also minimizing signage.



Residential Streets

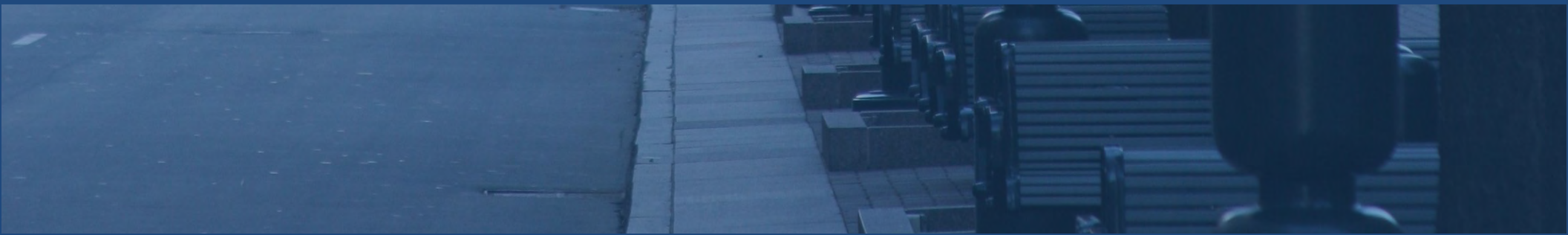


The intent of this block face is to provide residential permit parking capacity. Residential loading operations would take place in the on-street parking spaces, given the less common nature of this type of loading. Residential loading could mean home delivery, move-in/move-out procedures, and passenger loading and unloading.





CHAPTER 4—SIGNAGE RECOMMENDATIONS



This chapter provides general recommendations for signage modifications and enhancements intended to provide a clearer and more concise regulatory message at the curb level in Uptown. While the distribution and management of curb uses is discussed in previous chapters, this one focuses solely on the use of distinct symbols and messages to communicate the curb policy quickly and easily.

The curb uses in Uptown have evolved throughout the years, changing as adjacent development changed, and evolving as policies have been updated and implemented. These changes have included the installation of new curb-side signage to communicate changing uses. Many times, the signage has changed in one location without being modified in other locations. The result is a wide array of signage, sometimes varying greatly between blocks even though they are communicating the same message. An additional effect has been the stacking and growing of signs often created by attempting to communicate regulations for both sides of signs. In some locations one sign has grown to three signs and messages have become overloaded with information and thus overly complex and difficult to understand.

One of the primary goals of this study is to find new and innovative ways to organize information and effectively communicate messages to users without overwhelming them with too much information. This chapter provides recommendations to achieve this and conceptual examples of revised signage. The recommendations in this chapter build upon the existing signage review found in [Chapter 1](#).

Policy Standards and Recommendations

The existing signage in Uptown is largely governed by the Manual on Uniform Traffic Control Devices (MUTCD). However, many of the guidelines for parking related signage found in the MUTCD are in direct conflict with the existing signage. The following policy standards and recommendations are intended to develop a more consistent approach to signage and regulatory messaging.

General Recommendation:

Protocol and standards for design and implementation of parking regulatory signs in the Uptown core should be developed using MUTCD guidelines as a starting reference. The signs can then be modified specifically to improve communication of multi-use regulations and other complicated information delivery demands of a dense and active urban environment.



The following specific programming, layout, quality control, and implementation recommendations are suggested to guide in the development of design and maintenance standards that facilitate clearer and more consistent communications along the curb in Uptown:

Programming

The City should develop protocol and process for determining location and consistent messages for Uptown Parking signs, including:



- Develop and maintain a list of messages with standardized nomenclature approved for use on parking regulatory signs. Create a standard protocol for additions to nomenclature list and approval of additions.
- Use only whole hour increments for specific parking restrictions (i.e. 7AM – 9AM).
- Use symbols for general parking designations accompanied by text to qualify the designation. Unfamiliar or ambiguous symbols should be accompanied by plain language clarification. For example, use the text TAXI, LIMO, LOADING etc. with corresponding symbols.
- All signs with Tow-In information need to contain “if towed, 704-336-7600” or some similar variation.
- As an alternate to the use of arrows that show designated restriction zones, use text messages such as BEGIN, END, HERE TO CORNER, HERE TO ALLEY, THIS SIDE OF SIGN, or BETWEEN SIGNS, NO STOPPING OR STANDING.
- Do not use OTHER SIDE OF SIGN on same sign or sign post as THIS SIDE OF SIGN message.
- When using THIS SIDE OF SIGN message (with signs mounted 90 degrees), use additional sign on back (back-to-back signs) with THIS SIDE OF SIGN message to designate that information is for the opposite side of sign.
- Use double arrow signs mounted 30 degrees off of curb face in between signs mounted 90 degrees off of curb face where distance between signs causes legibility issues.
- Optimal and maximum distances between signs should be established through legibility testing once final layouts and font sizes are determined for each sign type.

Layout and Design

The City should develop “living” standards for design of curb lane regulatory signage. The standards should be developed in a format that allows for addition and modifications sign message to meet new curb lane uses/regulations as they arise. Specific recommendations include:

- Create standards for consistent location of information on graphic panels and model after MUTCD suggested order of information, when applicable. From top to bottom of sign:
 1. The restriction or prohibition related to the curb space
 2. The times of day it is applicable, if not all hours
 3. The days of the week it is applicable, if not every day
- Use color on regulatory signs to communicate the nature of the messages.
 - Red signifies prohibition
 - Green signifies permission
 - Black signifies neutral
 - White is MUTCD background preference
- Do not use permissive colors within prohibitory color borders or prohibitory colors within permissive border colors (see photo to the right for an example of this).
- For non-standard sign modifications, use full size mock up signs to test comprehension and legibility before establishing standards.



Implementation and Maintenance

The City should develop a process of implementation that ensures the quality and consistency of the program, including the following elements.

Quality Control

- Develop and implement a protocol for review and approval of sign messaging, layout and production quality by designated CDOT staff.



Installation

Develop and implement protocol for installation of signs. Installation includes such items as:

- Create special tools and/or jigs to aid in the accurate and consistent installation of signs, particularly for “arrow based” signs mounted 30 degrees off of parallel to curb face.
- Research and procure mounting hardware that minimizes the impact of graphics when through bolting sign faces to attach to posts or pole straps.
- Develop maintenance practices to ensure signs are not compromised by obstructions, vandalism, damage, conflicting signage or other conditions.
- Consider placement, i.e. affixing signs to existing structures or new poles.

Removal

- As curb uses or curb use restrictions change, prompt removal of signage is necessary to maintain consistent communication to the curb user.
- When changing or removing signs, ensure that the programming and layout of new signs is consistent with the standards identified in this document.

Conceptual Signage Examples

Building on these principles and guidelines, a set of conceptual signage examples were developed that represent new approaches to parking and curb space regulatory policy in Uptown. There were three approaches to the signage concepts, including:

1. **Standardization Approach** – primary recommendation using MUTCD guidelines and standards to provide a more consistent approach to regulatory messaging. This approach standardizes signage and cleans up conflicting messaging and varying sign types throughout Uptown.
2. **Graphic Symbol** – utilizing picture symbology to represent recurring uses along the curb, such as commercial loading, taxis, or buses. The use of symbology (supported by text) creates an easier to understand curb-side environment, including for out-of-town motorists or visitors from another country.
3. **Timeline Approach** – this approach is specific to curb lanes that have multi uses throughout a given day and in particular for lanes with peak hour parking limitations. The timeline approach uses the human tendency and instinct to respond to temporal and chronological data to present the regulatory messages in a way that is easier to comprehend, learn and follow, especially when implemented consistently throughout a large area.

Conceptual level signage examples were developed as part of the study process, printed full size, and presented to various user focus groups during the charrette. The conceptual level example signs were developed using MUTCD guidelines, but were further adapted to meet the unique constraints of the Uptown environment. The three approaches are described further in the following sections.

It is important to note that the following concepts have not been developed, tested and standardized as required for implementation. As recommended above, before initial implementation, these concepts need to be developed further and integrated into standards for programming, design and implementation of signs regulating the use of curb lanes in the uptown core.

