

6 SUBDIVISION AND INFRASTRUCTURE STANDARDS DRAFT 7.24.16

6.1 PURPOSE AND INTENT

The purpose of this chapter is to establish criteria for the site development and subdivision of real property within the jurisdiction of Lancaster County. These standards are set forth to:

- Provide for the protection of the public health, safety and welfare; and
- Promote the orderly growth and development of Lancaster County; and
- Provide for suitable residential and nonresidential development with adequate streets, utilities and appropriate building sites; and
- Coordinate streets within proposed subdivisions with existing or planned streets and with other public facilities.

6.2 SCOPE AND APPLICABILITY

6.2.1 SCOPE

The provisions of this chapter shall be applicable to all land within Lancaster County.

6.2.2 SITE PLAN & SUBDIVISION APPLICABILITY

- A. Subdivision Defined:** For the purposes of this chapter, “subdivision” shall mean all divisions of a tract or parcel of land into two or more lots, building sites, or other divisions for the purpose of sale or building development (whether immediate or future) and shall include all divisions of land involving the construction of new streets or a change in existing streets.
- B. Statutory Exemptions:** The following are not included within the definition above, nor are they subject to the regulations of this ordinance, provided however, that any document or plat to be recorded pursuant to any such exclusion shall bear the notation: “Exempt pursuant to Lancaster County Unified Development Ordinance,” and the signature of the Administrator before being presented for recordation.
1. The combination or recombination of portions of previously subdivided and recorded lots where the total number of lots is not increased, the resultant lots are equal to or exceed the Unified Development Ordinance requirements of the County, and no new street construction is involved.
 2. The division of land into parcels greater than 10 acres in size where no new street construction is involved.
 3. The public acquisition by purchase of strips of land for the widening or opening of streets.
 4. The conveyance to lineal descendants for the purpose of dividing real estate among said lineal descendants. At such time that any lineal descendants or their successors in interest develop or build upon their respective property, the property must conform in all respects to the regulations of Lancaster County.
 5. Any new lot created under a statutory exemption must have minimum road frontage of 25’ or be assessable via a 25’ easement.

- C. Site Plans Defined:** A site plan is an architectural and/or engineering drawing of proposed improvements for a specific lot that depicts such elements as building footprints, driveways, parking areas, drainage, utilities, lighting, and landscaping.
- D. Preliminary Plat:** A preliminary plat is a map or plat of a parcel of land which is to be or has been subdivided, containing sufficient data in order that a determination may be readily made as to the location, bearing, and length of every street and alley line, lot line, easement boundary line, and other boundary.
- E. Conformity Required:** From and after the adoption of this ordinance, no real property lying within the jurisdiction of Lancaster County shall be developed or subdivided except in conformance with all applicable provisions of this ordinance. In addition, after the effective date of this ordinance, no plat for subdivision of land within Lancaster County's jurisdiction shall be certified for recording by the Administrator until it has been submitted and approved in accordance with the provisions of this chapter.
- F. Permits:** Subsequent to Plat Approval and Recording
- 1. Building Permits:** The building inspector shall only issue building or repair permits for any structure on a lot in a subdivision for which a plat has been approved and recorded in the manner prescribed herein.
 - 2. Well and Septic Tank Permits:** Permits issued by South Carolina Department of Health and Environmental Control (SCDHEC) for the installation of wells and septic tank systems must be submitted to _____ prior to plat approval and recording.
 - 3. Public Water and Sewer:** A permit to operate water and/or sewer must be submitted to _____ prior to plat approval and recording.

6.2.3 LAND SUITABILITY

Land subject to flooding, improper drainage, and/or erosion; land that has been used for the disposal of solid waste and not adequately mitigated; and any other land deemed by the Administrator to be uninhabitable shall not be platted for residential or commercial occupancy, nor for such other uses as may increase danger to health, life or property or aggravate the flood hazard. Such land shall be set aside for such uses as shall not be endangered by periodic or occasional inundation or shall not produce unsatisfactory living conditions.

6.2.4 REQUIRED CONFORMANCE TO LANCASTER COUNTY SPECIFICATIONS MANUAL

The Lancaster County Manual of Specifications, Standards and Design (MSSD) is located in Appendix C and is herein incorporated by reference. Conformance to the MSSD is required in addition to the standards in this ordinance.

6.2.5 OTHER RELEVANT STANDARDS FOR SITE PLANS AND SUBDIVISIONS

In addition to the standards found in this chapter, standards in the following may also apply:

- Chapter 7: General Development Standards
- Chapter 8: Natural Resources Protection

6.3 REQUIRED IMPROVEMENTS FOR ALL DEVELOPMENT

All development which does not qualify as a Minor Subdivision according to the criteria in Chapter 9 shall be required to install or construct the improvements specified in the table below. The developer shall be responsible for the installation and construction of required improvements according to the provisions of this ordinance and the South Carolina Department of Transportation (SCDOT) Access and Roadside Management Standards (ARMS) manual, except as may otherwise be specifically provided herein or by County policy or agreement.

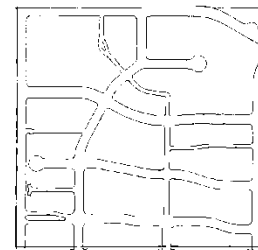
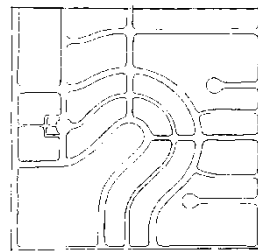
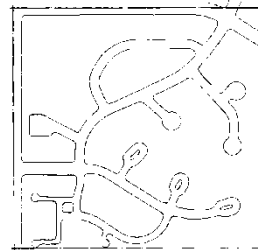
Required Improvements	Zoning Districts														
	AR	RR	RN	RUB	MH	LDR	MDR	PB	NB	GB	RB	INS	LI	HI	All Others
Underground Drainage*	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X
Curb and Gutter*	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X
Public Water and Hydrants	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X
Public Sewer	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X
Street Lights	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X
Street Trees	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Paved Streets	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Street Signs (All)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Underground Wiring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Park/Open Space	X	-	-	-	X	X	X	-	-	-	-	X	-	-	X
Sidewalks (also see 6.7.1)*	-	-	-	-	-	X	X	X	X	X	X	X	-	-	X

* Administrator may wave required improvements with use of approved Low Impact Development Infrastructure.

6.4 CONNECTIVITY

6.4.1 GENERAL

The arrangement, character, extent, width, grade and location of all streets shall be considered in their relation to existing and planned streets, to topographical conditions, to public convenience and safety, and in their appropriate relation to the proposed use of the land to be served by such streets. The proposed street system shall be designed to provide vehicular interconnections in order to facilitate internal and external traffic movements in the area, improve access/egress for neighborhoods and communities, provide faster response time for emergency vehicles, and improve the connections between neighborhoods and communities. Street arrangements shall not be such as to cause hardship to the owner of adjoining property in platting their own land and providing convenient access to it.



The images at left illustrate three conceptual subdivision layouts. The top image is an example of a poor layout with too few connections and many dead ends. The lower two images show improved street layouts with the required connections and a network of streets. (Diagrams courtesy of Fort Collins, Colorado)

A. **Block Lengths:** Block lengths shall adhere to the standards in the following table:

	Minimum Block Length	Maximum Block Length
Rural & Transitional Districts*	240	1,000
Neighborhood Mixed Use Districts*	240	600 feet

**District classifications are outlined in Chapter 2.*

- B. **Block Width:** Blocks shall have sufficient width to provide for 2 tiers of lots of appropriate depth except where otherwise required to separate residential development from through traffic.
- C. **Through-Block Connections:** A pedestrian/bicycle accessway shall be required near the center and entirely across any block in excess of 800 feet in length where deemed essential by the Administrator to provide adequate access to any school, shopping center, church, park or transportation facility (such as a greenway, sidewalk, or bike lane). Such connections shall be owned and maintained by an approved homeowner’s association.
- D. **Cul-de-Sac:** In general, streets with one end permanently closed shall be avoided unless the design of the subdivision and the existing or proposed street system in the surrounding area clearly indicates that a through street is not essential at the location of the proposed cul-de-sac. In instances where permanent dead-end streets or cul-de-sacs are permitted, they must adhere to the following requirements:
1. **Maximum Length:** 800 feet, measured from the point of street centerline intersection to the center point of the cul-de-sac, and no more than 20 lots.
 2. **Turnaround Dimensions:** The closed end of such streets shall be designed with turnaround dimensions in accordance with Appendix C, MSSD.
 3. **Cul-de-sac Connections:** For the purposes of meeting the connectivity index requirements in Section 6.4.3.A, credit for 1 additional segment shall be given when a pedestrian/bicycle accessway is provided between the following:
 - a. Two permanent culs-de-sacs, or
 - b. A cul-de-sac and any school, shopping center, church, park or transportation facility (such as a greenway, sidewalk, bike lane, etc.)
- E. **Street Jogs Prohibited:** Street jogs with centerline offsets of less than 150 feet shall not be permitted.
- F. **Reserve Strips Prohibited:** Reserve strips and non-access easements adjoining street rights-of-way for the purpose of preventing access to or from adjacent property, and half-streets, except those required to prevent access to thoroughfares, shall not be permitted.
- G. **Street Width Transition:** Where a proposed street extends an existing street of a different width than what is required by this section, the width transition shall be made within the first block of the proposed development, but in no instance less than the distance specified by the 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 (AASHTO).
- H. **Access to Major or Minor Thoroughfares:** Where a subdivision borders an existing or proposed Major or Minor Thoroughfare, no direct driveway access shall be permitted to such facilities from the lots within the subdivision.

