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## **Chapter 96 IMPROVEMENTS\***

### **ARTICLE I. IN GENERAL**

**Secs. 96-1--96-25. Reserved.**

### **ARTICLE II. DESIGN AND CONSTRUCTION STANDARDS OF IMPROVEMENTS**

#### **Sec. 96-26. General.**

(a) All lands included within a development shall be suitable for the various purposes proposed in the application for a development order. Further, no development order shall be approved unless the city finds, after full consideration of all pertinent data, that the development can be served adequately with such normal public and/or private facilities and services as are suitable under the circumstances of the particular case. All subsequent design standards adopted by the city are to be used in addition to the design standards below. Such subsequent design standards shall be adopted by resolution and shall become a part of this chapter by reference as though set out in their entirety.

- (1) *Conformance with city regulations.* Any development subject to this article shall conform to the adopted general goals and objectives of the city commission as set forth in:
  - a. The comprehensive plan;
  - b. The most currently adopted designated thoroughfare plan and area transportation study or studies;
  - c. City regulations on water and sewer utilities;
  - d. The zoning ordinance [chapter 110, Code of Ordinances]; and
  - e. This chapter.
- (2) *Use of natural features.* The arrangement of structures, buildings, lots and blocks, and street systems shall make the most advantageous use of topography, trees and other natural features.
- (3) *Consideration of soil and flood hazards.* A development order shall not be approved unless all land intended for use as building sites can be used safely for building purposes without danger from flood or other inundation or from adverse soil or foundation conditions or from any other menace to health, safety or public welfare. Lands shall not be subdivided and/or developed until proper provisions are made for protective flood control measures and water management facilities necessary for flood-free development and flood-free vehicular access to such sites. It is the intent of this provision that no filling or grade level change will be permitted which will cause adverse drainage, or public health or public safety impacts to any surrounding area.

The "Volusia County Soil Survey" and any supplements thereto shall be used as a guideline in identifying soil properties and for interpretations for various uses in terms of soil limitations and soil features adversely affecting a particular use. In addition, the "Soil Supplement and Vegetative Analysis" or supplemental soil borings are to be used in interpreting the basic properties of the soils in terms of their potential for a particular use. The following standard shall apply in areas of "low" and "very low" potential soils, as defined in the "soil survey": soils with very low potential

and low potential for proposed uses, as identified in the City of Deltona Soil Survey and its soil supplement, shall not be developed if health, environmental or safety hazards are created.

- (4) *[Underground installation of utility lines required; exceptions.]* Utility lines of all franchised utilities, electric power and light, telephone and telegraph, cable television, water, sewer and gas, shall be constructed and installed beneath the surface of the ground unless it is determined by the DRC as a result of their decision based on evidence that soil, topographical or any other compelling conditions make the underground installation of such utility lines unreasonable and impracticable. Drop lines from existing overhead power lines to new buildings, residences, or principal structures shall also be installed beneath the surface of the ground. The underground installation of bulk electric power supply lines, including but not limited to transmission lines and primary distribution feeder lines shall not be required.
- (5) *Monuments.* Permanent survey reference monuments shall be installed in all subdivisions and developments in accordance with F.S. ch. 177, as amended.
  - a. At least one corner of a development shall be designated by course and distance (tie) from a readily discernible reference marker such as a U.S. Government marker, section corner, or quarter-section corner. When such a monument or corner is not available, the tie shall be made to some permanent and readily recognizable landmark or identifiable point, physical object or structure.
  - b. At least two monuments shall be installed as control corners within each block within the development. The surveyor shall install additional monuments, if required by the city engineer prior to final plat or site plan approval. All monuments shall be constructed of concrete and shall be at least three inches in diameter or square, and not less than two feet in length. Each monument shall have imbedded in its top or attached by a suitable means a metal plate of noncorrosive material marked plainly with the point, the surveyor's registration number, and the words "Permanent Reference Monument" or the initials "P.R.M." Monuments shall be set in the ground so that the top is flush with the finish grade.
  - c. Property markers shall be installed in accordance with F.S. ch. 177, as amended.
- (6) *Multiple-family design.* In any planned unit development, development of regional impact (DRI), or cluster development, where the following requirements are met:
  - a. The project is consistent with and furthers the goals, objectives, and policies of the comprehensive plan;
  - b. It exceeds the city's minimum environmental standards;
  - c. It incorporates the use and preservation of natural site features, topography and trees to the maximum extent feasible in the design and arrangement of buildings, lots and blocks, streets systems and stormwater retention areas;
  - d. It includes more than the minimum amount of required open space and recreational areas;
  - e. It includes a full range of services and facilities when fully developed and populated;
  - f. It includes a variety of housing types throughout the development;
  - g. It exhibits innovative design in the overall project relationships between the various land uses, street system, and other natural and man-made site features;
  - h. It is planned and designed according to the city's zoning ordinance, as amended [chapter 110, Code of Ordinances]; and

- i. the provisions of this article may be modified by the development review committee to accommodate creative and innovative design in the multiple-family use area in any of the above-described developments.

(Ord. No. 96-25, § 1(401), 3-4-1996; Ord. No. 01-00, §§ 1, 3, 2-21-2000)

**Sec. 96-27. Finished floor elevations, utility lines, and sidewalks.**

- (a) *Title.* This section shall be known and cited as the City of Deltona Finished Floor Elevations, Utility Lines, and Sidewalks Ordinance.
- (b) *Applicability.* This section shall be applicable in the incorporated area of the city. The maximum lotfill elevation requirements shall be applicable only to those residential lots in the incorporated area of the city within which mounded septic tank systems are required pursuant to a septic tank permit issued by the state department of health, county environmental health unit.
- (c) *Declaration of nuisance.* It is hereby declared and determined by the city commission that the following shall each individually or in any combination be considered a nuisance when they exist upon any lot, lots or adjacent lots, as the case may be, in the incorporated area of the city:
  - (1) Lots that are over-filled or mounded in order to unnaturally elevate the finished site grade to more than 24 inches above the higher of either the lowest crown of that portion of any adjacent street, road or right-of-way, except in areas with slope limitations that are subject to subsection (h)(2) of this section, or the 100-year flood-prone elevation.
  - (2) Lots that have not been evenly filled and graded to the approximate average grade of the surrounding development to allow for continuity of the landscape and uniformity of appearance.
  - (3) Lots that are less than one foot above the 100-year flood-prone elevation.
  - (4) Lots that are less than one foot above the lowest crown of that portion of any adjacent street, road, or right-of-way.
  - (5) Lots that have spot-filled to accommodate a front yard septic system, except in accordance with the provisions of this section as they may be amended from time to time.
  - (6) Lots that have been filled beyond the minimum area required by the state department of health, county environmental health unit to accommodate a mounded septic system.
- (d) *Nuisance abatement requirements.* It is further determined by the city commission that any nuisance declared by this section which is found upon any lot, lots or adjacent lots, as the case may be, in the incorporated area of the city, shall be abated and corrected and the lot must be brought into conformance with the provisions of this section, except required landscaping, fencing, and visual screening, before the foundation for the proposed structure is built. Required landscaping, fencing, and visual screening shall be installed in compliance with this section prior to the issuance of a certificate of occupancy.
- (e) *Nuisance prohibited.* It is hereby declared unlawful for any person owning property in the city to allow his/her lot to exist in nuisance condition.
- (f) *Nonconforming lots and structures.* All lots and structures in existence prior to the effective date of this section [February 21, 2000] shall be allowed to continue to exist under this section as a nonconforming lot or structure until such time as the septic system is required to be replaced with a mounded system. At that time, soils replacement pursuant to subsection (g)(10), shall be required in order to minimize the effects of a mounded replacement system, or, if central sewer service is

available the septic tank shall be filled with sand, and the building or residence shall connect to the central sewer system.

