



2025 CLDSM UPDATES

DEVELOPMENT CENTER

Purpose

- The purpose of the 2025 CLDSM update is to more align the CLDSM with the updated standards of the UDO along with other public standard updates (City, State and Federal).

CLDSM Details that were updated

- CLDSM Special Provisions
- CLDSM 10.24A
- CLDSM 10.24B
- CLDSM 10.24C
- CLDSM 10.25A
- CLDSM 10.25B
- CLDSM 10.25C
- CLDSM 10.25D
- CLDSM 10.25E
- CLDSM 10.25F
- CLDSM 10.27A
- CLDSM 10.27B
- CLDSM 10.28
- CLDSM 10.45A
- CLDSM 10.45B
- CLDSM 21.24
- CLDSM 30.11A
- CLDSM 30.11B
- CLDSM 30.11C
- CLDSM 30.11D NEW
- CLDSM 40.11
- CLDSM 50.09D

CLDSM Special Provisions

Language was updated to implement recent PROWAG updates.

	ALL LOCAL STREETS (Except Industrial & Collector)		LOCAL INDUSTRIAL AND COLLECTOR ONLY	
	Level/Rolling	Hilly	Level/Rolling	Hilly
e. Min. Tangent between Horizontal Reverse Curves (ft.)	50	50	100	100
f. K Value (CREST/SAG)	20/20	15/20	28/35	20/20
K Value (STOP Condition)	9	5	14	9

Note: K=Rate of Vertical Curvature for Minimum Sight Distance. Provisions of adequate stopping sight distance may require use of larger K values than the minimums listed above. The Charlotte Department of Transportation, under Section 19-245 of City Code, reserves the right to prescribe more stringent sight distance standards and/or means to achieve adequate sight distance than these listed above.

2. INTERSECTIONS:

a. Maximum Street Grade at Intersections ^{a,b}

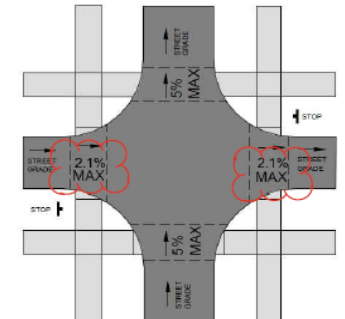
STOP or YIELD Condition: Vertical alignment is 2.10% maximum through the crosswalk areas (marked or unmarked). Outside of the crosswalk areas the vertical alignment is 5% maximum within 100 feet of an intersection ^c

UNCONTROLLED APPROACH Condition: Vertical alignment is 5% maximum through the crosswalk areas. Where feasible, it is recommended that the vertical alignment for a through-movement street also be set at 2.10% maximum through the crosswalk areas (marked or unmarked). Outside of the crosswalk areas, see B.1.b for maximum grade.

b. Midblock Pedestrian Street Crossings: At midblock crossings, the cross slope of the pedestrian street crossing is allowed to equal the street grade

c. Minimum Angle of Intersection is 75 degrees

d. See Charlotte Unified Development Ordinance Section 31.3.D for intersection sight distance requirements.



a Preferred option: Design intersections with a max. 2.10% street grade through the crosswalk area of all legs of the intersection. This will provide a level intersection where the required sidewalks, curb ramps, and street crossings can be constructed with the use of CLDSM standard details included in the plans. Special attention to drainage design is warranted to ensure that these intersections drain properly. For intersections with street grades greater than 2.10% in any direction it is strongly recommended that the sidewalks, curb ramps, and street crossings be included as part of the design process and site-specific details of the designs and any alternate layouts shall be included in plans as appropriate.

b Refer to Charlotte Unified Development Ordinance Section 31.1.D regarding potential modification of required street spacing and stub street requirements in areas of steep slopes.

c 100' is the standard for Level/Rolling Terrain. In areas classified as Hilly Terrain, 100' is preferred length, but 40' minimum may be approved by the Director of Transportation. This only applies within the City of Charlotte limits and not in the ETJ, where NCDOT vertical alignment criteria would govern.

(Please note: Modifications to standards as noted in ^b and ^c or the use of "Hilly Terrain" street alignment criteria are typically requested via a subdivision sketch plan submittal. The sketch plan submittal must contain sufficient information to support the request for modified standards. For example, modification requests based upon topographical constraints should include existing and proposed street profiles.)

CLDSM Special Provisions Cont...

Language was updated to implement recent PROWAG updates.

F. SIDEWALKS, RAMPS, AND DRIVEWAYS

1. Where sidewalks and pedestrian routes within street crossings (including marked and unmarked crosswalks) are provided, they must be constructed so they are accessible to all potential users, including those with disabilities.

All pedestrian facilities within the public right of way are to be designed per requirements of the latest Public Right-of-Way Accessibility Guidelines (PROWAG). The designer is encouraged to reference the complete PROWAG document for additional information (www.accessboard.gov). Buildings and other structures not covered by PROWAG must comply with the applicable requirements of the ADAAG.

2. Sidewalks shall be constructed of not less than 3000 P.S.I. concrete and shall be four (4) inches thick, constructed on an adequately graded base, except where a sidewalk crosses a driveway it shall be six (6) inches thick. Subgrade shall be compacted to 95% of the maximum density obtainable with the Standard Proctor Test. The surface of the sidewalk shall be steel trowel and light broom finished and cured with an acceptable curing compound. Tooled joints shall be provided at intervals of not less than five (5) feet and expansion joints at intervals of not more than forty-five (45) feet. The sidewalk shall have a desired lateral slope of 1.5% (2.10% maximum).

EXAMPLE SIDEWALK CONSTRUCTION DIMENSIONS:		
WIDTH	RISE	CROSS-SLOPE
4'	¼"	1.56%
5'	1"	1.67%
6'	1-1/8"	1.56%
8'	1-½"	1.56%

3. Planting strip adjacent to sidewalk shall be graded to ¼ inch per foot (min.) up to 1 ¼ inch per foot (max.), except where excessive natural grades make this requirement impractical. In such cases, the City may authorize a suitable grade.
4. Sidewalk widths shall be a minimum of five (5) feet unless otherwise specified. Where necessary, a 5' x 5' sidewalk is required at least every 200' as required by PROWAG for a passing zone unless otherwise provided by residential driveways, intersecting sidewalk, etc.
5. Approval of sidewalk construction plans must be obtained as part of the plan review process. Except in unusual circumstances, sidewalk must be located a minimum of (8) eight feet from the back of the curb or at the back of the right-of-way. A recorded public sidewalk easement is required for all sidewalk located outside public right-of-way; the width shall be equal to the distance from the right-of-way line to the back of the sidewalk plus two feet or to the face of building, whichever is less. The sidewalk easement must be recorded with the Mecklenburg County Register of Deeds prior to issuance of a certificate of occupancy for the corresponding building(s).
6. Running slope of all ramps shall be up to 7.5% (8.3% maximum). Ramp length is not required to exceed 15' regardless of the resulting slope, which shall be uniform for the length of the ramp. Curb ramps are required where sidewalks intersect curbing at any street intersection and at Type III driveway connections.
7. For City projects only: On CLDS# 10.24A/B/C, 10.25(A/B/C/D only), and 10.27A/B, the curb and gutter across the front of the driveway shall be measured and paid for separately under Curb and Gutter (either 2'-0" valley gutter, vertical curb, or standard 2'-6" curb and gutter as specified on the details). The curb and gutter is to be measured per linear foot along the surface of the top of the curb. The concrete driveway apron is to be measured per square yard.

CLDSM Special Provisions Cont...

Language was updated to implement recent PROWAG updates.

8. Refer to the WATCH Manual, MUTCD (latest edition), and the PROWAG (latest edition) for construction zone pedestrian routes and signalization and controls for actuators. Curb ramps shall be designed and constructed in accordance with PROWAG.

9. ~~Where pedestrian routes are contained within a street or right-of-way, the grade of pedestrian access routes shall not exceed the general grade established for the adjacent street or highway.~~

II. STORM DRAINAGE

A. GENERAL NOTES

1. Unless otherwise specifically set forth herein, all materials, methods of construction and workmanship for the work covered in reference to stormwater infrastructure construction shall conform to the most recent Standards and Specifications of the North Carolina Department of Transportation (NCDOT).
2. Refer to NCDOT Pipe Material Selection Guide for allowable pipe fill heights and specifications. For fill heights less than 2' (measured from top of pipe to bottom of pavement structure) Class IV/Class V Reinforced Concrete Pipe (RCP) will be required. Designs outside of the selection guide will be approved at the discretion of Charlotte Storm Water Services.
3. All pipes must be sourced through an NCDOT approved producer/supplier and they must participate in the NCDOT QA/QC program for each respective pipe material.
4. Reinforced Concrete Pipe (RCP) may be used in all storm drainage and culvert applications.
5. High Density Polyethylene (HDPE) Pipe may be substituted for pipe diameters of 48" or less but shall not be allowed in culvert applications or installations within an arterial street Right of Way maintained by the City of Charlotte.
6. Corrugated Aluminized Metal Pipe (CAMP) or Corrugated Aluminum Alloy Pipe (CAAP) may only be used in roadway culvert applications requiring 60" or larger pipe diameters. Culverts are defined as open-ended conduits passing through roadway embankments. CAMP and/or CAAP shall not be used in piped storm drainage collection systems that connect to drainage structures, multiple systems, system outlets, etc.
7. Pipes shall have a minimum diameter of fifteen (15) inches (eighteen (18) inches minimum on culverts).
8. The maximum allowable pipe slope is 10 percent.
9. All pipes, regardless of material shall have all joints wrapped with a geotextile fabric (NCDOT Section 1056 – Type 2). Geotextile must extend 12" past each side of joint and edges of bands. Geotextile must be secured to the outside of pipe by methods indicated by engineer.

CLDSM Special Provisions Cont...

Language was updated to implement recent PROWAG updates.