6.4.2 EXTERNAL CONNECTIONS

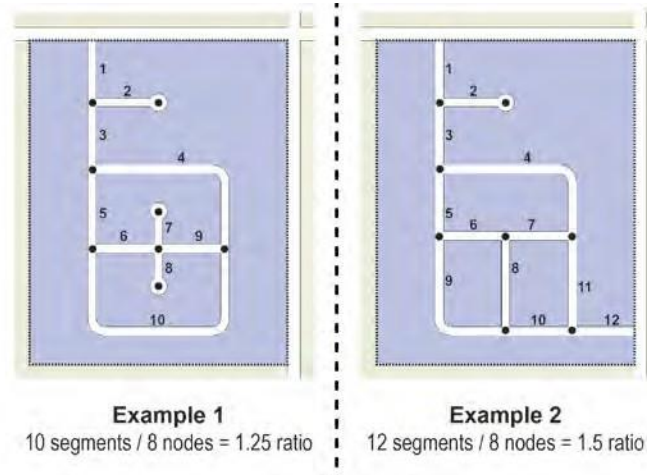
- A. Minimum Street Connections:** External street connections shall be provided at the rate of one for every 1,000 linear feet, or fraction thereof, of abutting property lines. Such connections shall be in the form of connections to existing streets or street stubs to adjacent undeveloped properties.
- 1. New Street Stub Prioritization:** When street stubs to undeveloped properties are provided in order to satisfy the minimum external street connection requirement, the following connections shall be prioritized:
 - a.** Adjacent parcels 20 acres or greater
 - b.** Adjacent parcels that abut or are traversed by existing or proposed thoroughfares.
 - c.** Where any adopted transportation or land use plan recommends a street connection.
 - 2. Permanent Barricades:** Permanent barricades shall be provided at the end of all street stubs.
 - 3. Alternate Compliance:** When the Administrator deems a required external street connection impractical due to severe topography, existing development, or other natural features, the County may require pedestrian/bicycle accessways in lieu of the required street connection(s).
- B. Continuation of Existing Street Stubs:** New development shall connect to and continue streets from any existing street stubs on adjacent properties.
- C. Additional Connections to Greenways and Parks:** When lots abut greenways, parks and open space areas, dedicated pedestrian/bicycle accessways must be provided to such features at a minimum of one accessway for every 900 linear feet, or fraction thereof, of abutting property lines.

6.4.3 INTERNAL CONNECTIONS

The internal connectivity of a subdivision or development shall be evaluated using the connectivity index requirements below. A connectivity index is a ratio of the number of street segments divided by the number of street nodes. Nodes exist at street intersections as well as cul-de-sac heads. Segments are the stretches of road that connect nodes. Stub outs shall also be considered as segments, but street segments on existing adjacent streets that are not part of the proposed subdivision are not included in the connectivity index calculation.

- A. Minimum Connectivity Index:** All development for which new streets are being constructed shall be required to achieve a minimum connectivity index of 1.3 unless the Administrator determines that compliance with this requirement is practically impossible due to topography, existing development, and/or natural features.
- B. Alternate Compliance:** In the event that this requirement is waived, as provided for in 6.4.3.A above, a 6-foot pedestrian trail and access easement shall be provided to link any cul-de-sac with the nearest adjacent street or pedestrian greenway.

C. Illustration: The illustration at right provides an example of how to calculate the index. Example 1 does not meet the minimum connectivity index requirement. Example 2 illustrates a subdivision design with the same number of nodes that is in compliance with the minimum connectivity index requirement.



6.4.4 TRANSIT CONNECTIONS AT PEDESTRIAN AND EMPLOYMENT CENTERS

Projects located within Pedestrian and Employment Centers on the Future Land Use Map and for projects within mixed-used districts shall be reviewed by the DRC for the identification of well-located spaces for future potential transit needs.

6.4.5 PROPOSED NEW STREETS

Where a proposed subdivision or development includes a new street, the developer shall plat and construct the street in accordance with one of the preferred street sections outlined in this ordinance and in accordance with Appendix C, MSSD. The street classification chosen shall be approved by the Administrator and shall reflect the expected intensity of land uses fronting the proposed street and the needs of the surrounding street network.

6.4.6 EXISTING SUBSTANDARD STREETS

Development along existing streets of inadequate right-of-way shall provide additional right-of-way as follows:

- A. Improvements Specified in the County Street Classifications:** Development along existing streets shall dedicate additional right-of-way where necessary to meet the minimum widths specified in this ordinance and in accordance with Appendix C, MSSD.
- B. Installation of Required Street Improvements:** The developer shall install all required street improvements that occur outside the planned vehicular travel lanes, including but not limited to, street trees, planting strips and/or tree wells, and sidewalks.

6.5 COUNTY STREET CLASSIFICATION AND DESIGN

The following standards are intended to provide general clarity for most conditions in Lancaster County. Deviations to these standards may be granted by the Administrator subject to generally accepted safety and engineering practices. For additional guidance, the County will use the United States Department of Transportation Federal Highway Administration's "Accommodating Bicycle and Pedestrian Travel: A Recommended Approach".

6.5.1 RULES FOR ASSIGNMENT OF APPROPRIATE STREET DETAILS

The illustration below (insert illustration) is a simplified diagram of the many different parts that go into the assemblage of each street. Care should be taken to ensure that context plays a primary role in the selection of the various right-of-way elements.

- A. Rights-of-Way:** The right-of-way should be the minimum required to accommodate the street, median, planting strips, sidewalks, utilities and maintenance consideration.
- B. Measurement of Pavement Area Details:** The dimensions established in Appendix C, MSSD for lane widths, sidewalks, bike lanes and parking lanes indicate the required face-of-curb to face-of-curb measurement, or to the edge of pavement for roadways with open drainage.
- C. Turn Lanes:** Dedicated right turn lanes, where required, may be taken from the parking lane.
- D. Street Signs:** The developer shall reimburse Lancaster County for the placement of all regulatory and street name signs in the development. Proposed street names and number systems will be reviewed by the Administrator and Lancaster County Emergency Services. No duplicate/similar names are allowed as determined by these agencies

6.5.2 COUNTY STREET CLASSIFICATIONS

All streets, public or private, shall comply with the preferred arrangement and design specifications indicated in this ordinance and in conformance with Appendix C, MSSD. Street sections may deviate from these standards where topographic and environmental conditions necessitate, as determined by the Administrator.

- A. Street Classification:** The list below indicates which of the Appendix C, MSSD street sections correspond to the classifications established in the Comprehensive Plan Transportation Element:
- B. Arterials:** Highways 5, 9, 160, 521 and 601 and the
- C. Collectors:** Highways 75, 97, 200, 265, 522, 903 and Jim Wilson Road, Harrisburg Road and W. Rebound Road.

6.6 SIDEWALKS AND OTHER PEDESTRIAN FACILITIES

6.6.1 SIDEWALKS

A. General Standards/Location:

1. Where required by Section 6.3, sidewalks shall be provided according to the classification of the existing or proposed street as designated in Appendix C, MSSD.
2. Alternative facilities or payments in lieu may be considered in accordance with C and D below.

B. Design Standards:

1. Where existing sidewalk abuts an area where new sidewalk is to be developed, the new sidewalk shall be the same width as the existing sidewalk or meet the standards of the Appendix C, MSSD, whichever width is greater.
2. Multi-family and commercial developments shall provide sidewalks for the interior movement of pedestrians and to connect the sidewalk system to building entrances and parking areas.
3. Within commercial areas and places with high pedestrian volumes, sidewalks should be designed to meet the anticipated pedestrian/traffic volume as well as accommodate outdoor seating areas.
4. Sidewalks shall be constructed of concrete or other approved materials (such as pavers) and built in accordance with Appendix C, MSSD.
5. Where a planting strip cannot be provided due to right-of-way, topographic or existing building constraints, and therefore the sidewalk must be located immediately adjacent to the curb, the minimum required width of the sidewalk shall increase by one foot. Where, due to similar constraints, a sidewalk abuts a landscape or building wall of any kind, the minimum sidewalk width shall increase by one foot.
6. Where a multi-use path or greenway is planned in the Lancaster County Carolina Thread Trail Master Plan and is located within the street right-of-way, such facilities shall be constructed in lieu of a normal sidewalk.

C. Alternative Compliance: Alternative provisions for pedestrian movement meeting the intent of this section may be used where unreasonable or impractical situations would result from application of these requirements. Such situations may result from significant street trees, impending road widening, topography, utility easements, lot configuration or other unusual site conditions. In such instances, the Administrator may approve an alternate plan that proposes different pedestrian amenities provided that the intent of this section is fulfilled.

D. Exceptions: The Administrator may approve an exception where any one or a combination of the following factors render compliance impractical:

1. Steep slopes; and/or
2. Absence of existing sidewalks along the corridor and in the general neighborhood.

6.6.2 PEDESTRIAN / BICYCLE ACCESSWAYS

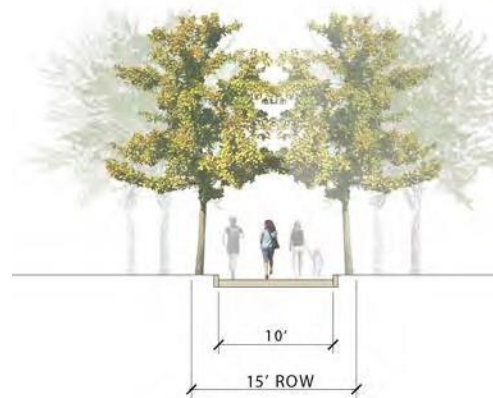
Where pedestrian/bicycle accessways are required, such facilities shall meet the following minimum requirements:

- A. Pavement Width:** 6 feet
- B. Easement Width:** 10 feet
- C. Surface Materials:** The surface of accessways shall be constructed of a smooth, compactable material that is accessible for wheelchairs and strollers. Acceptable materials include asphalt, concrete, and crushed stone.

6.6.3 GREENWAYS

Where greenways, are required by this ordinance, the Lancaster County Carolina Thread Trail Master Plan, or any other adopted plans, such facilities shall meet the following minimum requirements:

- A. Pavement Width:** 10 feet
- B. Easement Width:** 15 feet
- C. Connections:** Greenway stubs at property lines should be placed in areas that are easily accessible for future connectivity through adjacent parcels.
- D. Surface Materials:** Compact gravel, concrete, or asphalt or other material approved by the Administrator.



6.6.4 PEDESTRIAN CROSSWALKS

Mid-block crossings, bulb-outs, raised crosswalks and similar crossing techniques should be commonly used to accommodate pedestrians when appropriate for traffic conditions and site specific situations as directed by the Administrator. All designs shall be consistent with an approved development master plan, site plan, or subdivision plat.

- A. Curb Ramps:** Wherever sidewalks, pedestrian/bicycle accessways, greenways, or other pedestrian facilities intersect streets with curb and gutter drainage, curb cuts and ramps commonly used to provide accessibility for persons with disabilities shall be provided. Where sidewalks are not required, the curb return shall be depressed to allow for the future connection of curb ramps.
- B. Midblock Crosswalk:** A pedestrian crosswalk not less than 10 feet in width shall be required across any street segment in excess of 800 feet in length where deemed essential by the Administrator to provide adequate access to any school, shopping center, worship center, park or transportation facility. When required such crosswalks shall utilize ladder striping to enhance their visibility.