- (g) *Provisions.* It is hereby declared and determined by the city commission that no development shall be approved that does not contain a suitable building site of sufficient elevation to permit construction utilizing a first floor elevation based upon the following:
- (1) Elevated above the 100-year floodplain elevation in accordance with applicable city ordinances.
  - (2) Provided that building lots are approximately level or a reasonable slope toward a street, road or right-of-way, the minimum finished floor elevation of any structure shall not be less than 12 inches above the lowest crown of that portion of any adjacent street, road or right-of-way. Except that on corner lots, the minimum finished floor elevation shall be 12 inches above the crown of the lowest adjacent road.
  - (3) Elevated above seasonal high groundwater elevation in accordance with the city's building code.
  - (4) When compliance with the above minimum finished floor elevation standards requires the addition of fill to a lot as a result of a requirement for a mounded septic tank system pursuant to a septic tank permit issued by the state department of health, county environmental health unit, the maximum amount of such fill that may be added shall not cause the grade of any lot to be more than 24 inches above the lowest crown of that portion of any adjacent street, road or right-of-way, except as otherwise permitted herein.
  - (5) No lot shall be over-filled or mounded to the detriment of adjoining property owners.
  - (6) All lots shall be evenly filled and graded as closely as possible to the average grade of the surrounding development to allow for continuity of the landscape and uniformity of appearance with adjacent properties. Where adjoining lots on more than one side of a site have been filled or graded to be above or below the limits established by this section, the finished grade of a newly developed lot shall conform to the average finished grade of the adjoining development, to the extent that stormwater can be managed to avoid flooding of other public or private property, including roads, and consistent with flood zone requirements.
  - (7) On lots which slope away from a street or road with continuous slope toward a lake, stream or water collection area or where positive drainage exists, the finished floor elevation of any structure, including garage areas, shall not be less than 12 inches above finished site grade measured at the highest contour that abuts the building unless specifically approved by the city engineer for single-family or two-family homes or by the city engineer and the DRC for other types of development. Where necessary, swales shall be constructed to divert runoff water around any structure so as to not adversely impact adjacent property owners, and retain or detain water to prevent flooding of other properties.
  - (8) The maximum permitted slope of the finished grade on any single-family or two-family (duplex) residential lot shall be 1:3.
  - (9) Should an amount of fill over 12 inches above the finished grade of the lot at the principal building foundation be required to accommodate a front-yard septic system, said system, or the drain field for said system, will be located in the back yard. Should a mounded septic tank and drain field be placed in a front yard more than 24 inches above the crown of the adjacent road, only the drain field area shall be mounded, and the lot shall not be filled beyond the minimum required to accommodate the drain field. It is not a requirement that drain fields be placed in front yards with septic tanks. A septic tank may be located in a front yard with its mounded drain field located in the rear yard. A septic system that is required to be placed in a rear yard

pursuant to this section, or a mounded drain field that is placed in the rear yard at the election of the owner or builder, shall be visually screened from view from adjacent lots by the installation of landscaping that will reach one foot above the maximum height of the mound at maturity within two years and be at least 90 percent opaque, or by the installation of a six-foot high, 100 percent opaque fence around the perimeter lot line, or by architectural screening (such as the installation of a deck obscuring the mound from view, etc.). Required landscaping shall be selected from the list of shrubs and trees referenced in Ordinance 30-98 (Zoning) [chapter 110, Code of Ordinances], section 110-808, approved plant species list. The plot plan submitted with the building permit application for a single-family or duplex residence shall include the required screening features represented at a scale and with sufficient detail to allow the enforcement official or his or her designee to determine compliance of the proposal with the requirements of this section. All septic tank installations and screening shall comply with all other applicable federal, state, and local laws, ordinances and regulations, specifically including, but not limited to, Rule 64E-6, Florida Administrative Code, as it may be amended from time to time.

- (10) As an alternative to the installation of a mounded septic system, poor soils may be removed and replaced with well-drained soils that will accommodate a septic system without mounding, subject to the approval of the state department of health, county environmental health unit. Soil replacement shall be required in areas having soils unsuitable for septic tanks as identified in the Volusia County Soils Atlas and/or the Deltona Comprehensive Plan. Soil replacement shall also be required to minimize mounding when existing nonconforming septic systems are replaced and mounded drain fields are required.
- (11) All buildings and residences built using septic systems for sewage disposal shall include in their design and construction provisions for future connection to a central sewer system.
- (12) Driveways or other areas of access to a building or structure shall be sloped so as to prevent the runoff of surface water into any building or structure, including garage and carport areas, and to prevent off-site runoff in excess of the standard in applicable city ordinances. Driveways shall be constructed in accordance with all applicable requirements of section 110-829, "Off-street circulation, parking and loading facilities," and section 96-37, "Access to thoroughfare corridors."
- (13) Special considerations shall be given in the layout of streets, lots, blocks, buildings and easements to the preservation of large and specimen individual trees; to preserving natural drainage methods and natural topography and landscape; and to providing screening, buffers or berms where developments abut noncompatible land uses.
- (14) When compliance with the above minimum finished floor elevation standards requires the addition of fill to a lot as a result of a requirement for a mounded septic tank system pursuant to a septic tank permit issued by the state department of health, county environmental health unit, the maximum amount of such fill that may be added shall not cause the grade of any lot, measured at the mid-point of the portion of the lot line adjacent to the street, to be more than 36 inches above the lowest crown of the adjacent street when that street has a grade greater than 1:3. The maximum slope of the finished grade of said lot shall not exceed 1:3. Drainage shall be approved by the city engineer or his or her designee. Retaining walls may be required, and their design shall be reviewed and approved by the city engineer, or his or her designee.
- (15) When stemwall foundations are used, the finished floor elevation shall not exceed two feet above the permitted finished grade of the lot at its highest point.

