Text Amendment UDO-TA-2023-0975
Staff Report to Planning Commission
Meeting Date: July 18, 2023

PROPOSAL:	Amend Unified Development Ordinance Standards for Road Hierarchy.
APPLICABLE CHAPTER(S):	6.14 (Road Construction Standards), 10.4, 4.4.1
APPLICANT:	Lancaster County Council

STATED CONCERN: Appeal from the public to amend regulations relating to subdividing heirs' property in rural areas.

ADDITIONAL CONCERN: The UDO does not have consistent terminology or standards for road types.

BACKGROUND:
Earlier in 2023, the County received requests from two separate families who were interested in subdividing their rural properties for distribution among family members. Both were impacted by sections of the code that related to maximum street length and number of lots accessing off of a dead-end road. .

In April 2023, the County Council passed an ordinance (after recommendation from the Planning Commission) that amended Section 6.4.1 – Connectivity, essentially grandfathering in streets that were built at the time the current UDO was adopted in 2016 from meeting current block length, block width, through-block connections, and cul-de-sac design standards. This permitted one family to move forward, but the other remains impacted by regulations that result in additional cost to subdivide; namely, road construction.

Current UDO guidance in Section 6.14 includes required width for three types of rights-of-way: local, collector, and commercial/arterial roads. Road projects in the County have previously been classified as one of these three. Each requires a certain width of pavement.

Two potential changes have been discussed in development meetings:

1. For family subdivisions in rural areas where traffic is not a concern, ***is it possible to reduce the street design requirement from pavement to an all-weather surface***, like gravel?

2. There is a conflict regarding "alley" design between the limited choices of road type and other sections of code (specifically Chapter 3 and Detail R8 in Appendix C). Alleys are typically one-way, one-lane roads but are not accommodated in the geometric criteria of 6.14.1, which can lead to review as two-lane paved areas with 50-foot rights-of-way. ***The road type list should include "alley" roads with dimensions that match Detail R8 of Appendix C*** (12 - 15' paved road and 1.5' gutter on each side, for a minimum of 15' ROW).

SUPPORTING DATA

HEALTHY NEIGHBORHOOD STREET DESIGN STANDARDS (Source: ***Street Design Guidelines for Healthy Neighborhoods*** by Dan Burden, Michael Wallwork PE, Ken Sides PE, Ramon Trias, and Harrison Rue):

Street Type	Max Width	Max Design Speed	Max Corner Radius	Max Centerline Radius	Curb	Median	Max Street Length	Vehicle Volume	Walk Way	Bike Lanes	Trees	2-Way Traffic	Parking
Trail	8-14'	20 mph	n/a	95'	no	n/a	n/a	na	n/a	n/a	yes	yes	no
Alley	10-12'	10 mph	15'	50'	no	n/a	400'	200	no	no	no	yes	no
Lane	16-18'	20 mph	15'	90'	option	no	600'	200	both	no	yes	option	1 side
Street	26'	20 mph	15'	90-120'	option	no	1,320'	600	both	no	yes	yes	2 sides
Avenue	varies	30 mph	15-25'	250'	yes	option	n/a	3-20K	both	yes	yes	yes	option
Main Street	varies	15-25 mph	15-25'	600'	yes	option	2,600'	3-10K	both	option	yes	yes	option
Boulevard	varies	30-35 mph	25'	500'	yes	yes	n/a	20-40K	both	yes	yes	yes	option
Parkway	varies	45+ mph	25'	1,000' +	no	yes	n/a	20-60K	no	trails	yes	yes	no

SCDOT Definitions

Local Roads and Streets: Local roads and streets primarily serve as access roads to farms, residences, businesses and other properties. They distribute traffic to highways in the higher functional classification network.

Rural: A major part of the rural highway system consists of two-lane local roads. These roadways should be designed to accommodate the highest practical criteria compatible with traffic and topography.

Urban: A local urban street is a public roadway for vehicular travel including public transit and refers to and includes the entire area within the right of way. The street also serves pedestrian and bicycle traffic and usually accommodates public utility facilities within the right of way. The development or improvement of these streets should be based on a functional street classification that is part of a comprehensive community development plan. The design criteria should be appropriate for the planned development. The two major design controls are (1) the type and extent of urban development with its limitations on right of way, and (2) zoning or regulatory restrictions. Local streets primarily serve to provide access to adjacent residential development areas. The overriding consideration is to foster a safe and pleasant environment whereas the convenience of the motorist is secondary. Other local streets not only provide access to adjacent

development, but also serve limited through traffic. Traffic service features may be an important concern on these streets (e.g., traffic signals, left-turn lanes).