6.7 BICYCLE FACILITIES

- **Facilities Designated by Adopted Plans:** Bike lanes or separate off-street multi-use paths shall be installed on developer-built or modified roadways where designated for such by the Carolina Thread Trail Lancaster County Master Plan and any other adopted plans.
- **Reservation Required:** Where a proposed development is adjacent to required bikeway facilities as outlined in 6.7A above, but does not include the construction of new streets, or the

modification of existing streets, the developer shall reserve right-of-way and/or easement sufficient to accommodate the appropriate bikeway facility. Refer to Chapter 4, Carolina Thread Trail Overlay District.

- **Design Standards:** Bike lanes and bike paths shall be designed according to the AASHTO Guide for the Development of Bicycle Facilities published by Federal Highway Administration and shall include all appropriate signage and pavement markings. Variations from the standards may be allowed subject to approval from the Administrator based on the standards below.

6.8 TRANSPORTATION IMPACT ANALYSIS (TIA)

The intent of this section is to provide the information necessary to allow decision-makers to assess the transportation implications of traffic associated with a proposed development, to address the transportation-related issues associated with development proposals that may be of concern to neighboring residents, business owners and property owners, and to provide a basis for negotiation regarding improvements and funding participation in conjunction with an application for development.

A Traffic Impact Analysis will be required for any land use plan amendment, amendment to the zoning map, subdivision, special exception permit, rezoning or site plan under the following described conditions:

- The proposed development will consist of thirty (30) or more residential dwelling units.
- The proposed development will consist of two (2) acres or greater of commercial property.
- Any residential project accessing an arterial street.
- The proposed development will generate more than 100 peak hour cumulative trips per day at full occupancy, according to most current versions of the ITE Trip Generation Informational Report.

6.8.1 TRAFFIC IMPACT ANALYSIS PREPARATION

Traffic impact analysis shall be prepared by a Licensed South Carolina Professional Engineer or AICP Certified Transportation Planner (CTP) with no less than five years' experience in the preparation of traffic analysis and shall conform to the requirements of SCDOT publication "Access and Roadside Management Standards", Latest Edition, Section 3C-2.1, impact studies. The applicant shall coordinate with the SCDOT and local road authorities to determine whether planned roadway or intersection improvements affect the capacity of the roadway or designs of roadways or access points proposed by the applicant.

The standards for traffic service that shall be used to evaluate the findings of traffic impact studies are:

- A.** For collector or local streets, a Level-of-Service (LOS) "C" or better shall be maintained. On any arterial or higher order street a LOS "D" or better shall be maintained. Level of service will be measured for segments and intersections using ITE standards for LOS calculation. Where the existing LOS is below these standards, the traffic impact analysis shall identify those improvements required to ensure that development related traffic demands result in no net reduction in LOS, and identify additional improvements needed to raise the level of service to the standards on the applicable street to the adopted LOS standard.
- B.** The number and spacing of access points shall comply with applicable County, State and AASHTO standards.
- C.** Average Daily Traffic (ADT) on residential streets shall be within the ranges outlined for the class of street involved. No non-residential development shall increase the traffic on a residential street with at least 300 average daily trips by more than 25%.

- D. On-site vehicle circulation and parking patterns shall be designed so as not to interfere with the flow of traffic on any street and shall accommodate all anticipated types of site traffic.
- E. Access points shall be designed to provide for adequate sight distance and appropriate facilities to accommodate acceleration and deceleration of site traffic.
- F. Details shall be provided on curb space use on streets along the edge of the development site when it is intended that such areas be used for parking, parking space access, delivery and loading zones, passenger zones, taxi cab stands, bus stops, fire zones and/or other official/emergency zones. This review shall include a description of existing conditions prior to development, and proposed changes resulting from the development, including a description of any loss or gain in curb space use by the activities intended.

6.8.2 TRAFFIC IMPACT ANALYSIS CONTENT

A traffic impact analysis shall contain information addressing the factors listed below:

- A. The report shall contain illustrations and narrative that describe the characteristics of the site and adjacent land uses as well as expected development in the vicinity which will influence future traffic conditions. A description of the proposed development including access plans, staging plans and an indication of land use and intensity, shall be provided.
- B. The analysis shall identify the geographic area under study and identify the roadway segments, critical intersections and access points to be analyzed. The applicant shall meet with the County Engineer and Planning Manager to establish the study area prior to conducting the study. At a minimum, the study shall encompass all site access points, all intersections adjacent to the site and the first signalized intersection along each road serving the site, provided that the intersection is no further than three miles from the site. The criteria that define the scope for each TIA may vary depending on the size and type of development. Additional factors may be added to the study by the Administrator if there are known areas of concern that may be impacted by the development, including but not limited to existing congested areas and existing residential development.
- C. The report shall contain a summary of the data used in the analysis of existing traffic conditions, including:
 - 1. Traffic count and turning movement information, including the sources, dates and times of traffic count information used in the report;
 - 2. Correction factors that were used to convert collected traffic data into representative design hour traffic volumes;
 - 3. Roadway characteristics, including the design configuration of existing or proposed roadways, existing traffic control measures (speed limits, traffic signals, etc.) and existing driveways and turning movement conflicts in the vicinity of the site; and
 - 4. The existing LOS for roadways and intersections without project development traffic using methods documented in the Special Report 209: Highway Capacity Manual, published by the Transportation Research Board, or comparable accepted methods of evaluation. LOS shall be calculated for the weekday peak hour and, in the case of uses generating high levels of weekend traffic, the Saturday or Sunday peak hour as determined by the Administrator. In addition, consideration should be given to the peak hours for school traffic impact.
- D. The report shall identify the horizon year(s) that were analyzed in the study, the background traffic growth factors for each horizon year, and the method and assumptions used to develop the background traffic growth. Unless otherwise approved by the Administrator, the impact of development shall be analyzed for the year after the development is expected to be at full occupancy.

- E. The report shall identify projected design hour traffic volumes for roadway segments, intersections or driveways in the study area, with and without the proposed development, for the horizon year(s) of the study.

6.8.3 TRAFFIC IMPACT ANALYSIS REVIEW AND APPROVAL

Following initial completion of a traffic impact analysis, the report shall be submitted to the Planning Manager for distribution to the staff of all jurisdictions involved in the construction and maintenance of roadways serving the development. Staff shall complete an initial review to determine the completeness of the report and shall provide a written summary to the applicant outlining the need for any supplemental study or analysis to adequately address any deficiencies. A meeting to discuss the contents and findings of the report and the need for additional study may be requested by the applicant.

Following a determination that the technical analysis is complete, staff shall prepare a report outlining recommendations that have been developed to address the findings and conclusions included in the study regarding the proposed development's access needs and impacts on the transportation system.

In the case of a traffic impact analysis showing deficiencies requiring mitigation within the public right-of-way, negotiations based on the conclusions and finding resulting from the traffic study shall be held with the County Administrator, County Attorney and Planning Director. A Mitigation Agreement, detailing the applicant's responsibilities and the County's responsibilities for implementing identified mitigation measures, shall be prepared following the negotiations for final contractual action by County Council and the applicant.

If staff finds that the proposed development will not meet applicable service level standards, staff shall recommend one or more of the following actions by the public or the applicant:

- A. Reduce the size, scale, scope or density of the development to reduce traffic generation.
- B. Divide the project into phases and authorize only one phase at a time until traffic capacity is adequate for the next phase of development.
- C. Dedicate right-of-way for street improvements.
- D. Construct new streets.
- E. Improve intersection design and/or signalization.
- F. Redesign ingress and egress to the project to reduce traffic conflicts.
- G. Alter the use and type of development to reduce peak hour traffic.
- H. Reduce background (existing) traffic.
- I. Eliminate the potential for additional traffic generation from undeveloped properties in the vicinity of the proposed development.
- J. Integrate non-vehicular design components (such as pedestrian and bicycle paths or transit improvements) to reduce trip generation.
- K. Recommend approval of the development contingent upon making improvements or addressing items required to mitigate traffic and access issues and impacts.
- L. Contribute to an improvement that provides needed capacity, is on the capital improvements program or is approved to be added to the capital improvements program.
- M. Recommend denial of the application for development for which the traffic study is submitted.

6.8.4 ACCESS MANAGEMENT

A. Curb Cuts and Parcel Access:

1. All curb cuts, including both public and private streets, shall adhere to the standards set forth by the South Carolina Department of Transportation ("SCDOT"), and shall comply with the requirements set forth in the latest edition of the Access and Roadside Management Standards ("ARMS Manual") as published by the SCDOT Traffic Engineering Division. At a minimum, within the Highway Corridor Overlay District, curb cuts along the corridor right-of-way shall be limited to one every three hundred (300) feet of street frontage. A greater distance of separation may be required as justified by a Traffic Impact Analysis or the SCDOT ARMS Manual;
2. Individual parcels having three hundred (300) or more feet of corridor frontage may be permitted additional points of access provided they comply with the Highway Corridor Overlay District and are justified by a Traffic Impact Analysis or review by SCDOT;
3. Access points for parcels (5) acres or less, where access to a shared driveway is limited, shall be subject to SCDOT approval and shall adhere to SCDOT standards;
4. Corner parcels located at an intersection of the corridor and an existing or proposed secondary street, including both public and private streets, shall obtain access from the secondary street. Where such parcels have three hundred (300) or more feet of corridor frontage, a point of access to the corridor may be considered if no other corridor access is located within three hundred (300) feet, and it adheres to SCDOT standards. Such additional access shall be considered on a case-by-case basis, and is subject to approval by the Administrator or SCDOT when applicable;
5. Existing median crossovers are to remain as located. Where justified by a Traffic Impact Analysis, access to a parcel may be required to align directly with an existing median crossover. Likewise, a Traffic Impact Analysis may require improvement to an existing crossover to meet current SCDOT standards. When a proposed access does not align directly with an existing median crossover, such access must adhere to the latest edition of the SCDOT ARMS Manual.

B. Connectivity: Reduction of access points along arterials and collectors are required and are identified in Section 6.5.2.A. The following shall apply:

1. Consolidation of Access Points:
 - a. Shared driveways between two or more parcels shall be required where there is not a conflict in use and a shared driveway is not restricted by topography or other existing site features. Shared driveways shall require mutually executed shared access agreements; and
 - b. Unless restricted by topography or other natural site features, adjoining parking lots serving non-residential buildings of non-conflicting use shall be connected and shall require mutually executed shared access agreements.
2. Stub Outs:
 - a. One (1) stubbed out street shall be required to be provided to any adjacent undeveloped parcel or parcel used for a single-family home that contains a minimum of five (5) acres as set forth in Chapter 6 of the UDO. However, the Planning Commission may alter this requirement if the developer demonstrates that the connection would be difficult to provide because of topographical reasons; and
 - b. Where an undeveloped adjacent parcel exists, a stub out or cross-access easement for future stub out, shall be required to allow for connection to future parking and/or shared driveways; and
 - c. Where a developed adjacent parcel exists, existing stub outs shall be utilized.