- (h) *VariANCES.* Variances from the terms of this section may be granted by the city engineer. In granting such variances the city engineer shall determine that there are special conditions running with the land that are not imposed by the applicant or the property owner, that the variance is the minimum variance required to properly develop the property, and that no nuisance drainage will occur on other property or city streets. In making a determination of special conditions running with the land, the city engineer shall consider the average finished grade of adjacent lots, and of the developed lots in the immediate vicinity of the site. An application for a variance shall be made on forms prescribed by the city engineer, and shall contain all information required by the city engineer in his or her review of the requested variance. The city engineer may require the use of gutters to ensure that roof drainage is properly controlled, and erosion potential is minimized. Fees for variance applications shall be set by resolution of the city commission, and may be amended from time to time.
- (i) *Enforcement official.* The enforcement official is hereby designated as the investigating and enforcing authority pursuant to the provisions of this section. The enforcement official is hereby directed and empowered to inspect land on which a violation of this section is suspected to exist, to receive all complaints of a violation of this section, and to enter upon any real property in the conduct of official business pursuant to this section. The enforcement official shall be responsible for providing all notices to affected property owners and developers required by this section and to take such other action as is reasonably necessary to accomplish the purpose of this section.
- (j) *Penalty.* If the enforcement official shall find that any of the provisions of this section are being violated, he or she shall notify the property owner and developer of such violations, in writing, indicating the nature of the violation, including a description of the real estate or address sufficient for identification, and ordering any action necessary to correct the violation. The enforcement official shall, at the same time, post a notice of violation on the affected property. Upon issuance of a notice of violation, further construction or development of the subject property is prohibited until the property is brought into compliance with the provisions of this section. The building official shall issue a stop work order. Construction or development of the subject property shall not resume until the enforcement official has determined that the violation has been corrected and issued a notice of compliance.
- (k) *Civil remedies.* The city commission may institute in any court, or before any administrative board of competent jurisdiction, action to prevent, restrain, correct or abate any violation of this section or of any order or regulation made in connection with its administration or enforcement; and the court or administrative board shall adjudge to the plaintiff such relief by way of injunction or any other remedy allowed by law or otherwise, to include mandatory injunction, as may be proper under all the facts and circumstances of the case, in order to fully effectuate the regulations adopted and orders and rulings made pursuant thereto. The city shall also be entitled to collect all costs incurred in enforcement of this section, including reasonable attorney's fees.
- (l) *Contractor licensing and registration.* Contractors' city registration shall be issued subject to compliance with this section. More than two violations in any one calendar year shall be cause for suspension of a contractor's registration in the city. More than four violations in a five-year period shall result automatically in a one-year suspension of contractor's registration in the city. Two violations any time following a one-year suspension for violating this section shall result in the permanent revocation of a contractor's registration to do work in the city. In the case of state certified contractors, upon suspension for failure to comply with this section, a notice shall be filed with the State of Florida Construction Industry Licensing Board. Should a state certified contractor be subject to the one-year suspension, or to revocation of the contractor's city registration, a complaint shall be filed with the State of Florida Construction Industry Licensing Board seeking suspension or revocation of the contractor's state certification.

- (m) *Notice to correct violation.* The enforcement official or his or her duly authorized representative is empowered to enter upon and inspect said lots on which a violation as declared by this section is suspected to exist. In the event inspection reveals the presence of a violation, the enforcement official shall notify the record owners, developers, and contractors by registered or certified mail, return receipt requested, of such violation, or by hand delivery by a city code enforcement inspector or deputy sheriff. Said notice shall be sent to the last available address of the owners of record as found in the county public records, and to the address of the developer (if different from the owner) and contractor in charge of the work. At the same time, a notice of violation shall be posted on the property. Said notice shall advise the owner, developer, and contractor that a violation exists on said owner's lot or lots and said violation shall be abated by the owner, or by the contractor for work in progress. The notice shall specify what corrective action shall be taken by the owner, or contractor, to abate the violation and that failure to abate the violation will result in a continued moratorium upon further construction and development on said lot and fine in the amount of \$50.00 per day for each day beyond the specified time for compliance that the subject property continues to be in violation of this section. A lien for the costs and administrative expenses, accumulated fines, and reasonable attorney's fees incurred during the enforcement of this section shall be recorded against the property for failure to correct the violation or otherwise bring the subject property in compliance with this section. The owner, or contractor, shall have 30 days from issuance of the notice and posting on the property to correct the violation. The notice shall also state that the owner, or contractor, has the right to appeal the determination of the enforcement official to the city commission and that said appeal, upon payment of the fee in accordance with subsection (o) shall be filed within ten days of issuance of the notice from the enforcement official, and the posting of a notice on the property.
- (n) *Appeals.* Within ten days after the issuance of the notice from the enforcement official pursuant to subsection (m), the owner of the lot, or the contractor for work in progress, may make written request for a hearing before the city commission to appeal the decision of the enforcement official and to show that the condition alleged in the notice does not exist or that such condition does not constitute a violation. Filing such appeal shall toll the 30-day period to correct the nuisance until the decision of the city commission is rendered. Failure to notify or to timely appear for the hearing shall be deemed a waiver of the lot owner's, or contractor's right to appeal. The enforcement official shall give the owner seeking such hearing written notice of the date and location of the scheduled hearing. At the hearing before the city commission, the city and the lot owner, or contractor, may introduce such competent substantial evidence as is deemed relevant and necessary. Thereafter, the city commission shall render a decision on said hearing. In order to defray the expense of processing an appeal to the city commission, the fee for said appeal shall be \$50.00; provided, however, that the city commission shall refund the appeal fee to the applicant if the city commission concurs with the applicant in its decision. Following review by the city commission, or waiver of the right to appeal by the owner or contractor, the owner or contractor shall have exhausted his or her administrative remedies.
- (o) *Notice of lien.* The enforcement official shall mail a notice to the record owners of each lot described in the assessment by certified mail, return receipt requested, to the last available address of record for such owners, which notice shall be in a form approved by the enforcement official, and shall include the following information:
- (1) The name and address of the lot owner;
  - (2) A legal description of lot where the nuisance has been abated;
  - (3) The date of mailing of the notice of the lien;
  - (4) A brief description of the nuisance;