REFERENCES

1. North Carolina Department of Transportation, Standard Specifications for Roads and Structures, latest edition.
2. North Carolina Department of Transportation, Roadway Standards Drawings, latest edition.
3. City of Charlotte Department of Transportation, Work Area Traffic Control Handbook (WATCH), latest edition.
4. City of Charlotte and Mecklenburg County Storm Water Services, Charlotte-Mecklenburg Storm Water Design Manual, latest edition.
5. American Association of State Highway and Transportation Officials most recent edition, A Policy on Geometric Design of Highways and Streets.
6. North Carolina Department of Transportation, Roadway Design Manual, latest edition.
7. NCDEQ -Division of Energy, Mineral, and Land Resources, Erosion and Sediment Control Planning and Design Manual, latest edition.
8. NCDEQ, Storm Water Best Management Practices, latest edition.
9. Charlotte-Mecklenburg SCM Design Manual, latest edition.
10. City of Charlotte, CDOT Pavement Marking Standards, latest edition.
11. The City of Charlotte Urban Street Design Guidelines, adopted by City Council October 22, 2007.
12. Federal Highway Administration, Manual on Uniform Traffic Control Devices (MUTCD), latest edition.
13. United States Access Board, Public Right-of-Way Accessibility Guidelines (PROWAG), latest edition.
14. City of Charlotte, Charlotte Streets Manual.
15. City of Charlotte, Post Installation Inspection and Repair of Storm Drainage Pipes and Culverts, latest edition.
16. Charlotte Storm Water Services, Third-Party Inspection for Pipe Installations, latest edition.

CLDSM 10.24A

Detail was added regarding the driveway apron requirements.

NOTES:

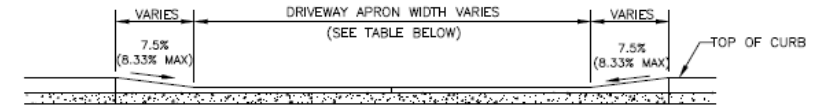
- 1/2" EXPANSION JOINTS REQUIRE INSTALLATION OF ONE 1/2" THICK PIECE OF BITUMINOUS FIBER THROUGH THE ENTIRE SLAB. JOINT MATERIAL SHOULD BE PLACED FLUSH WITH CONCRETE.
- TO LIMIT STORM WATER FLOW DOWN DRIVEWAYS, USE STANDARD 10.24C FOR DRIVEWAYS NEAR LOW POINTS.
- ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
- "A" BREAKOVER SHALL BE 8% OR LESS
(A = ALGEBRAIC DIFFERENCE).
- PRIOR APPROVAL IS REQUIRED BY CDOT ON GRADES EXCEEDING WHAT ARE SHOWN.
- ** PER NC IFC SECTION D103.2, FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE.
- RELATED TO TREE PRESERVATION OR CONSTRAINED SPACES.
- DRIVEWAY APRON MUST BE ASPHALT OR CONCRETE EXTENDED FROM EXISTING ROADWAY EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE, OR BACK OF SIDEWALK, WHICHEVER IS GREATER.

GENERAL NOTES:

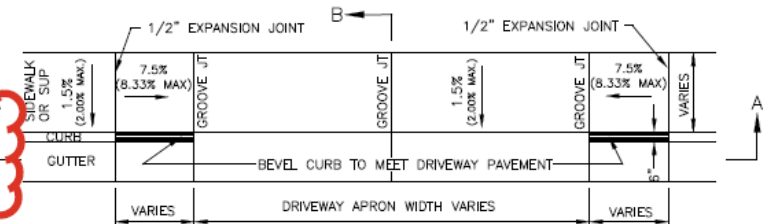
- ALL CONCRETE TO BE 3600 P.S.I. COMPRESSIVE STRENGTH.
- ALL CURB, CURB AND GUTTER AND SIDEWALKS ARE TO BE REMOVED TO THE NEAREST JOINT BEYOND NEW CONSTRUCTION OR CUT WITH A SAW AND REMOVED.
- SAW CUT OR JOINT TO BE PERPENDICULAR TO EDGE OF EXISTING PAVEMENT.
- SEE STD. NO 10.17B FOR DETAIL OF EXPANSION JOINT AND GROOVE JOINT.

DRIVEWAY APRON WIDTH		
TYPE DRIVEWAY	MINIMUM	MAXIMUM
TYPE I-RESIDENTIAL: LOCAL/COLLECTOR ARTERIAL *	10' 15'	24' 24'
ONE-WAY TYPE II COMMERCIAL	20'	30'
TWO-WAY TYPE II COMMERCIAL	26'	50'

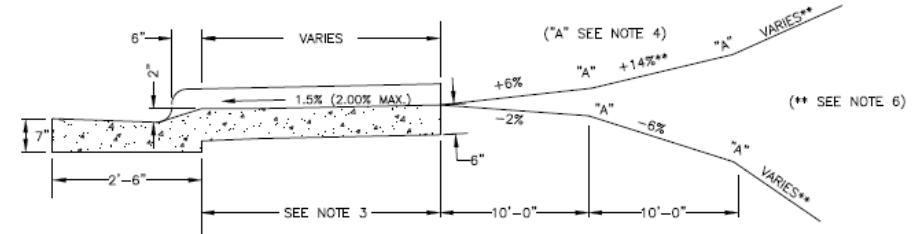
* MUST PROVIDE ON-SITE TURNAROUND



SECTION A - A



PLAN



SECTION B - B

NOT TO SCALE



CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

COMMERCIAL TYPE II AND RESIDENTIAL TYPE I
DROP CURB DRIVEWAY WITH SIDEWALK ABUTTING
CURB (2'-6" CURB AND GUTTER)

DRAFT

STD. NO. 10.24A
REV. 25

CLDSM 10.24B

Detail was added regarding the driveway apron requirements.

NOTE:

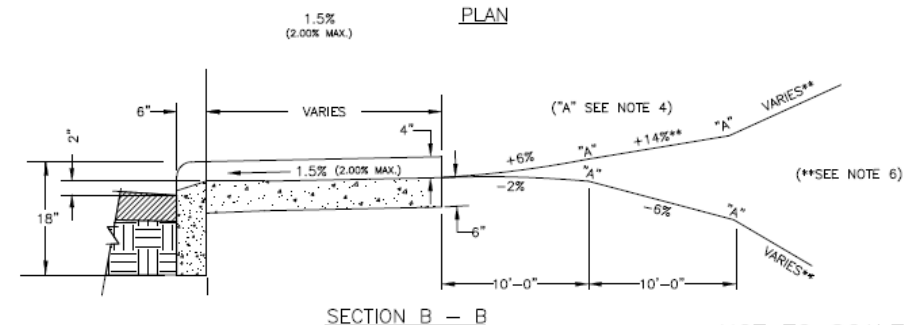
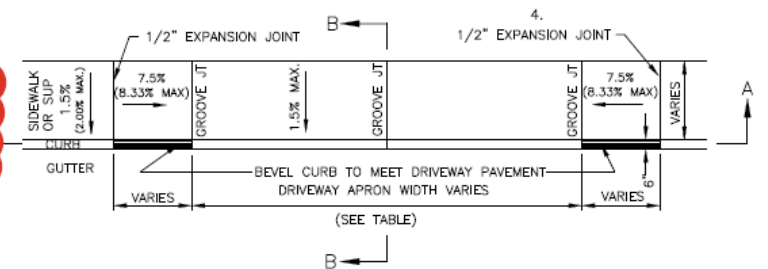
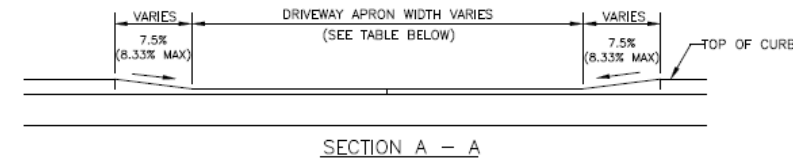
- 1/2" EXPANSION JOINTS REQUIRE INSTALLATION OF ONE 1/2" THICK PIECE OF BITUMINOUS FIBER THROUGH THE ENTIRE SLAB. JOINT MATERIAL SHOULD BE PLACED FLUSH WITH CONCRETE.
- TO LIMIT STORM WATER FLOW DOWN DRIVEWAYS, USE STANDARD 10.24C FOR DRIVEWAYS NEAR LOW POINTS.
- ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
- "A" BREAKOVER SHALL BE 8% OR LESS
(A = ALGEBRAIC DIFFERENCE).
- PRIOR APPROVAL IS REQUIRED BY CDOT ON GRADES EXCEEDING WHAT ARE SHOWN.
- ** PER NC IFC SECTION D103.2, FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE.
- REFER TO CHAPTER 32 OF THE O.D. FOR ADDITIONAL RELATED TO TREE PRESERVATION OR CONSTRAINED SPACES.
- DRIVEWAY APRON MUST BE ASPHALT OR CONCRETE EXTENDED FROM EXISTING ROADWAY EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE, OR BACK OF SIDEWALK, WHICHEVER IS GREATER.

GENERAL NOTES:

- ALL CONCRETE TO BE 3600 P.S.I. COMPRESSIVE STRENGTH.
- ALL CURB, CURB AND GUTTER AND SIDEWALKS ARE TO BE REMOVED TO THE NEAREST JOINT BEYOND NEW CONSTRUCTION OR CUT WITH A SAW AND REMOVED.
- SAW CUT OR JOINT TO BE PERPENDICULAR TO EDGE OF EXISTING PAVEMENT.
- SEE STD. NO 10.17B FOR DETAIL OF EXPANSION JOINT AND GROOVE JOINT.

DRIVEWAY APRON WIDTH		
TYPE DRIVEWAY	MINIMUM	MAXIMUM
TYPE I-RESIDENTIAL LOCAL/COLLECTOR ARTERIAL *	10'	24'
	15'	24'
ONE-WAY TYPE II COMMERCIAL	20'	30'
TWO-WAY TYPE II COMMERCIAL	26'	50'