6.9 IMPROVEMENT GUARANTEES

6.9.1 GENERAL

- A. Before recordation of a final plat of a subdivision, the Administrator must be satisfied that all improvements required by this ordinance have been constructed.
- B. In lieu of the completion of the improvements required by this section, the County may enter into a financial guarantee agreement with the developer whereby the developer shall agree to complete all required improvements except water and sewer.
- C. The financial guarantee or surety will be subject to the following conditions:
 - 1. The guarantee shall be in an amount equal to 125% of the cost of construction of the outstanding improvements based on an estimate by the Administrator.
 - 2. The improvements will be completed within 12 months after approval of the financial guarantee and upon receipt of the corresponding security documents. The guarantee shall include with an automatic renewal, unless Lancaster County is notified in writing not less than 60 days prior to expiration that it will not renew. The financial guarantee may be amended by the Administrator, as required.

6.9.2 GUARANTEES

- A. **Types of Guarantees:** To secure this agreement, the developer shall provide, subject to the approval of the Administrator, either one or a combination of the following guarantees:
 - 1. The deposit of a certified check,
 - 2. A letter of credit duly executed by a bank located within 100 miles of Lancaster County and payable to the County, or.
 - 3. Another form of surety, together with an assignment of such security payable to Lancaster County, as approved by the Finance Director.
- B. **Default by Developer:** In the event such improvements are not completed as required by the ordinance, the County shall proceed with the work and hold the owner and the guarantor jointly responsible for the costs thereof by redeeming such portion of the financial guarantee as may be necessary to complete the required improvements.
- C. **Release of Financial Guarantee:** Upon completion of the improvements, the County shall release any assignment placed upon such account, certificate or other surety

6.9.3 WARRANTY AGAINST DEFECTS

The developer shall be responsible for the maintenance and repair of all new streets, stormwater structures controls and other required utilities and warranty such improvements for a minimum of 2 years from the approval date of the final plat.

- A. **Significant Failures Reset Warranty Period:** If a significant failure of the warranted improvements occurs, including pavement, trench, or subgrade failure of streets, at any time during the warranty period, the Administrator shall suspend the warranty until the failure is repaired to an acceptable condition. Upon completion of the repair, a new warranty period shall commence on the entire project.
- B. **Warranty Inspection:** At least 30 days prior to the expiration of the warranty period, the developer shall request a warranty inspection. Upon successful completion of all warranty items, the developer shall be released from maintenance responsibilities for the warranted construction.

6.10 EASEMENTS AND DEDICATIONS

6.10.1 REQUIRED EASEMENTS

- A. Easement Width:** Easements shall be conveyed to the County or other appropriate agency for underground and overhead utility installation, stormwater drainage, pedestrian/bicycle access, and other purposes as required by the County. Easements shall be centered along front, rear or side lot lines. The minimum width for easements shall be determined by the Administrator. Widths will vary based on the number of utilities placed within an easement area, the depth of utilities, and other related factors in order to ensure enough space for their future maintenance. The Administrator will set easement widths based on topography, on-site soils, number of utilities, etc., and in accordance with Appendix C, MSSD.
- B. Surface Drainage Easements:** Easements for watercourses and drainage channels shall conform to the lines of such watercourse, and such further width or construction, or both, as will be adequate for the purpose.
- C. Utility Cuts:** An encroachment permit will be required for any entity wishing to excavate or place utilities in the County right-of-way. Pavement cuts in streets made shall be repaired in accordance with Appendix C, MSSD.

6.10.2 RESERVATION/DEDICATION OF PUBLIC SITES AND FACILITIES

Property owners' association covenants shall include the following infrastructure improvements and common area not dedicated to the County:

- A. Infrastructure Improvements Not Dedicated to the County:** Property owners' association covenants shall be established and recorded that guarantee the association's responsibility for the ongoing liability, taxes, and maintenance of private streets, sidewalks, planting strips, storm drainage system, lighting, etc. constructed to serve the common development which are not dedicated to the County.
- B. Common Areas Not Dedicated to the County:** Property owners' association covenants shall be established and recorded that guarantee the association's responsibility for the ongoing liability, taxes, and maintenance of recreational facilities and common open space, which are not dedicated to the County.

6.11 STREET NAMES AND HOUSE NUMBERS

6.11.1 SYSTEM ESTABLISHED

There is hereby established an official system of road names in the County as shown on a map entitled "Lancaster County Official Streets and Highways Map," a copy of which is on file and available for reference at the Lancaster County Public Safety Communications Department and made a part hereof by reference. Names of roads shall remain as shown on said map unless officially changed as herein provided. The E-911 Database Coordinator shall maintain an up to date index listing the names of all known roads.

6.11.2 CONDITIONS OF ACCEPTANCE

No new road shall be platted by the County until such road has been named as herein provided.

- A.** A master list of the names, including suffixes of all roads and streets, within Lancaster County shall be maintained by the E-911 Coordinator and kept on file in the Planning Department.

- B. Road names on all plats must be first approved by the Planning Department/E-911 coordinator before the plat may be recorded in the Register of Deeds office.

6.11.3 ROAD NAME STANDARDS

- A. Any road in excess of one thousand (1,000) feet in length shall be designated as either "road," "street," "avenue" or "drive." The acceptable abbreviations for these suffixes are "Rd.," "St.," "Ave.," and "Dr."
- B. Any road less than one thousand (1,000) feet in length or any road that is cul-de-sac or any road that begins and ends on the same road shall be designated as "court," "way," "place," "terrace" or "lane." The acceptable abbreviations for these are "Ct.," "Way," "Pl.," "Ter." and "Ln."
- C. Any previously unnamed road or new road with center line offsets at intersections of less than one hundred (100) feet shall be given the same name, except in a subdivision. The roads will be allowed two (2) separate road names under the discretion of the approval of the Lancaster County Addressing Coordinator. Excluding roads within an approved subdivision or PDD.
- D. Any continuous road shall have the same name over its entire length even though its direction may change.
- E. No road name hereafter established, regardless of suffixes or directionals, shall duplicate either phonetically or by spelling, another road name in the unincorporated area of Lancaster County or a neighboring county. This is to ensure emergency personnel are directed to the proper location in the correct jurisdiction.
- F. No road name hereafter established shall exceed fifteen (15) characters, including spaces and suffix abbreviations. If the subdivision provides their own signage, the character limit does not apply.
- G. No special characters, such as hyphens, apostrophes, periods, or decimals, shall be used.
- H. Areas of surrounding counties, which share Postal Service zip codes or multi-jurisdictional emergency services agreements with areas of Lancaster County, shall be considered when determining duplicates.
- I. The E-911 addressing department will not allow use of words which in its opinion are overused, either in the immediate area or county-wide, as such overuse is likely to cause confusion.
- J. Directional names (N, S, E, W or combination thereof) shall not be allowed.
- K. Proposed road names, which are intentionally misspelled, obscene, derogatory or other offensive words shall not be permitted.

6.11.4 PROCEDURE FOR NAMING A NEW ROAD

- A. Any person, firm, corporation, developer or right-of-way owner shall submit an application obtained from the Planning Department when requesting to name a new road. Such request shall include any descriptive/locational information required by the Planning Department; designate a spokesperson by name, address, and telephone number; provide first and second road name choices; and be accompanied by a petition, signed by seventy-five (75) percent of the property owners with parcels having frontage on the affected road.
- B. If the request is consistent with standards included the section entitled "Road Name Standards," above, the Planning Department shall approve said request giving written notice of that action within sixty (60) days of the date of such request.

- C. If the request is denied by the Planning Department, written notice including reasons for that action shall be provided within sixty (60) days of the date of such request.
- D. Decisions of the Planning Department, whether affirmative or negative, shall be final subject to written appeal to Lancaster County Planning Commission filed with the clerk to the commission within fifteen (15) calendar days of the notice date of the Planning Department's decision. Such appeal shall set out the specific grounds upon which the Planning Department's decision is questioned. The fifteen-day appeal period shall commence on the date of the Planning Department's written notice of decision, which shall be sent to the person signing the affected road name request.
- E. A person laying out a street is guilty of a misdemeanor if he shows an unapproved street name on a plat, street marker or deed. If convicted, the court decides the punishment.
- F. Naming a previously unnamed road or driveway does not change the maintenance responsibility; if it was privately maintained prior to its naming, it will remain privately maintained.
- G. Any road or driveway, whether publicly or privately maintained, that serves as the sole access for three (3) or more permanent residential or business structures must be named and brought up to private road standards. An occupied manufactured home is considered a permanent structure.

6.11.5 PROCEDURE FOR CHANGING THE NAME OF AN EXISTING ROAD

- A. Any person, firm, or corporation shall submit a written request to the Planning Department which proposes to change the name of a previously named road. Such request shall include any descriptive/locational information required by the Planning Department; designate a spokesperson by name, address, and telephone number; provide first and second road name choices; and be accompanied by a petition, signed by seventy-five (75) percent of the owners addressed on the affected road. The request must also include a reason for the name change. When the request is submitted by the Public Safety Communications Department, or its successor entity, for a road name change based on the provisions of Section 23-47-60(C)(2) of the Code of Laws of South Carolina 1976, as amended, or when needed to rename road segments for computer aided dispatch database purposes, the requirement for the request to be accompanied by a petition does not apply.
- B. Upon receipt of such request, the Planning Department shall schedule consideration of same by the Lancaster County Planning Commission. The Planning Commission's consideration shall be conducted during any regular meeting of the Planning Commission. The public notice requirement for this type of application shall be the same as is contained in Chapter 9.
- C. The proposed road name change shall be posted at integral points along the affected road.
- D. Within sixty (60) days of first consideration, the Lancaster County Planning Commission shall render a decision on the request, which decision shall be final and binding. Such decisions of the Planning Commission, along with reason(s) for any denied request, shall be provided in writing to the spokesperson of the affected petitioning group.
- E. Where road name signs have been installed and replacement is necessitated as a result of a road name change approval, the petitioning group involved shall pay the expense of new sign materials prior to installation in the form of an application fee collected by the Planning Department.
- F. After reasonable notice in a general circulation newspaper in the community, the Lancaster County Planning Commission may change the name of an existing street or road within its jurisdiction. The commission can make the change when one of the following occurs.