Collector roads: Collector routes are characterized by a roughly even distribution of their access and mobility functions. Traffic volumes and speeds will typically be somewhat lower than those of arterials. Access to properties is normally allowed on collector roads.

The function of rural collector roads is to serve intracounty travel needs and collect traffic flow from the rural local roads to the rural arterials and to distribute traffic flow from arterials back to the local roads.
In rural areas, the collectors provide the following functions:

- provide access to adjacent land uses;
- carry traffic into areas with sparse development;
- serve larger towns and significant traffic generators (e.g., shipping ports, mining areas) that are not served by an arterial or freeway;
- spaced at intervals consistent with the traffic population density to accumulate traffic from local roads;
- provide service to smaller communities; and
- link locally important traffic generators with higher classified routes.

In urban areas, collector streets serve as intermediate links between the arterial system and points of origin and destination. Urban collectors typically have the following characteristics:

- provide both access and traffic circulation within residential neighborhoods and commercial/industrial areas;
- may penetrate residential neighborhoods or commercial/industrial areas to collect and distribute trips to and from the arterial system;
- in fully developed areas, spacing generally is approximately ½ mile between routes and, within the Central Business District, between 650 feet and ½ mile;
- may be an urban extension of rural collector roads; and
- often include local bus routes.

Arterials: Arterial highways are generally characterized by their ability to quickly move relatively large volumes of traffic, but is often impacted by access to abutting properties. The arterial system typically provides for high travel speeds and the longest trip movements. The rural and urban arterial systems are connected to provide continuous through movements at approximately the same level of service.

The freeway is the highest level of an arterial. These facilities are characterized by full control of access, high design speeds and a high level of driver comfort and safety. For these reasons, freeways are considered a special type of highway within the functional classification system, and separate design criteria.

Arterials have the following general characteristics:

- consist of a connected network of continuous routes;
- in rural areas, provide a mix of interstate and intercounty travel service;
- provide service to, through or around urban areas from rural arterial routes and may be connecting links;
- provide for significant urban and suburban travel demands (e.g., between central business districts (CBD) and outlying residential areas, between major inner city communities, between major suburban centers);
- serve long distance traffic within an urban area by connecting major regional activity centers not served by connecting links or may provide service for trips of moderate length;
- may be a multilane undivided facility, divided facility, two-lane rural highway, major two-way city street or a one-way pair system;
- typically warrant management of access to the highway;
- may be included in the National Highway System (NHS); and may carry local bus routes and provide intra-community continuity, but generally will not penetrate neighborhoods.

SAMPLE CLASSIFICATION SYSTEM *(Source: City of Myrtle Beach)*

Road Classification System

A street network performs most efficiently and safely from both a traffic operation and a road safety perspective if roads are designated and operated to serve their intended purposes. A road classification system designates streets into different groups or classes according to the type of service each group is intended to provide. This is a fundamental tool for urban development and road management. Grouping roads with similar functions can improve transportation planning, road infrastructure design and maintenance, and traffic and road operations.

But while road classification can help meet the needs of communities for transportation services, just as importantly, it can help protect against the adverse impacts of motorized traffic in residential areas. Some roads should carry higher volumes of traffic at higher speeds, while others (the majority) carry lower volume at lower speeds. This allows residential neighborhoods to exist between main traffic corridors. The absence of a hierarchy of roads would result in less efficient routes for traffic with associated increases in the time and cost of transporting people (whether by foot, bike, bus or car) and goods. The quality of urban life would also decline as motorized traffic would increasingly infiltrate into residential neighborhoods to avoid mounting congestion - *Appendix K: City of Myrtle Beach Roadway Classification Systems Map 2009.*

The following is a glossary of terms used in the roadway classifications system for the city of Myrtle Beach.

• *Minor Street* is a two-lane, residential or commercial, street controlled by stop signs at two-way-stop controlled intersection.

• *Major Street* is a two-lane, residential or commercial, street not controlled by stop signs at a two-way stop-controlled intersection providing connection to minor and major collectors and minor arterials.

• *Major Commercial* is a two or four-lane commercial street not controlled by stop signs but signalized intersections.