- (5) The date that the notice was originally sent to abate the nuisance;
  - (6) Statement of the actual costs of abatement, the administrative fees and attorney's fees and any interest due;
  - (7) A copy of the assessment form executed by the enforcement official;
  - (8) Instructions regarding payment and removal of the lien; and
  - (9) Additional information as necessary and appropriate.
- (p) *Recording of lien.* As soon as possible after the assessment has been made by the enforcement official, a certified copy of the assessment shall be recorded in the official records of the county in the office of the clerk of the circuit court in and for the county, and the lien shall become effective as of the date of filing such copy with said clerk of the circuit court
- (q) *Effect of lien.* The property lien created under the provisions of this section shall become effective as of the date of recording such copy in the official records of the county by the clerk of the circuit court. Such assessments, together with interest thereon, may be enforced by civil action in the appropriate court of the county. The interest rate will be determined by reference to the highest rate allowed by law. The liens created under this section shall be a first lien equal to a lien for nonpayment of property taxes, on any property against which an assessment for costs to abate the nuisance has been filed, and shall continue in full force from the date of recording until discharged by satisfaction or foreclosure.
- (r) *Satisfaction.* Upon satisfaction of the lien created under this section, the enforcement official shall file an order of satisfaction, release and dismissal of lien with the clerk of the circuit court.
- (s) *Alternate method of enforcement.* As an alternative to the above procedure at the option of the enforcement official, violations of this section which occur on occupied properties, and repeat violations, may be referred to the city's code enforcement board for enforcement action pursuant to city Ordinance No. 96-37. In such cases, notice shall be given to the property owner, developer (if different from the owner), and contractor for work in progress by registered or certified mail, return receipt requested and the property shall simultaneously be posted. The time period for compliance with the notice of violation shall not exceed 30 days. The code enforcement board shall set a minimum fine for such violations of \$250.00, plus \$10.00 per day. The \$250.00 fine shall be assessed on the day following the required compliance date set by the code enforcement board, or on the day following the date of issuance of the notice of violation for repeat offenses. The \$10.00 fine shall accumulate for each day that the violation continues from the second day following the required compliance date determined by the code enforcement board, or from the second day following date of the notice of violation to the date of compliance for repeat violations.

(Ord. No. 01-00, § 1, 2-21-2000)

**Sec. 96-28. Streets; generally.**

- (a) *General.* The character, width, grade and location of all streets and bridges shall conform to the standards in this section and 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 uses of the land to be served by such streets. All bridges shall conform to the latest edition of the "Standard Specifications for Highway Bridges" adopted by AASHTO. Construction and material specifications for streets and bridges shall conform to "FDOT Standard Specifications for Road and Bridge Construction".

- (1) Thoroughfares in developments shall be planned in conformity with the transportation element of the comprehensive plan.
  - (2) The proposed development's street layout shall be coordinated with the street system of the surrounding area or with plans for streets in said area on file with the city, if any.
  - (3) Where, in the opinion of the development review committee (DRC), it is desirable to provide for future street access to an adjoining property, proposed streets shall be extended by dedication to the boundary of such property and a temporary paved turnaround provided.
  - (4) All newly platted streets intended to serve residential uses shall be public. The DRC may recommend and the city commission may approve private streets for security purposes only, provided all such streets meet all design and construction criteria of this chapter, a permanent security post or posts are provided, and a condominium or homeowners association is created with all duties and powers necessary to ensure perpetual maintenance of such private roads. All streets shall be constructed to the exterior property lines of the development unless they are permanently terminated by a cul-de-sac or an intersection with another street.
  - (5) Newly platted streets intended to serve business or industrial uses may be private if approved by the DRC. In such cases, all streets shall meet the design and construction criteria of this chapter unless overriding conditions, such as sharing entrances or parking areas, require different design criteria.
  - (6) Private streets shall be an easement that has not been dedicated to the public and has not been accepted by the city commission for maintenance.
- (b) *Traffic impact analysis.* Unless waived by the DRC, the developer at his/her expense shall have a registered professional engineer qualified in traffic engineering prepare and shall provide the city with a traffic impact analysis when trip ends generated by the proposed development equal or exceed 1,000 trip ends per day, as determined from the "ITE Trip Generation Manual," or when determined to be necessary by the DRC, if less than 1,000 trip ends per day. The traffic impact analysis shall be submitted at the time of Preliminary Plat or FSP review, and shall follow the adopted MPO Transportation Impact Analysis (TIA) Methodology Guidelines as it may be amended from time to time.
- (c) *Arrangement of streets.* The arrangement of streets in a development shall:
- (1) Provide efficient and orderly hierarchy of streets;
  - (2) Conform with official plans and maps of the city;
  - (3) Be integrated with the existing and planned street system of the surrounding area in a manner which is not detrimental to existing neighborhoods;
  - (4) Be such that the use of local streets by through or commercial traffic is discouraged;
  - (5) When necessary, as determined by the DRC, provide at least two separate and remote entrances to a development, unless other provisions, such as easements, are made for emergency ingress and egress, and provided that such entrances will not adversely affect the overall street system;
  - (6) Facilitate and coordinate with the desirable future development of adjoining property of a similar character and provide for local circulation and convenient access to neighborhood facilities.
- (d) *Intersections.* Street intersections shall be laid out as follows:

- (1) Streets shall intersect at an angle of 90 degrees, unless circumstances acceptable to the DRC indicate a need for a lesser angle of intersection.
  - (2) Intersections of any streets with a thoroughfare shall be at least 660 feet apart, measured from center line to center line.
  - (3) Property lines at street intersections shall be rounded with a minimum radius of 25 feet. A greater radius shall be required for angles of intersection less than 90 degrees.
  - (4) The right-of-way width and pavement width shall be increased by at least ten feet on each side of an arterial street for a minimum distance of 150 feet from its intersection with another arterial street or thoroughfare, to permit proper intersection design.
- (e) *Minimum right-of-way and lane widths.* Street minimum rights-of-way and lane widths shall be as follows unless otherwise indicated or required:
- (1) Urban development. (Applicable to designated urban areas in the comprehensive plan).

**Table 96-1 Urban Development – Minimum Right-of-Way and Lane Widths**

Street Type	ROW in Feet	Lane Width in Feet
(a) Arterials	100	12/lane
(b) Collectors (4-lane/2-lane)	100/80	12/lane
(c) Local streets	50 1	10/lane
(d) Culs-de-sac (radii)	54	43 outside radii
(e) Service drives	50	12/lane
(f) Alleys (1-way, 1-lane)	30	12

- a. A 40-foot right-of-way width may be approved by the DRC provided a six-inch minimum vertical curb is used and upon a showing that all required improvements can be contained within the proposed 40-foot right-of-way or adjacent easements. Setbacks for structures shall be sufficient to permit a minimum of 25 feet of driveway depth from the closest side of the sidewalk to the structure.

- (2) *Rural development.*

**Table 96-2 Rural Development – Minimum Right-of-Way and Lane Widths**

Street Type	ROW in Feet	Lane Width in Feet
(a) Arterials (4-lane)	200	12/lane
(b) Collectors (4-lane/2-lane)	200/100	12/lane
(c) Local streets	70	12/lane
(d) Culs-de-sac (radii)	68	43 outside radii

(e) Service drives	60	12
(f) Alleys (1-way/2-lane)	30	12

- (f) *Additional right-of-way and/or pavement widths.* Additional right-of-way and or pavement width may be required by the DRC to promote public safety and convenience or to ensure adequate access, circulation and parking. Whenever any street shows future need for improvement within the area to be developed, the appropriate right-of-way and pavement shall be dedicated. Where a proposed development abuts or contains an existing street of inadequate right-of-way or pavement width, additional right-of-way and pavement in conformance with subsection (e) shall be required for that development.

The thoroughfares shown on the thoroughfare system maps in the transportation element of the comprehensive plan of the city or the jurisdiction in which the roads are located, which are either located within or provide primary access to the area proposed to be developed, shall be conveyed or dedicated to the public by deed, or if acceptable to the city or other appropriate jurisdiction, by grant of easement.