1. There is a duplication of names which tends to confuse the public or persons delivering mail, orders or messages.
2. A change may simplify markings or giving directions to persons looking for an address.
3. Any other good and just reason that may appear to the commission.

After reasonable opportunity for public hearing, the Planning Commission issues its certificate designating the change. It is recorded in the Lancaster County Register of Deeds office. The change and certified name becomes the legal name of the street.

6.11.6 NOTICE TO AFFECTED ENTITIES

Upon approval of any road name, the Administrator shall notify affected entities which shall include at least the County Tax Assessor, Public Works Director, Fire Marshal, Sheriff, Emergency Management Planner, and other agencies.

6.11.7 PENALTIES

- A. It shall be unlawful for any person to establish or name any street or road by any marking on any sign, plat, deed or other instrument without first obtaining the approval of the Planning Department, or Lancaster County Planning Commission, as appropriate. Any person, firm, or corporation violating this provision shall be guilty of a misdemeanor and, upon conviction, shall be punished by a fine not greater than two hundred dollars (\$200.00) and/or imprisonment of thirty (30) days.
- B. It shall be unlawful for any person to remove or deface street signs or tamper with the direction of signs. Any person violating this provision shall be guilty of a misdemeanor and, upon conviction shall be punished by a fine not greater than two hundred dollars (\$200.00) and/or imprisonment of thirty (30) days.
- C. Failure by the owner, occupant or agent responsible for a building to place or cause to be placed on each building proper numbers as provided by this ordinance shall constitute a violation of this ordinance, and the owner, occupant or agent shall be deemed guilty and subject to a fine not to exceed five hundred dollars (\$500.00) per day, issued by the Administrator.

6.11.8 NAMING STATE SECONDARY ROADS

All roads in the County contained in the secondary portion of the state highway system shall be named in accordance with appropriate provisions of this chapter.

6.12 UNIFORM ADDRESSING AND NUMBERING

6.12.1 UNIFORM NUMBERING SYSTEM

A uniform system of numbering properties and principal buildings, as shown on the map identified by the title, "Uniform Numbering System Map, County of Lancaster, S.C." (hereinafter referred to as "property number map"), which is filed with the E-911 database coordinator in the Public Safety Communications Department, is hereby adopted for use in the County. This map and all explanatory matter thereon, is hereby adopted and made a part of this ordinance.

6.12.2 ASSIGNMENT OF NUMBERS

- A. All properties or structures within the County shall hereafter be identified by references to the uniform numbering system adopted herein; provided further, that all existing street numbers assigned to a parcel and/or not in conformity with the provisions of this section shall be changed to conform to the system herein adopted.

- B.** A modified grid system is utilized for addressing the County. The reference streets for numbering are:
1. The north/south axis is U.S. Highway 521;
 2. The east/west axis is S.C. Highway 9;
 3. All buildings north of east/west streets and east of north/south streets shall bear even numbers and all buildings on the south side of east/west streets and west of north/south streets shall bear odd numbers. All streets running more nearly north/south shall be numbered as north/south streets, and all streets running more nearly east/west shall be numbered as east/west streets.
- C.** All numbers shall be assigned by the Administrator on the basis of two (2) numbers for each twenty-five (25) feet of frontage along the street.
- D.** No single building shall be assigned more than one (1) number.
- E.** Notwithstanding any other provisions of this article, when multiple buildings have frontage within one (1) or more assigned twenty-five-foot frontage areas and under the remaining provisions of this article, each such building would be assigned a separate number designation.
- F.** All new streets shall be numbered with odd numbers on the left side of the road and even numbers on the right side of the road, leaving at least two (2) numbers for every twenty-five (25) feet of road frontage.
- G.** The Administrator shall notify the applicant of the following information as a complete proper address within sixty (60) days of the date of the E-911 addressing application:
1. A house or structure number.
 2. A correct street name.
 3. The proper E-911 community name and the postal community name if different from the E-911 community name.
 4. The proper zip code.
- H.** Each structure shall have its own distinct address.
1. Each single, detached structure shall have its own individual number.
 2. Collective developments (such as mobile home parks and apartments) containing only one street or located along only one street shall be assigned either: one (1) central number with a unit number or apartment number or each building may be assigned its own individual number along that street.
 3. Collective developments containing more than one (1) street or built along more than one (1) street may have an individual number assigned to each structure. The road name shall be the one that provides access to the building. Each street in the development shall be assigned a name consistent with this chapter.
 4. Units in strip shopping centers, units in duplexes, and like developments shall be assigned a central number along with suite numbers or individual numbers along the street which provides them vehicular access. The outbuilding of strip shopping centers shall be considered single, detached structures and given an individual number.
- I.** The following permitting process must be followed and paperwork must be obtained and available to the 911 addressing coordinator before a 911 address can be issued. The following permitting process is required prior to the 911 address being issued:

1. Recorded plat and deed.
2. Zoning application.
3. Zoning permit.
4. Septic tank permit.
5. 911 addressing permit.

6.12.3 LOCATION OF NUMBER

- A. When each house or building has been assigned its respective number or numbers, the owner, occupant, or agent shall place or cause to be placed upon each house or building controlled by him the number or numbers assigned under the uniform system as provided in this chapter.
- B. Such numbers shall be placed on existing buildings on or before the effective date of this article, and within thirty (30) days after the assigning of the proper number in the case of numbers assigned after the effective date of this article. The cost of the numbers shall be paid for by the property owner. Residential numbers shall not be less than three (3) inches in height, and business numbers shall not be less than four (4) inches in height. These numbers shall be made of durable and clearly visible material and shall be in a contrasting color from the building.
- C. The numbers shall be conspicuously placed immediately above, on, or at the side of the proper door of each building so that the number is clearly legible from the nearest public travel way. Should the structure be too far from the public travel way for reasonably sized numerals to be seen, the property owner shall also erect where the main driveway to the building intersects the public travel way an additional set of numerals which are to be legible from vehicles traveling at the speed limit on the roadway.

6.12.4 ADMINISTRATION

- A. For the purpose of facilitating correct numbering, grid maps of all streets, avenues, and public ways within the County showing the proper address ranges shall be kept on file and available for public review.
- B. It shall be the duty of the Administrator to inform any party applying therefore of the number or numbers belonging to or embraced within the limits or any said lot or property as provided in the section. In case of conflict as to the proper number to be assigned to any building, the Administrator shall determine the number of such building.
- C. Whenever any house, building, or structure shall be erected or located in the County after the establishment of the uniform system of numbering provided for herein has been completed, in order to preserve the continuity and uniformity of numbers of the houses, buildings, and structures, it shall be the duty of the owner to procure the correct number or numbers as designated by the building and zoning department for the property and to immediately fasten the number or numbers so assigned upon the building as provided by this article. No building permit shall be issued for any house, building or structure until the owner has procured the official number of the premises.
- D. Whenever any house, building, or structure shall be erected or located in the County after the establishment of the uniform system of numbering provided for herein has been completed, in order to preserve the continuity and uniformity of street numbers for houses, buildings, and structures, it shall be the duty of the owner to procure the correct number or numbers as designated by the Administrator for the property and to

immediately fasten the number or numbers so assigned upon the building as provided by this chapter. No certificate of occupancy shall be provided by the Administrator for any house, building or structure until the owner has complied with Section 6.12.13.B of this ordinance.

- E.** Whenever any house, building, or structure shall be erected or located in the unincorporated section of the County, it shall be the duty of the Administrator to assign its proper street number based on the uniform numbering system set forth in this chapter. The Lancaster County Planning Department shall also number all subdivision plats prior to their being recorded in the register of deeds and shall number all commercial/industrial development and manufactured home park plats and site plans at the time such plats and plans are permitted by the County. It shall be the duty of the building and zoning department to inform any party applying for a permit that they must obtain a proper address from the Administrator prior to receiving a certificate of occupancy.
- F.** Existing numbers shall be changed only where it is necessary in the judgment of the Administrator to maintain the order and uniformity sought by this ordinance.

6.13 ROADS, BRIDGES, AND PUBLIC WAYS

6.13.1 ACCEPTANCE OF ROADS

- A.** Post Ordinance No. 2008-915 Roads are considered to be those roads that were "identified and created through the submission of a preliminary plat" following the passage of Lancaster County Ordinance No. 2008-915 on December 1, 2008, but prior to January 1, 2015. To be accepted by the County, the following shall be mandatory:
 - 1.** Each requirement and condition set forth in Ordinance No. 2008-915 must be accomplished;
 - 2.** Each requirement shall be completed by the owner on or before December 31, 2017.
- B.** Roads within a planned development district, a residential subdivision or other developments that are identified and created through the submission of a preliminary plat after January 1, 2015, will be private. Subject only to the specific exception noted below, the approval process for these roads shall have the following two (2) requirements:
 - 1.** The platted roadway must indicate with specificity on the plat to be recorded that the road will remain privately owned and privately maintained.
 - 2.** The owner of the roadway must provide to Lancaster County sufficient proof that there is in existence a legally created property owners association or other similar entity for the purpose of providing perpetual maintenance and repairs for the road.
 - 3.** As an exception to the requirements set forth in subsections (b)(3)a and b. Upon proof that the road in question has been built in full compliance with Ordinance No. 2008-915, Council may vote to accept the road into the County system upon a finding that the road provides connectivity to the County road system or is a necessary component for the proper development of the County road system.
 - a.** Council's favorable consideration shall be by an affirmative resolution vote of at least two-thirds (2/3) of the Council members.
 - b.** The resolution must contain language establishes a finding that the road fully meets the two (2) conditions cited in subsection (b)(3)c above.

- c. Under no circumstances shall the County accept ownership or responsibility for sidewalks, landscaped medians, stormwater infrastructure outside the road right-of-way, detention ponds, street trees, decorative stamped asphalt or concrete, pavers, street lights and similar items.
- C.** Before any road or right-of-way is accepted by Lancaster County for ownership, maintenance or use, the owner shall provide the Administrator a copy of a recorded certified plat of the road which must specifically show the distance, width and location of the road. The owner wishing to transfer a road or right-of-way shall prepare a deed and deliver the deed to the Administrator along with the recorded plat and the opinion of the owner's legal counsel that the grantor of the right-of-way has marketable fee simple title. Before any road is accepted, all owners of the road must have executed the deed. The deed must not be recorded before the road or right-of-way has been accepted by the County. If the road or right-of-way is accepted, the Administrator shall provide the owner a certificate of acceptance which must be recorded with the deed.