• *Minor Commercial* is a two-lane commercial street controlled by stop signs at intersections.

• *Minor Collector* is a two-lane street providing lane access and traffic circulation within residential, commercial, and industrial areas and connection between major collectors and minor arterials with low density of driveways.

• *Major Collector* is a four-lane street providing lane access and traffic circulation within residential, commercial, and industrial areas and connection between minor arterials with relatively high density of driveways.

• *Minor Arterial* is a functional category of street allowing trips of moderate length within a relatively small geographical area; signalized street that primarily serves through-traffic and secondarily provide access to abutting properties with signal spacing of two miles or less.

• *Principle Arterial* is a major surface street with relatively long trips between major points, and with through trips entering, leaving and passing through the urban area.

STAFF RECOMMENDATIONS:

Staff recommends amended Sections 4.4.1.I.5.a, 6.14.1.A through C, and Section 10.4 as follows.

- **Allow local rural roads to be an all-weather surface compacted properly and to the standards in the fire code that would allow fire apparatus access, in exchange for requiring paved roads. Limit this application to AR (Agricultural Residential) and RR (Rural Residential) zoning, rather than all rural land uses, for the following reasons:**
    - RN (Rural Neighborhood) zoning is targeted toward neighborhood development at rural lot scale (one dwelling unit per acre), with higher traffic counts than

general agricultural or rural uses; gravel roads are not appropriate for neighborhood development.
    - RUB (Rural Business) zoning allows for business operations. Businesses pull in more traffic than residential uses, and gravel roads are not appropriate for higher traffic uses.
    - MH (Manufactured Home) zoning accommodates manufactured home subdivisions and parks; these have higher traffic counts than general agricultural or rural uses. Gravel roads are not appropriate for neighborhood development.
- **Amend the definition of "Alley" in the UDO to indicate the road is intended to be one-way and limited to 15 ft maximum width.**
    - **Add notation on the exhibits in Appendix C.**
- **Add definitions of "local," "collector," and "arterial" roads to the general definitions section.**
- **Add to the list of updates to the UDO that are in process (for future action):**
    - Clean up the conflicts between Road Design and Cluster development.
    - Create a full road hierarchy table, including min/max width, curb requirements, tree well depth and planting, sidewalk min width, etc.
    - Further refine the definitions of the main street classifications created by this ordinance, as needed.

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PROPOSED TEXT AMENDMENTS
Language proposed for deletion is ~~strikethrough~~
Language proposed for addition is highlighted and underlined

4.4.1.I.5.a.

Road Type	Right-of-Way (feet)	Pavement (feet)
Local (closed drainage)	50	22
Local (open drainage) – follow guidance for collector (rural)	66	~~22~~ 24
Collector – follow guidance for collector (rural)	66	24

10.4 DEFINITIONS, GENERALLY

ALLEY Alleys are intended to provide indirect, limited access to the rear of properties but not to accommodate through traffic. Utilities, either above ground or underground, may be located in alleyways to provide service connections to rear elevations. Alleys are limited to one lane of traffic, and should be one way only unless there is not a connecting roadway to complete the network. Alley design should be straight (180 degrees) and may not curve. Alleys may not end in cul-de-sacs and must connect to another road in the network (usually a local road). On-street parking is strictly prohibited on alleys.

LOCAL (URBAN) ROAD
Roads that primarily serve as access to residences, businesses and other properties. They distribute traffic to higher functional classification streets in the network. These roads should have the lowest traffic counts in the urban network, which includes the transitional and neighborhood zones as shown in Section 2.5.3. Informal on-street parking is not allowed on local (urban) streets with less than 30 feet of pavement width. On-street parking is allowed with an approved parking plan that includes parking stalls designed to work with the street.

LOCAL (RURAL) ROAD
Local roads and streets primarily serve as access roads to farms, residences, businesses and other properties. They distribute traffic to highways in the higher functional classification network. These roads should have the lowest traffic counts in the county-wide network, and are found in rural zones as shown in Section 2.5.3.

COLLECTOR (URBAN) ROAD

Collector routes are characterized by a roughly even distribution of their access and mobility functions. Traffic volumes and speeds will typically be somewhat lower than those of arterials. Access to properties is normally allowed on collector roads unless a traffic impact analysis (TIA) performed in the area indicates a shared access is safer. Collector streets (urban) serve as intermediate links between the arterial system and points of origin and destination, providing access and traffic circulation within residential neighborhoods and commercial/industrial areas.