Half streets shall be prohibited. Where a previously dedicated half street, paved or unpaved, abuts or is within a tract to be developed, the second half of the street shall be dedicated to the city and the full width shall be paved by the developer where the subject street is necessary for the development of the subdivision or overall traffic circulation.

On divided two-lane road, minimum pavement width for each lane shall be 14 feet, exclusive of curbs. Provisions for left turns storage, acceleration, deceleration, tapers or channels shall be provided as required by the city traffic engineer. Whenever an island is proposed in the center of a cul-de-sac turnaround, the pavement shall be 26 feet exclusive of curbs, if any.

- (g) *Access.* Access shall be provided as follows:

- (1) There shall be the minimum number of access points to adequately serve the development.
- (2) In order to provide ease and convenience in ingress and egress to private property and the maximum safety with the least interference to the traffic flow on thoroughfares, the number and location of driveways shall be regulated by the dedication of access rights to the city, and in accordance with sections 110-829 and 96-37.
- (3) Tapers, deceleration lanes, left-turn lanes, bypass lanes, median modifications or other facilities shall be provided as requested by the city traffic engineer to protect the safe and efficient operation of a thoroughfare.
- (4) Every lot or parcel shall have access from a public street.
- (5) All proposed lots or developments shall front on a paved road. Primary access to a subdivision or development shall be from a street paved to the standards of section 96-40. This street, if not already paved, shall be paved by the developer from the entrance of the development to the nearest public paved road.

- (h) *Business/Industrial and multifamily driveways and internal circulation.*

- (1) Vehicular circulation must be completely contained within the property, and vehicles located within one portion of the development must have access to all other portions without using the adjacent street system.

- (2) Acceptable plans must illustrate that proper consideration has been given to the surrounding street plan, traffic volumes, proposed street improvements, vehicular street capacities, pedestrian movements and safety.
- (3) No driveway shall be constructed in the radius return of an intersection or within 50 feet of the tangent point of the radius return.
- (i) *Pavement (or curb) radius returns at intersections.* The minimum radius return of pavement edge, or back of curb, where used, at all typical intersections approximating a right angle shall be as follows:

**Table 96-3 Minimum Radius Return of Pavement Edge/Back of Curb**

Category	Minimum Radius (feet)
2-lane access	30
Local to collector	35
Local or collector to arterial	40
Arterial to arterial	50

A taper or turn lane may be required on roads with a functional classification of collector or arterial, or a design speed of 35 miles per hour or greater. Other appropriate radii shall be subject to approval by the city traffic engineer for other than right-angle intersections.

- (j) *Service drives.* Where a development borders on or contains a railroad right-of-way, limited-access highway right-of-way, or arterial road right-of-way, the DRC may require a service drive or suitable provisions for future service drives approximately parallel to and on each side of such right-of-way, at a distance suitable for the appropriate use of the intervening land, as for park purposes in residential districts, or for business or industrial purposes in appropriate districts. Distances involving rights-of-way shall also be determined with due regard for the requirements of approach grades and future grade separations.
- (k) *Street jogs.* Street jogs or center line offsets between streets shall be no less than 150 feet.
- (l) *Culs-de-sac.* Permanent dead-end streets shall not exceed 1,000 feet in length. Culs-de-sac shall be provided. In the center of the turnaround, an unpaved island, surrounded by a curb, improved with grass and landscaping that will not interfere with sight distance, may be provided. Center islands shall have a diameter of not less than 17 feet.
- (m) *Street grade.* Minimum center line grade for all streets with curb and gutter shall be two-tenths of one percent. Maximum center line grades for arterial roads shall not exceed five percent. Maximum grades for all other streets shall not exceed eight percent. The center line may be flat for all swale sections provided the swale grade is a minimum of two-tenths of one percent.
- (n) *Design criteria.* All proposed streets shall comply with the specifications contained in the "FDOT Minimum Standards for Streets and Highways."
- (o) *Street names.* Proposed streets which are obviously in alignment with other existing or approved named streets shall have the same name as the existing or approved streets. In no other case shall the name of a proposed street duplicate or be phonetically similar to existing or approved street names, irrespective of the use of alternative suffixes, such as "street," "avenue," "boulevard," "drive,"

"place," "court," etc. All street names shall require the approval of the city planning and development services department.

(p) *Street lights.* All proposed urban and suburban development shall provide for street lighting installation. A petition for creation of a special assessment district for street lighting shall be submitted.

(1) Installation of street lighting.

*Arterials.* Lighting units (22,000 lumen) along arterials must be spaced 100 feet to 150 feet on alternate sides of the street. All intersections must be provided with street lighting.

*Collectors.* Lighting units (16,000 lumen) along collectors must be spaced 200 feet to 250 feet on alternate sides of the roadway. All intersections must be provided with street lighting.

*Locals.* New street lights (9,500 lumen) on local streets must be provided at intersections or at points along the road such as sharp curves or existing overlength culs-de-sac where street lights would decrease the potential for accidents.

(2) Installation procedures. Proposed street lighting along all public rights-of-way must be coordinated through the city. Street light installation orders are issued by the city's department of public works to initiate the process and must be requested by the developer through the city as soon as street construction plans are complete. All costs for new street lighting on public streets must be paid for by the developer.

(q) *Traffic signals.* Traffic signals and other control devices shall be installed at locations determined by the DRC, where warranted, pursuant to any submitted traffic studies in accordance with "USDOT Manual on Uniform Traffic Control Devices."

(Ord. No. 96-25, § 1(402), 3-4-1996; Ord. No. 21-2008, § 2, 8-18-2008)

### **Sec. 96-29. Blocks.**

(a) *General.* The length, width and shape of blocks shall be determined with regard to:

(1) Provision of adequate building sites suitable to the special needs of the type of use contemplated;

(2) Needs for convenient access, circulation, control and safety of street and pedestrian traffic, and fire protection;

(3) Limitations and opportunities of topography, with special emphasis on drainage of the proposed development and the possible adverse effects of that drainage on properties surrounding the development.

(b) *Block length.* Block lengths shall not exceed 1,400 feet, and no less than 150 feet.

(c) *Block width.* The width of any block shall be of sufficient dimensions to accommodate two tiers of lots except where one tier of lots abuts an area of existing residential development, nonresidential development, an arterial or collector street, a railroad, utility right-of-way, a watercourse or on landfill fingers. The block width shall be no less than 150 feet when measured from one street right-of-way line to another.

(d) *Pedestrian crosswalks.* Pedestrian crosswalk signing and marking, where used, shall be in accordance with the "USDOT Manual on Uniform Traffic Control Devices."

