



CITY OF CHARLOTTE DRIVEWAY REGULATIONS

TABLE OF CONTENTS (2015)

CHAPTER 1 - INTRODUCTION.....	1
Purpose & Applicability	1
Governing & Regulatory Authority	2
Objectives of this Manual.....	2
CHAPTER 2 - PROCESS & PROCEDURES.....	2
General Requirements	2
City Code Requirements for Driveways.....	3
Expiration of Permit	3
Permit Revocation.....	3
Driveway Abandonment.....	3
Driveway Bond	3
Driveway Variance	3
Driveway Permits on CDOT Maintained Streets.....	4
Driveway Permits on NCDOT Maintained Streets.....	4
Non - Residential Change of Use.....	5
CHAPTER 3 - DESIGN CRITERIA & ACCESS MANAGEMENT	5
General Criteria	5
CHAPTER 4 - DRIVEWAY DESIGN CRITERIA.....	12
General Criteria	12
Standard Driveway Types	12
Convenience stores & Gas Stations	16
Channelization & Internal Driveway Access.....	17
Driveway Alignment.....	18
CHAPTER 4 - ACCESS MANAGEMENT	18
Sight Distance.....	18
Driveway Placement	18
Turn Lane Warrants.....	22
Left-turn Lanes	22
Right-turn Lanes.....	23
Access Restrictions	23
CHAPTER 5 - TRAFFIC IMPACT STUDY (TIS).....	23
CHAPTER 6 - PAVEMENT MARKINGS AND SIGNAGE.....	23
CHAPTER 7 - TRAFFIC CONTROL	24
CHAPTER 8 - SCHOOLS	24
CHAPTER 9 - RESIDENTIAL DRIVEWAYS.....	24

CHAPTER 1 - INTRODUCTION

Charlotte's public street system is one of the key pieces of city infrastructure that is used to provide mobility to a wide array of users. These users include a motorists, pedestrians, transit users and cyclists that all enter the public street system with an expectation of safety and freedom from unnecessary conflicts with other users. The location, quantity, and type of driveways that connect to the public street have the ability to significantly shape the experience of the various stakeholders from both a safety and operational perspective. Therefore, the Charlotte Department of Transportation (CDOT) has developed the following driveway regulations to help provide the greatest amount of safety and operational efficiency for the users of the public street network.

The requirements set forth in this manual are intended to provide a regulatory framework that will aid the users of this manual as they seek guidance on the City's minimum requirements and expectations for driveway design, access management, and general permit requirements. Additionally, this manual outlines the existing City processes whereby driveway permits (commercial and residential) get issued, and provides specific transportation resources that will assist design professionals as they produce land development construction plans, and as these plans move through the City's land development permitting processes.

Purpose & Applicability

The primary purpose of the City's Driveway Regulations is to provide helpful regulatory guidance and the minimum driveway design standards to individuals that are engaged in the design, permitting, and construction of private land development projects. City staff will use this manual as a tool to support **The City of Charlotte's [Transportation Action Plan \(TAP\) Policy Objective 2.10.5](#)** (Figure 1), and The City's [Centers, Corridors and Wedges Growth Framework](#). Additionally, City Staff will use the regulations and recommendations provided in this manual as a guide to provide uniform, consistent, and reliable administration of the City's commercial driveway regulations and permitting procedures for privately funded land development projects.

Policy 2.10.5

The City will continue to implement comprehensive access management and context-sensitive sight triangle and site design requirements, consistent with the Urban Street Design Guidelines.

Figure 1: TAP Access Management & Sight Distance Policy

Use of these driveway regulations is not intended to be limited solely to commercial site access to the public right-of-way. This document is also intended to be used in concert with other regulatory documents that influence site access such as the City of Charlotte's [Zoning Ordinance](#); [Subdivision Ordinance](#), and the "Specifications & Standard Provisions" section of the [Charlotte Land Development Standards Manual](#). Moreover, the requirements contained within this document will be applied to public and private street connections to the public street system, respectively.

From a procedural perspective, City Staff will administer the regulations and guidance set forth in this manual in all of the land development activities occurring in the City of Charlotte that include but may not be limited to:

- Commercial Plan Review
- Subdivision Review
- Rezoning Process
- [Traffic Impact Study](#) (TIS) Review

Governing & Regulatory Authority

Per Chapter 19 (Article III, Section 19-66) of the city Code of Ordinance's that states;

Except where otherwise governed and specified by the state department of transportation driveway entrance regulations, it shall be unlawful to construct, maintain, or use a driveway connecting to a public street except in accordance with the city's driveway connection rules and regulations and the terms and conditions of a valid and unrevoked driveway connection permit.

Figure 2: Regulatory Authority

The requirements contained within this document will serve as the “driveway connection rules and regulations” by which any entity, public or private, seeking access to the public street will be required to follow in order to obtain a valid City of Charlotte “driveway connection permit” as described in City Code.

Objectives of this Manual

The objectives of the Driveway Manual are identified below;

1. Provide minimum driveway design and access management requirements and guidance to private landowners and/or developers that seek access to the public street
2. Effectively link appropriate driveway type to the surrounding land-use context
3. Create a tool that allows for the consistent administration of the driveway requirements and policies that govern access to the public street system

CHAPTER 2 - PROCESS & PROCEDURES

General Requirements

A private land owner/developer seeking access to the public right-of-way has two City Land Development processes for obtaining a commercial driveway permit. A driveway permit can be obtained via the City's [Commercial Plan Review Process](#), and/or the City's [Subdivision Review Process](#). It is important to note that the approval of the development plan (commercial or subdivision) provides approval of each of the driveways/street connections proposed as a part of the subject development plan. This means that no separate driveway permit document will be

issued as a part of the land development plan approval with one exception. The developer/design professional will need to obtain a physical driveway permit from the North Carolina Department of Transportation's District 2 Office when any of the previously mentioned access points connect to a public street maintained by the North Carolina Department of Transportation (NCDOT).

City Code Requirements for Driveways

Charlotte City Code includes the following specific provisions related to driveways:

Expiration of Permit

Construction of a driveway must be completed within one year after the issuance of a driveway connection permit. An extension may be granted upon showing that valid reasons exist for the delay. A request for an extension must be submitted in writing at least fourteen (14) days prior to the permit expiration date. **Charlotte, North Carolina, Municipal Code §19-69a**

Permit Revocation

A driveway connection permit may be revoked for failure to comply with city's driveway connection rules and regulations or the terms and conditions of a driveway connection permit. If a driveway connection permit is revoked, the city may require the permittee or property owner to physically eliminate the driveway and replace or repair any existing sidewalk. If the permittee or property owner does not physically eliminate the driveway and replace or repair the sidewalk within a reasonable period of time, the city may do so and charge the expense to the permittee or property owner. **Charlotte, North Carolina, Municipal Code §19-69b**

Driveway Abandonment

If a driveway connection is abandoned, the city may require the permittee or property owner to physically eliminate the driveway and replace or repair the sidewalk. If the permittee or property owner does not physically eliminate the driveway and replace or repair the sidewalk within a reasonable period of time, the city may do so and charge the expense to the permittee or property owner. **Charlotte, North Carolina, Municipal Code §19-69c**

Driveway Bond

The city may, in its sole discretion, authorize the issuance of a certificate of occupancy or authorize the use of a driveway connection prior to completion of all work required in a driveway connection permit by requiring the permittee to post a bond to ensure the completion of required work. **Charlotte, North Carolina, Municipal Code §19-70**

Driveway Variance

The city may, in its sole discretion, grant a variance from the driveway connection rules and regulations in order to preserve a tree within a public right-of-way for which a tree removal permit is required under [section 21-63](#) of this Code and the granting of such a variance

would not be inconsistent with the objectives and spirit of the driveway connection rules and regulations. **Charlotte, North Carolina, Municipal Code §19-71**

Driveway Permits on CDOT Maintained Streets

As previously noted, the procedure for obtaining a driveway permit via the Commercial Plan Review Process is explained in – depth on the City of Charlotte [Development Services webpage](#).