1. *Standardization Approach*

The primary approach to new signage in Uptown utilizes basic MUTCD guidelines to clean-up and standardize signage. The intent is to create a more consistent and understandable regulatory message

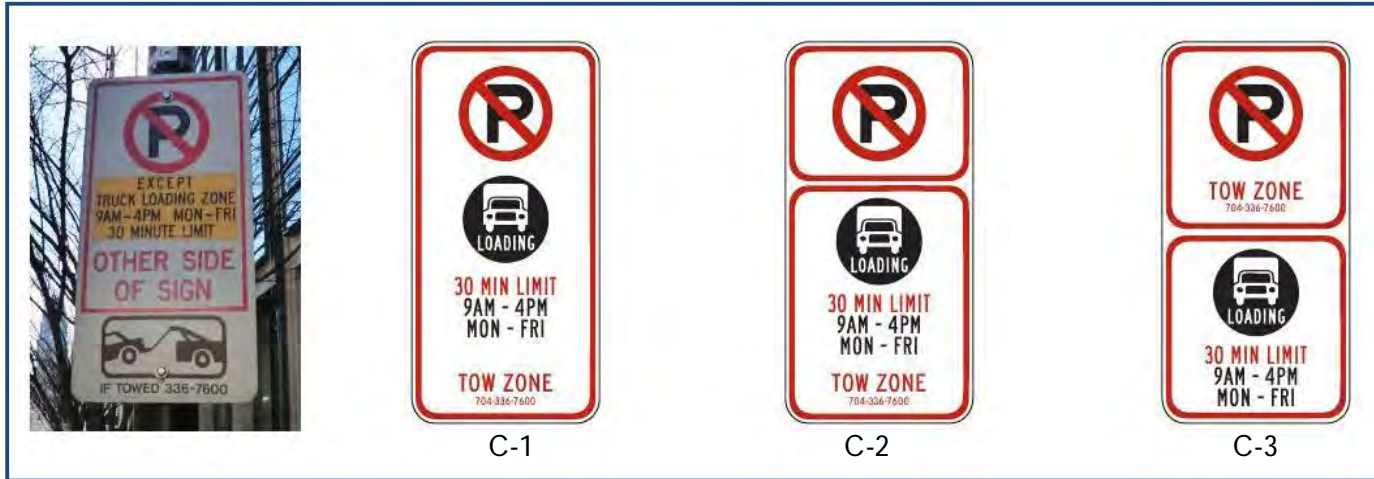


at the curb level. The signage includes modified approaches to border colors, symbology, order of messages, and overall use of colors. This signage looks very similar to existing signage, but removes many of the conflicting messages discussed in Chapter 1.

As an example of the transition from the existing signage to a more refined and standardized approach, the following sign indicating evening peak hour restricted parking, as well as permissive parking between 7am and 4pm, was modified to more closely resemble MUTCD signage. The primary change was the movement of the permissive information outside of the red restrictive border. This move more accurately displays the restriction and the permissive operations, consistent with MUTCD guidelines. An alternative to this sign would be the use of a larger permissive sign (as seen to the far left), which emphasizes the permissive message more clearly with the use of the “Green P” which highlights the ability to parking during designated hours.



Additional examples are shown below.



In these examples (photo above), the commercial loading permissive text is treated in a variety of manners. In the first concept (C-1), the text is replaced by a graphic symbol, and reinforced by supporting text (time limits, restricted times, etc.). In the second concept (C-2), the two signs are removed from each other, with the restrictive NO PARKING symbol listed first to deter motor vehicles. The LOADING ZONE sign then outlines the use and restrictions for the commercial vehicle loading zone. Finally, the third concept (C-3) is only a slightly tweaked version of the second, with the tow information moved from the LOADING ZONE sign to the NO PARKING sign.

By cleaning up the existing signage with the general MUTCD guidelines, the various curbside regulatory messages in Uptown should become clearer to the user and easier to comprehend moving throughout Uptown. However, there still remain situations where complexity is an issue when large amounts of information need to be displayed on one sign.

When various peak hour restrictions and multiple curb uses are designated within a block, the messages may be difficult for the motorist to decipher. When these signs were tested during the charrette, the various user groups still had trouble with the amount of information being displayed. They also felt like the negative, restrictive messages (which should be the prominent feature according to MUTCD) were a deterrent to parking in the example area. A majority of the user group attendees



expressed a desire for the positive, permissive messages to be the most prominent display, indicating when you could park.

2. Graphic Symbol Approach

The graphic symbol approach is a technique that is used to provide an easier to understand message, utilizing universal symbology that naturally translates the use and/or restriction associated with the regulatory message. The use of pictures or symbols helps to display messages in a concise manner with less text. However, the symbology should still be accompanied by text to reinforce the intended message.



TAXI CAB



LIMOUSINE



COMMERCIAL LOADING ZONE



PASSENGER LOADING ZONE

Universal symbol concepts were developed for curb uses such as TAXI, LIMO, COMMERCIAL LOADING, and PASSENGER LOADING. These symbols are intended to be quickly and easily recognizable to users without overwhelming the general public with a large amount of text. These graphic symbols are just a starting point and need to be further developed and tested prior to full implementation. As an example, many focus group attendees felt that the limo graphic too closely resembled a typical car and should carry some additional designation to further distinguish limousine or black car restriction.

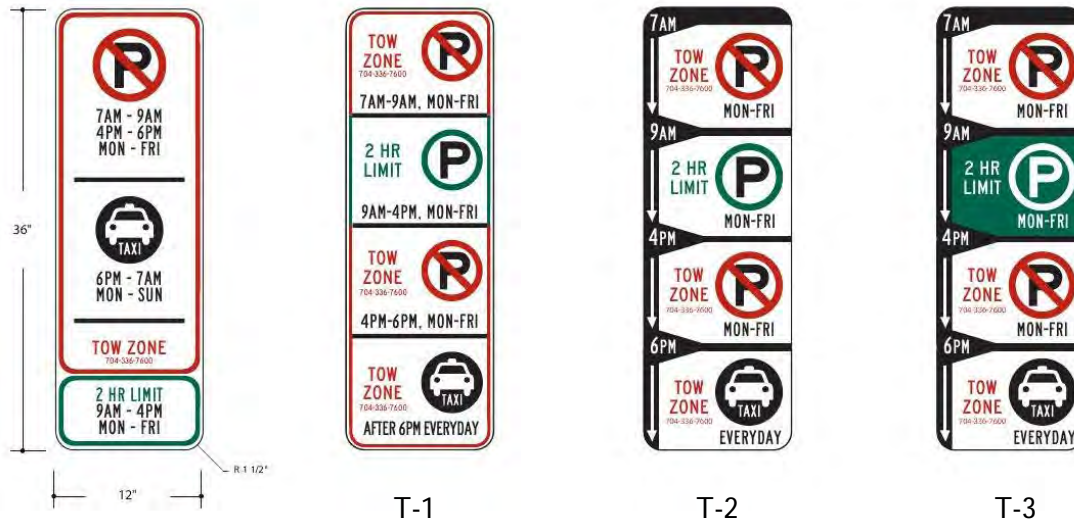
New symbol-based signage was also developed for the parking pay stations. The two signs to the left illustrate the existing signage (which indicates coin payment only) and the proposed signage (that indicates that the pay station will accept credit cards, debit cards, or coin).

The graphic symbols developed were also used throughout the Standardization Approach and the Timeline Approach, because its intent is to provide a clearer and more consistent approach to whichever type of signage it accompanies.

3. Timeline Approach

This approach was developed to simplify presentation and improve comprehension of complex regulatory message common at multi-use curbside lanes with peak hour restrictions. It organizes messages chronologically, grouped by consistently occurring time slots before, during, in-between and after peak hour parking restrictions to communicate how curbside lane uses are managed throughout the day. As part of the concepts for this signage, several variations were evaluated, including some that were closely tied to MUTCD signage and others that were more aesthetically pleasing and understandable.

The concepts below show how one of the signs developed under the Standardization Approach (far left) could be modified to present information in the chronological timeline order.



In each of the concepts (T1-T3), the standardized sign on the left is presented chronologically (with three different alternatives) from 7am to 6pm. In each panel of the signs the regulatory message is displayed for the appropriate time period, including graphic symbols and supporting text describing the restrictions. The first concept (T-1) most closely represents the MUTCD approach to parking signage. The second concept (T-2) uses a black border to delineate the time period and arrows to help the user scan the timeline. The third concept (T-3) builds off of that approach, using green coloring to emphasize the permissive parking allowance. The T-3 alternative was built based on feedback from user groups during the project charrette process, which requested that the permissive messages on these signs be the primary visual reinforcement when first viewed. By placing the green background behind the permissive parking sign, the allowable message should typically be the first message viewed, informing the motorist that there is an opportunity to park and then providing chronological and text based support to clearly state the overall regulations.

W 6th St

W 7th St



CHAPTER 5—PRACTICAL IMPLEMENTATION

The previous four chapters of this report provide insight into existing conditions, best management practices from peer communities, and general recommendations related to curb lane usage and regulatory messages. This chapter provides a more specific look at how these recommendations and best management practices could be implemented in Uptown. The discussion in this chapter includes:

- Recommendations for locating specific curb use street type priorities, including commercial vehicle loading areas, limousine passenger loading and staging areas, and peak hour restricted curb uses
- Implementation examples for new growth and development areas in Uptown
- Implementation examples for Core Street curb management implementation

This chapter is not intended to provide all of the answers related to curb lane management and regulation in Uptown. Rather, this chapter provides examples and strategies for practical implementation of the previously stated recommendations, strategies, and policy standards. In essence, this chapter serves as a blueprint for the City to begin to implement actual curb lane policies and practices.