- (e) *Nonresidential blocks.* Within the limits set out in 96-29(b), nonresidential blocks shall require a length sufficient to serve the intended use without adversely affecting traffic circulation of existing or proposed surrounding streets. The width shall be sufficient to provide adequate service areas and parking without requiring excessive points of ingress and egress on abutting streets or requiring vehicular maneuvering on public rights-of-way. Lots within such blocks shall require a common vehicular access easement dedicated to the use, maintenance and benefit of all lots within the block. Alternatively, a marginal-access street shall be provided to prevent points of ingress and egress from each lot to the abutting street.

(Ord. No. 96-25, § 1(403), 3-4-1996; Ord. No. 31-05, § 1, 8-15-2005)

**Sec. 96-30. Lots.**

- (a) *General.* All lots shall be consistent with the requirements of the zoning ordinance [chapter 110, Code of Ordinances]. In addition, the following requirements shall apply:
- (1) *Width.* All lots fronting on a cul-de-sac shall have a minimum width at the right-of-way line of not less than 35 feet, measured at the chord.
  - (2) *Depth.* Lot depths along designated thoroughfare roads shall be 150 percent of the average lot depth or lots shall front on service drives without increased depth.
  - (3) *Orientation.*
    - a. Every lot shall abut on a public street which has a minimum right-of-way of at least 50 feet, except as may be provided under section 96-28(e)(1)a.
    - b. When lots are platted or developed abutting a limited-access city, state or federal highway, ingress or egress shall be limited to the interior streets or marginal-access roads.
- (b) *Dimensions.* Lots shall meet the minimum dimensional requirements of the zoning ordinance [chapter 110, Code of Ordinances] and shall be determined by the particular land use and building size proposed provided that minimum dimensions for lots utilizing individual wells and/or septic tanks shall be in accordance with section 96-34.
- (1) *Corner lots.* Corner lots shall have a 15 percent greater width and area than that required by the applicable zoning classification to accommodate setbacks from both streets except where all lots have an area of one-half acre or larger.
  - (2) *Business, industrial off-street parking.* Depth and width of properties reserved or laid out for business and industrial purposes shall be adequate to provide for the off-street service and parking facilities required by the type of use and development contemplated. Due to high lot coverage of building, parking and roads, lot size shall include suitably sized and located areas to accommodate on-site storm water retention and/or detention in accordance with chapter 98, article IV of this Code, and tree protection and replacement in accordance with chapter 98, article II.
  - (3) *Street access.* The development of land shall provide, by means of a street or accessway, each lot with satisfactory and permanent access to an existing paved public street. Backing onto streets shall not be permitted except in single-family and duplex developments. In addition, where automobiles backing onto adjacent streets from single-family or duplex driveways are anticipated to present a potential traffic flow or safety problem, the DRC may require provisions, such as turnaround areas or horseshoe driveways, or other access control measures as deemed necessary.

- (c) *Double-frontage lots.* Double-frontage lots shall be permitted only where necessary to separate a development from thoroughfares, to overcome disadvantage of topography and orientation, or to limit individual driveway access where necessary to preserve the carrying capacity of streets. Where double-frontage lots are created, they shall all front in the same direction. The rear of the lots shall be screened from the abutting street by a wall of brick or masonry construction, erected on-site, six feet in height. The DRC may require landscaping of suitable height or permit a fence other than masonry. Such double-frontage lots shall be at least 150 feet in depth. Access rights along the portion of the lots abutting a thoroughfare shall be dedicated to the city by means of a note stating, "Vehicular Access Rights Dedicated to City of Deltona" lettered on the final plat along the right-of-way line adjacent to the lots affected.

(Ord. No. 96-25, § 1(404), 3-4-1996)

**Sec. 96-31. Easements.**

- (a) *Utility easements.* Utility easements shall be granted where necessary to accommodate all required utilities. Easements shall be centered on rear or side lot lines unless otherwise approved by the DRC. Rear lot line easements shall have a minimum width of seven and five-tenths feet per lot (15 feet total) and side lot line easements shall have a minimum width of five feet per lot (ten feet total). A minimum total width of 15 feet must be provided, where necessary, for storm or sanitary sewers. In all cases, easements shall be granted to the perpetual use of the public for the purpose shown.

The term "utility easement" shall allow, but not be limited to, the installation of sanitary and storm sewers, water lines, gas lines, electrical lines, telephone and telegraph lines, and cable television lines.

- (b) *Water and wastewater easements.* Water and wastewater lines shall be installed within a granted easement or a dedicated right-of-way which meets the following standards:
- (1) If an easement, it shall be adjacent to a dedicated road right-of-way and shall be a minimum of 12 feet in width, shall run parallel to the dedicated road right-of-way, and shall not be included as part of the road dedication except adjacent to a state or municipal road right-of-way, where such easement shall be a minimum of 25 feet.
  - (2) A lot line easement shall be a minimum of 15 feet in total width.
  - (3) A maintenance easement in which both water and wastewater lines are to be installed shall be wide enough to allow for a ten-foot separation between lines unless the wastewater lines are entirely encased in concrete.
  - (4) The width of an easement immediately adjacent to a building or structure shall be determined by the following factors: type of pipeline (water, wastewater, or force main), size and elevation of line, damage to buildings or structures in the case of failure, and accessibility to utility maintenance equipment.
- (c) *Drainage easements.* Drainage easements of a width required for handling and maintaining an adequate storm drainage system shall be provided. The width of drainage easements shall be 20 feet to permit periodic access and maintenance by machinery, unless otherwise approved by the city's engineer.
- (d) *Pedestrian and bicycle easements.* Pedestrian and bicycle easements or walkways may be provided on-site. Pedestrian and bicycle easements shall be at least ten feet wide.
- (e) *No city expense.* All easements shall be granted at no expense to the city.

(Ord. No. 96-25, § 1(405), 3-4-1996)

**Sec. 96-32. Drainage systems.**

- (a) *General requirements.* Protection of the water resources of the city is essential to the public health, safety and welfare. Innovative approaches to stormwater management shall be encouraged; and the concurrent control of erosion, sedimentation, pollution from surface runoff contaminants and flooding shall be mandatory.
- (b) *Criteria.* All development improvements shall include comprehensive drainage facilities for positive drainage based on the design standards as specified in chapter 98, article IV. Drainage plans and specifications shall be prepared by a Florida registered engineer.

(Ord. No. 96-25, § 1(406), 3-4-1996)

**Sec. 96-33. Phased development.**

Each phase of any development shall be capable of standing on its own if subsequent phases planned for development are not developed.