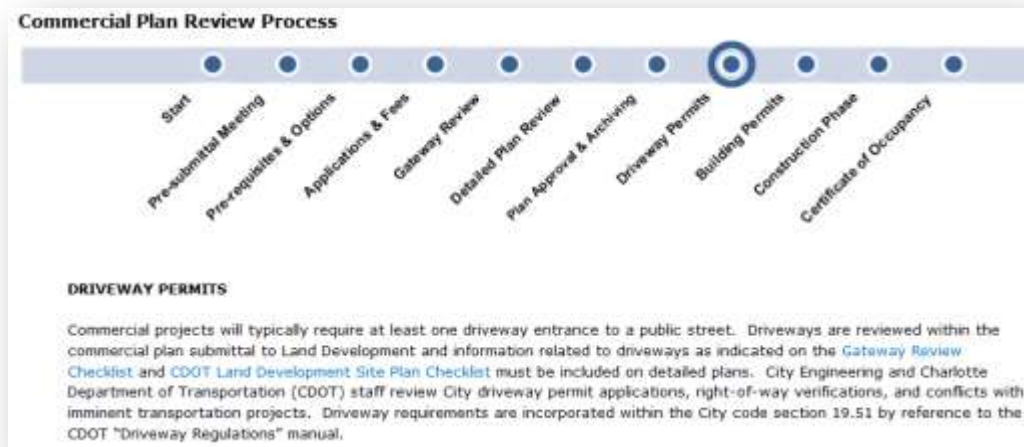


Figure 3: Excerpt from Charlotte Development Services Web Portal

Driveway Permits on NCDOT Maintained Streets

COMMERCIAL DRIVEWAYS ON STATE-MAINTAINED STREETS – Driveways accessing NCDOT roadways require a separate Driveway Permit review and approval from NCDOT. This can happen concurrently with or upon completion of the [detailed plan review process](#) with the city, but NCDOT cannot sign off on the permit until the City has provided tentative approval of the plans. LD Plan coordinators will contact applicants when their Commercial Plan has been tentatively approved by the City and ask that they bring 5 sets of plans and 5 NCDOT driveway applications to the LD front counter on the lobby level of the Charlotte Mecklenburg Government Center. NCDOT driveway permit applications must have original signatures on each copy.

[NCDOT Driveway Application](#)

Once the City generates the NCDOT driveway permit submittal package, the customer will be notified and responsible for the pick-up and delivery of the submittal package to the NCDOT Division 10, District 2 office located at 7605 District Drive (off of Old Concord Road in the Newell community).

Refer to the NCDOT driveway permit form for the "construction inspection" fee required on every permanent and/or temporary driveway submittal at the time the submittal is delivered to NCDOT. **THE CITY WILL NOT ACCEPT NOR HANDLE MONEY ASSOCIATED WITH THIS STATE FEE.**

Please note the NCDOT approval process may take six to eight weeks or longer. If you are required to submit an NCDOT permit, you will need to include an additional five (5) sets of plans. NCDOT submittal plans must include complete sets of the civil engineering portion of the project.

Once NCDOT has approved and issued driveway permits, the applicant should bring 2 copies of the NCDOT permit and stamped approved plans back to City of Charlotte Land Development office to obtain final sign-off from CDOT. If changes were made to the plans during NCDOT's review, once the State approval is complete, up to seven (7) sets of the sheets (or one copy of the revised PDF file) related to the driveway (s) reflecting any changes made by the State will be required for the City's approval.

Figure 4: Excerpt from Charlotte Development Services Web Portal

Non – Residential Change of Use

A new driveway permit will be required for non-residential change of use development plans if they meet any of the following criteria.

1. Current driveway is in disrepair and does not meet City minimum design
2. When a change of use results in an additional 20 daily trips per day above the existing use
3. In cases where the existing driveway does not meet ADA accessibility requirements
4. When there are significant changes to the on-site parking layout and circulation pattern

CHAPTER 3 - DESIGN CRITERIA & ACCESS MANAGEMENT

General Criteria

An overarching goal of the driveway regulations is to provide an access pattern that helps link the operational needs of each site to the public street system and the City's overall growth framework. This means that the appropriate/permitted driveway types, quantities, and appropriate spacing will vary based on land-use, the site's geography, and the type of street for which access is requested. Table 1 provides a summary of the key land-use and transportation priorities established in the Centers, Corridors, and Wedges Growth Framework.

Activity Centers			
Geography	Recommended Land – Use	Transportation Priority	Preferred Driveway Type
Uptown Center	Medium – High Density Mixed Use	Promote Walkability and Transit Use	Type II Modified
Mixed – Use Center	Low – Medium Density Mixed-Use	Easy vehicular access, and pedestrian friendliness	Type II Modified
Industrial Center	Light & Heavy Industrial	Vehicular Access and Circulation	Type III
Growth Corridors			
Transit Station Areas	Medium – High Density Mixed Use	Promote Walkability and Transit Use	Type II Modified
Interchange Areas	Medium – High Density Mixed Use	Auto-oriented	Type II Modified
Established Neighborhood Areas	Low Density Residential	Local Street Inter-connectivity	Type I* & Type III **
General Areas	Low Density Residential	Local Street Inter-connectivity	Type I* & Type III **
Wedges			
General Wedges	Area Plan Recommendations/General Development Policies (GDP's)	Local/Non-Local Street Interconnectivity	Type II Modified & Type III * (at street intersections only)

Table 1: Centers, Corridors, and Wedges Summary

*Type I driveway is for residential access only

**Type III will only be permitted at public/private street intersections

The following series of tables (Table 2 – Table 4) provide a comprehensive overview of driveway selection guidance and criteria that should be considered during the commercial driveway review

