

Added to Sec. 1-50 Definitions

Connectivity index	A tool to quantify how well a roadway network connects destinations as measured by a ratio of links to nodes.
Link	Any portion of a street defined by a node at each end or at one end.
Node	The terminus of a street or the intersection of two or more streets.

Sec. 6-12 Connectivity.

- (a) With the submittal of a preliminary plat for a new single family or two family subdivision, a connectivity index shall be included and calculated for the road network in the subdivision. The roadway connectivity index shall be a minimum of 1.35, however additional pedestrian links shall be provided to increase the overall connectivity index to a minimum of 1.4. Subdivisions with a roadway connectivity index of 1.4 or greater shall not be required to provide additional pedestrian links.
- (b) The connectivity index shall be calculated by dividing the total number of links by the total number of nodes in the proposed subdivision.
 - (1) Arterial streets shall not be included in the calculation of the connectivity index, except when it is necessary to travel along the arterial street to reach any two points in the subdivision.
 - (2) Stub streets that will eventually connect the subdivision to a future subdivision or arterial or collector street shall not be counted as a node. The segment of the stub street shall count as a link.
 - (3) Alleys shall not be counted as a link, and locations where an alley intersects with a street shall not be counted as a node.
 - (4) Any location where a street name changes (as approved by the zoning administrator) shall be considered a node.
 - (5) Any location where a street T-intersects with another street of any classification shall be considered a node.
 - (6) Any curve or bend of a street that exceeds 75 degrees shall receive credit as a node.
 - (7) Any curve or bend of a street that does not exceed 75 degrees shall not be considered a node.
 - (8) Links on existing adjacent local streets that are not part of the proposed subdivision shall not be included in the connectivity index calculation if those streets are proposed as the only street connections that will be active at the time of the proposed plat's completion.

(c) Subdivisions shall have a minimum number of connections to public roads and a minimum number of stub streets where necessary to connect to future subdivisions on adjacent tracts of land as follows:

- (1) Less than 75 lots: one (1) connection to a public road and one (1) stub street;
- (2) Between 75 lots and 149 lots: two (2) connections to a public road and one (1) stub street;
- (3) Between 150 lots and 299 lots: three (3) connections to a public road and two (2) stub streets;
- (4) One (1) additional connection to a public road and one (1) stub street shall be required for every additional 200 lots above 300 lots;
- (5) One (1) additional stub street may substitute for one (1) road connection requirement.

(d) A subdivision may have a roadway connectivity index of less than 1.35, provide fewer connections to public roads, or provide fewer stub streets than required by the above where specific features or constraints of the land being subdivided makes strict compliance impossible or impractical. Such features include the following:

- (1) Natural features such as bodies of water, severe elevation changes, karst features, or monarch trees;
- (2) Important cultural or archeological features such as historic landmarks or burial grounds;
- (3) Incompatible land uses adjacent to the proposed subdivision;
- (4) Adjacent subdivisions which do not provide stub streets or other opportunities to connect to the proposed subdivision; or
- (5) Situations where intersection and driveway separation requirements prevent the ability to provide additional connections to a public road.

The applicant shall attach to the plat application an explanation of how the connectivity of the proposed subdivision is hindered by the presence of any notable features. The Commission shall approve the application if it determines the connectivity of the proposed subdivision cannot meet the requirements in this section due to the site constraints. Alternately, the Commission may deny the application if it determines the proposed subdivision's connectivity can be reasonably improved in spite of the presence of said features.