The true definition and need for the curb lane will always be directly related to the adjacent land use it serves, as well as the street type in which it is located. It is not feasible for the curb use adjacent to short term retail to be served by dedicated taxi loading. Additionally, the true function of the urban street is lost if it fails to serve its intended user.

Previous planning efforts have laid a foundation for efficient and proper use of Center City Streets. Many of these efforts include recommendations intended to provide the proper pedestrian experience, Uptown access, and user choice. The recommendations and practical implementation strategies in this chapter build off of that foundation, laid by the *Center City Transportation Plan* and other Uptown vision documents.



Peak Hour Restricted Curb Uses

The Uptown street network serves many purposes, including traffic and transit capacity, pedestrian experiences, business access, commuter access, and as the overall gateway into the Center City. The ability to balance all of these needs is at the core of this study. Some streets, such as the Signature Street, need to serve pedestrians and adjacent business. Other streets, such as Primary and Secondary Streets, need to balance access into Uptown with pedestrian activities and curbside parking and loading.

On many of the major Uptown streets, traffic capacity has been prioritized as the highest use – especially during the peak hour. On many of the Uptown streets, curb uses are restricted or greatly reduced during peak hour operations (currently 7 am to 9 am and 4 pm to 6pm). This serves the ingress and egress of commuter traffic very well, but on some streets, the loss of curbside parking negatively impacts business operations and encourages high speed traffic that contributes to accidents and conflicts with the pedestrian environment. The *Center City Transportation Plan* calls for the Uptown to be more pedestrian friendly and for the parking system to promote a “Park Once” objective that reduces the need to move about Uptown in a passenger vehicle, but peak hour restrictions can be counter to this mentality in some areas. Additionally, peak hour restrictions make commercial and passenger loading increasingly difficult.

The following recommendations are intended to improve curb lane operations, while recognizing that traffic capacity is an important aspect of Uptown but of primary importance is a pedestrian friendly environment and implementation of the vision for Center City.

Tryon Street

Tryon Street is primarily a pedestrian oriented street (with traffic capacity designated as the lowest priority), and the use of existing peak hour restrictions are counter to the actual intention of the street priority. Peak hour parking restrictions are enacted during peak commute hours to optimize traffic movement and reduce congestion, and are typically appropriate on streets with traffic capacity as a high priority.

Peak hour restrictions are not the highest and best use of valuable curb space along the street. On-street parking could continue to serve retail and restaurant uses, loading vehicles could continue operation for restaurant and nightlife establishments, and passenger loading could serve employment,

including both commuter and pick up / drop-off loading during peak hours. With this in mind, the City should consider removing peak hour restrictions, initially as part of a pilot program, to evaluate the effectiveness of consistent curb lane use. After evaluation, the City can determine if peak hour restrictions are removed.

Church and College Streets

Unlike Signature Streets, such as Tryon Street, the highest priority on College Street and other Primary Streets is traffic movement to / from the available structured parking supply. Therefore, the use of peak hour restrictions may be appropriate to maintain traffic flow and to reduce congestion during the morning and evening peak hours. By enforcing peak hour restrictions, the flow of traffic will not be impeded by vehicles slowing to park or to pull out onto the street. Instead, the parking lane will be used as a travel lane to increase capacity on the road.

3rd and 4th Street

3rd and 4th Streets, which serve as primary east-west connections within the Uptown loop, are also quickly growing into neighborhood and business supporting roadways. Under the current configuration, these streets are restricted to peak hour traffic during the morning and evening peak hours. While this configuration serves automobile traffic, these streets are candidates for increased on-street parking to serve business, neighborhood, and pedestrian uses.

The 2020 Vision Plan calls for an enhanced focus on traffic calming within the community. On roadways like 3rd and 4th Street, the best traffic calming measure is to maintain some form of traffic friction, which in this case would be continued use of the curb lane for parking and loading operations. Peak hour restrictions should be removed from these streets, to enhance traffic calming and improve curb space inventory during the peak hours of traffic operation.

It should be noted that even though peak hour restrictions are proposed to be lifted along these streets, in the areas around the Charlotte Mecklenburg Government Centers, parking and curb space activity should be limited to account for increased security measures in the adjacent blocks.

Long term recommendation:

Based on the effectiveness of the 3rd and 4th Street peak hour restriction removal, evaluate the effectiveness of removing peak hour restrictions on 5th and 6th street. This study will likely require an evaluation of how traffic patterns have changed from the reconfiguration of traffic flow on 3rd and 4th Street.



Commercial Loading Zones

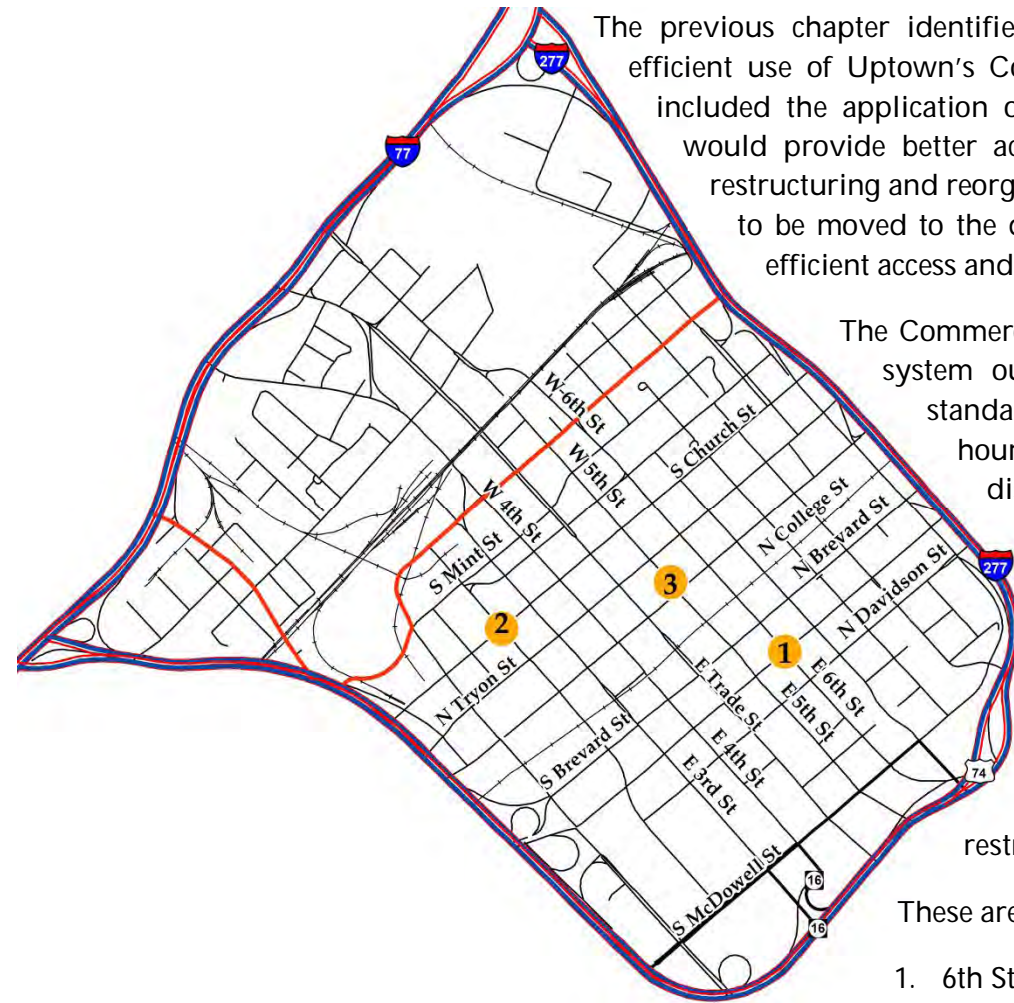
The previous chapter identified several strategies and recommendations to create more efficient use of Uptown's Commercial Vehicle Loading Zones. Those recommendations included the application of a permitted commercial vehicle loading program, which would provide better access and flexibility for users. Additionally, as part of the restructuring and reorganization of standard blocks, loading operations are proposed to be moved to the downstream end of the standard block face to provide more efficient access and easier movement for larger delivery vehicles.

The Commercial Vehicle Loading Zone use will be defined by the permit system outlined in Chapter 3. Typical time limit regulations in a standard loading zone will vary between 30 minutes and three hours, depending upon the operators permit level. However, in discussion with commercial vehicle stakeholders, it became apparent that in certain areas there needed to be longer term loading zones. In response to the concerns of commercial vehicle stakeholders and in support of growing business areas in Uptown, several key loading zones were identified. Again, the use and time availability of these spaces should be dictated by the commercial vehicle permit system. The use of these zones could extend up to three hours, depending on the permit level and peak hour time restrictions in place.