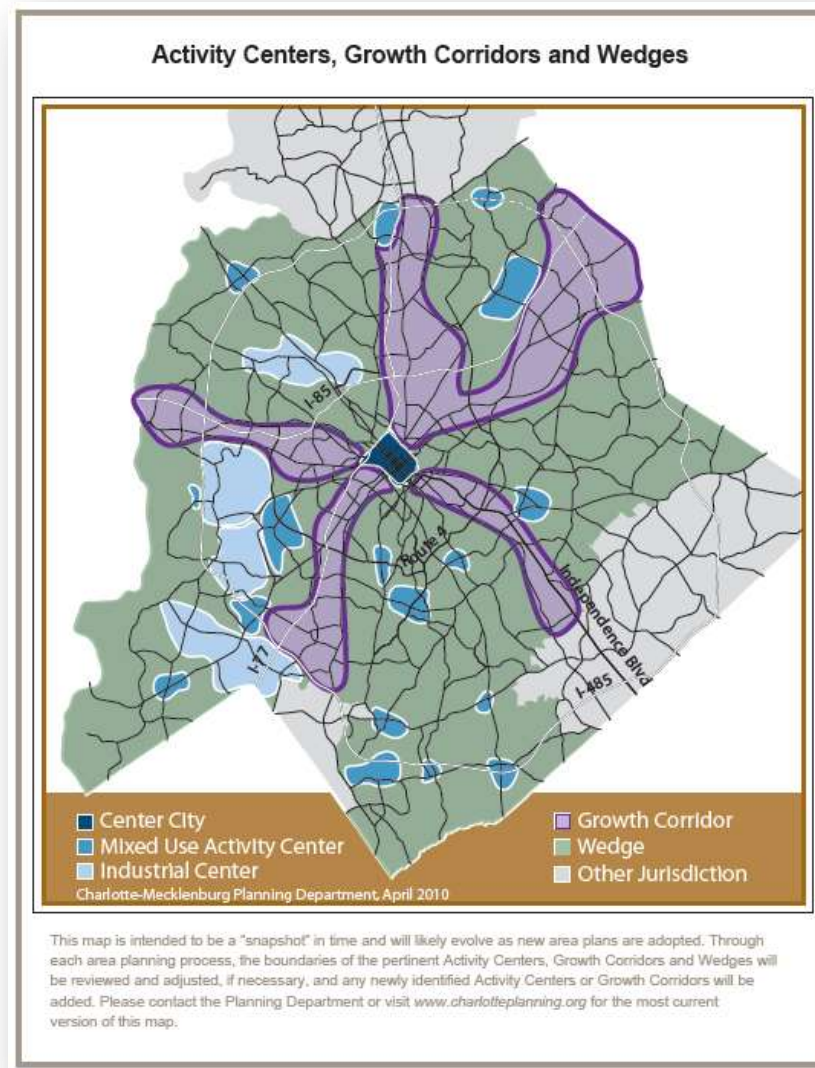


Figure 5: Centers, Corridors, and Wedges Boundaries

process. Each table covers a specific geographic area identified in the City's growth framework (Figure 5). While site specific conditions will have an influence on how CDOT will review and approve commercial driveways, these tables will serve as the basis for CDOT's general expectations regarding the appropriate driveway type, access amount, and general position on access management. It will be the designer's responsibility to demonstrate why a respective site cannot meet the conditions outlined in the tables below, when a development proposes a different access arrangement.

The series of tables below include common terms that will repeat throughout the various geographies covered in each table. The following list of terms and corresponding definitions have been provided to assist the various users of the tables below as to what CDOT's goals and objectives are when permitting access to specific street types given a site's geographic location.

Access Location – generally is defined as the locations where CDOT desires/ will permit access along a site's public/private street frontage relative to other driveways on-site, across the public/private street, and/or adjacent to the proposed driveway.

- **Maximize Spacing** – refers to permitting site access in a manner that limits the amount of closely spaced driveways across a given street frontage, and favors the use of a more centralized driveway(s) that can be shared by multiple uses.
- **Intermediate Spacing** – where feasible shared access will be encouraged, however, individual parcel access will be permitted provided all other minimum driveway requirements (i.e. sight distance, property line separation, separation distance from adjacent driveways), are met.
- **Minimal Spacing** – contemplates smaller parcels per a given street frontage that will pursue individual parcel access to the public street system.

Access Amount – is generally defined as the quantity of driveways that will be permitted along a site's public street frontage.

- **Limited Direct Access** – promotes the use of the lower volume side street (where present) being CDOT's preferred site access location, and the prohibition of direct access to the higher volume street. Direct access to the higher volume street will only be permitted where no such lower volume side street exists.
- **Minimize Additional Access** – one driveway per site frontage will generally be permitted unless there's a significant case that the site's circulation/operations do not work with a single access.
- **Permit Additional Access** – provided the site meets all other applicable requirements for access (i.e. sight distance, property line separation, separation distance from adjacent driveways), CDOT will generally permit more than one driveway across a site's public street frontage.
- **No Direct Access** – All access will need to be provided via a lower volume side street, and/or a shared driveway that consolidates multiple land-uses.

Access Restrictions & Traffic Mitigations - refers to the likelihood that either access will be restricted to vehicular movements less than full movement, and whether or not any association public infrastructure (medians, turn lanes, traffic signals) will be required as a condition of the driveway permit.

- Refer to Chapter 4 of this document for a detailed description of when both access restrictions will be implemented and traffic mitigations will be considered.

Centers

Site Location	Street Type	Access Location	Access Amount	Preferred Driveway Type	Access ⁴ Restrictions	Traffic ⁴ Mitigations
Mixed-Use Activity Center	Parkway	Maximize Spacing	Limited Direct Access	Type III	High	High
	Boulevard		Minimize Additional Access	Type III/Type II modified	Medium - High	
	Avenue				High	
	Class III				Medium	
	Major		Intermediate Spacing	Type II Modified/Type II	Low	Medium
	Minor				N/A	
	Collector				Low	
	Main	N/A	No Direct Access	N/A	N/A	N/A
	Local	Minimal Spacing	Permit Additional Access	Type II Modified/Type II	Low	Low
Industrial Center	Parkway	Maximize Spacing	Limited Direct Access	Type III	High	High
	Boulevard		Minimize Access	Type III/Type IV	High/Medium	
	Avenue				High	
	Class III				High	
	Major				Medium	
	Minor				Low	Medium
	Collector		Frequent Access		Low	
	Local		Frequent Access		Low	Low

Table 2: Access within Centers

¹ Access to Parkways will be permitted primarily through the use of public/private street connections. Individual parcel access to the Parkway will be discouraged, and access will be encouraged from the lower volume side streets.

² Type III driveways will be limited to connections of public/private streets and large commercial shopping centers where internal access is shared among the tenants.

³ Access restrictions and Traffic Mitigations will be determined based on the safety and operational needs of the street for which access is desired

⁴ Access restrictions and Traffic Mitigations will be determined based on the safety and operational needs of the street for which access is desired

Corridors

Site Location	Street Type	Access Location	Access Amount	Preferred Driveway Type	Access Restrictions	Traffic Mitigations
Corridor (Transit Station Area)	Parkway	Maximize Spacing	Limited Direct Access	Type III	High	High
	Boulevard			Type III/Type II modified	Medium - High	
	Avenue		High			
	Class III		Medium		Medium	
	Major					
	Minor					
	Collector	Intermediate Spacing	Permit Additional Access	Type II Modified/Type II	Low	
	Main	N/A	No Direct Access	N/A	N/A	N/A
	Local	Minimal Spacing	Permit Additional Access	Type II Modified/Type II	Low	Low
Corridor (Interchange Area)	Parkway	Maximize Spacing	Limited Direct Access	Type III	High	High
	Boulevard			Type II Modified/Type II		
	Avenue					
	Class III					
	Major					
	Minor			Medium	Medium	
	Collector					
	Local		Frequent Access		Low	Low
Corridor (Established Neighborhood Area)	Parkway	Maximize Spacing	Limited Direct Access	Type III	High	High
	Boulevard			Type III/Type II modified	High	High
	Avenue		Intermediate Access	Type III/Type II modified	Medium -High	Medium
	Class III				High	
	Major				Medium	
	Minor					
	Collector	Intermediate Spacing	Type II Modified/Type II	Low	Medium	
	Main	N/A	No Direct Access	N/A	N/A	N/A
	Local	Minimal Spacing	Frequent Access	Type II Modified/Type II	Low	Low
General Corridor	Parkway	Maximize Spacing	Limited Direct Access	Type III		High
	Boulevard			Type II Modified/Type II	High	
	Avenue		High/Medium			
	Class III		High			
	Major					
	Minor	Medium	Medium			
	Collector	Minimal Spacing	Permit Additional Access		Low	
	Main	N/A	No Direct Access	N/A	N/A	N/A
	Local	Minimal Spacing	Permit Additional Access	Type II Modified/Type II	Low	Low

Table 3: Access within Corridors

¹ Access to Parkways will be permitted primarily through the use of public/private street connections. Individual parcel access to the Parkway will be discouraged, and access will be encouraged from the lower volume side streets.