(Ord. No. 96-25, § 1(407), 3-4-1996)

**Sec. 96-34. Water and sewer.**

- (a) *General.* Water and sewer facilities shall be designed in compliance with all applicable regulations by a Florida registered engineer. All water and sewer facilities shall be approved by the city engineer, the Volusia County Health Department, the Florida Department of Environmental Regulation, and the St. John's River Water Management District as appropriate. The cost of designing and installing water and sewer systems shall be borne by the developer.
- (b) *Water facilities.*
  - (1) All proposed urban developments shall provide potable water production, treatment and distribution facilities, in accordance with the potable water subelement of the comprehensive plan and other applicable regulations.
  - (2) Developments with lot sizes equal to or greater than one acre may utilize individual wells provided that provisions are made to meet fire flow requirements in accordance with section 96-45 of this article.
  - (3) Development of water facilities shall be consistent with the comprehensive plan.
  - (4) All proposed urban development located within one-quarter mile of an existing potable water facility with available capacity, as provided in chapter 86, to serve the proposed development shall connect to said existing facility or alternate facility approved by the city's utilities division. The proposed development shall be designed to provide adequate areas and easements necessary for the installation and maintenance of a potable water distribution system which meets the requirements of the potable water subelement of the comprehensive plan, of this chapter, chapter 17-6 and chapter 10D-6, Florida Administrative Code, and the most current ANSI/ASTM standards.
  - (5) All proposed urban development within one-quarter mile of an existing potable water facility which lacks capacity to serve the proposed development shall be approved subject to the

existing or approved alternate potable water facility being made available as provided in chapter 86.

- (6) Where joint participation agreements have not been approved, the city may operate and maintain potable water production, treatment and distribution systems in the City. Developments that construct or guarantee construction of their own potable water facilities shall convey such potable water facilities to the city.

(c) *Sewer facilities.*

- (1) All proposed urban development shall provide for central sewer collection, treatment and disposal facilities in accordance with the city's comprehensive plan, chapter 86 of this Code, and other applicable regulations.
- (2) Where approved for use, all septic tanks shall be located in yards abutting sewer facility easements. Where connection to a central wastewater system is not required, individual wastewater disposal treatment and discharge systems which include septic tanks shall be provided.
- (3) Where joint participation agreements have not been approved, the city may operate and maintain wastewater collection, treatment and disposal systems in the City. Developments that construct or guarantee construction of their own sewer collection, treatment and disposal facilities shall convey the sewer facilities to the city at no expense to the city.
- (4) Development of sewer facilities shall be consistent with the comprehensive plan. A finding that wastewater collection, treatment and disposal services is available must be based upon a demonstration that the existing facilities have sufficient capacity to provide for the needs of the proposed development and for all other developments in the service area which are occupied, available for occupancy, for which building permits are in effect, or for which wastewater treatment or disposal capacity has been reserved. If existing wastewater services are unavailable, but will be made available, any development order shall be conditioned upon such availability. A finding that wastewater services will be made available must be based upon a demonstration that there is a feasible plan to construct or expand a wastewater system which will have sufficient capacity to provide for the collection, treatment and disposal needs of the proposed development and for all other developments in the service area which are occupied, available for occupancy, for which building permits are in effect, or for which wastewater collection, treatment or disposal capacity has been reserved. The granting of a development order shall not be constructed to effect a reservation of wastewater capacity.
- (5) Whenever any pressure or force mains are located underneath pavement or curbs with cover of less than 36 inches, the mains shall be encased or shall be constructed of ductile iron for pipe diameter of four inches or more, and galvanized iron for pipe diameter under four inches or shall be made of appropriate material.
- (6) Where central sanitary sewer facilities are provided, all new development approved pursuant to chapter 106 and chapter 74, article II, shall install facilities for connection and use of recovered wastewater for irrigation and other nonpotable water uses. Upon being made available, such development shall connect to and use recovered wastewater.

(Ord. No. 96-25, § 1(408), 3-4-1996)

**Sec. 96-35. Fences, buffers and berms.**

- (a) *Purpose and need.* Screening such as fences, buffers and berms shall be required for the following reasons:
- (1) Visual screening and buffer zones between adjacent zoning classifications pursuant to the zoning ordinance [chapter 110, Code of Ordinances].
  - (2) Movement barriers to prevent direct driveway cuts or access onto thoroughfares.
  - (3) Buffer zones, either open space or specially vegetated, may be required between adjacent land uses, especially where problems with building heights, noise, nuisances or scenic impairment might be a problem.
- (b) *Location on lot.* Where a buffer screen of decorative masonry, plant materials, fences or berms are approved, they shall be so constructed and located in such manner that each property owner might maintain their own section, or provisions shall be made to have them maintained by a community or property owners association.

(Ord. No. 96-25, § 1(409), 3-4-1996)

**Sec. 96-36. Reserved**

**Sec. 96-37. Access to thoroughfare corridors.**

- (a) In order to provide safe and adequate access between proposed development and thoroughfares, a thoroughfare corridor shall meet the following requirements:
- (1) *General street design and construction standards.*
    - a. Street capacities shall be determined by the standards established by the "Transportation Research Board Highway Capacity Manual."
    - b. The geometric design of streets shall conform to the minimum standards established by the "FDOT Minimum Standards for Streets and Highways."
    - c. The construction of roads and work in the public right-of-way shall conform to the "FDOT Standard Specifications for Road and Bridge Construction."
    - d. The determination of traffic generation rates for a particular development shall conform to the latest edition of the "ITE Trip Generation Manual."
  - (2) *Design criteria and characteristics of streets within a thoroughfare corridor.*
    - a. Arterial and collector streets shall conform to the criteria and characteristics established in the comprehensive plan, and the provisions of this section.
    - b. Within a thoroughfare corridor, collector streets which have not been identified in the traffic circulation element of the comprehensive plan and local streets shall conform to the criteria and characteristics of table III, and the provisions of this section.

**Table 96-4 Design Criteria and Characteristics of Street within a Thoroughfare Corridor**

		Collectors Not Shown on the Designated Thoroughfare System Plan		Local Streets	
		Four-Lane Collector	Two-Lane Collector	Local	Local/Cul-de-Sac Radii
Volume		5,000--10,000 vpd	2,500--5,000 vpd	500--2,000 vpd	0--500 vpd
Residential Access		Prohibited	Prohibited	Yes	Yes
Minimum Design Speed		45 mph	40 mph	30 mph	30 mph
	*Parallel Space Between Streets	1/2 mile	1/4 mile	660 ft.	330 ft. (a)
	Intersection Space Maximum	1 mile	1/2 mile	1/2 mile	N/A
	Intersection Space Minimum	660 ft. (d)	330 ft. (d)	330 ft. (d)	330 ft. (d)
Lanes		4	2	2	2
	Minimum Pavement	48 ft.	24 ft.	24 ft.	24 ft.
	Pavement Marking	Yes (e)	Yes (e)	Yes (e)	Yes (e)
Driveway Design		Street-type	Street-type	Swale dr.	Swale dr.
Parking, On Street		Prohibited	Prohibited	Prohibited	Prohibited
Median		Yes	No	No	No
*Turn Lanes		Yes	Yes	No	No
Traffic Signal		As warranted	As warranted	No	No
Pedestrian crossing		At signalized crossing	Intersection only	Yes	Yes
*Approach Widening (Expand Intersection)		Yes	Yes	No	No

*ROW:					
	200 ft.(R)	100 ft.(R)	70 ft.(R)	70 ft.(R)	68 ft.(R)
	100 ft.(U)	80 ft.(U)	50 ft.(U)	50 ft.(U)	54 ft.(U)
Design Vehicle (c)	wb-60 & su	wb-60 & su	wb-40 & su	wb-40 & su	wb-40 & su
Sidewalks	Yes	Yes	Yes	Yes	Yes

\*Further explanation in provisions of this section.

