



ORDINANCE NUMBER 29-2021

AN ORDINANCE TO AMEND THE CITY OF GREER LAND DEVELOPMENT REGULATIONS BY REPEALING AND REPLACING IN ITS ENTIRETY ARTICLE 8, ROAD CLASSIFICATIONS AND DESIGN STANDARDS

WHEREAS, the City of Greer City Council at various times reviews the city ordinances to make necessary improvements and/or changes; and,

WHEREAS, Greer City Council wishes to amend the City of Greer Land Development Regulations by Repealing and Replacing Article 8, Road Classifications and Design Standards; and,

WHEREAS, the City of Greer Planning Commission recommended approval of the requested amendment of Article 8, Road Classifications and Design Standards, Land Development Regulations, at a Public Hearing held at 6:30 p.m. on June 21, 2021 after due notice in The Greer Citizen, a newspaper in Greer, South Carolina, with general circulation in the Greer area, for the purpose of considering a proposed amendment to the City of Greer Land Development Regulations. The Planning Commission minutes and staff report from said meeting are attached hereto marked as Exhibit A.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and Council of the City of Greer that the City of Greer Land Development Regulations be amended by Repealing and Replacing Article 8, Road Classification as follows:

8 Road Classification and Design Standards

8.1 Road Classification

Roadway classification is based upon the character of service in which they provide. Geographic location, connections, and volumes all contribute to determining the functional classification of a roadway. Other than designations listed by SCDOT and County, the Greer Planning Commission reserves the right to verify any road classification based on criteria in this section.

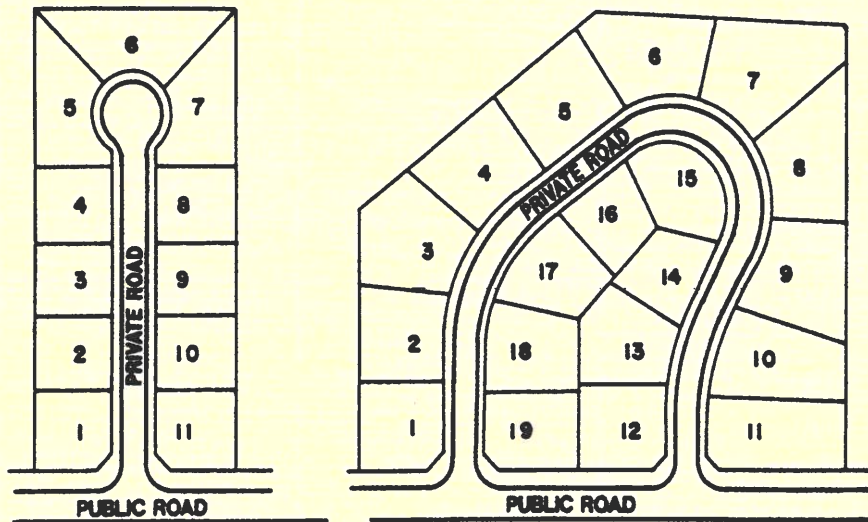
- A.** Interstates, freeways/expressways, principal/minor arterials, and major/minor collectors, and State maintained secondary road system will be all designed to SCDOT standards in accordance with the SCDOT Road Design Manual. The manual and

functional classification maps for State roads can be found on the SCDOT website. County maintained roads will be designed per County standards.

- B.** City maintained residential streets will be classified into three categories based on the number of dwelling units and the potential for dwelling units due to additional undeveloped acreage or cross development access.
 - a) Class C Residential Street is characterized by 50 or more residential dwelling units
 - b) Class D Residential Street is characterized by greater than 15 and less than 50 residential dwelling units
 - c) Class E Residential Street is characterized by 15 or less residential dwelling units
 - d) Stub-out Street will eventually provide access to adjacent properties and will be considered a Class C Residential Street.

- C.** Industrial/Commercial Streets will be determined by the Greer Planning Commission if the development partially or entirely within a zoned area for Commercial, Services, or Industrial established by the County or City Zoning Ordinance. Un-zoned areas, the Industrial/ Commercial classification will be applied based on the area exhibiting commercial, service, or industrial use.