² Type III driveways will be limited to public/private street connections and large commercial shopping centers where internal access is shared among the tenants.

³ No direct parcel access will be permitted to Main Streets. Access will be provided via access to the side streets. Direct site access will be evaluated on a case by case basis is no side street is present.

⁴Access restrictions and Traffic Mitigations will be determined based on the safety and operational needs of the street for which access is desired

Wedges

Site Location	Street Type	Access Location	Access Amount	Preferred Driveway Type	Access Restrictions	Traffic Mitigations
Wedge	Parkway	Maximum Spacing	Limited Direct Access	Type III	High	High
	Boulevard			Type III/Type II modified		
	Avenue		Minimize Additional Access	Type II Modified/Type II		
	Class III					
	Major					
	Minor	Intermediate Spacing				
	Collector		Permit Additional Access			
	Local	Minimum Spacing				

Table 4: Access within Wedges

¹Driveway review/approval within wedges will focus on “improving the capacity of the existing transportation system”

This will be achieved by evaluating the existing land-use context along supporting driveway connections that advance the objectives outlined in the most recent Council Adopted Small Area Plan for the respective area.

CHAPTER 4 – DRIVEWAY DESIGN CRITERIA

General Criteria

The final decisions regarding the appropriate driveway type, placement, and quantity of driveways per site are based on various factors including but not limited to the proposed land-use, traffic characteristics of the adjacent public street, existing site conditions, proposed density, and other environmental factors and considerations. In general, the Charlotte Department of Transportation will follow national design criteria identified in the latest version of the *AASHTO Policy on Geometric Design* when regulating the minimum requirements for driveway design and driveway placement.

To that end, the City of Charlotte has published a series of standard driveway designs provided in the [Charlotte Land Development Standards Manual](#) (CLDSM) that have a proven record of meeting the traffic demands for most land development projects seeking commercial driveway access to the public street system. In cases where the standard driveway designs do not meet the development's site-specific needs, the site designer can provide a non-standard driveway design to CDOT for review and consideration.

In cases where a site-specific driveway design is proposed, the site designer should anticipate a review time longer than the typical 5 or 15-business day commercial plan review timeframe. The site designer is encouraged to do as much advanced coordination of such design as is practical before the construction documents are officially submitted for review to prevent the official permitting schedule for the site from being negatively impacted.

The following section of this document entitled "Standard Driveway Types" will provide a brief definition of each driveway type, its general applicability, and specific design considerations for each respective standard driveway type. The subsequent design considerations in each subsection should not be considered a comprehensive analysis of every aspect of the respective driveway type, but key considerations that should be noted during the site design. CDOT reserves the right to require a different driveway type than what a designer proposes based on safety, proper alignment of the specific driveway type to its appropriate geographic/land-use context (i.e. Centers, Corridors, and Wedges), coordination with the public street that the driveway accesses and the influence of the specific driveway on site design.

Standard Driveway Types

Driveway Type	Land Use	Design Vehicle	Recommended Width	Key Consideration
Type I	Low – Density Single – Family Residential	P-20	16-20'	Low volume, low/no large trucks
Type II/Type II-Modified	Medium/High Density Residential & Single-Tenant Commercial	SU-30	26 – 30'	Urban Context /High Pedestrian Activity
Type III	High Trip Generating Commercial Shopping Centers & Industrial Uses	WB-62	35 – 40'	Low Pedestrian Volume
Type IV	Industrial	WB-62	35 – 40'	High Truck Activity

Table 5: Standard Driveway Summary Table

Type I (CMLDS 10.24A,B,C & 10.25A,C & 10.27)

Definition: Any driveway that provides access to single-family attached and detached residences, duplexes, or triplexes. This driveway has no radius returns and is either constructed as a drop-curb concrete ramp where standard 2'6" vertical curb-and-gutter is present or constructed to the back of existing curb where valley curb is present. Sidewalks (unless located at back-of-curb) do not change grade when crossing a type I driveway.

Application & Land-Use Context: This driveway type should be used for all single-family residential driveways.

Design Considerations: Type I driveways must be designed with sufficient length to accommodate the anticipated number of vehicles such that no parked vehicles will overhang the sidewalk. The design must include at least 20 feet of pavement between the right-of-way and any structure.

Type II (CMLDS 10.24A,B,C & 10.25B,D & 10.26)

Definition: A drop-curb concrete ramp driveway that provides access to small office, multi-family, retail, recreational, industrial, or institutional buildings. This driveway does not have radius returns. Sidewalks (unless located at back-of-curb) do not change grade when crossing a type II driveway.

Application & Land-Use Context: This driveway should be used for any facilities that generate a low to moderate number of vehicle trips (20 – 100 trips/day). Type II driveways are also preferred for urban or highly commercialized areas where high numbers of pedestrians can be expected to travel along the intersecting sidewalk and where too many driveways are present to allow for the spacing necessary to accommodate type III driveways. Type II driveways are also appropriate for sites with un-channelized vehicular circulation or where it is otherwise important that entering vehicles decelerate significantly to maneuver on site.

Design Considerations:

Type II driveways should always be designed to the minimum width that effectively accommodates the vehicles entering and exiting the site. Typically type II driveways are designed to accommodate the single unit design vehicle (SU-30). Where larger vehicles are anticipated, the driveway apron should be designed to accommodate the actual wheel paths of the turning vehicle, rather than providing a uniform width, which is often unnecessarily large. Wherever possible, planting strips should be provided to separate the sidewalk from the driveway apron, thereby allowing a constant grade for the sidewalk.

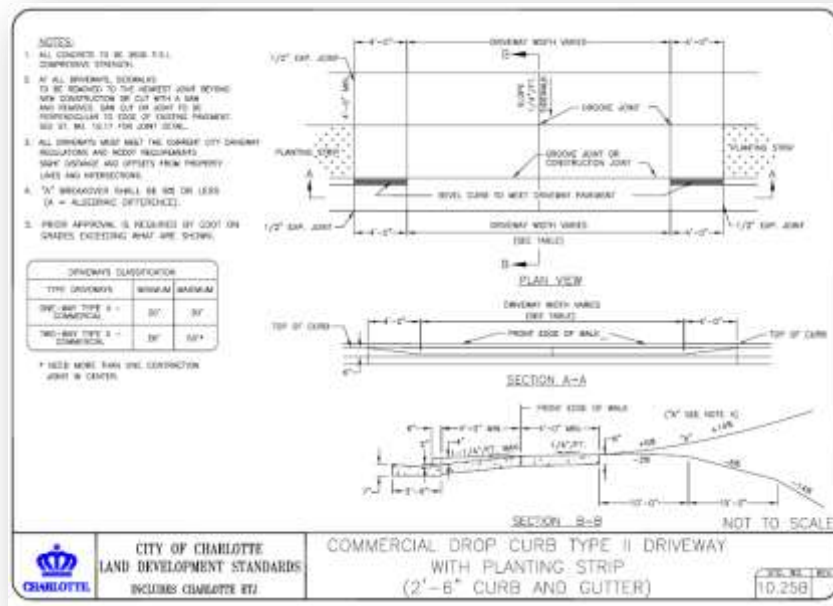


Figure 6: Commercial Type II & Residential Type I Driveway w/ Planting Strip

Type II – Modified (CMLDS 10.25E)

Definition: A drop-curb concrete ramp driveway that serves land uses in urban zoning districts. This driveway has small radius returns. Sidewalks do not change grade when crossing a type II driveway.