These areas include:

1. 6th Street and Caldwell Street
2. Martin Luther King Jr. Boulevard and Church Street
3. 5th Street between Tryon and College Streets

These locations are in addition to regular commercial vehicle loading zones throughout the City, and would serve to provide long term delivery staging. In other locations, the time limit restrictions would be based on permit level and adjacent land use. Additionally, the reduction of peak hour restrictions,



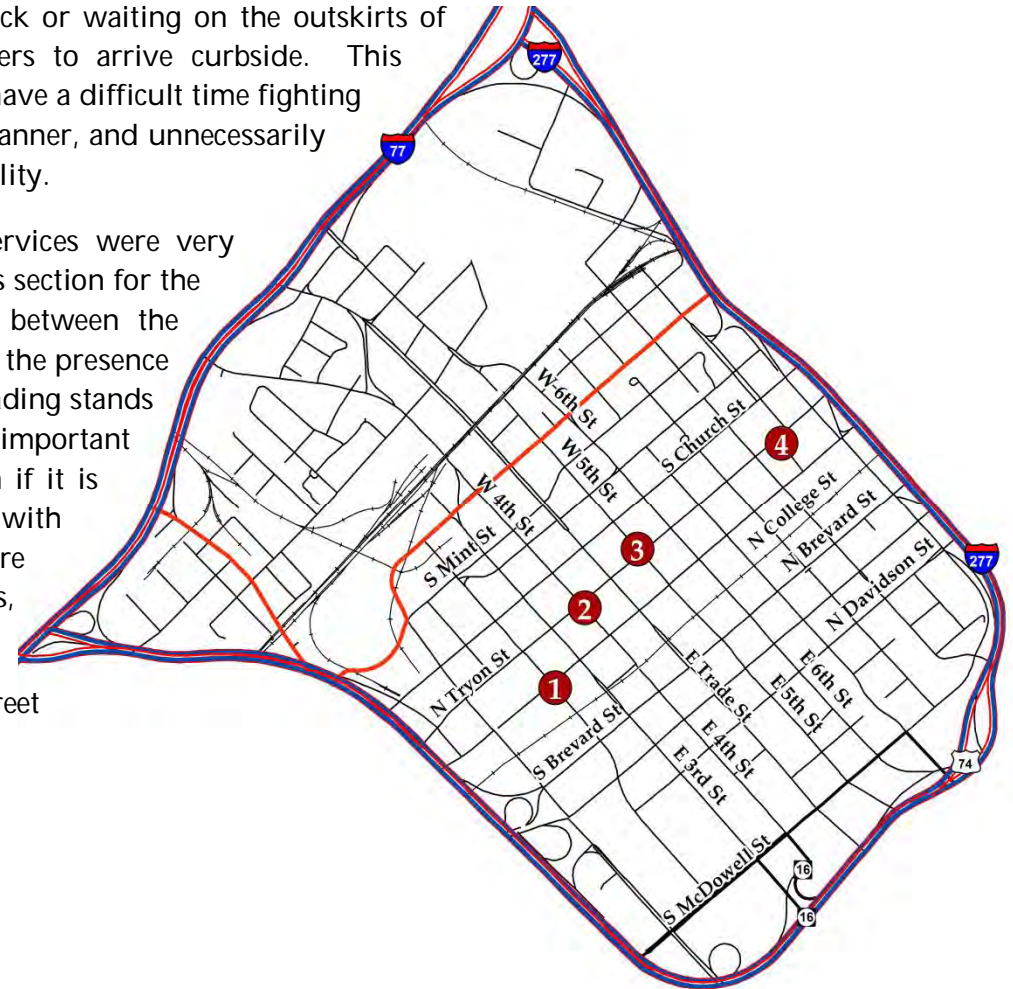
especially on streets like Tryon Street and 4th Street, will provide additional capacity and accessibility during highest demand periods.

Limousine/Executive Loading Zones

Limousine (or Black Car) services have the least amount of dedicated curb space in Uptown today. This is primarily due to the fact that their loading operations are prearranged and typically don't need to have a dedicated location for standing and waiting. However, under certain scenarios there may be a need for a limousine to stop and wait for passengers who are running behind schedule. With today's setup, the limousine operators are left circling the block or waiting on the outskirts of Uptown (such as Hill or Phifer streets) for customers to arrive curbside. This configuration can be problematic for drivers who may have a difficult time fighting traffic to get back to the pick up location in a timely manner, and unnecessarily increases vehicle miles of travel while worsening air quality.

In Chapter 3, the recommendations for limousine services were very similar to the permit structure described in the previous section for the commercial vehicle operations. The main difference between the commercial loading and executive loading operations is the presence of existing loading zones. With no specific limousine loading stands found in the current Uptown curb lanes, it is even more important to provide some areas for standing and waiting, even if it is only for a few minutes. Based on conversations with limousine operations stakeholders, several locations were identified for designated limousine loading stands, including:

1. Martin Luther King Jr. Boulevard and College Street
2. 4th Street and Tryon Street
3. 5th Street and Tryon Street
4. 10th Street and Tryon Street



Implementation Example – Gateway Station

As a practical example of how the priorities, street type priorities, and block face standards can be implemented for specific uses in Uptown, the planned Charlotte Gateway Station multi-modal transportation hub requires the application of multiple curb lane uses to support the adjacent transit network. The site is bounded by Trade Street (Signature Street), Graham Street (Primary Street), and Fourth Street (Primary Street).

Based on these street types, the curb use priorities could be identified based on the priorities defined in Chapter 3. However, the scope and scale of transit services converging on this block likely warrant a site specific prioritization. For example, in a typical primary street, traffic capacity would be the defined highest use. However, on Graham Street, the best use of space may instead be passenger loading or drop-off to facilitate the movement of passengers to transit services.

A Charlotte Gateway Station specific curb lane priority designation might include:

1. Transit Operations (Bus and Streetcar)
2. Passenger Loading (private vehicle)
3. Taxi and Black Car Service
4. Traffic Capacity
5. Commercial Loading
6. On-Street Parking

Note that in this example, on-street parking is the lowest priority, and may very likely not find curb space in the immediate vicinity of the station. In this instance, the need for quick, efficient, and timely passenger loading far exceeds the benefits gained from two hour parking, and transit uses of this type and magnitude are not typically supported by short term parking. The proposed street grid system near the CGS will provide opportunities for nearby parking or standing.

To move forward developing the street type priorities and block face standards needed in the vicinity of the planned Charlotte Gateway Station will require key stakeholders to gain consensus on the applicable curb lane priorities (example represented above). These can then be applied to the perimeter streets including: Trade Street (RR to Graham both sides), 4th Street (RR to Graham both sides), and Graham Street (Trade to 4th west side) to establish a template supporting the site's development.

Implementation Example – Core Street Curb Management Strategies

Within the context of this study, there are three defined Core Streets – Tryon Street, Church Street, and College Street. These three streets are the busiest and most utilized streets in Uptown in relation to pedestrian use, retail and restaurant development, nightlife, traffic, passenger loading, and transit services. These three streets (along with Trade Street, which represents similar uses and demands), exemplify the curb management issues within Uptown and provide a canvas to implement specific curb management strategies and approaches, as defined by the previous general recommendations and strategies (Chapter 3 – Street Type Priorities and Chapter 4 – Signage Recommendations).

The following sections describe examples of changes and implementation strategies along these streets, as well as the side streets supporting their demands and uses. A full representation of the curb lane recommendations can be found as an addendum to this document (*Core Street Curb Management Recommendations Mapping*).

Tryon Street

Tryon Street is the quintessential Uptown street. The street serves as a Signature Street, defines the urban context within Uptown, and is identified by many (including the *Center City Transportation Plan*) as “the most significant of Center City’s ‘signature’ streets” because it is established as the City’s primary business, cultural, and entertainment area.

As a Signature Street, Tryon Street should enhance the pedestrian experience in Uptown, creating a sense of place and characterize Uptown as a destination.

The following are curb lane priority designations for Signature Streets:

1. Transit Operations
 2. On-Street Parking
 3. Commercial Loading
 4. Passenger Loading (including taxi, valet, etc.)
 5. Traffic Capacity
- Other** – car sharing and electric vehicle*

Tryon is the model for the Signature Street Concept. Tryon Street’s pre-eminence should be retained and built upon as the most significant of Center City’s Signature Streets.

-Center City Transportation Plan



These priorities represent the ideal uses of the curb space along Tryon Street and other Signature Streets. In regards to practical implementation, it may not be feasible to implement curb lane recommendations in this manner for every block face. For example, a block face that includes primarily retail or restaurant establishments may not be best served by transit operations. In these locations, on-street parking would be given priority because it provides quick, accessible, and convenient parking, which works well to serve this manner of business. Additionally these businesses need quick and accessible commercial loading to serve delivery needs between high demand periods.