- D.** Private Streets shall be designed based on Class E Residential Street criteria except as noted in the Pavement Design Table. All liability and maintenance of a private street shall be the responsibility of the landowner, developer, and/or homeowners association and will hold the City hold harmless and indemnity from any damages when used by public service vehicles. Alleys will be considered Private Streets and require turn around points and unobstructed roadway if required to be utilized by public service vehicles.
 - a) Private roads shall be limited to residential streets constructed as a cul-de-sac, loop street, or combinations thereof provided that the private road or road network does not allow through access between/among adjoining public roads.



8.2 Road Design Standards

The purpose of roadway classification is to determine appropriate roadway design standards for each classification listed in Design Standards Chart table in this document. Prior to any final plat approval, the street construction or improvements shall be completed and approved in accordance with the design features set forth in this section. The City Engineer or Designee will approve all design in the City Limits and in accordance with this section. What features this section does not cover on road design, the current SCDOT Highway Design Manual which is in accordance with the AASHTO Geometric Design of Highways and Streets will be utilized for proper application. For traffic control application such as signs and pavement markings, the current Federal MUTCD (Manual on Uniform Traffic Control Devices) will apply. Special consideration will be given to the NACTO Urban Street Design Guide that improves upon design features for pedestrian and bicycle safety. All design shall be performed by a SC Registered Professional Engineer who is familiar with road design criteria and plans shall be PE stamped.

- A. Basic Design Criteria for each class of street should be based on design elements in the following tables:

DESIGN STANDARDS CHART

STREET CLASSIFICATION	R/W (MIN, FT)	PAVEMENT WIDTH (MIN, FT)	DESIGN SPEED (MIN, MPH)	STOPPING SIGHT DISTANCE (K FACTOR)		GRADE MAXIMUM (%)	TANGENT BETWEEN REVERSE CURVES (MIN, FT)	HORIZONTAL CURVE RADIUS (MIN, FT)	INTERSECTION ANGLE OF ADJACENT STREET (MIN, DEG)	R/W TRIANGLE # INTERSECTIC (MIN, FT)
				CREST	SAG					
Class C	44	24	25	16	24	10	100	110	70	25
Class D	42	22	25	16	24	10	100	110	70	25
Class E	40	20	20	16	24	12	100	110	70	25
Industrial/ Commercial	60	26	35	29	49	9	150	450	90	30

All other design criteria not listed in the Tables or listed in this document shall conform to The SCDOT Highway Design Manual.

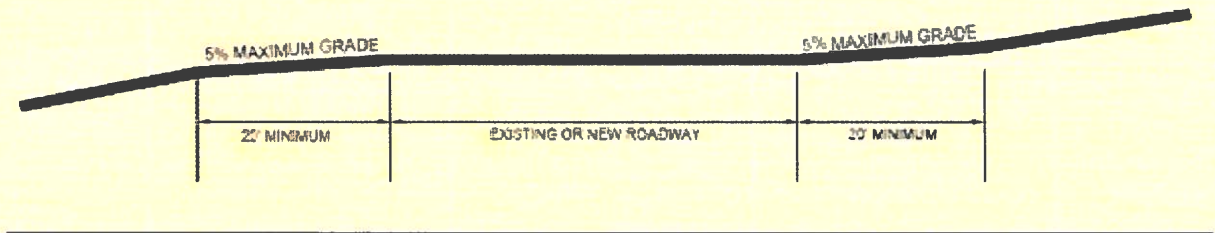
PAVEMENT DESIGN STANDARDS CHART

STREET CLASSIFICATION	R/W (MIN, FT)	PAVEMENT WIDTH (MIN, FT)	FULL DEPTH ASPHALT SURFACE/INTERMEDIATE (IN.)	ASPHALT W/ INTERMEDIATE & STONE BASE SURFACE/INTERMEDIATE/BASE (IN.)
Class C	44	24	2" / 3"	1.5" / 2.5" / 6"
Class D	42	22	2" / 3"	1.5" / 2.5" / 6"
Class E	40	20	2" / 3"	1.5" / 2.5" / 6"
Industrial/ Commercial	60	26	2" / 6" *	2" / 4" / 8"
Private	40	20	1" / 2"	1.5" / 4"