Application & Land-Use Context: This driveway should be used for any facilities in the following zoning districts.

- Mixed Use Development District (MUDD)
- Uptown Mixed Use District (UMUD)
- Neighborhood Services (NS)
- Urban Residential (UR)
- Transit Oriented Development (TOD)
- Any special urban overlay districts

Type II-modified driveways can also be used where sufficient planting strips are present and there is an operational need to provide radius returns to accommodate larger turning vehicles while still using a drop-curb style driveway.

Design Considerations:

This driveway should be designed to the smallest width that will accommodate all anticipated turning vehicles. In general, the radius should be equal to or no greater than the width of the planting strip as noted on the CLDSM construction detail.

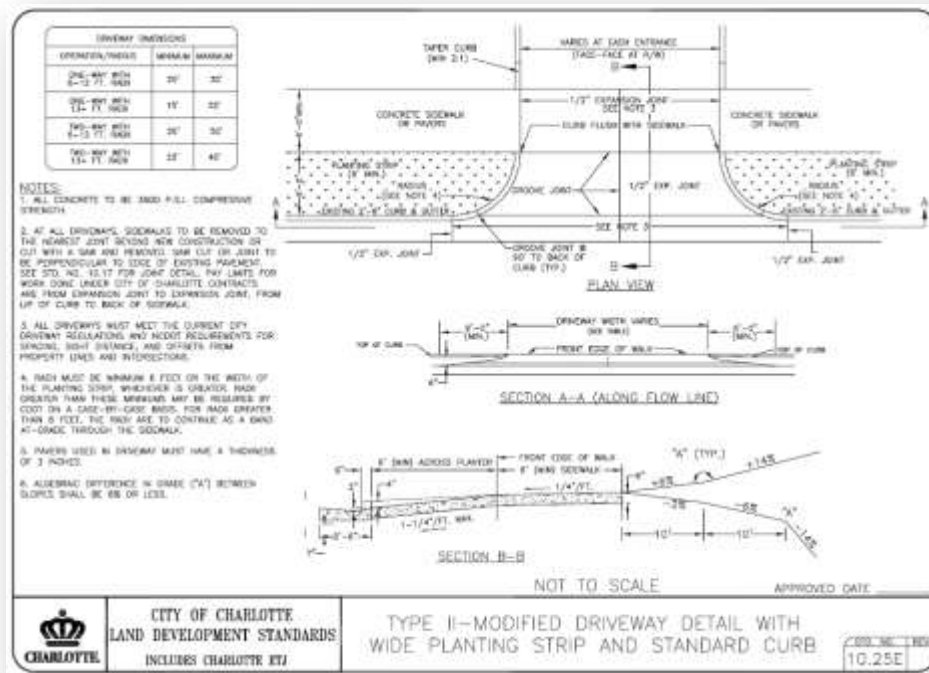


Figure 7: Commercial Type II - Modified Driveway w/ Planting Strip

Type III (CMLDS 10.28)

Definition: A street-type driveway with radius returns. Intersecting sidewalks are interrupted across type III driveways, but wheelchair-accessible ramps are present to provide continuous passage across the driveway.

Application & Land-Use Context: This driveway is suitable for facilities with a moderate to high number of vehicle turning movements, or where a substantial number of truck movements are expected to occur. Because type III driveways allow for higher capacity, they are ideal for consolidating access to multiple land uses. This is desirable as a means of increasing the efficiency of vehicles entering and exiting the roadway, and reducing the total number of driveways along a roadway. Type III driveways must be used wherever dedicated left-turn lanes are required in order to facilitate the turns.

Because of the higher vehicle entry and exit speeds and the interruptions they cause to pedestrians, proper spacing is critical for type III driveways. Type III driveways are generally inappropriate in locations with high pedestrian activity.

Design Considerations:

Type III driveways should always be designed to the minimum width that effectively accommodates the vehicles entering and exiting the site. The overall driveway width and the radius returns should be designed to accommodate the actual wheel paths of the turning vehicle. Since larger radius returns increase the distance required for a pedestrian to cross, they should be designed to the smallest radius which still accommodates the anticipated entering and exiting traffic and which still allows for a reasonable turning speed. Type III driveways should be located on the site where the

highest vehicular utilization can occur and where proper channelization can be provided.

Since type III driveways tend to serve higher volumes of entering and exiting traffic, the driveway stem must also be designed to provide an adequate amount of internal channelization, thereby reducing the potential for entering traffic to back-up into the public right-of-way.

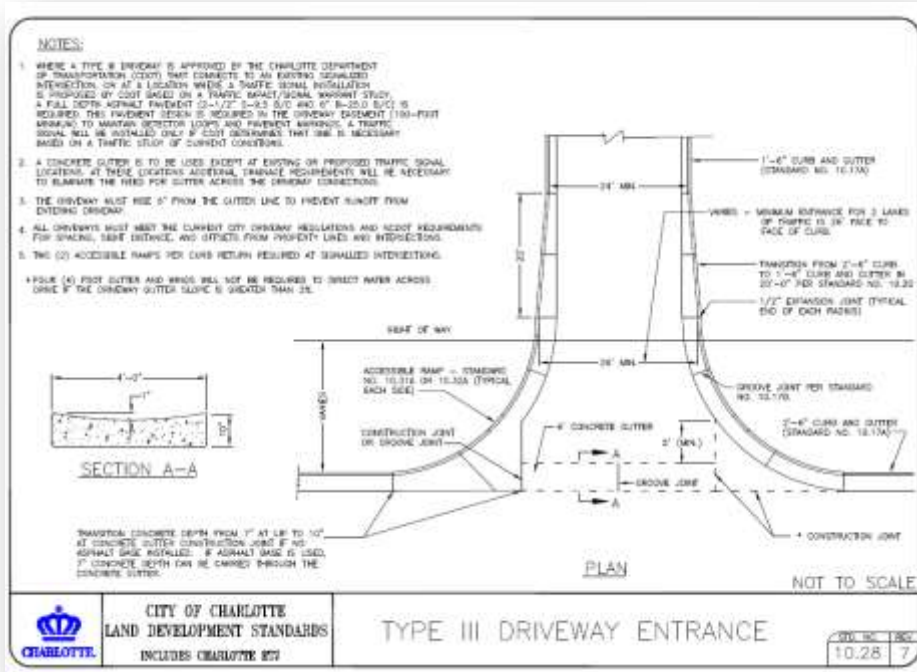


Figure 8: Type III Driveway Entrance/Public Street Intersection

Convenience stores & Gas Stations

From both an on-site circulation and driveway access perspective, access for convenience stores/fillings stations presents a unique challenge for balancing the needs of the users of the subject facility and to provide safe access to the public street system. It has been CDOT's experience that convenience stores' primary desire is to have corner access near signalized intersections (Figure 9).