In another example, a large employment center might be best served by transit and passenger loading, which can provide quick and efficient movement of large groups of people. When evaluating and defining curb uses along Tryon Street, the adjacent uses and needs define the curb lane policy as much as the ideal priorities.

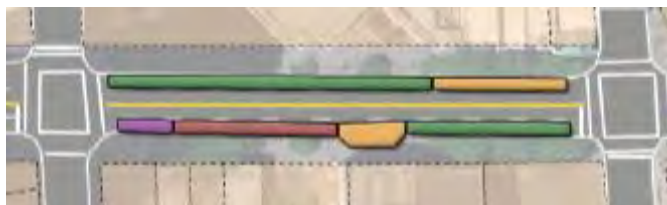
The following examples illustrate these points, while also defining how curb uses should be structured along this Signature Street.

Tryon Street between West 5th Street and West 6th Street

LEGEND

- Residential Parking
- Public Parking
- Commercial Loading
- Passenger Loading
- Transit Stop

Existing Curb Use Structure



Proposed Curb Use Structure



In this example, the curb uses are modified to present a more consistent structure for all curb users, including motorists, delivery vehicles, and transit operators. On the west side of the street, the uses remain unchanged because the structure and designation of uses is supportive of two principles:

1. Supporting adjacent uses through the provision of on-street parking
2. Provision of loading adjacent to restaurant and nightlife uses, with loading space located at the downstream end of the block

On the east side of the street, the uses are modified to be more consistent with outlined Signature Street principles. Examples of this implementation include:

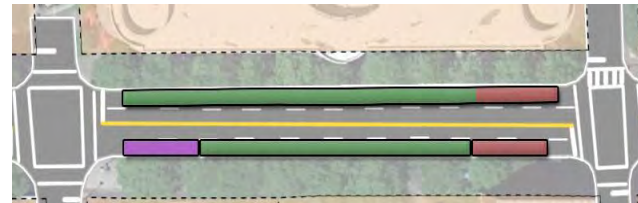
1. Relocating transit loading operations to the upstream end of the block to support more efficient movement of transit vehicles and reduce the likelihood that transit vehicles block traffic on side streets.
2. Provision of dedicated taxi stands at the downstream end of the block. The provision of dedicated taxi stands allows for the restriction of taxi use within paid parking spaces and provides additional regulation for taxi use.
3. Provision of on-street spaces in one linear and consolidated grouping of spaces. This approach provides a more consistent on-street parking structure and serves to maximize on-street parking in the area, which is a primary need of adjacent uses.
4. Removal of curb lane “bump-out” which is currently used for loading, but is counter to Uptown policies that promote pedestrian movement and use by restricting available sidewalk space.

Tryon Street between West 7th Street and West 8th Street

Existing Curb Use Structure



Proposed Curb Use Structure



LEGEND

	Residential Parking
	Public Parking
	Commercial Loading
	Passenger Loading
	Transit Stop

In this example, the curb uses are modified to promote an atmosphere more conducive to transit operations. Specifically, the Primary Transit blockface was implemented along the east curb face, creating a more accessible and efficient curb use for CATS transit operations. This approach was utilized because transit operations are identified as the highest priority along the Signature Street.

Beyond the application of primary transit principles, new on-street parking spaces were added on both the west and east curbs. Along the north side of the street, transit operations and passenger loading are replaced by a larger provision of on-street parking and smaller area of passenger loading. Along the south curb, on-street parking is utilized downstream of the block, while passenger loading is provided upstream of the block. Both uses provide a buffer for the centralized transit use along the block.



Reorganization of Transit Stops

In regards to transit stops along Tryon Street (and the other Core Streets), it was assumed that passengers could comfortably walk a block and a half, or 600 feet, to reach a transit stop; the normal maximum walk to a transit stop is one-quarter mile or 1300 feet. Using this criteria, and the desire to more consistently structure curb uses along the Core Streets, several transit stops were consolidated to provide less stops and more efficient access.¹

In the example on the previous page (Tryon Street between West 7th Street and West 8th Street), the transit stop on the west side of the street was removed because there is one in the adjacent block, between 6th Street and 7th Street. While there is a transit stop on every block on Tryon Street (with the exception of 8th Street to 9th Street), the stops in each direction are located on every other block. Placing transit stops on every other block face and moving loading zones to the corners of intersections provided an opportunity to add on-street parking along many of the blocks along Tryon Street. It should be noted that this is an example of how the bus stops could be reorganized. Any consolidation or reorganization of bus stops will need to be coordinated between the City, CATS, and Center City businesses to understand the needs of the passengers, business patrons, and public.

College Street

If Tryon Street serves as the quintessential Uptown Street, College Street is one its primary support arterials, moving northbound traffic through the Center City, serving numerous office towers and their parking decks, as well as the downtown arena, convention center, and one of the highest demand destinations, the EpiCentre. According to the *Center City Transportation Plan*, College Street is designated as a Primary Street, with the intent to serve pedestrians while recognizing the need to move transit operations and vehicular traffic. The following are curb lane priority designations for Primary Streets:

1. Transit Operations
2. Traffic Capacity
3. On-Street Parking

¹ The removal and consolidation of bus stops should be a collaborative process that includes CATS representative and other City of Charlotte staff. Ultimate decisions for removal should include a discussion of ridership, loading patterns, and existing infrastructure in place.

Primary Streets are "intended to provide an enhanced width and quality of pedestrian realm to support pedestrian circulation to the Signature Streets, transit and other destinations."

-Center City Transportation Plan

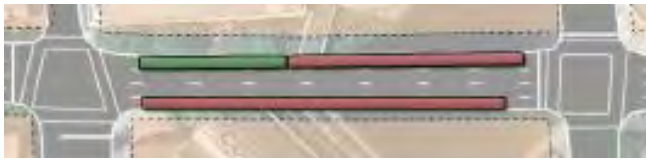
4. Commercial Loading
 5. Passenger Loading (including taxi, valet, etc.)
- Other** – car sharing and electric vehicle*

Similarly to Tryon Street, these priorities represent curb uses under ideal conditions along Primary Streets. However, implementation of these uses is not always feasible due to specific land use needs. The land uses on each block face must be considered individually. The curb lane priorities act as guidelines when making these decisions for implementation. Along Primary Streets, such as College Street, the highest priority is traffic capacity. However, in some locations the desire to provide traffic capacity may need to be balanced with the pedestrian experience or even land use support uses such as loading and on-street parking. For example, in the area of the EpiCentre, traffic capacity may need to yield to both pedestrian movements and passenger loading operations.

The following examples illustrate how the land uses along the street will dictate specifically how these priorities could be implemented along this Primary Street.

College Street between Martin Luther King Jr. Boulevard and 3rd Street

Existing Curb Use Structure



Proposed Curb Use Structure



LEGEND

-  Residential Parking
-  Public Parking
-  Commercial Loading
-  Passenger Loading
-  Transit Stop

As illustrated above, the existing curb uses (which were primarily passenger loading in the vicinity of the convention center) were reassigned to be more consistent with the Primary Street priorities. Implementation strategies for this example include:

1. Addition of a commercial loading zone on the west block face to provide for loading operations for adjacent businesses
2. Relocation and extension of on-street parking on the western block face. This approach creates convenient parking, which will serve the adjacent land uses, while also providing easier commercial vehicle movements at the downstream portion of the block.



3. Addition of a transit stop at the upstream end of the block to provide more accessible and convenient transit operations from the convention center. The transit stop is located upstream of the intersection (consistent with the secondary transit block face) and to ensure that side street traffic and transit movement is not obstructed.

College Street between 3rd Street and 4th Street

LEGEND

- Residential Parking
- Public Parking
- Commercial Loading
- Passenger Loading
- Transit Stop

Existing Curb Use Structure



Proposed Curb Use Structure



In the above example, the curb uses were consolidated and rearranged to create uninterrupted on-street parking. The commercial loading zone was relocated to the downstream end of the block to provide for easier access for delivery vehicles and to maximize on-street parking capacity. The on-street parking was consolidated and moved the center of the block face not only for consistency but also to increase safety as drivers make the transition to being pedestrians. Finally, transit loading was located at the upstream end of the block to provide efficient loading and to minimize impacts between transit operations and side street traffic.

Considerations for One-Way Streets

Certain considerations must be reviewed on one-way streets to ensure appropriate curb use and efficient traffic flow. College Street, in the example above, is a one-way street with congested intersections in the evening peak hour in the northbound direction, which influenced the placement of curb uses. To maintain an acceptable level of traffic flow, on-street parking is typically located on one side of the street (although this rule of thumb was not strictly adhered to throughout the entire street segment). This structure is used to maintain two lanes available for free-flowing traffic. Placement of on-street parking on one-way streets should be dictated by adjacent land uses. In the example above, the land use on the northern block face is a parking garage and therefore does not require on-street parking.