* Placed in two (2) lifts in accordance with SCDOT Standards for Asphalt Placement

B. Sight distance should be adequate for all movements to perceive potential conflicts and perform the actions needed to maneuver through the intersection safely. The SCDOT Highway Design Manual Chapter 4 should be referenced for proper formula and gap acceptance times to provide adequate sight distance for all type movements. Intersection sight distance shall be maintained free and clear of any obstruction and should be shown on plans to delineate this area. This sight distance area is not the required right of way triangle at the intersection shown in the above table.

C. **Grades** will follow the Design Criteria Chart for maximum and the minimum for all roads should not be less than 1% for drainage. When intersecting an existing or proposed street, construct the horizontal grade to match this street and the maximum approach grade is 5% for a distance of 20 feet from the edge of pavement of this street.



D. **Intersection** preferred angles to the cross street is 90 degrees with a minimum of 70 degrees. Intersection alignment with the opposing street will be on the centerline with turning templates checked. Intersection offsets used to avoid jogs, turning movement conflicts, and future main street turn lane development are as follows:

SPEED LIMIT ON MAIN

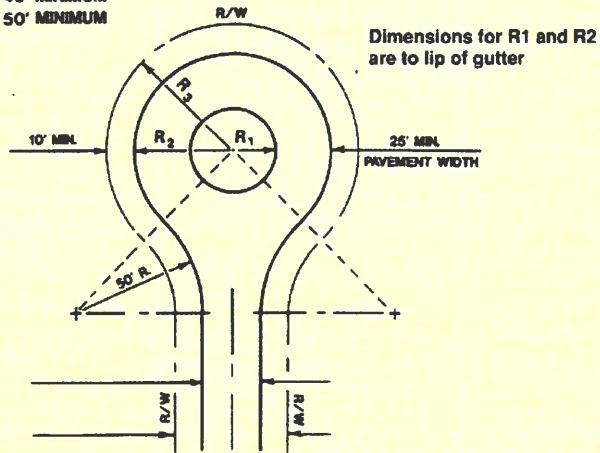
<u>THROUGH STREET</u>	<u>OFFSET IN FEET</u>
<u>25 MILES PER HOUR</u>	<u>150 FEET</u>
<u>30-35 MILES PER HOUR</u>	<u>200 FEET</u>
<u>40-45 MILES PER HOUR</u>	<u>250 FEET</u>
<u>50-55 MILES PER HOUR</u>	<u>300 FEET</u>

E. **Drainage** for all public roads shall be designed in accordance with Article 10 and required to collect roadway runoff to include runoff from adjacent properties to a proper discharge point.

F. **Cul-de-Sacs** shall be placed on all road ends streets or dead ends. Cul-de-sacs shall have a minimum length of 125 feet and a maximum length of 1,000 feet unless topography or physical conditions dictate otherwise. Cul-de sacs shall have a circular right of way and typical layout are as follows:

Standard Cul-de-Sac Design

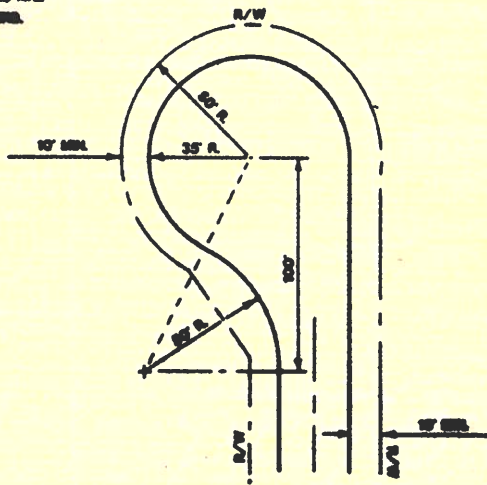
- R₁ - 15' MINIMUM
- R₂ - 40' MINIMUM
- R₃ - 50' MINIMUM



TYPICAL CUL-DE-SAC DETAIL W/ISLAND

N.T.S.