* MUST PROVIDE ON-SITE TURNAROUND



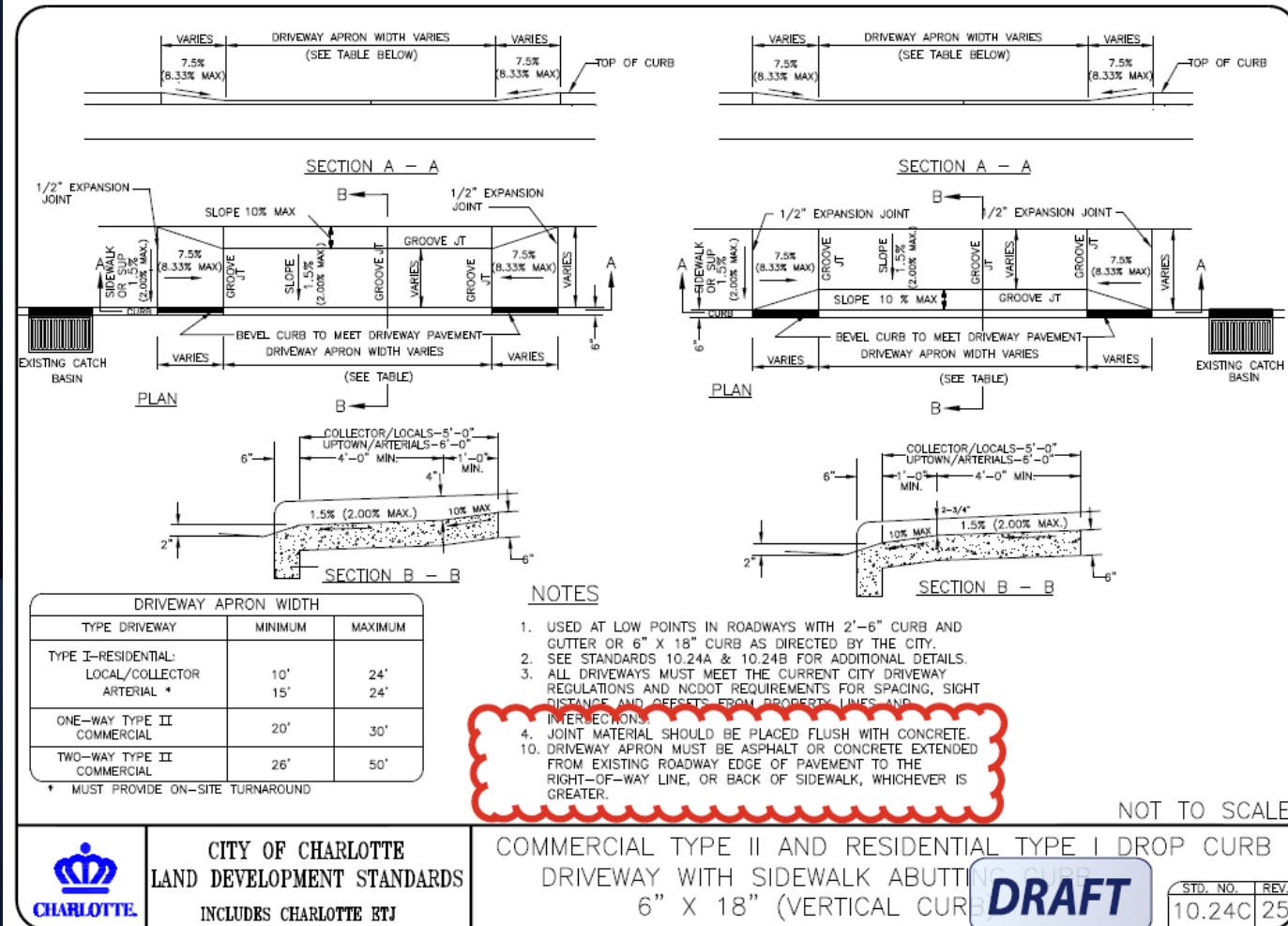
CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

COMMERCIAL TYPE II AND RESIDENTIAL TYPE I DROP CURB
DRIVEWAY WITH SIDEWALK ABUTMENT
(6" X 18" VERTICAL CURB)
DRAFT

STD. NO.	REV.
10.24B	25

CLDSM 10.24C

Detail was added regarding the driveway apron requirements.



Detail was added regarding the driveway apron requirements.

STD. NO.	REV.
10.25A	25

CLDSM 10.25B

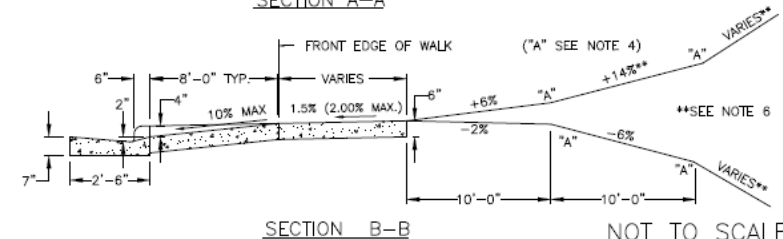
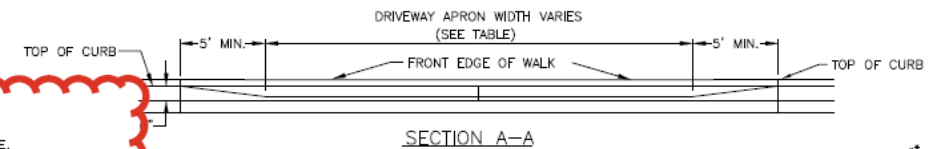
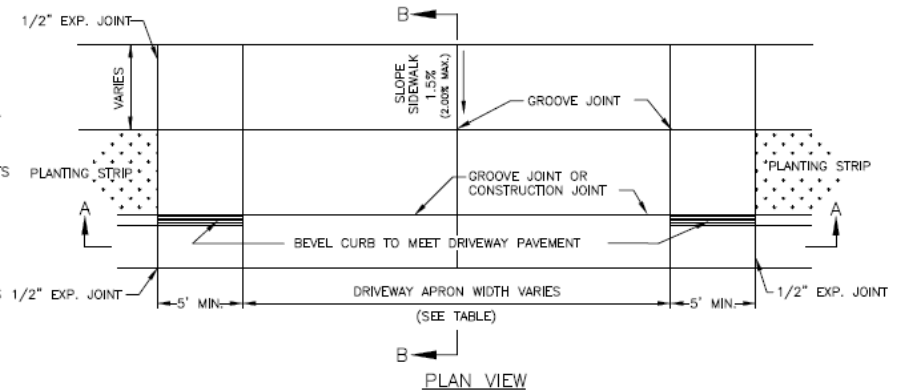
Detail was added regarding the driveway apron requirements.

NOTES:

1. ALL CONCRETE TO BE 3600 P.S.I. COMPRESSIVE STRENGTH.
2. AT ALL DRIVEWAYS, SIDEWALKS TO BE REMOVED TO THE NEAREST JOINT BEYOND NEW CONSTRUCTION OR CUT WITH A SAW AND REMOVED. SAW CUT OR JOINT TO BE PERPENDICULAR TO EDGE OF EXISTING PAVEMENT. SEE STD. NO. 10.17 FOR JOINT DETAIL.
3. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
4. "A" BREAKOVER SHALL BE 8% OR LESS (A=ALGEBRAIC DIFFERENCE).
5. PRIOR APPROVAL IS REQUIRED BY CDOT ON GRADES EXCEEDING THE GRADES SHOWN ON THIS 1/2" EXP. JOINT DETAIL.
6. **PER NC IFC SECTION D103.2, FIRE APPARATUS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE.
7. JOINT MATERIAL SHOULD BE PLACED FLUSH WITH CONCRETE.
8. THIS DETAIL IS ONLY FOR USE WHEN PLANTING STRIP IS 6' OR LESS IN WIDTH. USE TYPE II-MODIFIED DRIVEWAY 10.25E WITH LARGER PLANTING STRIP.
10. DRIVEWAY APRON MUST BE ASPHALT OR CONCRETE EXTENDED FROM EXISTING ROADWAY EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE, OR BACK OF SIDEWALK, WHICHEVER IS GREATER.

DRIVEWAY APRON WIDTH		
TYPE DRIVEWAYS	MINIMUM	MAXIMUM
ONE-WAY TYPE II - COMMERCIAL	20'	30'
TWO-WAY TYPE II - COMMERCIAL	26'	50'*

* NEED MORE THAN ONE CONTRACTION JOINT IN CENTER.



CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE BTJ

COMMERCIAL DROP CURB TYPE II DRIVEWAY
WITH PLANTING STRIP
(2'-6" CURB AND GUTTER)

DRAFT

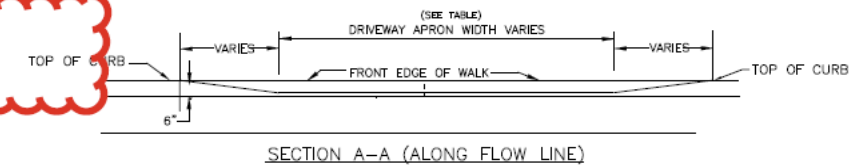
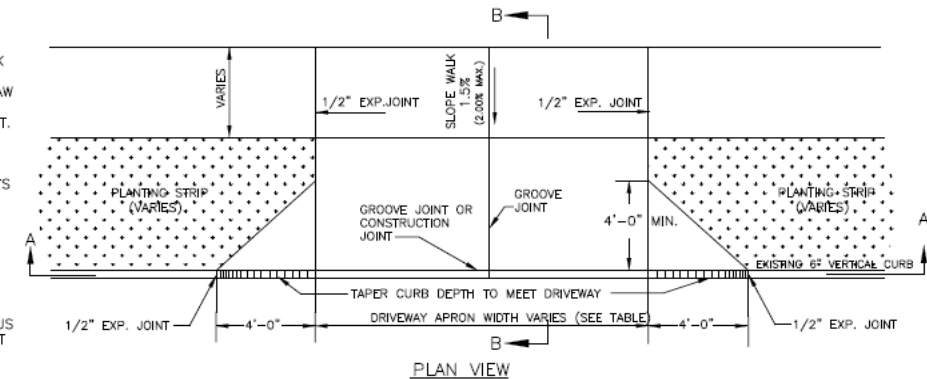
STD. NO. REV.
10.25B 25

CLDSM 10.25C

Detail was added regarding the driveway apron requirements.

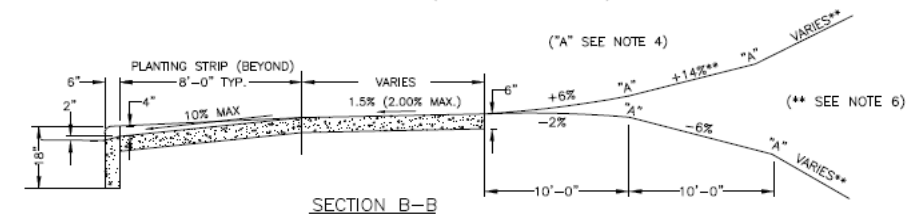
NOTES:

1. ALL CONCRETE TO BE 3600 P.S.I.
2. ALL CURB OR CURB AND GUTTER AND SIDEWALK ARE TO BE REMOVED TO THE NEAREST JOINT BEYOND NEW CONSTRUCTION OR CUT WITH A SAW AND REMOVED. SAW CUT OR JOINT TO BE PERPENDICULAR TO EDGE OF EXISTING PAVEMENT. SEE STD. NO. 10.17 FOR JOINT DETAIL.
3. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
4. "A" BREAKOVER SHALL BE 8% OR LESS.
5. PRIOR APPROVAL IS REQUIRED BY CDOT ON GRADES EXCEEDING WHAT ARE SHOWN.
6. ** PER NC IFC SECTION D103.2, FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE.
7. JOINT MATERIAL SHOULD BE PLACED FLUSH WITH CONCRETE.
8. DRIVEWAY APRON MUST BE ASPHALT OR CONCRETE EXTENDED FROM EXISTING ROADWAY EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE, OR BACK OF SIDEWALK, WHICHEVER IS GREATER.