6.13.2. INSPECTION

The roadway developer shall provide the County a set of "as-built" drawings for the roadway and the drawings must show all details related to the roadway, including, but not limited to, centerline profile, dry utilities, water system, sewer system and storm drainage system. The Administrator shall inspect, or cause to be inspected by an engineer retained by the County. The roadway owner must pay a road inspection fee to cover the cost of the inspection. The road inspection fee shall be set annually in the County budget.

6.13.3 WARRANTY

- A.** Before final plat approval by Lancaster County, the developer shall provide a warranty to cover defects in workmanship and materials of the road and supporting systems within the right-of-way. The warranty must be secured by the developer providing an acceptable letter of credit to the County Finance Director. In lieu of a letter of credit, the developer may deposit cash with the County Finance Director. The dollar amount of the letter of credit or cash deposit must be not less than fifty (50) percent of the cost of the final one and one-half-inch asphalt overlay. The warranty period begins with the date of approval of the final plat and runs for two years.
- B.** If a road or right-of-way is platted prior to the installation of the final one and one-half inch asphalt overlay, then the developer shall provide an acceptable letter of credit to the County Finance Director to insure installation of the final asphalt overlay. In lieu of a letter of credit, the developer may deposit cash with the County Finance Director. The dollar amount of the letter of credit or cash deposit must be not less than one hundred twenty-five (125) percent of the engineer's estimated cost of installation of the final asphalt overlay as approved by the Public Works Director.

6.13.4 VARIANCES

County Council may vary appropriate provisions of this article upon a written finding that compliance with such provisions would result in undue hardship for the owner/developer or owners fronting upon a proposed road for acceptance. Requests for variances shall be submitted in writing by the owner/developer in advance of or simultaneously with a request for final plat approval. Such requests shall identify the provision or provisions for which a waiver is requested and shall substantiate the reasons that expenditures necessary to meet such provisions are not reasonably recoverable. Any variance granted shall be the minimum necessary to avoid unreasonable prejudice. To the extent that expenditures are recoverable on a reasonable basis, such as through the sale of lots fronting a road proposed for acceptance, prejudice shall not be found to exist. Approval of any variance shall be by no less than the

6.13.5 PRIORITY FOR MAINTENANCE

Maintenance shall be performed on all county roads based on the following factors:

- The utilizations of the road by county residents;
- The availability of funds;
- The availability of other access roads.

School bus routes and heavily traveled roads will have priority as to maintenance.

6.13.6 ABANDONED OR PRIVATE ROADS NOT MAINTAINED

The County shall not maintain any road if the road is abandoned nor shall the County maintain any private road.

6.13.7 RESTRICTIONS UPON USE

The County Council shall have the authority to restrict the use of any road maintained or deeded to Lancaster County as follows when such action is indicated based upon a traffic and engineering study:

- Restrict the use of a County maintained road to cars only;
- Restrict the use of a County maintained road to certain weight limits;
- Restrict the use of a County maintained road to those persons living on the road or traveling to a residence on the road by designating the road a non-throughway, through road, or thoroughfare;
- Restrict the speed limit on County maintained roads, if necessary;
- If the County maintained road is unsafe or abandoned, close the road;
- Restrict the use of any bridge maintained by the County to certain weight limits, and to terminate the use of any bridge that is unsafe.

The County Council shall not restrict the use of any road as to vehicles by this article without posting an appropriate sign or signs to properly notify persons of the restrictions.

6.13.8 UTILITY LINES OR PIPES

No utility lines or pipes shall be installed in or across any County road bed without a County encroachment permit.

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)
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.

B. Cul-de-sacs shall not exceed five hundred (800) feet in length, except where unusual topographic or other physical conditions dictate otherwise, and shall have a turnaround with ninety (90) feet minimum diameter to pavement edge and one hundred (110) 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 twenty (20) residential lots.

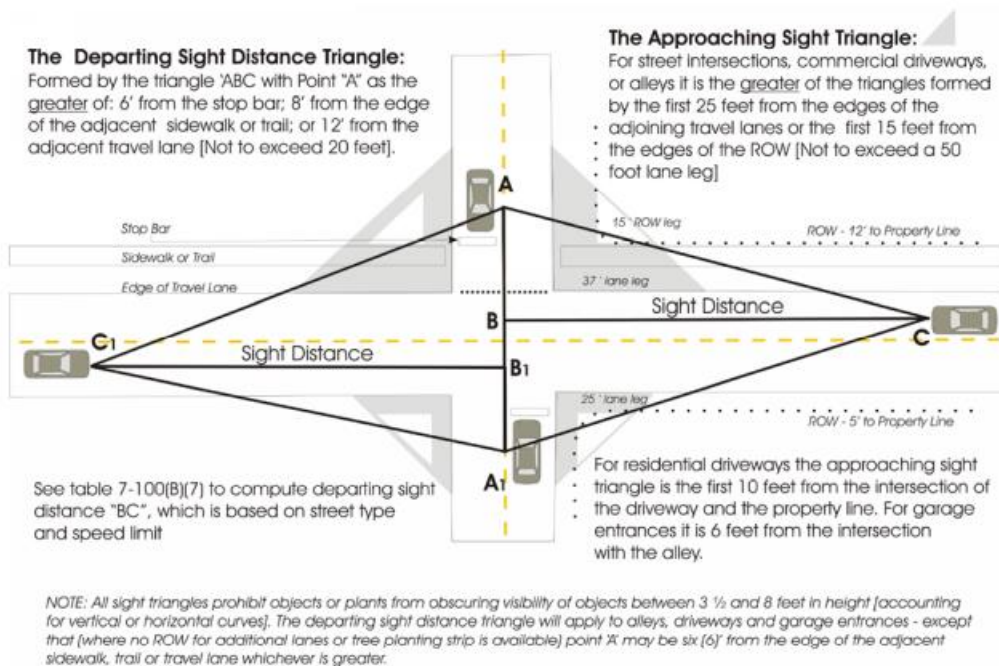
C. Design speed, sight distance, and centerline radius shall be as follows:

	Local	Collector	Commercial/Arterial
Design speed	25 mph	25	35 mph
Minimum sight distance on vertical curve	150 feet	200	225 feet
Minimum centerline radius	150 feet	200	250 feet

1. Horizontal curvature shall be introduced at any change in road direction. Major road curvature shall be in accordance with SCDOT standards. Minimum tangent between reverse curves shall be one hundred (100) feet for local roads, two hundred (200) feet for collector roads, and sixty (60) feet from curve to any intersecting road.
2. If a collector road may reasonably be expected to serve more than one (1) subdivision, it shall be designed for at least a fifty-five (55) miles per hour design speed (four hundred and fifty (450) minimum sight distances). Minimum sight distance at intersections shall be established by provision of a clear sight triangle measured along centerlines for one hundred (100) feet, which triangle shall be entered upon the final plat prior to recording.

D. Site distance at intersections shall be as follows:

# OF LANES	MINIMUM SIGHT DISTANCE (BC) (IN FEET)							
	20MPH	25MPH	30MPH	35MPH	40MPH	45MPH	50MPH	55MPH
2	200	250	300	350	400	450	500	550
3	220	275	330	385	440	495	550	605
4	240	300	360	420	480	540	600	660
5	250	312.5	375	437.5	500	562.5	625	687.5
6	260	325	390	455	520	585	650	715



- E. Roads shall be designed to intersect as nearly as possible at right angles, but no less than seventy-five (75) degrees. Minimum radius or curb or pavement edge at intersections shall be at least twenty (20) feet at intersections with local roads and twenty-five (25) feet at intersections with collector roads.
- F. Unless necessitated by unusual topographic conditions approved by County Council, minimum and maximum road grade shall be one (1) percent and eight (8) percent, respectively. Road crown shall be two (2) percent.
- G. Proposed intersections on one side of a road shall coincide with existing or proposed intersections on the opposite side. Minimum centerline offset for intersections on opposite sides of a road shall be one hundred and fifty (150) feet. No two (2) roads may intersect on the same side of a road at a centerline separation distance of less than four hundred (400) feet.
- H. At street intersections, the intersection of paved surfaces shall be rounded with a minimum radius of 30'. Where streets intersect at less than right angles, a greater radius may be required.

- I. **Two Street Maximum:** The intersection of more than 2 streets at 1 point shall be avoided except where it is otherwise impracticable to secure a proper street system as determined by the Administrator.
- J. **Sight Triangles:** A 25-foot by 25-foot sight visibility triangle shall be maintained at all street intersections. Within the sight visibility area no fence, wall, sign (except regulatory and street name signs), slope, embankment, parked vehicle, hedge, foliage, or other planting or structure shall be placed, erected or maintained which will obstruct visibility within the sight area. This sight triangle requirement may be reduced by the Administrator at fully controlled intersections only.

6.14.2 PAVEMENT STANDARDS

In general, all roads shall be constructed in accordance with the South Carolina Department of Transportation's "Standard Specifications for Highway Construction" (latest edition) as it relates to earthwork, bases/subbases, paved surfaces, etc., and the following requirements.

A. Grading for Road Construction:

Street shall be graded in accordance with the lines and grade set by the engineer. Before placing curb and gutter or base on the graded subgrade, the subgrade shall be compacted to one hundred (100) percent ASTMD690 for a depth of six (6) inches and then shall be proof rolled in the presence of the engineer. Places that are found to be loose, or soft, or composed of unsuitable materials, whether in the subgrade or below it, must be dug out and refilled with suitable material. All embankments or fills shall be made in one-foot horizontal lifts of suitable material. The fill shall be rolled with a sheepsfoot roller after each lift, followed by a wheel roller, each weighing not less than eight (8) tons.

B. Paved Road Surfaces are Required for all Roads:

The developer shall submit a complete soils report and a detailed road thickness design as part of his or her engineering plans and specifications that either supports the County's minimum requirements or recommends thicker sections based on actual soil conditions. A complete soils report and detailed road design shall convincingly support the use of the County's typical minimum cross-section or document the necessary variations from the required design criteria. This report and design shall be prepared by an independent County-approved Geotechnical Engineer/Testing Laboratory and approved by the Administrator. NOTE: A complete soils report includes, but is not limited to, the following data: a CBR for every soil type and a grain size analysis and Atterberg Limit determination for each soil type.