In all situations, no Type III driveways will be permitted for access to convenience stores/gas filling stations due the combination of the trip generation of this land-use and poorly defined on-site circulation. CDOT will work with the site designers to ensure these site plans offer the highest degree of on-site traffic organization and vehicular circulation.



Figure 9: Access for Convenience Stores & Gas Stations

Channelization & Internal Driveway Access

Appropriate driveway channelization length aids in the effectiveness of commercial driveways by helping to organize entering and exiting traffic without introducing excessive maneuvering within the functional area of the driveway. In all circumstances, 50' will be considered the minimum channelization for commercial site access to the public street. This dimension will be measured from the back of the driveway apron into the subject site. For larger commercial shopping centers, and higher density mixed-used developments 100' will be the minimum channelization required. No internal driveways will be permitted within the channelized portion of the subject driveway that accesses the public street system. In access where a commercial driveway provides access to a signalized intersection, 200' will be the minimum internal channelization dimension.

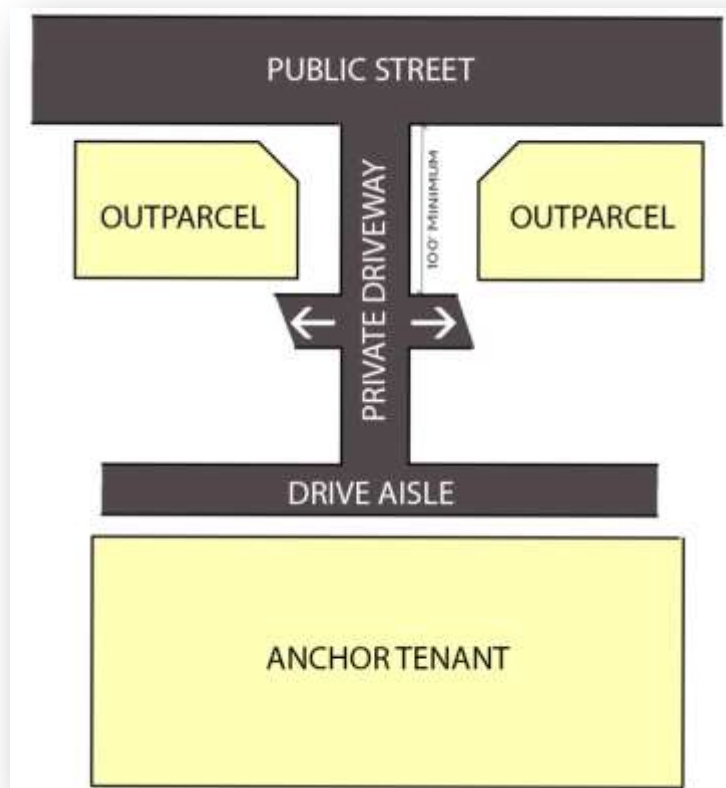


Figure 10: Driveway Channelization

Driveway Alignment

Driveways must intersect the public right-of-way at an angle of no less than 75°, when the desired 90° intersection angle cannot be achieved.

CHAPTER 4 - ACCESS MANAGEMENT

Sight Distance

One of the most important criteria that are necessary to provide safe access to the public street system is the presence of adequate available Sight Distance. As such, all existing and proposed driveway entrances must conform to the latest version of CDOT's [Sight Distance Policy](#).

Driveway Placement

1. Separation from Un-Signalized Intersection (Corner Clearance)

In general, 75' is the minimum separation a commercial driveway should have from an un-signalized intersection. CDOT will evaluate the site specific conditions when the site property frontage is less than 75' or if a spacing greater than 75' creates safety and/or operational problems within the public street (Figure 11).

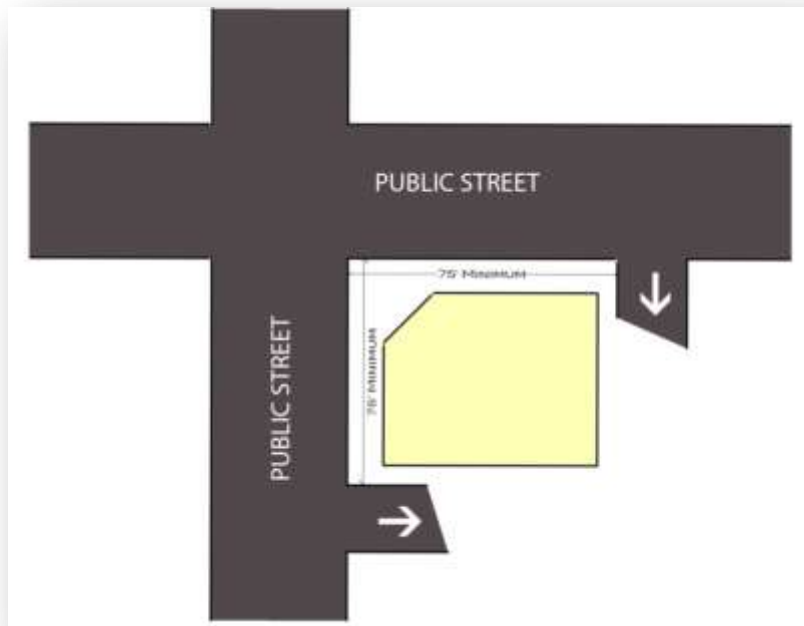


Figure 11: Driveway Placement from Un-signalized Intersections

2. *Separation from Signalized Intersection*

Traffic signals are a critical component of the transportation system, Traffic signals aid in alleviating congestion, metering traffic, and organizing the various transportation demands that motorists and pedestrians place on the public street system. Introducing driveways in close proximity to a signalized intersection can degrade the intersection's capacity, safety, and operations. Therefore, special consideration will always be given to driveways that are proposed in a location that could affect an existing or proposed traffic signal.

200' from signalized intersections (approach and departure side) will be the minimum distance required permit a commercial driveway access (Figure 12). Driveway placement will be evaluated on a site-specific basis when a site is adjacent to a traffic signal and its property frontage is less than 200' or it is otherwise not possible to provide the minimum separation.

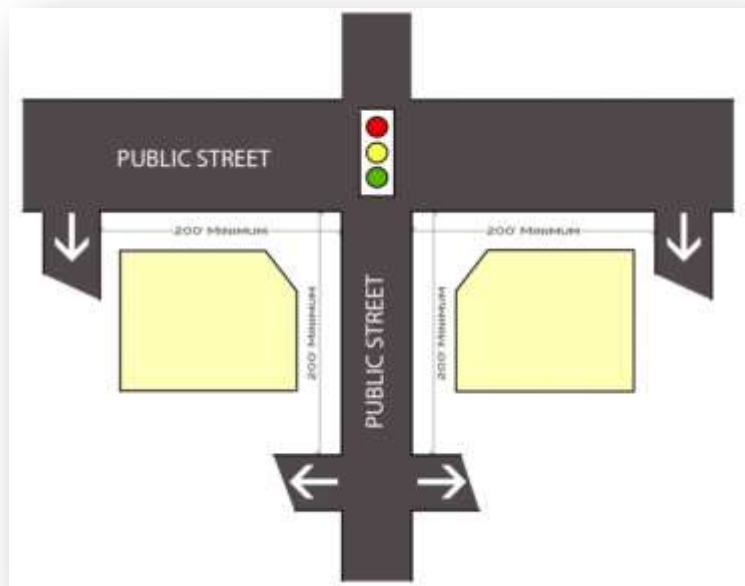


Figure 12: Driveway Placement from signalized intersections

Where dual left turns are present at signalized intersections, any new driveway proposed within the functional area of the intersection will be restricted to right turn-in, and right turn-out (commonly referred to as “right-in/right-out”) vehicular movements. This will be accomplished via the installation of a raised concrete median island (Figure 13).