Collector (urban) roads are found in the transitional, special, and neighborhood zones as shown in Section 2.5.3. In fully developed areas, spacing generally is approximately ½ mile between routes. On-street parking is not allowed on collector (urban) roads.

COLLECTOR (RURAL) ROAD

Collector routes are characterized by a roughly even distribution of their access and mobility functions. Traffic volumes and speeds will typically be somewhat lower than those of arterials. Access to properties is normally allowed on collector roads.

The function of rural collector roads is to serve travel needs within the county and collect traffic flow from the rural local roads to the rural arterials and to distribute traffic flow from arterials back to the local roads. These collectors are found in the rural network, which includes rural zones as shown in Section 2.5.3. On-street parking is not allowed on collector (rural) roads

COMMERCIAL/ARTERIAL (URBAN) ROAD

Commercial/arterial (urban) roads are characterized by their ability to quickly move relatively large volumes of traffic, but are often impacted by access to abutting properties. They have the highest travel speeds and the longest trip movements. Development along arterials should encourage shared driveways and/or frontage roads in order to manage highway access points.

Commercial/arterials may take the form of multilane facilities (divided or not), two-lane rural highways, four lane urban street, or major two-lane urban street. At no time will an arterial consist only of gravel and/or dirt for a road surface; all arterials will be paved.

Commercial/arterial (urban) roads are found in the transitional, special, and neighborhood zones as shown in Section 2.5.3.

COMMERCIAL/ARTERIAL (RURAL) ROAD

Commercial/arterial (rural) roads are characterized by their ability to quickly move volumes of traffic, but are often impacted by access to abutting properties and slow-moving machinery using the road as transportation between fields. They have the highest travel speeds and the longest trip movements, and provide a mix of intrastate/interstate and intercounty travel service.

Commercial/arterial (rural) roads provide service to, through, and/or around urban areas from rural areas, may provide for significant suburban travel demands, and may warrant management of access to the highway. Commercial/arterial (rural) roads are found in rural zones as shown in Section 2.5.3 and generally do not penetrate neighborhoods.

6.14 ROAD CONSTRUCTION STANDARDS

6.14.1 ROAD DESIGN (GEOMETRIC CRITERIA)

In general, geometric criteria for road design shall be in accordance with standards of the South Carolina Department of Transportation (SCDOT). Said standards are those contained in the latest edition of "A Policy on Geometric Design of Highways and Streets" by the American Association of State Highway and Transportation Officials. Local and collector residential roads that will be maintained by the County shall be designed in accordance with the following standards.

A. Minimum right-of-way and pavement width shall be as follows:

ROAD TYPE	RIGHT-OF-WAY (FEET)	PAVEMENT (FEET)
Alley	15	12
Local (Urban)	50	22
Local (Rural)	60	22*
Collector (Urban)	60	24
Collector (Rural)	66	24
Commercial/Arterial (Urban)	60	26
Commercial/Arterial (Rural)	66	26

Additional right-of-way or pavement width will be provided as determined necessary by County Council for high density residential or nonresidential subdivisions or portions thereof.
* Local (rural) private roads in the AR and RR zones may replace pavement with an all-weather gravel surface that meets the fire code standards. This exception must be approved by the fire marshal prior to subdivision final plat approval.

B. Cul-de-sacs shall not exceed 500 feet in length, except where unusual topographic or other physical conditions dictate otherwise, and shall have a turnaround with 90 feet minimum diameter to pavement edge and 100 feet minimum diameter to right-of-way line. Dead end streets without turnarounds are prohibited. In no case shall a cul-de-sac serve more than 20 residential lots.

C. Design speed, sight distance, and centerline radius shall be as follows:

	Alley	Local	Collector	Commercial/Arterial
Design Speed	10 mph	25 mph	25 mph	35 mph
Minimum sight distance on vertical curve	n/a (not allowed to be curved)	150 ft	200 ft	225 ft
Minimum centerline radius	n/a (not allowed to cul-de-sac)	150 ft	200 ft	250 ft

Add notation on the exhibits in Appendix C: Alleys are limited to one lane of traffic, and should be one way only unless there is not a connecting roadway to complete the network. Alley design should be straight (180 degrees) and may not curve. Alleys may not end in cul-de-sacs and must connect to another road in the network (usually a local road). On-street parking is strictly prohibited on alleys.