C. Road Construction between March 1 and November 30:

1. **Local Roads:** Road base shall include eight (8) inches of crushed stone with a one and a half (1.5) intermediate asphalt course and a one and a half (1.5) inches compacted asphalt surface course. Alternate designs will be acceptable if they have the same or greater coefficient of strength and with prior written approval from the Public Works Director. Road shall be left down one and a half (1.5) inches for future overlay ninety-five-percent build out of entire project, even if phased. A local road shall mean a route providing service which is of relatively low average traffic volume, short average trip length or minimal through-traffic movements, and high land access for abutting property. Total cross section for local roads: eight (8) inches crushed stone compacted, one and a half (1.5) inch compacted intermediate asphalt course, one and a half (1.5) inches compacted asphalt surface course.
2. **Collector/Subcollector Roads:** Road base shall include eight (8) inches of compacted crushed stone with a three (3) inches compacted intermediate asphalt course, and two (2) inches compacted asphalt surface course. Alternate designs will be acceptable if they have the same or greater coefficient of strength and with prior written approval from the Public

Works Director. Road shall be left down two (2) inches for future asphalt overlay after eighty-five (85) percent build out of entire project, even if phased, or two (2) years from completion date, whichever comes first. A collector/subcollector road shall mean a route providing service which is of higher average traffic flow, serving as a main route for interior/exterior traffic and land/property access related to the designed project. Total cross section for collector/subcollector roads: eight (8) inches compacted crushed stone, two (2) inches compacted intermediate asphalt course, two (2) inches compacted asphalt surface course.

- 3. Commercial/Arterial Roads:** Road base shall include eight (8) inches of crushed stone with a four (4) inch asphalt intermediate course and two (2) inch surface asphalt course. Alternate designs will be acceptable if they have the same or greater coefficient of strength and with prior written approval from the Public Works Director. Commercial or arterial roads shall be accompanied by a CBR study of the soils, and a traffic study based on repetitive traffic, including construction traffic per lot during building phase(s). Note: If CBR and traffic study supports a cross section below the proposed standard, proposed standard will still be used. If road needs a heavier section, then the pavement design shall be included in plan review by the project engineer/geotechnical engineer. Lancaster County may also incorporate a mandatory lime/cement treated subgrade for such roads identified as commercial or arterial roads. A commercial/arterial road shall mean any road inside a business or industrial park and those roads providing service which is of relatively moderate average traffic volume, moderately average trip length, and moderately average operating speed. Such a route collects and distributes traffic between local roads or arterial roads and serves as a linkage between land access and mobility needs.
- D. Road Construction Between December 1 and February 28 (29):** Road work requires advance approval by Lancaster County:
- 1. Local Roads, Collector/Subcollector Roads:** Road base shall be treated with lime or cement base stabilization and shall include four (4) inches of asphalt base with a two (2) inches compacted intermediate asphalt course. Road shall be left down one and a half (1.5) inches for future overlay after eighty- five (85) percent build out of entire project, even if phased, or two (2) years from completion date, whichever comes first.
 - 2. Commercial/Arterial Roads:** Road base shall be treated with lime or cement base stabilization and shall include ten (10) inches of full depth asphalt. Commercial or arterial roads shall be accompanied by a CBR study of the soils, and a traffic study based on repetitive traffic, including construction traffic per lot during building phase(s). Note: If CBR and traffic study supports a cross section below the proposed standard, proposed standard will still be used. If road needs a heavier section, then the pavement design shall be included in plan review by the project engineer / geotechnical engineer. Lancaster County may also incorporate a mandatory lime/cement treated subgrade for such roads identified as commercial or arterial roads.
- E.** All entrances shall be paved with ten (10) inches full depth asphalt fifty (50) feet (minimum) from edge of intersecting road ROW. An entrance is defined as wherever asphalt begins of an intersecting street, or end of a previous phase.
- F.** Any utility cuts in asphalt shall be saw cut, primed, and replaced with eight (8) inches minimum hot asphalt mix.
- G.** All conduit crossings shall extend from edge to edge of the right-of-way of the road, and must be installed before curb and gutter is to be poured. Developer is responsible for ensuring dry utilities (power, cable/phone, natural gas) are properly installed and compacted. Dry utilities are subject to inspection by Lancaster County Public Works, and any deficiencies must be corrected immediately.

- H. All curb must be, or transitioned to, SCDOT vertical standard curb at all creek crossings. A ten-foot transition is also required from curb to all drainage structures.
- I. All roadway ditches and channels shall be designed to contain, at a minimum, a peak flow from a twenty-five (25)-year frequency storm. All roadway ditches and channels shall be designed so that the velocity of flow expected from a twenty-year frequency storm shall not exceed the permissible velocities for the type of lining used. Riprap shall be placed for stops in road drainage swales as needed. Swales shall be stabilized against erosion by grassing with a mixture of rye and Bermuda grass. Road swales shall be installed at a maximum depth of three (3) feet and be designed to enable mowing by adjoining property owners.
- J. Roads may be constructed with drainage swales and six-foot-wide shoulders (12:1 slope) provided road grade does not exceed six (6) percent. Where road grade exceeds six (6) percent, curb and gutter, paved drainage swales, or riprap swales shall be provided. Curb and gutter may be roll-type or standard ninety-degree curb.

6.14.3 MATERIALS

Roadway materials shall conform to the latest edition of the SCDOT's "Standard Specifications for Highway Construction."

- A. Base course for streets shall be crushed stone conforming to SCDOT Type ABC stone. The stone base course shall be placed in four-inch layers, watered as necessary, and compacted to 100 percent ASTM D690. The contractor shall be responsible for keeping the stone base free of contamination from clay or other foreign materials. Handling and placement of stone base shall all be in accordance with SCDOT specifications.
- B. Asphalt intermediate course shall meet SCDOT specifications for Type C asphalt intermediate course.
- C. The asphalt surface course shall meet SCDOT specifications for Type C asphalt surface course.
- D. Concrete curb shall meet SCDOT specification and be a minimum of 18" rolled or barrier curb.

6.14.4 PROOF ROLLS

A. CURB & GUTTER

For all roads with curb and gutter, the following requirements apply:

1. Curb subgrade shall be proof rolled with a loaded dump truck. Proof roll equipment must be approved by Lancaster County Public Works. No weight ticket will be necessary for curb subgrade proof roll.
2. Curb subgrade proof rolls shall be scheduled between the hours of 8:30 a.m. and 2:30 p.m. (Monday through Thursday). Any curb subgrade proof roll scheduled on Friday or the day prior to a holiday must be approved by Lancaster County Public Works. A twenty-four hour notice is required.
3. Curb proof rolls shall be scheduled accordingly, despite size or phasing of project. Lancaster County will not "piece mill" proof rolls for curb placement.
4. Curb subgrade shall be smooth on top with no loose material, cracks, ruts, or organic material roots visible in subgrade. Exposed rock shall be at least six (6) inches below subgrade.
5. The contractor or project engineer will schedule proof rolls.

6. All sewer and water lines shall be tested by the project engineer, and all road crossing conduits installed before curb subgrade proof roll.
7. Curb subgrade shall be compacted properly with no visible movement, and at optimum moisture content in order for proof roll to pass.
8. If proof roll fails, a re-inspection fee in an amount established by the Lancaster County annual budget shall be collected before the rescheduled proof roll.
9. Any undercut areas must be replaced with material approved by the Lancaster County Public Works Department.
10. All concrete shall meet or exceed SCDOT and all local government requirements. Concrete shall be three thousand six hundred (3,600) psi, or greater. Temperatures must be above forty (40) degrees Fahrenheit to pour curb. If temperatures fall below freezing (32 degrees F.) overnight, all finished curb shall be covered with insulation blankets.
11. Lancaster County reserves the right to have any material and/or utility trenches tested by an independent engineering firm, at the developer's/ contractor's expense.
12. Pour is to start within twenty-four (24) hours of passed proof roll. If project receives significant rainfall, the proof roll shall be rescheduled. In the event of rainfall, any undermined curb and gutter shall be removed and repoured. Finished curb must have a minimum seventy-two-hour period curing time, and be properly backfilled, before any stone is placed on the subgrade.
13. Lancaster County shall have final decision on the acceptance of all proof rolls.

B. ROADWAY SUBGRADE

For all roads, the following requirements apply:

1. Roadway subgrade shall be proof rolled with a loaded tandem dump truck with a minimum fifteen (15) tons loaded on truck, or a maximum of fifty-four thousand (54,000) pounds gross weight. Current weight ticket shall be provided to Lancaster County. Note: The use of water trucks, regardless of gross weight, is unacceptable.
2. Road subgrade proof rolls shall be conducted from the hours of 8:30 a.m. and 1:00 p.m. (Monday through Thursday). No road subgrade shall be proof rolled on Fridays or the day prior to a holiday.
3. The contractor or project engineer will schedule proof rolls. A representative of the paving contractor must be present at all subgrade proof rolls.
4. If a soils engineer is employed by the developer for quality control, the soils engineer shall be present at all proof rolls.
5. Subgrade proof rolls shall be scheduled accordingly, despite project size or phasing. Lancaster County will not "piece mill" proof rolls for stone placement. If subgrade is covered, contractor(s) shall make every effort to pave the road. Any stone left dormant over extended periods of time shall be considered contaminated, removed from the road base, and subgrade reworked.
6. Curb and gutter shall be properly backfilled and compacted before any roadway subgrade proof roll is scheduled. Backfill shall be inspected prior to any subgrade proof roll. Right-of-way shall be smooth and graded for positive drainage, with no ruts and all conduits/utility services properly tamped/compacted.
7. Roadway crown/grade shall be checked by the paving contractor, with a Lancaster County representative present, at fifty-foot intervals minimum. If grade is inconsistent, the proof roll automatically fails and shall be rescheduled. A re-inspection fee in an

amount established by the Lancaster County annual budget shall be collected before the rescheduled proof roll.