Reorganization of Transit Stops

Transit stops are proposed to be consolidated and/or relocated to improve consistency. Since College Street is a one-way street, transit stops were typically located on the southern block faces, to best serve adjacent land uses. In the example provided previously (College Street between Martin Luther King Jr. Boulevard and 3rd Street), a transit stop was added on the south side of the street to provide efficient access to the surrounding land uses.

Church Street

Church Street is the other primary support arterial to Tryon Street, providing efficient movement of vehicles, transit, and pedestrians in the southbound direction. Based on the *Center City Transportation Plan*, Church Street is classified as a Secondary Street, which caters to pedestrian traffic, but whose primary purpose is to move traffic through Center City efficiently.

The following are curb lane priority designations for Secondary Streets:

1. Transit Operations
2. Traffic Capacity
3. On-Street Parking
4. Commercial Loading
5. Passenger Loading (including taxi, valet, etc.)

*Other** – car sharing and electric vehicle*

As mentioned previously, the priorities above for Secondary Streets represent curb uses under ideal conditions. Implementation of these uses is contingent upon the adjacent land uses, but when feasible, curb uses should be implemented to reflect the above priorities. Much like the Primary Street, the highest priority on Secondary Streets is traffic capacity and loading/unloading of parking decks.. However, unlike Primary Streets, where the pedestrian environment was balanced with traffic capacity, Secondary Streets give a higher priority to traffic movement. Considerations for the pedestrian environment are not to be disregarded, but a greater emphasis is placed on the efficient movement of traffic and transit.

The following examples illustrate how the land uses along the street will dictate specifically how these priorities could be implemented.

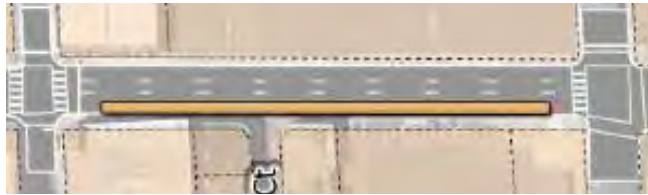


LEGEND

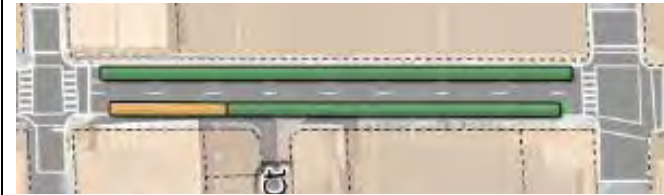
	Residential Parking
	Public Parking
	Commercial Loading
	Passenger Loading
	Transit Stop

Church Street between Martin Luther King Jr. Boulevard and 3rd Street

Existing Curb Use Structure



Proposed Curb Use Structure



As illustrated above, the curb uses were reassigned to be consistent with the Secondary Street priorities. Note that even though traffic capacity is generally the highest priority, in this example on-street parking was placed on both sides of the roadway, giving that use a higher priority to serve the needs of the surrounding land uses.

Additional implementation strategies for this example include:

1. Reduction of the commercial loading zone on the eastern block face to provide loading service to the land uses near the Martin Luther King Jr. Boulevard intersection. Currently parking lots are on both sides of the street near the 3rd Street intersection, providing ample off-street parking. However a City park will be constructed on the western block, which will remove one of the parking lots. Therefore, a large loading zone may not be the most appropriate curb use. Reducing the commercial loading area provided additional opportunities for on-street parking capacity.
2. On-street parking capacity was added on both the west and east curb faces. On-street parking was provided on the northern block face to better serve the adjacent land uses. On the eastern block face, the space previously occupied by the commercial loading zone was repurposed to provide on-street parking to support the adjacent land uses.

Church Street between 9th Street and 11th Street

Existing Curb Use Structure



Proposed Curb Use Structure



LEGEND

-  Residential Parking
-  Public Parking
-  Commercial Loading
-  Passenger Loading
-  Transit Stop

At the eastern end of Church Street, residential land uses are more prevalent than commercial or business land uses. To accommodate the residential uses, on-street parking was provided on the southern block face. To provide more parking for residents, the on-street parking in the evenings could be restricted for the use of residents with a parking permit, if the boundaries of the Fourth Ward residential area were expanded. During the daytime, when there is less demand for parking by residential users, the eastern block face can allow public on-street parking.

Considerations for One-Way Streets

The placement of the curb lane uses in the example above also took into consideration the flow of traffic along Church Street, which is a one-way street in the southbound direction. Placement of on-street parking on one-way streets should be dictated by adjacent land uses. In the example above, on-street parking was placed on the southern block face to support the residential land uses.

Tryon Street Pilot Project

The implementation and phasing of these projects will need to occur over time, as development and redevelopment needs dictate. The next chapter provides several implementation strategies and an action plan for the City to follow as it moves forward with the principles and practices of curb lane management defined in this report.

One of the primary short term recommendations of this study will be a pilot study of actual recommendations along Tryon Street. This pilot study will serve to introduce the concepts of this study to the Uptown community, as well as testing and helping to mold the final design of overall recommendations.



The following elements should be considered for inclusion in the Tryon Street Curb Management Pilot Study

- **Peak Hour Restrictions** – the peak hour restrictions (AM and PM) should be removed from Tryon Street. The purpose and definition of Tryon Street is to serve pedestrian movement and business access. By removing the peak hour restrictions, additional parking capacity can be realized during peak hours, commercial delivery vehicles can operate without interruption, and passenger loading vehicles can serve their client during peak travel times.
- **Curb Management and Structure Changes** – the curb management recommendations and structures shown in the *Core Street Curb Management Recommendations Mapping* should be implemented as recommended in this report and the associated mapping recommendations. This improvement will require restructuring curb uses for the one mile corridor, including pavement markings, signage, and appropriate metering and enforcement of parking.
- **Policy and Enforcement Practices** – along Tryon Street (in conjunction with the curb management and structure changes), the City should implement and evaluate the policy recommendations and enforcement policies outlined in Chapter 3. This includes new approaches to commercial vehicle loading, taxi stands, transit operations, and limousine practices.

While the implementation of some of these policies might lend themselves to a pilot study implementation, others (e.g. commercial vehicle loading, taxi and limousine practices) might need to be tested on a study area wide level to understand full effectiveness. The following categories describe the intended application further.

- **Commercial Vehicle Loading Zone Practices** – commercial vehicle loading practices are best served on a study area wide basis. If these practices are only implemented along Tryon Street, their effectiveness cannot be truly gauged. Rather, these practices should be implemented throughout the entire study area to evaluate how effective they are at managing and enforcing loading zone operations. The full permit system may not be realized under a pilot study approach, but an abbreviated version could be implemented to better understand the impacts and limitations of such an approach.



- **Passenger Loading Practices** – there are several approaches to passenger loading discussed in this chapter, including taxi operations, limousine and black car service, and commuter passenger loading. These operations will all be treated slightly differently in a pilot study process.

For taxi operations, the primary recommendation is to restrict taxis from standing in on-street paid public parking spaces. For the pilot study process, it could be feasible to restrict taxi operations from standing in paid parking spaces along Tryon Street, as a means to measure effectiveness and enforceability of this practice. However, it is probably more feasible to implement this practice on a study area wide basis to get a true gauge of the effectiveness.

For limousine services, the primary limousine stand locations identified earlier in this chapter are not located along Tryon Street. In the long term, these locations will be critical to the full implementation of limousine loading operations and the recommended executive loading permit system. For the Tryon Street Pilot Study, the removal of peak hour restrictions should serve to improve limousine and executive loading practices.

Commuter passenger loading is similar to the limousine loading needs. In the long term, it may be necessary to implement specific commuter loading areas or stands to serve carpooling activities or commuter loading and unloading. However, in the short term, especially as it relates to the Tryon Street Pilot Study, the removal of peak hour restrictions should provide additional loading capacity along Tryon Street to serve commuter loading.

- **Weekend Bagging Policies** – another traffic capacity element that restricts curb operations along Tryon Street is the bagging policies, especially as they relate to weekend cruising activities. Charlotte-Mecklenburg Police Department (CMPD) currently use bagging practices to ensure that weekend cruising does not adversely affect traffic operations or Uptown safety and security. However, these practices typically remove a large quantity of available on-street parking that could be better serving restaurant, entertainment, and nightlife uses. Weekend bagging policies also deter normal street activities, affect economic development, and create an atmosphere that is unfriendly to pedestrians and businesses.

The City should consider evaluating the weekend bagging policies, with the emphasis placed on Tryon Street and adjacent core streets that are bagged on Friday through Sunday for stadium and arena events.