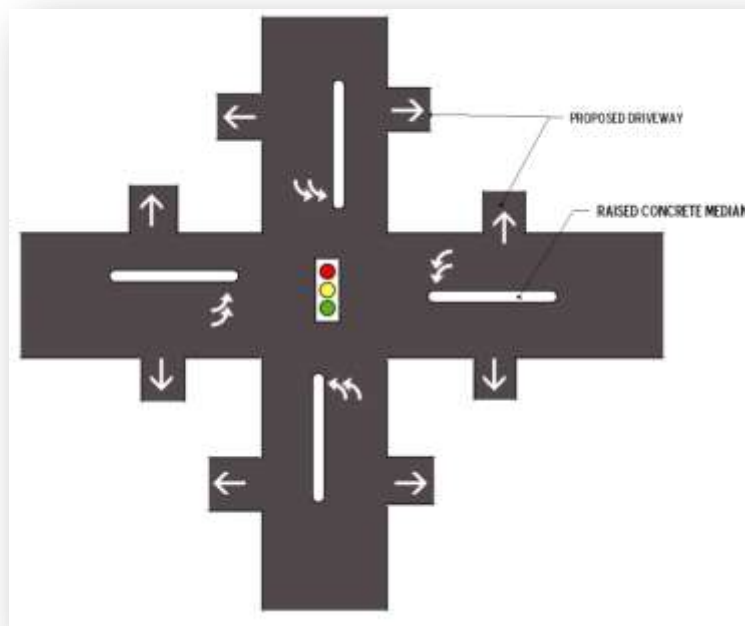


Figure 13: Access within the functional area of a signalized intersection

Developers will be required to enter into a [Signal Installation/Modification Agreement](#) when the proposed development either warrants a new traffic signal, or the development alters an existing traffic signal. This includes but is not limited to the modifications/impacts to existing loop detectors, controller cabinet, pull boxes, wood poles, strain poles, and mast arms. The Signal Installation/Modification Agreement will be required to be executed and any associated fees paid prior the construction plan approval.

3. Separation from Adjacent Driveways

Driveways too closely spaced to one another have the ability to create sight distance problems, and introduce unnecessary conflicts within the public street network (Figure 14). In circumstances where access is proposed to a non-median divided public street that is classified as a Collector Street or higher, the minimum driveway separation will be 50 ft. This dimension can be reduced to 20 ft when access is proposed to a median-divided public street classified as a Collector Street or higher. ***Note that the previously mentioned driveway spacing will not accommodate every situation, and CDOT reserves the right to modified/adjust these dimensions based on the existing/proposed site and roadway conditions.***

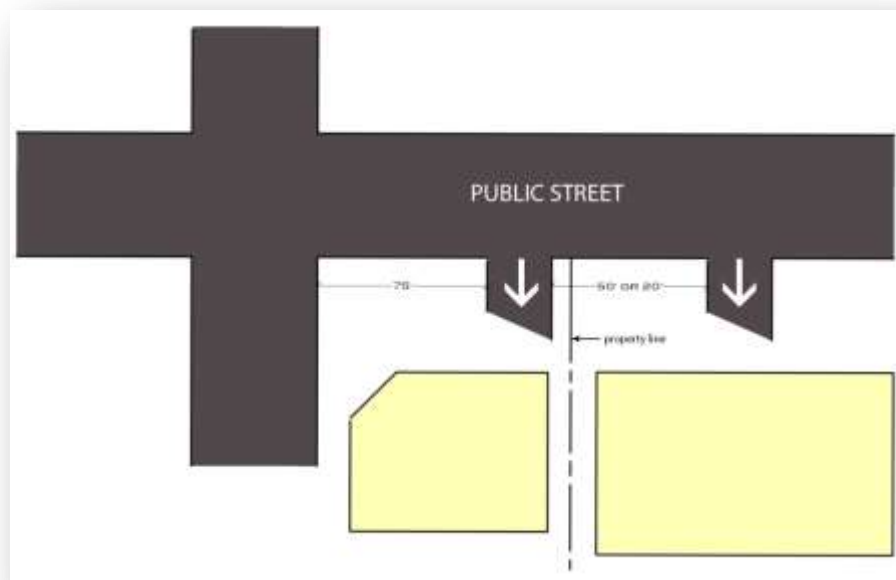


Figure 14: Driveway Separation from adjacent driveways

4. Separation from Property Line

In general, ten feet (10') is the minimum driveway separation from a site's property line. This distance is measured from the property line to the radius point of the driveway. In cases where there is no radius for the driveway (Type II, and Type IV), the ten foot measurement will be taken from the tie-in location of the taper to the existing roadway pavement. The application of the ten foot property line separation requirement should ensure a minimum of twenty feet (20') between driveways. In cases where an existing

driveway is located closer to the property line than ten feet, CDOT may require additional separation from the property line for the proposed driveway to ensure a minimum of twenty feet of driveway separation is provided (Figure 15).

In an urban infill scenario, the property line separation requirements may be reduced on a case-by-case basis in order to determine an access plan for the site that minimizes any harmful impacts of the driveway to the street system and still allows the site to achieve other urban design objectives. Where practical, CDOT will encourage the use of shared driveway access between the individual properties to help produce a more organized and pedestrian oriented form of access management.

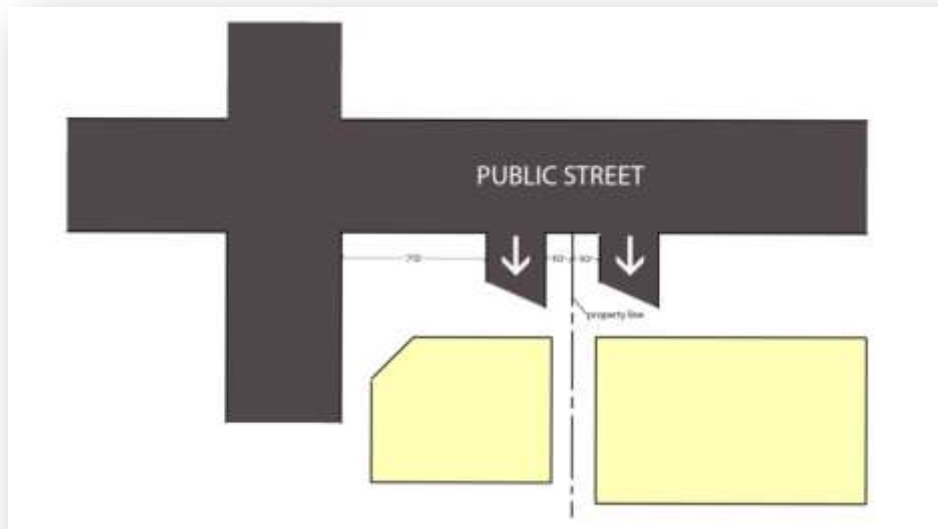


Figure 15: Driveway Separation from Property Line

Turn Lane Warrants

Under North Carolina General Statute **§160A-307 “Curb cut regulations”**, the City has the authority to require certain transportation infrastructure including but not limited to raised medians, and accelerations and deceleration lanes to ensure the safe and efficient operations of the public street network.