8. Proper erosion control measures shall be installed and maintained to prevent silt from contaminating roadway subgrade. Lancaster County reserves the right to have additional erosion control measures (ex. silt fencing, rip rap check dams, diversion ditches, etc.) installed to protect the roadway subgrade.
9. Roadway subgrade shall be smooth on top, with no visible cracks, ruts, or exposed organic material/roots present. Any exposed rock shall be at least six (6) inches below subgrade, if conditions require rock to stay in place. Organics/roots shall be removed from the subgrade.
10. Roadway subgrade shall have no visible movement or deflection, and be at optimum moisture content, in order for proof roll to pass. Excessive "scaling" or movement in the top unbonded lift of soil shall be deemed failing, and unacceptable to Lancaster County.
11. Any undercut material must be approved by Lancaster County. Isolated marginal areas may use extra compacted crushed stone. Largely inconsistent areas must be reworked. Undercut areas shall be a minimum twelve (12) inches in depth, and are subject to a reinspection fee.
12. Stone is to begin being placed within twenty-four (24) hours following satisfactory proof roll.
13. Every effort shall be made to protect the subgrade/stone base. Construction traffic shall be monitored, and in certain cases, isolated failing areas may cause entire proof roll to fail. Upon completion of a satisfactory proof roll, construction traffic shall be limited to the forces of the paving contractor only. Utilities shall not be trenched in the road right-of-way of unpaved, undeveloped roads.
14. Stone shall not be placed on frozen or excessively wet subgrade. Temperatures must be above thirty-five (35) degrees to place stone. In the event temperatures fall under freezing overnight, proof roll shall be rescheduled.
15. All material shall meet SCDOT standards, as well as local government standards. Lancaster County reserves the right to have any material tested by an independent engineering firm, at the developer's/ contractor's expense.
16. Lancaster County shall have final decision on all proof rolls.

C. ROADWAY STONE BASE

For all roads, the following requirements apply:

1. Stone base shall be proof rolled with a loaded tandem truck with fifteen (15) tons loaded on the truck, or a maximum gross weight of fifty-four thousand (54,000) pounds. Current weight ticket shall be checked.
2. Stone base shall be properly set and sealed, with no visible movement in order for proof roll to pass. No loose gravel, or segregation of stone on top, shall be permitted. Those areas shall be wet and rolled, or broomed/undercut until satisfactory surface is present. If proof roll fails, a re-inspection fee in an amount established by the Lancaster County annual budget shall be collected before the rescheduled proof roll.
3. Proof rolls shall be conducted from the hours of 8:30 a.m. and 1:00 p.m. (Monday through Thursday). Any proof roll scheduled on Friday or the day prior to a holiday must be approved by Lancaster County Public Works. A twenty-four-hour notice is required.
4. Stone base proof roll shall be scheduled by the paving contractor only.
5. Pavement is to begin within twenty-four (24) hours following satisfactory proof roll.

6. Every effort shall be made to pave the stone base. Traffic shall be monitored and routed around subgrade before, during, and after stone base is set or being set. In certain cases, isolated areas could cause entire proof roll to fail.
7. Any isolated areas shall be undercut and removed to the subgrade for full depth patching. Undercut areas will be a minimum of six (6) inches.
8. Any areas of contaminated stone shall be undercut/removed before any asphalt is placed.
9. Pavement shall not be placed on frozen or excessively wet subgrade. Temperatures must be above fifty (50) degrees by 10:00 a.m. to place asphalt. In the event temperatures fall under freezing overnight, proof roll shall be rescheduled. In the event of significant rainfall, proof roll shall be rescheduled.
10. All material shall meet SCDOT standards, as well as local government standards. Lancaster County reserves the right to have any material, fill, or trench tested by an independent engineering firm, at the developer's/ contractor's expense.
11. Proper measures shall be installed at catch basins to drain roadway properly after initial asphalt course is placed. These measures shall be the responsibility of the developer to maintain from the time of asphalt placement to the end of the warranty period.
12. Lancaster County shall have final decision on all proof rolls.

6.15 SIDEWALK STANDARDS

Sidewalk construction shall be similar to street construction, with subgrade compacted to 100 percent ASTM D690. Concrete sidewalks shall be four inches thick (increasing to six inches thick at driveway entrances), and shall be at least five feet wide. Expansion joints shall be provided every 300 feet; false joints at 10 feet. Where required, accessible ramps shall be constructed per SCDOT standard details.

6.16 UTILITY TRENCH COMPACTION

For all roads, the following requirements apply: Utility trenches within the road right of way shall be compacted to 98% maximum dry density per ASTM D698. The developer shall submit a report prepared by an independent County-approved Geotechnical Engineer/Testing Laboratory verifying compliance with this requirement. Density test shall be performed at a minimum rate of 1 per 200 feet of trench.

6.17 INSPECTIONS

6.17.1 STORM DRAIN INSPECTIONS

The following requirements apply to all storm drain systems:

- A. Storm drain system must be initially inspected after catch basins are tied into curb and gutter (ten-inch transition from curb to drainage structure). Storm drain system shall be cleaned and flushed before final acceptance inspection of roadway. A forty-eight-hour notice is required. All drainage infrastructure must have a video inspection completed by the developer or requestor and submitted to the Public Works Director.
- B. Catch basins must be free of excess silt and mud for inspection to pass. All throat/hood openings shall conform to the MSSD, and all pipe shall be reinforced concrete pipe (RCP). Any failures or deficiencies noticed in any pipe crossings flashed in roadway must be corrected before stone base is put down. Minor issues such as grouting boxes, changing grates, adding steps can be completed before final inspection.

- C. All materials used in the storm drain system must be meet SCDOT specifications.
- D. All outfall pipes must have a flared end with rip rap outlet protection properly installed.
- E. Developer/contractor shall be required to have weepholes, pipes, or some form of temporary drainage, installed to the catch basins to protect the road subgrade/stone base/intermediate asphalt base course.

6.17.2 PAVEMENT INSPECTIONS

For all roads, the following requirements apply:

- A. Pavement shall pose no drainage or safety hazard during its warranty period.
- B. Upon installation of the intermediate asphalt course, Lancaster County Public Works will conduct monthly inspections of the roadway. Any immediate hazards will be forwarded in writing to the project engineer and/or developer. These repairs must be done immediately, or developer will be found in default, with the possibility of the suspension of building permits and certificates of occupancy for the project.
- C. Pavement will be cored for Lancaster County Public Works at random intervals, determined by Lancaster County Public Works. Any failing areas must be made good immediately.

6.18 UTILITIES

6.18.1 FIRE PROTECTION FIRE HYDRANTS

All fire hydrants not located at an intersection, hammerhead, or cul-de-sac shall require that the road width be increased from 22 feet to 26 feet on the hydrant side of the road for a distance of 20 feet on either side of the fire hydrant.

A. SUBDIVISIONS

No structure shall be located more than 500 feet from a fire hydrant, all of which require a six-inch water main. The 500-foot length shall be measured as an apparatus would lay fire hose from the fire hydrant to the front of the structure. If the developer chooses to install fire sprinkler systems in all homes in the subdivision according or exceeding IRC P2904 or NFPA13D standards, the hydrant measurement may be increased to 1,000 feet from structures.

B. FIRE APPARATUS ACCESS ROADS

All fire apparatus access roads shall adhere to the requirements of the most recently adopted International Fire Code. All access roads are required to be 22 feet in width. Dead-end fire apparatus access roads in excess of 150 feet shall require either an 80-foot diameter cul-de-sac, a 120-foot hammerhead having two equal ends with lengths of 60 feet as measured from the centerline of the access road and widths of 22 feet and rounded corners with a radius of 28 feet or an alternative hammerhead turnaround extending from the access road a distance of 70 feet as measured from the far edge of the access road with a width of 22 feet and rounded corners with a radius of 28 feet.

C. ONE ACCESS SUBDIVISIONS

Development of any subdivision, or portion thereof, which will result in 100 or more dwelling units dependent on a single point of access shall require the provision of a second means of ingress/egress.

1. All one access subdivisions shall adhere to the following requirements:
 - a. Access into and out of the subdivision (i.e.) divided entrances, extra turn lanes, etc.

- b. Provision of emergency services (i.e.) intermediate turnarounds at least every 1,000 feet up to the point where an intersection is located, divided entrances, extra lanes, special points of access, a minimum turning radius of 60 feet, etc.
 - c. Provision of safe and convenient traffic access and circulation. (i.e.) Avoid long straight roads (not over 2,000 feet) which can be used for speeding. Provide curves in the roads, speed humps or other traffic calming devices, etc.
2. The suggestions made as to how to address these three areas of concern are not all inclusive and the applicant can make any other proposals which they believe will serve to alleviate any and/or all safety concerns.
3. Planning staff and the Planning Commission reserve the right to ask for a traffic impact statement for any subdivision regardless of the number of proposed units based on the amount of development which has in the surrounding area (within a one-half mile radius) if it appears that the proposed development could have a negative impact on the road system of the surrounding area. Staff or the commission may also ask for a traffic impact statement based on the direction of the trips (i.e.) a large amount of the anticipated trips will require a left-turn be made out of the subdivision.

D. EMERGENCY ACCESS TO GATED COMMUNITIES

The following notes are required on the final plat for gated communities:

1. Note on final plat stating the development is a gated community.
2. The developer will be required to install and maintain a "Click 2 Enter" system. This system is designed to use the emergency vehicles' radio equipment to activate a sensor at the entrance and open the gate. The controller would be purchased and maintained by the developer of the gated community.
3. The County will require the development to have a back-up Knox Key Switch system. This is a system that uses the Knox Key to override the gate controller. This system is used only if the "Click 2 Enter" system does not work.

E. ACCESS TO SUBDIVISIONS AND LOTS

1. Any subdivision created after June 30, 2008, and on or before December 13, 2012, which creates ten (10) or more lots shall be required to have its main point of access from within Lancaster County. This means the public or private road, which will be providing access to the newly created subdivision, shall be located within Lancaster County. Newly created subdivisions located within Lancaster County will no longer be able to have its main point of access from an adjoining county.
2. Any lot or any access to a building lot created after December 13, 2012, shall be required to have access that will accommodate emergency and school vehicles from within Lancaster County. This means the public or private road, which will be providing access, will accommodate emergency and school vehicles to the lot shall be located within Lancaster County.

F. NO PUBLIC WATER

Where no public water is available for fire protection, alternative means of providing fire protection will be required. These alternatives may include, but are not limited to:

1. Installing fire sprinkler protection per the applicable NFPA standard for the building protected
2. Static water sources
3. Water tanks

4. Water pumps

5. Cisterns

The alternative means of fire protection will be evaluated by the Fire Marshal as a part of the Technical Review Committee process.

G. NO SPEED BUMPS

Traffic calming devices such as speed bumps, speed tables, speed cushions, or other devices which can cause damage to emergency apparatus are prohibited on any fire apparatus access road. A fire apparatus access road is defined as a road that provides fire apparatus access from a fire station to a facility, building, or portion thereof. This is a general term inclusive of all other terms such as fire lane, street, parking lot lane, and access roadway.