DRIVEWAY APRON WIDTH		
DRIVEWAY TYPE	MINIMUM	MAXIMUM
LOCAL/COLLECTOR	10'	24'
ARTERIAL *	15'	24'

* MUST PROVIDE ON-SITE TURNAROUND



NOT TO SCALE



CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE BTJ

RESIDENTIAL DROP CURB TYPE I DRIVEWAY WITH
PLANTING STRIP (6" X 18" VERT

DRAFT

STD. NO. REV.
10.25C 25

CLDSM 10.25D

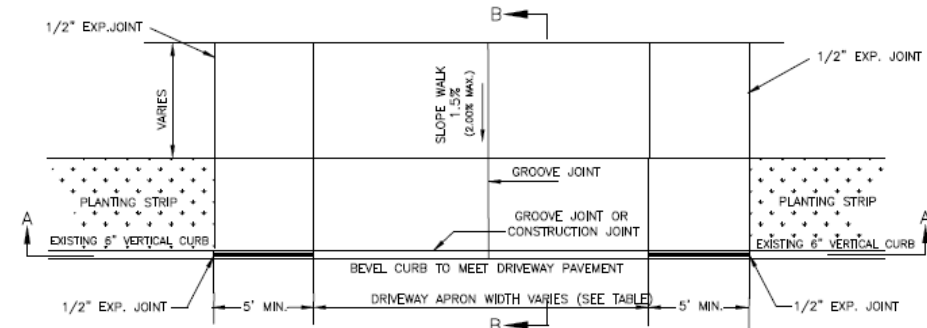
Detail was added regarding the driveway apron requirements.

NOTES:

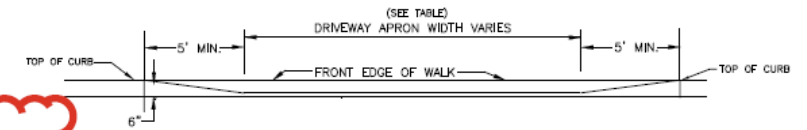
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3. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
4. "A" BREAKOVER SHALL BE 8% OR LESS. (A=ALGEBRAIC DIFFERENCE)
5. PRIOR APPROVAL IS REQUIRED BY CDOT FOR GRADES EXCEEDING THE GRADES SHOWN ON THIS DETAIL.
6. **PER NC IFC SECTION D103.2, FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE.
7. JOINT MATERIAL SHOULD BE FLUSH WITH CONCRETE.
8. THIS DETAIL IS ONLY FOR USE WHEN PLANTING STRIP IS 6" OR LESS IN WIDTH. USE TYPE II-MODIFIED DRIVEWAY 10.25E WITH PLANTING STRIP 6" OR MORE IN WIDTH.
8. DRIVEWAY APRON MUST BE ASPHALT OR CONCRETE EXTENDED FROM EXISTING ROADWAY EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE, OR BACK OF SIDEWALK, WHICHEVER IS GREATER.

DRIVEWAY APRON WIDTH		
TYPE DRIVEWAYS	MINIMUM	MAXIMUM
ONE-WAY TYPE II-COMMERCIAL	20'	30'
TWO-WAY TYPE II-COMMERCIAL	26'	50'*

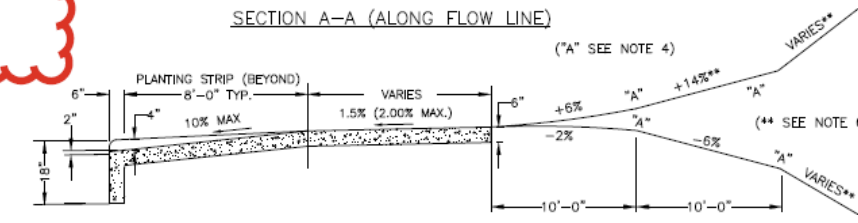
* NEED MORE THAN ONE CONTRACTION JOINT IN CENTER



PLAN VIEW



SECTION A-A (ALONG FLOW LINE)



SECTION B-B

NOT TO SCALE



CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

COMMERCIAL DROP CURB TYPE II DRIVEWAY WITH
PLANTING STRIP (6" X 18" VERT

DRAFT

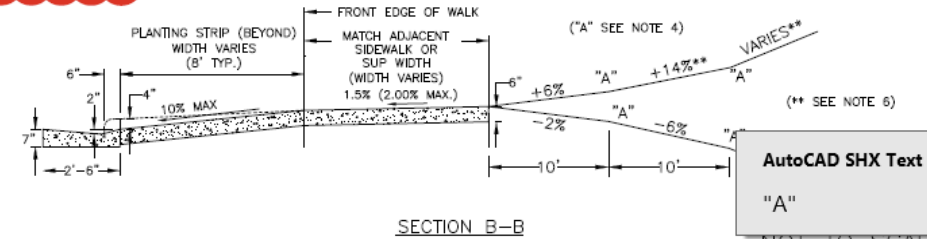
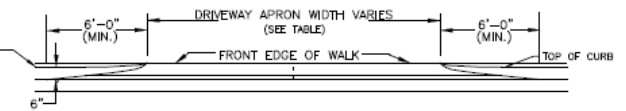
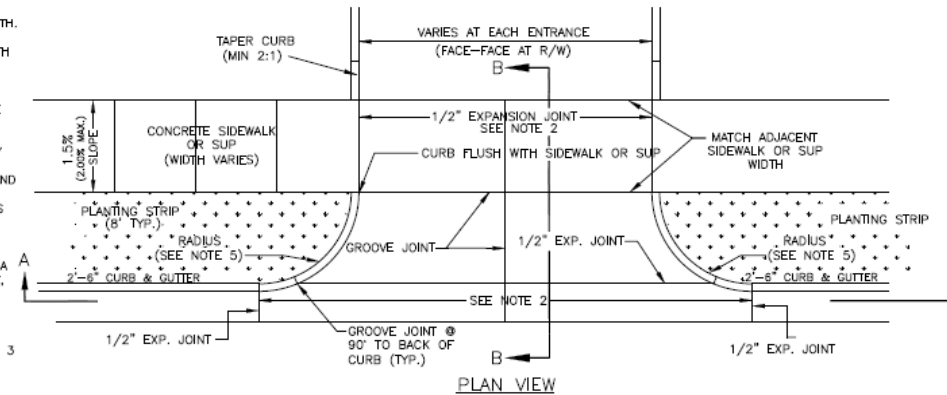
STD. NO. REV.
10.25D 25

CLDSM 10.25E

Detail was added regarding the driveway apron requirements.

NOTES:

1. ALL CONCRETE TO BE 3600 P.S.I. COMPRESSIVE STRENGTH.
2. AT ALL DRIVEWAYS, SIDEWALKS TO BE REMOVED TO THE NEAREST JOINT BEYOND NEW CONSTRUCTION OR CUT WITH A SAW AND REMOVED. SAW CUT OR JOINT TO BE PERPENDICULAR TO EDGE OF EXISTING PAVEMENT. SEE CLDSM STD. #10.17 FOR JOINT DETAIL. PAY LIMITS FOR WORK DONE UNDER CITY OF CHARLOTTE CONTRACTS ARE FROM EXPANSION JOINT TO EXPANSION JOINT, FROM UP OF CURB TO BACK OF SIDEWALK.
3. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
4. ALGEBRAIC DIFFERENCE IN GRADE ("A") BETWEEN SLOPES SHALL BE 8% OR LESS.
5. RADII MUST BE MINIMUM 8 FEET OR THE WIDTH OF THE PLANTING STRIP, WHICHEVER IS GREATER. RADII GREATER THAN THESE MINIMUMS MAY BE REQUIRED BY CDOT ON A CASE-BY-CASE BASIS. FOR RADII GREATER THAN 8 FEET, THE RADII ARE TO CONTINUE AS A BAND AT-GRADE THROUGH THE SIDEWALK.
6. PER NC IFG SECTION D103.2, FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE.
7. PAVERS USED IN DRIVEWAY MUST HAVE A THICKNESS OF 3 INCHES.
8. JOINT MATERIAL SHOULD BE PLACED FLUSH WITH CONCRETE.
9. THE DRIVEWAY MUST RISE 6" FROM THE GUTTER LINE TO PREVENT RUNOFF FROM ENTERING DRIVEWAY.
10. FOR STREETS WITH 2'-0" VALLEY GUTTER, PROVIDE TRANSITION ON EACH SIDE OF DRIVEWAY APRON FROM USING CLDSM STD. DETAIL #10.19.
11. DRIVEWAY APRON MUST BE ASPHALT OR CONCRETE EXTENDED FROM EXISTING ROADWAY EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE, OR BACK OF SIDEWALK, WHICHEVER IS GREATER.



DRIVEWAY APRON DIMENSIONS		
OPERATION/RADIUS	MINIMUM	MAXIMUM
ONE-WAY WITH 6-12 FT. RADII	20'	30'
ONE-WAY WITH 13+ FT. RADII	15'	25'
TWO-WAY WITH 6-12 FT. RADII	26'	50'
TWO-WAY WITH 13+ FT. RADII	22'	40'



CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE RTJ

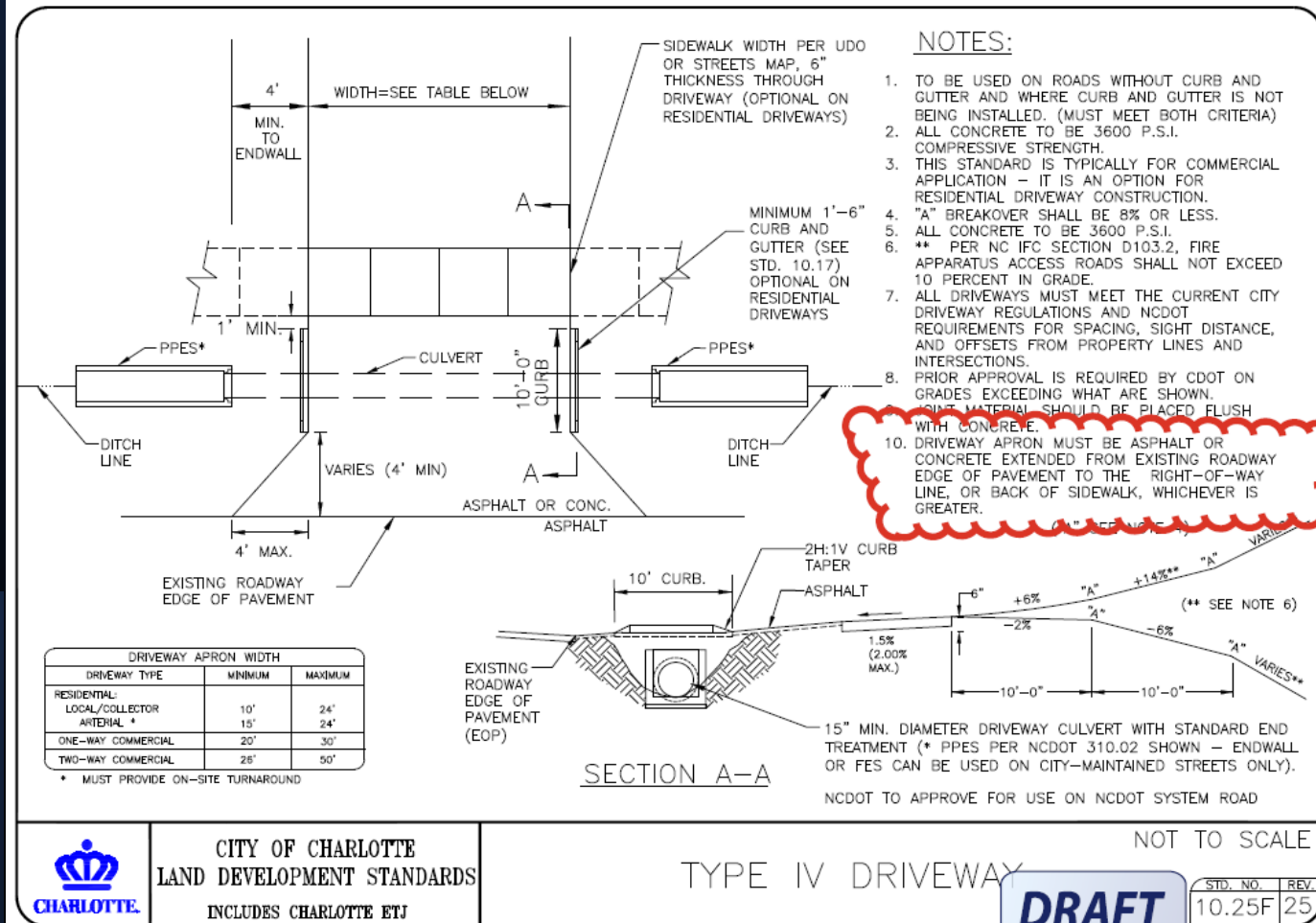
TYPE II-MODIFIED DRIVEWAY DETAIL WITH
WIDE PLANTING STRIP AND STANDARD CURB

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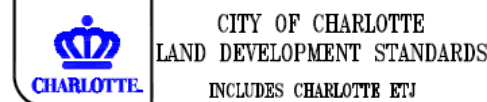
STD. NO. 10.25E
REV. 25

CLDSM 10.25F

Detail was added regarding the driveway apron requirements.



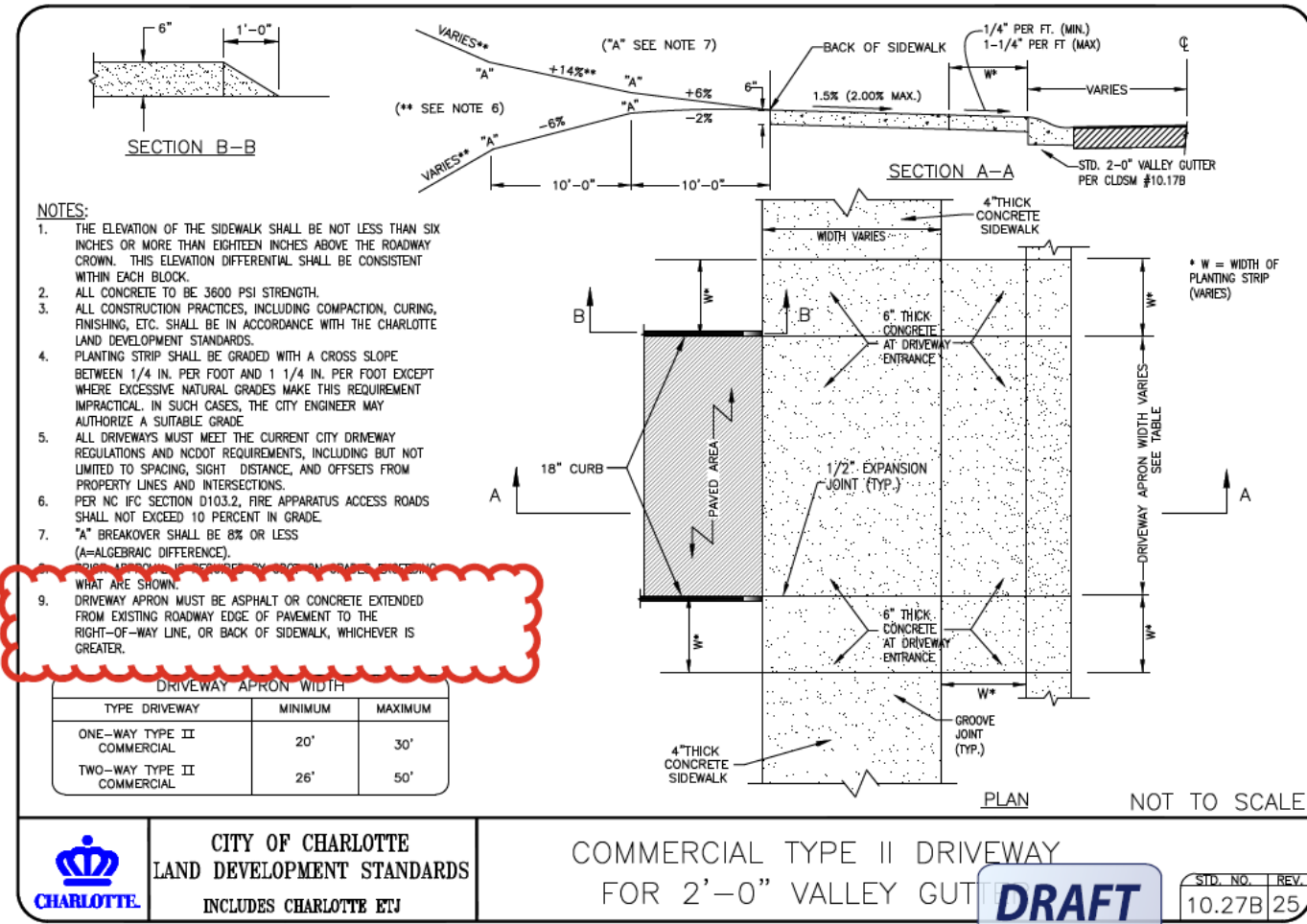
Detail was added regarding the driveway apron requirements.



RESIDENTIAL DRIVEWAY (TYPE 1)
FOR 2'-0" VALLEY GUTTER

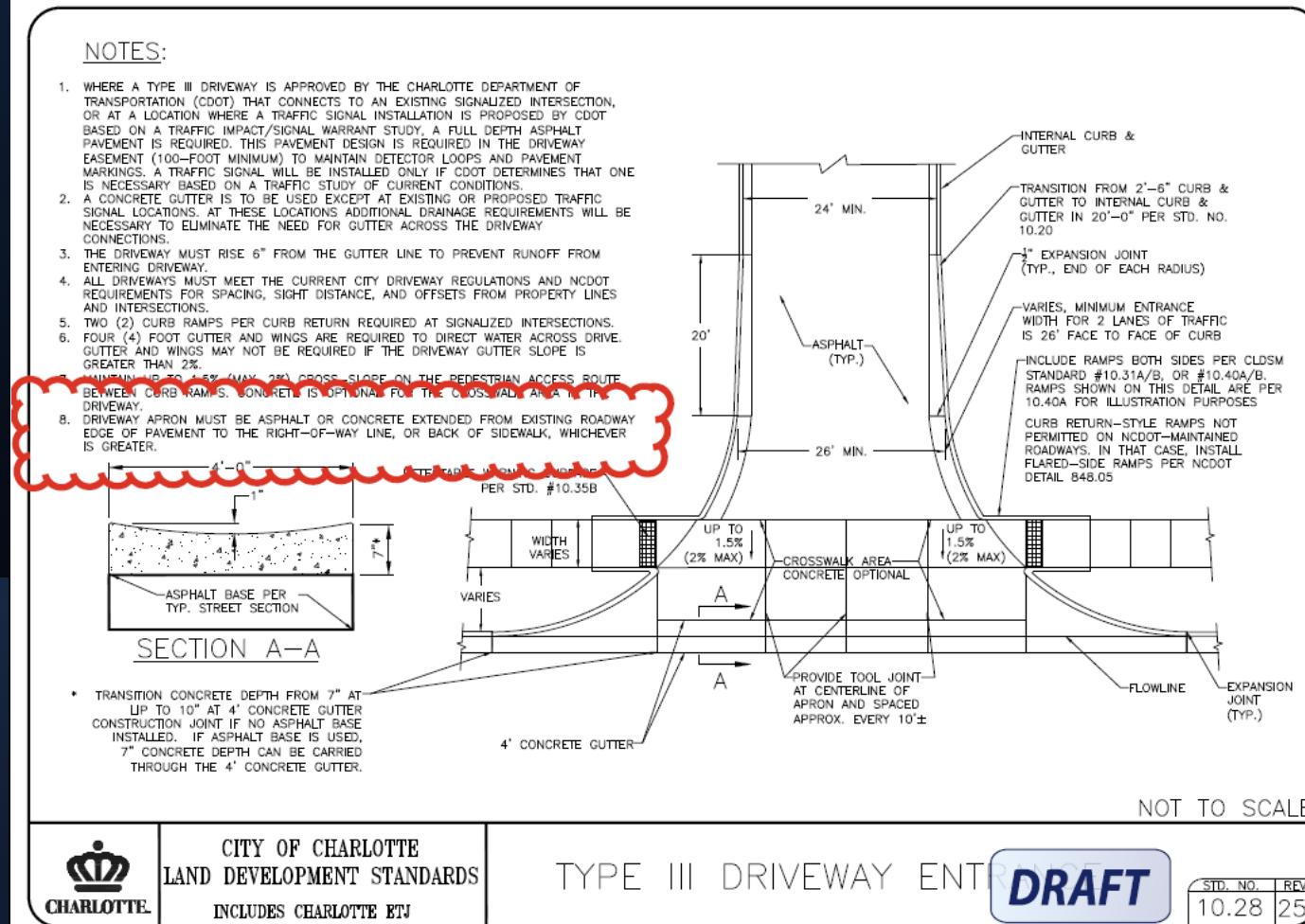
CLDSM 10.27B

Detail was added regarding the driveway apron requirements.