Left-turn Lanes

Generally, a left-turn lane will be required for sites that generate 50 or more left turns from a thoroughfare during the peak hour. Left-turn lanes will generally not be required for streets classified lower than a thoroughfare, but exceptions may include higher volume collector streets or streets that have known operational, safety, or sight distance deficiencies. Within Mixed-Use activity centers, a left-turn may not be required even if the subject site exceeds the 50 peak hour left threshold. The Urban Street Design Guidelines

provides additional information on the appropriateness of left-turn lanes based on street type.

Right-turn Lanes

Generally CDOT does not require nor support mid-block right-turn deceleration lanes as a condition of the driveway permit approval. Right-turn lanes provided at mid-block locations have the potential degrade the pedestrian and cyclist experience due to the frequent interruptions in the continuous bike path, and the higher entry speeds that exclusive right-turn lanes allow into the respective developments.

Right – turn lanes may be required and are generally more appropriate in Industrial Centers where there’s an anticipated higher volume of industrial truck traffic that will access the subject uses, however, right-turn lanes are generally not appropriate in Activity Centers unless they are being provided at signalized intersections.

Access Restrictions

While providing adequate public safety and insuring efficient street operations will be the overarching criteria in determining whether or not CDOT restricts site access, there are a few specific criteria where a property owner and/or private developer should expect for their respective site access to be restricted to vehicular movements less than full-movement.

1. When the site proposes access to an existing public street cross –section is four lanes or greater
2. Within 150ft (approach or departure)of a signalized intersection’s
3. Whenever site access is proposed where dual – left turns turn lanes are present
4. At locations where a known accident and/or street operations problems exists
5. Where available sight distance isn’t present

The criteria above are not intended to represent a comprehensive list of every situation where CDOT will restrict site access; however, it provides a general framework of the most common situations where property owners and/or private developers should expect limited site access.

CHAPTER 5 – TRAFFIC IMPACT STUDY (TIS)

A Traffic Impact Study (TIS) may be required for developments that have the potential to create a significant impact to the adjacent or surrounding public street system. These include but are not limited to large or very intense developments that generate 2,500 daily trips above the existing use, or developments with driveways that propose new traffic signals or modifications to existing traffic signals. If a TIS is required, it must be prepared by a qualified traffic engineer licensed in the state of North Carolina and must be completed in accordance with CDOT’s [Traffic Impact Study \(TIS\) Guidelines](#).

CHAPTER 6 – PAVEMENT MARKINGS AND SIGNAGE

All traffic control signs and pavement markings placed on driveway entrances and within the public right-of-way must conform to the latest edition or revision of both the “[Manual on Uniform Traffic Control Devices](#) (MUTCD),” and CDOT’s latest version of the [Pavement Marking Standards](#) and shall

be located and maintained in accordance with the approved site plan.

CHAPTER 7 – TRAFFIC CONTROL

All traffic control signs and pavement markings placed on driveway entrances, and within the public right-of-way must conform to the latest edition or revision of the “Manual on Uniform Traffic Control Devices (MUTCD),” and CDOT’s latest version of the [Work Area Traffic Control Handbook \(WATCH\)](#) and shall be located and maintained in accordance with the approved site plan.

CHAPTER 8 – SCHOOLS

The regulations and design criteria provided within this document will be used by CDOT staff during the review of new school construction plans. In cases where a new school public school is proposed, the Charlotte Mecklenburg School (CMS) System will be required to conduct a Transportation Technical Memorandum (TTM) to help identify changes in traffic patterns associated with the proposed school and to properly identify any required mitigations necessary to alleviate the increase in traffic caused by the new school construction. Additionally, each proposed school will be required to submit a completed NCDOT [Municipal School Transportation Assistance \(MTSA\)](#) vehicular queue calculator to insure adequate on-site vehicular stacking exists, and vehicular queuing does not spill onto the public right-of-way.

Private and Charter Schools will be evaluated on a case-by-case basis to identify that on-site vehicular storage exists. These sites may be required to submit a TTM based on the number of students, adequacy of the existing public infrastructure to accommodate the increase in traffic volume, proposed bell times, and future student population growth potential.

CHAPTER 9 – RESIDENTIAL DRIVEWAYS

In most cases, residential driveways will be permitted via the submittal and subsequent review/approval of a single-family subdivision plan. However, there are cases where residential access to the public right-of-way is being proposed independent of a large tract subdivision plan. In those cases, CDOT’s Public Service Division (704-336-3894) will provide the approval of the residential driveway. Note that an individual lot inspection fee will be administered by the City’s Engineering & Property Management Department to inspect these driveways.

Outside of the review/approval process for a Subdivision Plan, a commercial driveway review/permit will be required in cases where a single-family residential driveway seeks access to a public street classified as a Class III Thoroughfare or higher, or if the use generates 20 trips/day or more and connects to a local or collector street.

APPENDIX A - RESOURCE DOCUMENTS

[USDG POLICY DOCUMENT](#)

[CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL \(CLDSM\)](#)

[CDOT WORK AREA TRAFFIC CONTROL HANDBOOK \(WATCH\) MANUAL](#)

[CDOT SIGHT DISTANCE POLICY](#)

[CDOT PAVEMENT MARKING STANDARDS](#)

[CDOT DEVELOPER TRAFFIC SIGNAL AGREEMENT](#)

[CDOT TRAFFIC IMPACT STUDY \(TIS\) GUIDELINES](#)

[STREET LIGHTING](#)

[NCDOT COMPLETE STREETS POLICY](#)

[CITY OF CHARLOTTE/NCDOT STREET CROSS – SECTION GUIDELINES](#)

[NCDOT DRIVEWAY PERMIT APPLICATION FORM](#)

[NCDOT POLICY ON STREET AND DRIVEWAY ACCESS TO NORTH CAROLINA](#)

APPENDIX B - DEFINITIONS SECTION

Access - Ingress and egress to property bordering on public roadways.

Driveway – an access way that is intended to serve primarily vehicular access to and from a subject property to the public and/or private street system.

Driveway Angle - The acute angle between the driveway centerline and the curb line.

Driveway Width - Width of the driveway at the property line (R/W) measured parallel with the centerline.

Frontage - The length along the street right-of-way of a single property tract or roadside development area between the edges of the side property lines. A corner property at a street intersection has a separate frontage along each street.

Full Access - Unrestricted ingress and egress to property bordering on City streets.

Restricted Access - When one or more vehicular movements may not be permitted into or from a City street.

Right-of-Way - The land within legally boundaries whose title rests in the City designated or intended for roadway purposes or an easement dedicated for the same use.

Roadway - That portion of the right-of-way, which is ordinarily available and open to the general public for vehicular travel.

Side Clearance - The distance measured parallel to the curb line at the property line (R/W) between the adjacent side property line and the nearest edge of the driveway.