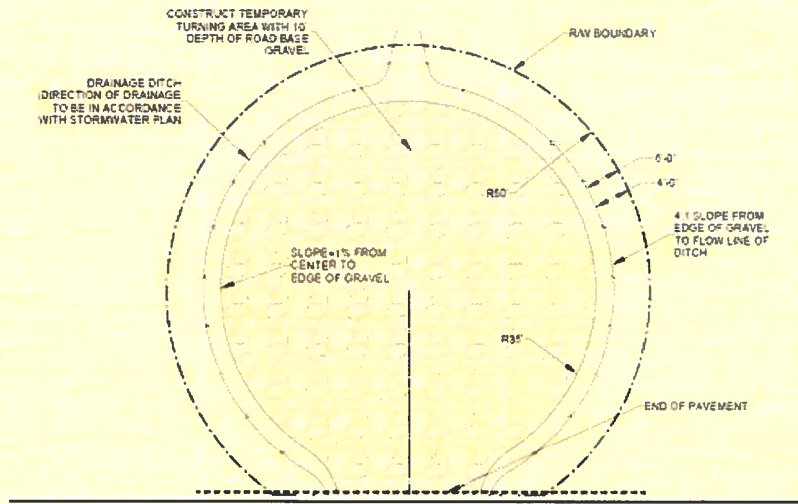
ALL DIMENSIONS ARE TO FACE OF CURB.



TYPICAL OFFSET CUL-DE-SAC DETAIL


N.T.S.

G. Temporary Turnarounds will be used in phased subdivisions for a future continuation of the through street I the next phase. They shall consist of a temporary cul-de-sac as follows:



This ordinance shall be effective immediately upon second reading approval hereof.

CITY OF GREER, SOUTH CAROLINA


Richard W. Danner, Mayor

ATTEST:

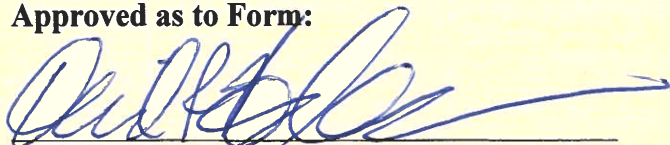

Tammela Duncan, Municipal Clerk

Introduced by: Councilmember Jay Arrowood

First Reading: July 13, 2021

Second and
Final Reading: July 27, 2021

Approved as to Form:

A handwritten signature in blue ink, appearing to read "D. Hughes", written over a horizontal line.

Daniel R. Hughes, City Attorney

**STAFF REPORT
GREER PLANNING COMMISSION
MONDAY, JUNE 21, 2021**

EXHIBIT

A

DOCKET: MISC 2021-05

APPLICANT: City of Greer

ZONING TEXT AMENDMENT: Land Development Regulations (LDR) Article 8, Road Classification and Design Standards

PURPOSE: Repeal and replace text

ANALYSIS: MISC 21-05

The City has experienced record growth over the last decade; with exponential growth and increased population the City has also experienced impacts to roadways both in condition and volume. While the Zoning Ordinance and Land Development Regulations are currently undergoing an extensive rewrite with the UDO project, staff felt that it was important to address transportation in a more expedient manner. The City retained consultant Infrastructure Consulting and Engineering (ICE) to review and draft updated regulations. The team included two former SCDOT engineers.

The referenced sections of the LDR will be stricken and replaced by the attached text. Key changes include:

- Streamlined text with references to latest editions of DOT and other nationally recognized manuals for guidance
- Road standards consistent with DOT and AASHTO standards, with consideration of County standards
- Road standards will now apply to both newly created roads within the subdivision as well as existing roads along the boundaries.

STAFF RECOMMENDATION: Approval

The commission asked questions of when this would go into effect and who would be responsible for the improvements to existing roads if required. Staff informed the commission that this change would take effect on completion of second reading and that developers would bear the cost of the improvements.

ACTION: Mr. Lavender mad a motion to approve MISCP 21-05. Mr. Jones seconded the motion. The motion carried with a vote of 6 to 0.