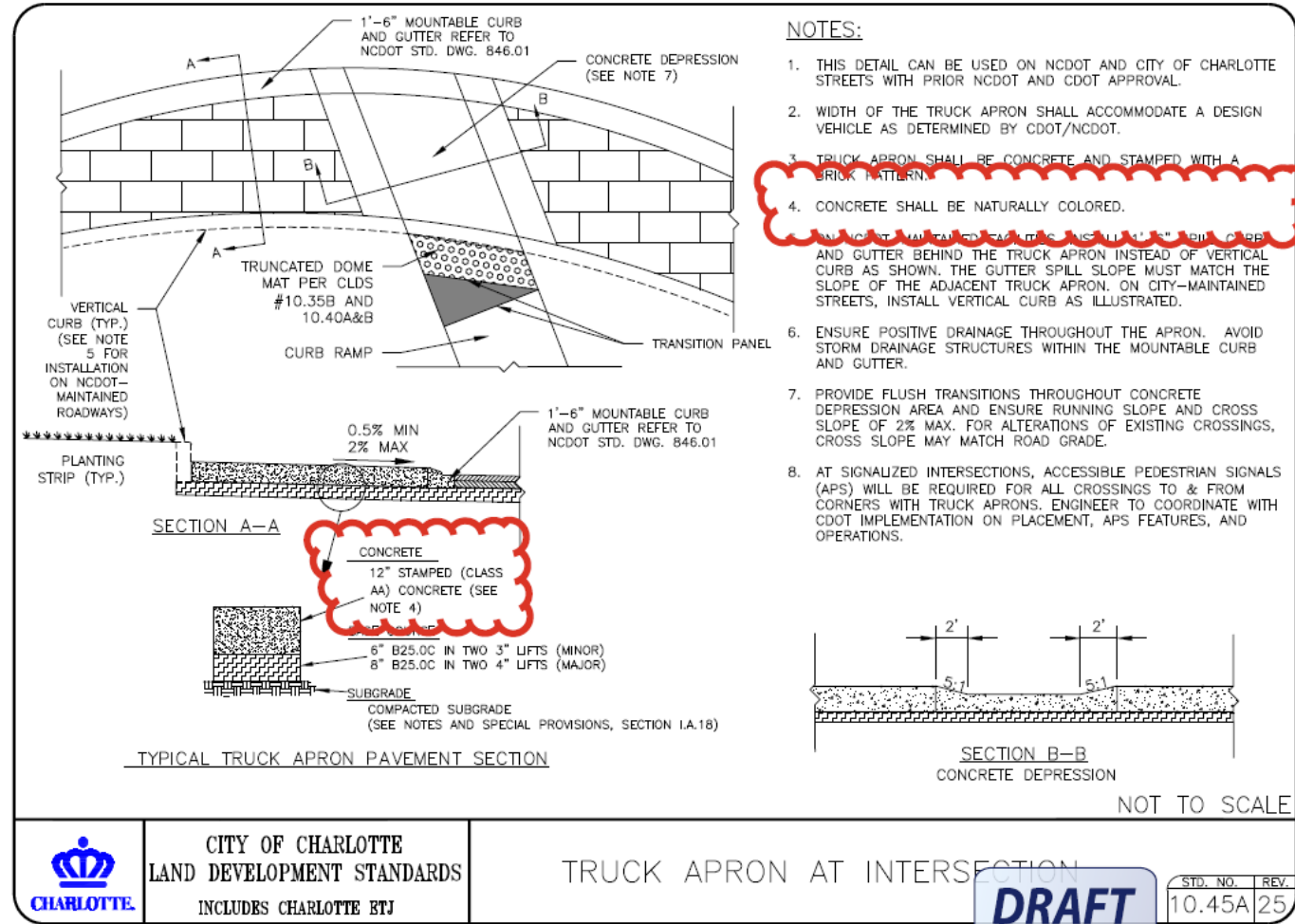
CLDSM 10.28

Detail was added regarding the driveway apron requirements.



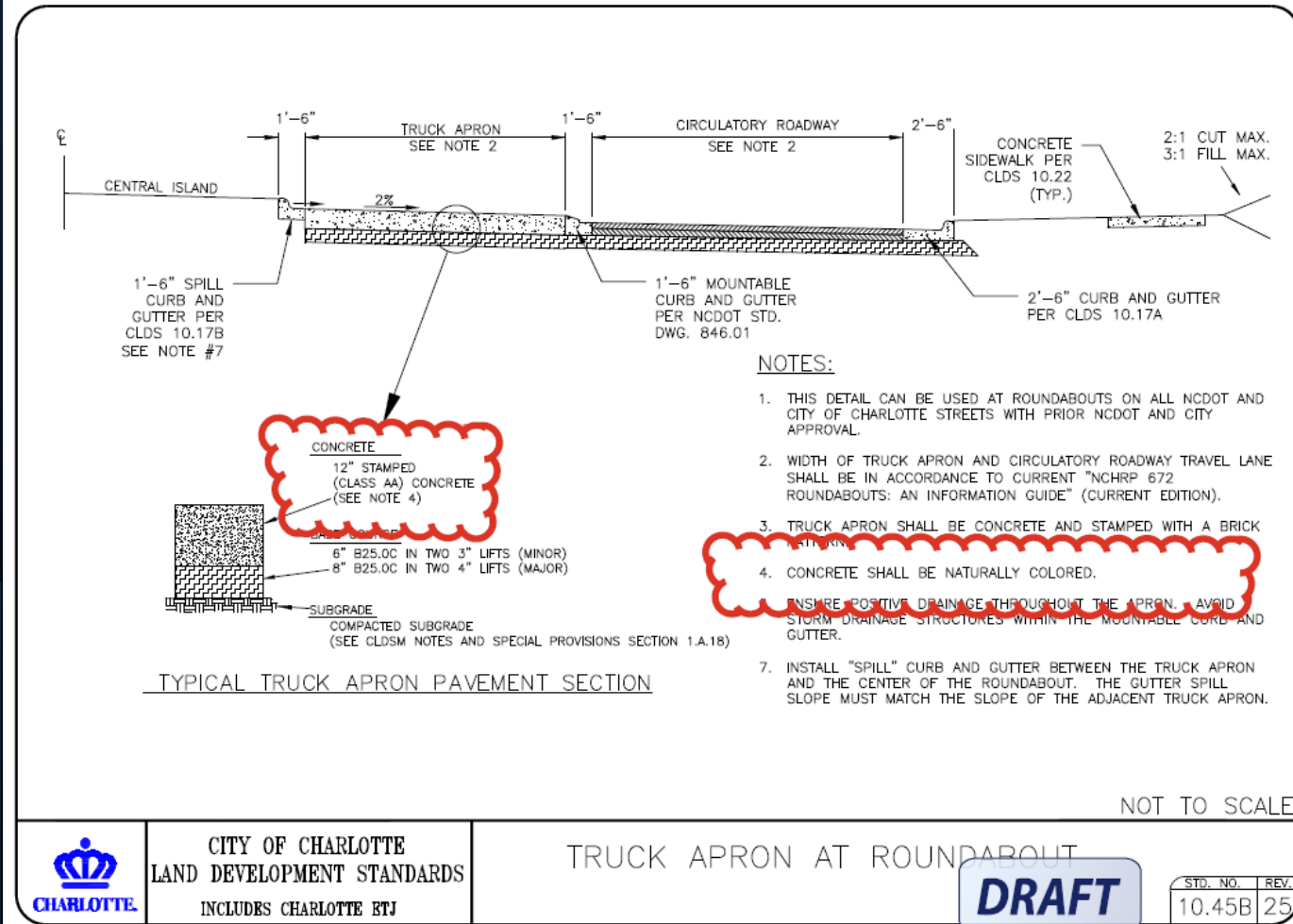
CLDSM 10.45A

Red Dye option was removed from the detail and the concrete is required to be naturally colored.