Additional Recommendations for Expansion of Pilot Study

If the City implements both the removal of peak hour restrictions and the improved signage approaches along Tryon Street, it may not be applicable to install the timeline approach to signage. If the City wishes to accomplish both measures, it could implement the elements of the Pilot Study along Tryon Street and the timeline signage along College and Church Street. Under this application, the City would be able to measure the effectiveness of the study's recommendations and policy standards along Tryon Street, while also measuring the effectiveness of the timeline signage on the remaining Core Streets.

Additionally, the City could consider applying different aspects of the Pilot Study on North and South Tryon Street. For example, along North Tryon Street the City could remove peak hour restrictions to test the impacts to traffic and curb operations. At the same time, the City could test timeline signage along South Tryon Street to test the ability of the driving public to comprehend the new approach to communicating curb policy.

Another alternative would be to test timeline signage in other locations in Uptown. Two examples would be Trade Street near Gateway or 6th Street between Brevard Street and College Street.

- **Application of Additional On-Street Parking Capacity** – through the measures outlined in the previous six bullets, the City should be able to recognize additional on-street parking capacity along Tryon Street. The provision of additional on-street parking capacity was a major goal of the *Center City Transportation Plan*, the Center Retail Plan, and would provide additional accessibility and convenience for Uptown businesses located along Tryon Street.

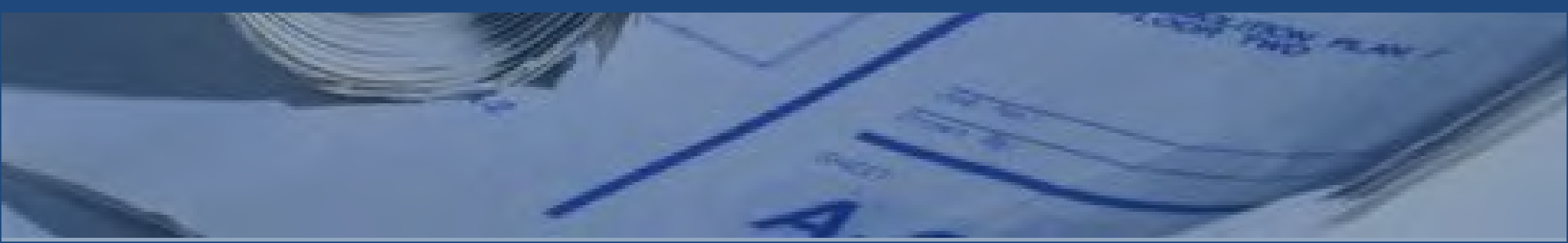
Additionally, as addressed in Chapter 3, on-street parking should be designated as on-street parking only. Because of the variability of the end user for paid on-street parking, the provision of simple and easy to understand parking regulations will provide a more accessible and convenient parking experience in Uptown. The primary curb lane uses considered for transitional uses are loading zones (with evening taxi use) and valet operations. Valet operations may occur in paid on-street parking spaces, but rather than signing them as transitional uses, the valet operators should be required to annually purchase the use of meter bags, and should be required to temporarily demarcate where their spaces begin and end.

- **Signage and Messaging** – finally, all of the above policies, recommendations, and strategies related to the Tryon Street Pilot Study will need to be appropriately signed and communicated for the driving public. The signage recommendations outlined in Chapter 4 should be implemented along Tryon Street, including the timeline signage (where appropriate) and the standardized approach to signage.

Timeline signage may no longer be appropriate along Tryon Street once peak hour restrictions are removed. If on-street paid parking is not made transitional, then approach to signage should be more consistent by the simple act of restructuring the curb uses. The City should evaluate the curb lane structure and apply the appropriate signage to manage and communicate the usage, whether that message is timeline or standardized.



CHAPTER 6—ACTION PLAN



Implementation of the curb lane management recommendations and strategies presented in the previous chapters is reliant upon funding and collaboration between local, state, and private agencies. The following Action Plan provides the necessary information to guide projects and recommendations through the implementation process. The Action Plan consists of a summary of funding opportunities that could potentially be used to implement the recommendations and an Action Plan Matrix that organizes specific action items based on typology, priority (including short-term, mid-term, and long-term horizons), and responsible agency. The Action Plan should be used as a guide by decision makers to initiate and track implementation efforts.

Funding Opportunities

Funding for curb lane management improvements can be identified from a variety of sources, including Federal, State, local, and private agencies. The list of sources is intended to provide decision makers with a broad range of funding options and to act as a guide for initiating implementation. The list is not inclusive. Other funding sources exist at the federal, state, and local levels. The following discussion identifies funding sources and how they can be used to implement the action items listed in the Action Plan Matrix.

Federal Programs

SAFETEA-LU

On August 10, 2005 the President signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU). The legislation updated the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) and the 1998 Transportation Equity Act for the 21st Century (TEA-21). SAFETEA-LU promotes more efficient and effective Federal surface transportation programs by focusing on transportation issues of national significance, while giving state and local transportation decision makers more flexibility for solving transportation problems in their communities. There are a number of grant programs that operate under SAFETEA-LU, a few of which are appropriate for implementing the curb lane management action items. These potential programs are discussed below.

Bus and Bus Related Equipment and Facilities

The Bus and Bus Related Equipment and Facilities program provides capital assistance for a number of bus related projects including construction of bus stops, bus shelters, and signage.

The Kansas City Area Transportation Authority was a recipient of this grant for their Bus Stop and Access Improvement Program. Their program includes upgrading bus stops with shelters, adding benches, repairing or installing concrete pads for passenger waiting areas, constructing sidewalks between stops, constructing ADA-accessible ramps at intersections, and constructing in-street bus pads and related curbing.

Congestion Mitigation/Air Quality Program (CMAQ)

The CMAQ program funds areas designated as nonattainment, as described by the National Ambient Air Quality Standards (NAAQS), to help meet the requirements of the Clean Air Act by funding transportation projects and programs. The program also funds projects in former nonattainment areas (known as maintenance areas) to help them maintain their attainment status. The total national funding level for the program is \$8.6 billion through 2009. The funds are distributed based on an area's population by county and severity of its ozone and carbon monoxide problems. Greater weight is given to those areas that are both carbon monoxide and ozone nonattainment/maintenance areas. A wide range of projects are eligible for CMAQ funds including projects that work to reduce carbon monoxide emissions, promote alternative forms of transportation, and to improve traffic flow.

Energy Efficiency and Conservation Block Grant Program (EECBG)

The EECBG is funded by the American Recovery and Reinvestment Act of 2009, and works to promote and implement energy efficiency and conservation projects and programs. The purpose of the program is to empower local communities to make strategic investments to meet the nation's clean energy goals. Eligible projects and programs reduce fossil fuel emissions, reduce the total energy use, improve energy efficiency in the transportation, building, and other appropriate sectors, and create and retain jobs.

A combination of funds from the CMAQ and the EECBG programs were used to fund Charlotte's Center City Parking and Wayfinding System. The funds were granted for this project based on the project goals to reduce vehicle miles traveled by creating a concise, consistent, and easy to follow signage and parking system which will ultimately reduce the length driven to search for locations and adjacent parking in the Center City.

State and Local Programs

Economic Development Program and the Business Investment Program Grants

The Economic Development Program manages the Business Investment Program (BIC) and other economic development grants. The Economic Development Program and BIC grants attract private developments that are beneficial to the City's economic growth. The City can use this program to support projects in a number of ways. For the purposes of this study, this program can support projects that work towards enhancing the pedestrian space.

Capital Investment Plan (CIP)

The City of Charlotte maintains a CIP that lists funded projects over a five year period and is updated annually. The projects listed in the CIP are funded by the General Fund, which receives money from sales and property taxes. Specific projects or programs can be selected for inclusion in the CIP and those projects will receive dedicated funds for implementation. The selection of projects or programs into the CIP is based on whether the project or program improves infrastructure, facilitates economic development, enhances the tax base, and protects the community's environmental and safety resources.

Engineering and Operations Sign Replacement and Upgrades to Meet MUTCD and Retro-reflectivity

The CDOT Engineering and Operations Division replaces signs as needed when signs are damaged in accidents, out of date with current standards or no longer accurate. This represents an opportunity to develop a message schedule then replace signs according to a program that achieves new standards in an acceptable manner.

Commitment from Other City Revenue Sources

Increase Revenue Generated by Parking

The City can use parking to generate funds to pay for enforcement, operation, and maintenance needs. The following three strategies can be implemented to increase revenues.

- Increase the Number of Paid On-Street Parking Spaces (managed through pay stations)
- Graduated Parking Enforcement Fines
- Extend Operating Hours



A portion of the potential additional revenue (after compensating for maintenance, operations, and administrative efforts) could be dedicated to curb lane management improvements, which benefit the parking system, the transportation system, and the overall Uptown area.