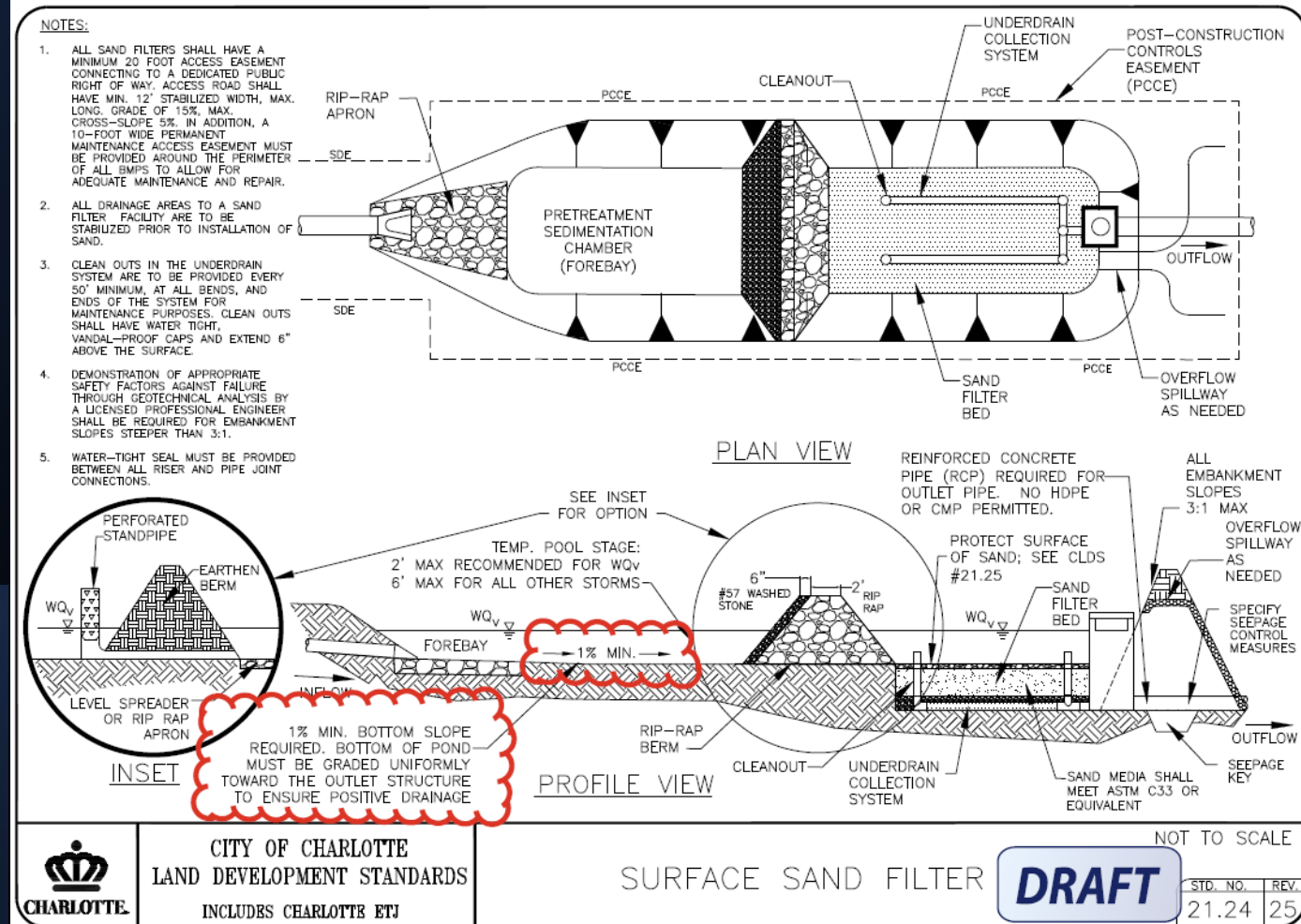
CLDSM 10.45B

Red Dye option was removed from the detail and the concrete is required to be naturally colored.



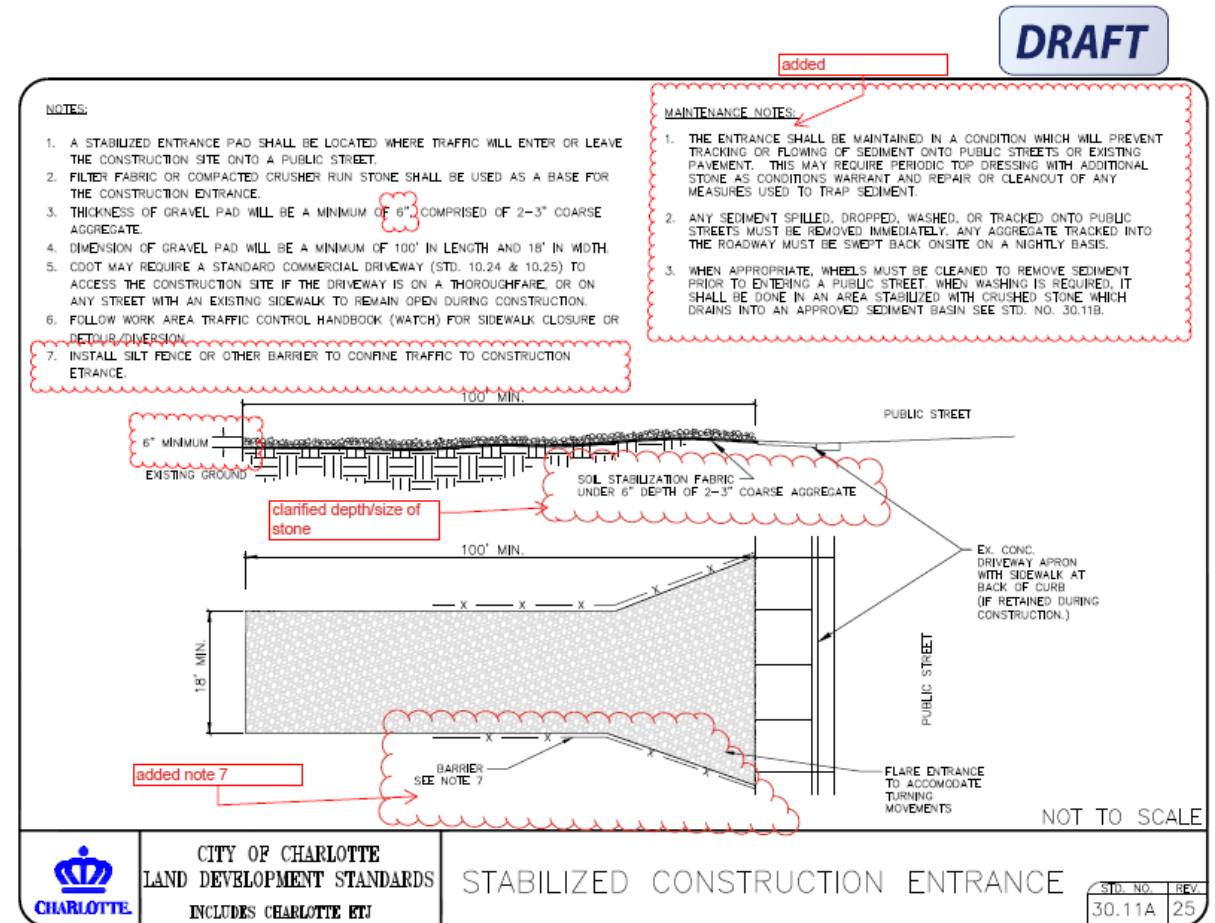
CLDSM 21.24

Clarification added to ensure positive drainage.



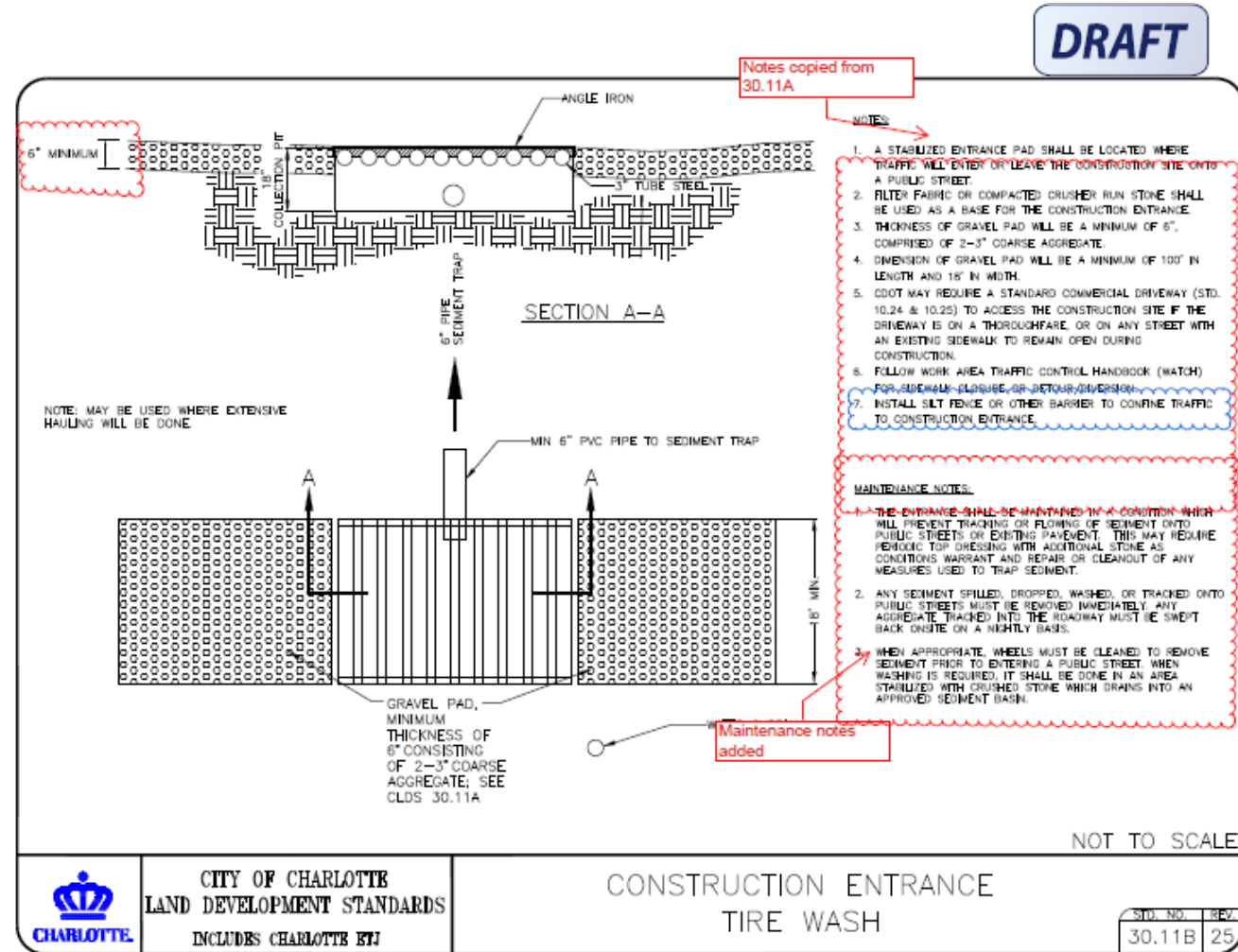
CLDSM 30.11A

Clarified depth and stone size required, added silt fence and maintenance notes.