Special Taxing Districts

There are three special development taxing districts called Municipal Service Districts in Center City. These districts were created to support a variety of improvement and promotional activities. The City contracts with Charlotte Center City Partners who manages these programs. The revenue generated from these taxes can be allocated to projects that support development within the district boundaries. For example, an increase in MSD taxes approved by City Council in 2009 was allocated specifically to parking and retail programs. The geographic limits of MSDs can also be increased by City Council's authority.

Other Strategies

Self-Financing Bonds

Self-Financing Bonds were established to support public improvements by channeling future tax revenues from specific development projects to public improvements that support the project. Public improvements could include development of parking facilities, and enhancements to the pedestrian system.

Transportation Management Association (TMA) Funds

TMA's are generally created through a public-private partnership to form a member-controlled organization that provides management to the transportation system within a particular area. TMA's are an important vehicle used by many cities to acquire federal and state funding for transportation related projects, which includes parking.

Conditional Approval of Rezoning Requests

Developers may finance capital improvements that support their proposed land uses if these infrastructure investments can be planned to occur during approved property development. For example, the developer of a hotel may support taxi or town car parking that can be implemented by curb or curblane changes during construction.

Enforcement of Adopted Policies, Codes, and Ordinances

City adopted policies, codes, and ordinances establish a set of recommendations that work together to promote an overall vision for the City. Included in these recommendations are standards and guidelines for how to improve the transportation system and where and how to guide development, which impacts the uses along the curb lane. The policies, codes, and ordinances ensure that implementation of specific projects and programs are consistent with the City's vision.

Action Plan Matrix

Implementation of the recommendations presented in previous chapters will require prioritization and collaboration among local agencies. The following Action Plan Matrix outlines the recommendations into action items based on street type priority and recommendation type. The action plan includes a description of each recommendation, the timeline for implementation, and responsible party. The Matrix is intended as a guide for accomplishing the goals of this study and prioritizing implementation of the various recommendations found throughout this document.

For the purposes of this study, Immediate indicates actions within the next year, short-term indicates actions within the next 2-3 years, mid-term indicates actions within the next 3-5 years, and long-term indicates actions beyond the 5 year horizon.



<i>General Recommendations</i>	<i>Timeframe</i>	<i>Responsible Party</i>	<i>Action</i>
Endorse Curb Lane Management Recommendations	Immediate	CDOT	Council Briefing
Adopt the Uptown Street Type Priorities	Immediate	CDOT	Council Briefing
Update various ordinances and governing documents to reflect recommendations outlined in Curb Lane Management Study	Short-term	City Staff	Council Approval
Initiate Communications Plan around implementation. Share recommendations.	Immediate	CDOT	CDOT
Form Committee for project steering, decisions, and implementation	Immediate	CDOT	CDOT, City
<i>Items for Additional Study</i>	<i>Timeframe</i>	<i>Responsible Party</i>	<i>Action</i>
Inventory streets to find locations where on street parking can promptly be added	Immediate	CDOT	CDOT
Evaluate the amount of revenue lost due to bagging for excessive periods before and after special events.	Short-term	CDOT	ParkIt!
Evaluate the on-street parking occupancy and needs after 5pm and on weekends	Short-term	CDOT	CDOT/ParkIt!
Evaluate the effectiveness of removing peak hour time restrictions	Short-term	CDOT	CDOT/CMPD
Field test curb lane timeline signage	Short-term	CDOT	CDOT
Field test standardized curb lane signage	Short-term	CDOT	CDOT
Evaluate transit ridership data to identify primary and secondary operations points, and consolidation of transit operations	Short-term	CATS, CDOT	CATS, CDOT

<i>On-Street Parking Recommendations</i>	<i>Timeframe</i>	<i>Responsible Party</i>	<i>Action</i>
Restrict On-Street Public Parking Spaces (i.e. no transitional use)	Immediate	CDOT	CDOT
Organize and group on-street parking uses in a consistent manner along curb face	Ongoing	CDOT	City staff
Implement pay-by-cell phone feature and connect to current meters and pay stations	Ongoing	CDOT	ParkIt!
Finish implementation of on-street pay-by-space pay stations	Ongoing	CDOT	ParkIt!
Implement graduated fine structure	Short-term	Council, CDOT	Council approval
Implement a \$50 charge for immobilized vehicles to account for processing	Short-term	CDOT, ParkIt!	Council briefing
Train ParkIt! enforcement staff on Uptown events and general knowledge to assist in promoting Center City attractions and assistance for visitors	Short-term	CDOT	ParkIt!
Evaluate the operations and usage patterns for electric vehicle charging stations	Short-term	City Staff	ParkIt!
Increase fines for illegally parked vehicles in transit stops	Short-term	CDOT	Council approval
Utilizing License Plate Recognition software to actively seek out scofflaws	Mid-term	CDOT	ParkIt!
Utilize automated boot removal service to allow motorists to remove the boot after payment is received	Mid-term	CDOT	ParkIt!
Revise City Code to allow for booting of scofflaw vehicles, even without an ongoing violation	Mid-term	Council, CDOT	Council approval
Increase parking rates from \$1.00 per hour to \$1.50 per hour	Mid-term	Council, CDOT	Council briefing
Expand meter hours of operation from 6pm to 10pm	Mid to Long-term	CDOT/ParkIt!	Council briefing
Add Saturday as an additional enforcement day	Mid to Long-term	CDOT	Council briefing



<i>Commercial Vehicle Loading Recommendations</i>	<i>Timeframe</i>	<i>Responsible Party</i>	<i>Action</i>
Identify and implement longer term (up to three hours) loading zones in strategic areas of Uptown	Short-term	CDOT	CDOT
Evaluate the financial levels for a Commercial Vehicle Loading Zone Permit system (including initial payment and increased fine structure)	Short-term	CDOT	CDOT
Implement a Commercial Vehicle Loading Zone Permit system (including increased fine structure)	Mid-term	CDOT	Council approval

<i>Passenger Loading Recommendations</i>	<i>Timeframe</i>	<i>Responsible Party</i>	<i>Action</i>
Revise taxi ordinance to restrict standing or stopping in on-street passenger parking spaces	Immediate	CMPD, CDOT	Complete 2011
Identify locations for "Black Car" specific loading zones	Short-term	CDOT	CDOT
Allow taxis to utilize commercial loading zone curb spaces after 6pm	Short-term	CDOT	CDOT
Evaluate the financial levels for a Passenger Vehicle for Hire permit system (including initial payment and increased fine structure)	Short-term	CDOT	CDOT
Implement a Passenger Vehicle for Hire ("Black Car") permit system (including initial permit payment and increased fines)	Mid-term	CDOT	Council approval
Revise valet parking ordinance to include operations fee and parking obstruction fee	Mid-term	CDOT	Council approval

<i>Residential Permit Parking</i>	<i>Timeframe</i>	<i>Responsible Party</i>	<i>Action</i>
Adopt a policy that will ensure residents of new residential towers will not be eligible for residential on-street parking in any ward	Short-term	CDOT	CDOT, possible council approval
Charge a consistent annual fee for residential permits in all Wards and increase permit cost	Mid-term	CDOT	Council briefing
Evaluate updated and simplified residential permit zone signage	Long-term	CDOT	CDOT and residential stakeholders
<i>Signage Recommendations</i>	<i>Timeframe</i>	<i>Responsible Party</i>	<i>Action</i>
Implement Standardized Signage improvements throughout Uptown (will be ongoing, on a case-by-case basis as development occurs)	Ongoing	CDOT	CDOT
Implement Timeline Signage improvements throughout Uptown (will be ongoing, on a case-by-case basis as development occurs)	Ongoing	CDOT	CDOT
Adopt and implement Signage Policy Standards and Recommendations	Immediate	CDOT	CDOT, possible council approval
Develop final signs design, message schedules, and maintenance plan	Immediate	CDOT	CDOT



<i>General Curb Lane Recommendations</i>	<i>Timeframe</i>	<i>Responsible Party</i>	<i>Action</i>
Review and modify special event bagging policies	Short-term	CDOT, CMPD	CDOT
Review and modify cruising bagging policies	Short-term	CDOT, CMPD	CDOT
Review structure and location of curb uses, consistent with the recommendations of this study (will be ongoing, on a case-by-case basis as development occurs)	Ongoing	CDOT, City Staff	CDOT
Implement Tryon Street Pilot project: <ul style="list-style-type: none"> ▪ Remove peak hour restrictions ▪ Implement prescribed curb lane structure changes ▪ Remove weekend bagging operations ▪ Implement standardized signage along Tryon Street ▪ Implement timeline signage along portions of Trade and 6th Streets Streets 	Short-term	CDOT, City Staff, CMPD, Center City Partners	All and council briefing