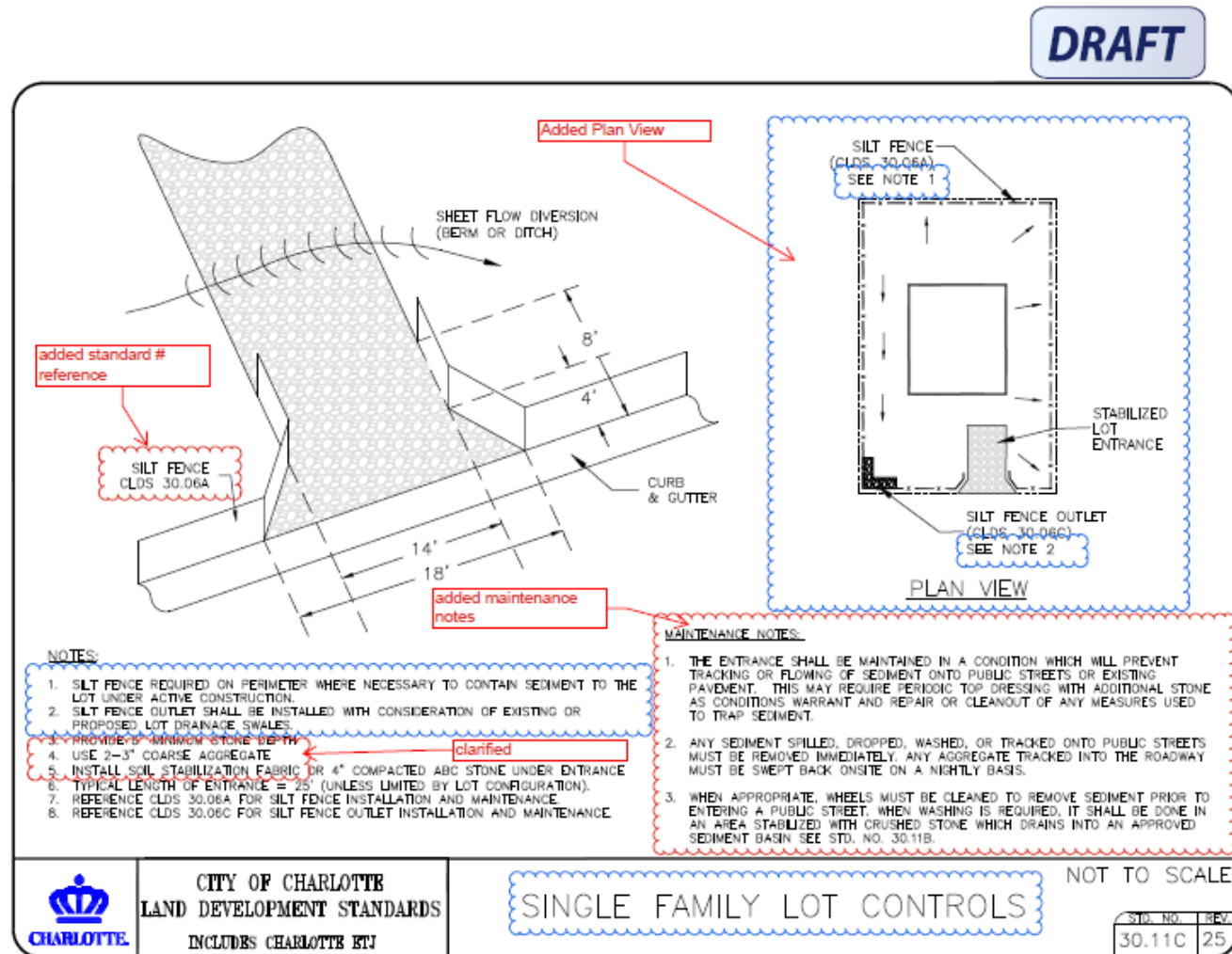
CLDSM 30.11B

Clarified depth and stone size required and added construction and maintenance notes.



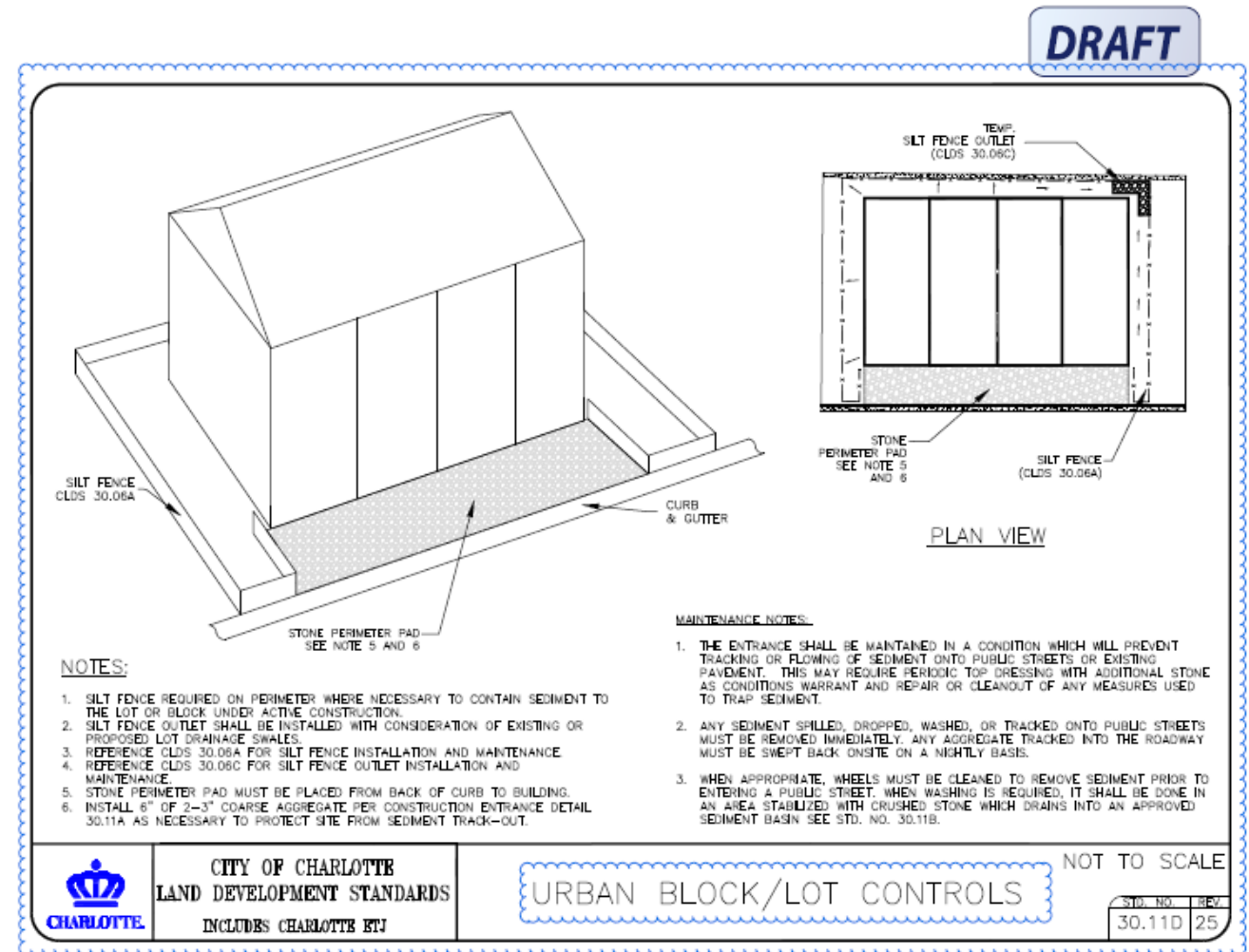
CLDSM 30.11C

Clarified depth and stone size required, added plan view and maintenance notes.



CLDSM 30.11D

New Detail to address erosion control requirements. Provides standard practice related to erosion control requirements for lots/blocks.




CLDSM 50.09D

Detail was updated to
accommodate meet current
PROWAG language

NOTES:	
1. AN ACCESS AISLE SHALL BE PROVIDED AT STREET LEVEL FOR ON-STREET PARALLEL PARKING WITH 5' MIN. WIDTH AND SHALL EXTEND THE FULL LENGTH OF THE PARKING SPACE.	
2. ACCESSIBLE SPACE AND ACCESS AISLE SHALL BE OBSTRUCTION-FREE (INCLUDING ADJACENT SIDEWALK OR SHARED USE PATH).	
3. ALL CONCRETE TO BE 3600 P.S.I.	
4. SEE STD. NO. 10.18 FOR DETAIL OF 18" VERTICAL CURB.	
5. SEE STD. NO. 10.17C FOR DETAIL OF EXPANSION JOINT AND GROOVE JOINT.	
6. SEE STD. NO. 10.22 FOR SIDEWALK DETAIL.	
7. OUTER FLOW LINE SHALL BE MAINTAINED THROUGH THE ACCESS AISLE	
8. ACCESSIBLE PAVEMENT MARKING DETAIL: <ul style="list-style-type: none">• INSTALL INTERNATIONAL SYMBOL OF ACCESSIBILITY PARKING SPACE MARKINGS, INCLUDING WHITE SYMBOL WITH BLUE BACKGROUND AND WHITE BORDER. SYMBOL SHALL HAVE MIN. HEIGHT OF 28 INCHES AND MIN. WIDTH OF 24 INCHES (EXCLUSIVE OF BLUE BACKGROUND AND WHITE BORDER). STROKE WIDTH SHALL BE MIN. 3 INCHES.• WHITE PAVEMENT MARKINGS PLACED ON CONCRETE SHALL BE SHADOWED WITH BLACK BORDER.• TYPICAL SYMBOL LOCATION AND ORIENTATION PER "DIAGRAM A" BELOW	
9. PROPOSED TREES MUST BE PLANTED 6-8' AWAY FROM THE BACK OF ACCESS AISLE CURB.	
10. SPECIFY STD. NO. 40.11, "BRIDGING TREE ROOTS" IF ENCROACHING ON GROWING SPACE OF TREE.	
11. LOCATE IN MOST LEVEL AREA OF BLOCK (RECOMMENDED PRACTICE) TO MAXIMIZE USABILITY.	
12. CURB LINE SHIFTS TOWARD RIGHT-OF-WAY TO ACCOMMODATE ACCESS AISLE.	
13. SPACE AND ACCESS AISLE SHOULD HAVE SMOOTH SURFACE FOR LIFT DEPLOYMENT. MINIMIZE CROSS SLOPE FOR LIFT OPERATION.	
14. PARKING METER FOR ACCESSIBLE SPACE - PROVIDE A CLEAR APPROACH AREA WHERE PARKING METERS ARE REQUIRED. COORDINATE WITH CDOT FOR METER LOCATIONS.	
15. FOR MORE INFORMATION SEE SECTION R310 OF "PROPOSED GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES" (PROWAG).	
16. USE SIGN "C" AS SHOWN ON STD. 50.10A FOR ON-STREET PARKING.	
17. ON-STREET ACCESSIBLE PARKING DOES NOT COUNT TOWARDS ON-SITE ACCESSIBLE PARKING REQUIREMENTS.	

ON-STREET PARKING SPACES REQUIRED	
TOTAL NUMBER OF MARKED OR METERED PARKING SPACES ON THE BLOCK PERIMETER	MINIMUM REQUIRED NUMBER OF ACCESSIBLE PARKING SPACES
1 TO 25	1
26 TO 50	2
51 TO 75	3
76 TO 100	4
101 TO 150	5
151 TO 200	6
201 AND OVER	4% OF TOTAL
(BASED ON TABLE R211 OF PROWAG)	

DIAGRAM A

	CITY OF CHARLOTTE LAND DEVELOPMENT STANDARDS INCLUDES CHARLOTTE ETJ	ACCESSIBLE ON-STREET PARALLEL PARKING	STD. NO. 50.09D	REV. 23
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