- (a) Or 125 feet for opposing offset T-type intersection.
- (b) Or in accordance with traffic impact analysis.
- (c) Per AASHTO definitions.
- (d) Or alternate as approved by the development review committee based upon land planning and traffic analysis.
- (e) As delineated in the "USDOT Manual on Uniform Traffic Control Devices."

(R) Rural

(U) Urban or suburban

(3) *Intersections.*

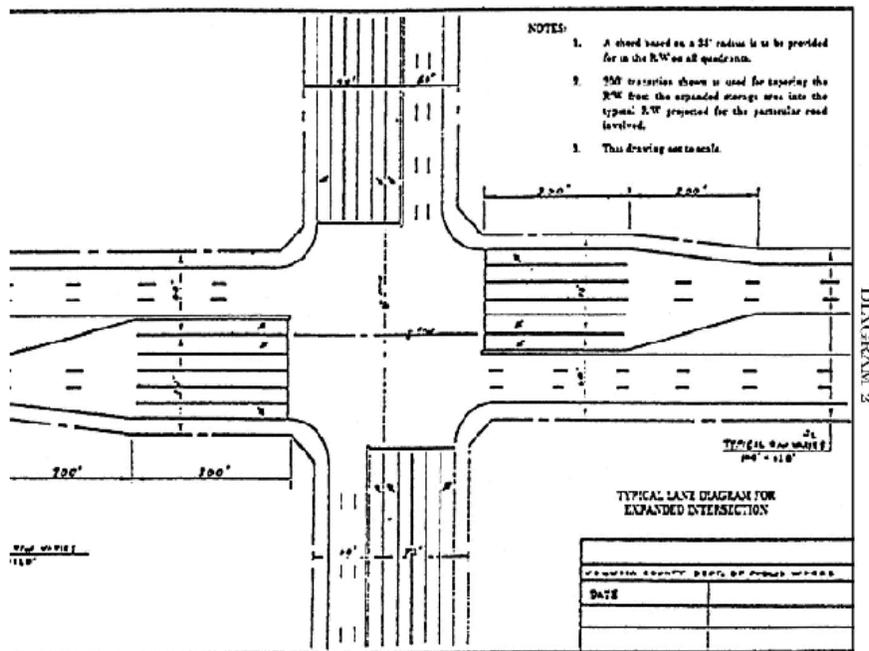
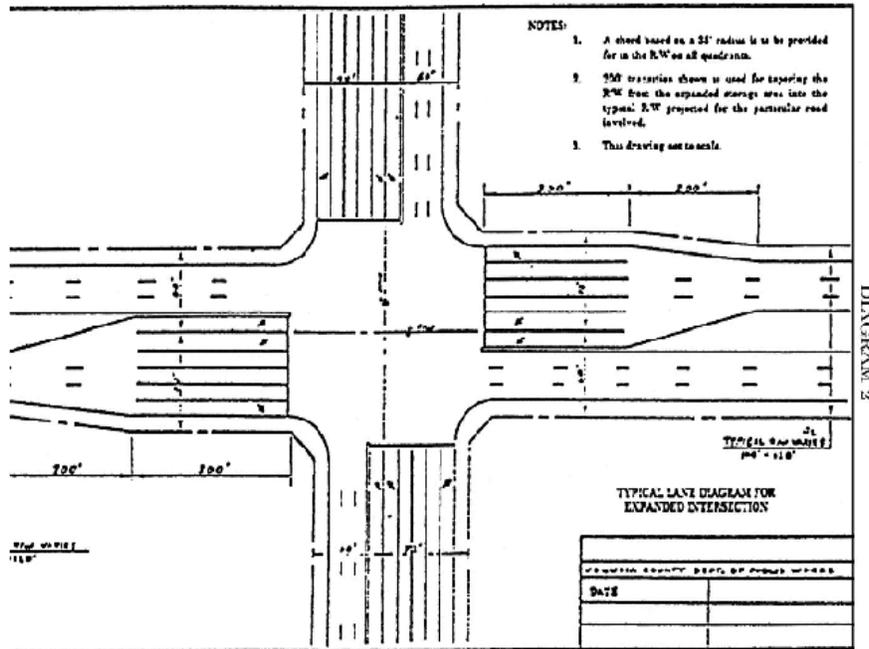
a. Spacing of street intersections.

1. A collector may intersect a thoroughfare but only if aligned with and extending an existing collector which intersects the thoroughfare or at a minimum distance of 1,320 feet from the intersection of an existing collector and the thoroughfare.
2. A local street shall not intersect a thoroughfare unless unavoidable, in which case the local street may intersect a thoroughfare but only if aligned with and extending an existing local street which intersects the thoroughfare or at a minimum distance of 660 feet from any other intersection of the thoroughfare.
3. A collector may intersect another collector but only if aligned with and extending an existing collector or at a minimum distance of 660 feet from any other intersection.
4. A local street may intersect a collector if spaced at a minimum distance of 660 feet from any other intersection or, in the case of a T-type intersection, at a minimum distance of 330 feet from any other intersection.
5. The minimum spacing requirements of this section may be reduced upon a finding by the DRC that, given the particular conditions of the proposed development, such reduction will not compromise operational and safety standards.

b. Additional right-of-way required at intersections.

1. For the installation of traffic-control equipment, a chord shall be drawn at each intersection, and the area between the chord and the tangents of the intersecting streets shall be dedicated or, if acceptable to the city, granted by easement. Such required





(4) *Median openings.* To assure traffic safety, capacity and control, median openings located within a thoroughfare corridor shall be spaced the maximum distance apart that will allow safe and adequate traffic circulation.

- a. Location.
    - 1. No median opening shall be spaced at a distance less than 660 feet from any other median opening unless specifically approved by the city traffic engineer on a finding that, given the particular conditions of the proposed development, such determination will not compromise traffic operational and safety standards.
    - 2. Dedicated public streets are given priority consideration for median openings.
  - b. Design criteria.
    - 1. All median openings shall include at least 200 feet storage with 100 feet transition unless otherwise acceptable to the city traffic engineer. Increased storage and transition lengths may be required to eliminate disruption of through-traffic flow.
    - 2. Final design of median openings shall be approved by the city traffic engineer.
- (5) *Access limitations for development adjacent to thoroughfares.*
- a. There shall be no access to a thoroughfare from a lot with less than 300 feet of width unless one of the following conditions is met:
    - 1. Access to the lot is limited to streets other than that thoroughfare; provided, however, that commercial and industrial developments shall not be given access on local residential streets.
    - 2. Access to the lot is provided jointly with other lots of an adjoining development such that minimum driveway spacing and corner clearance requirements of Tables 96-6A and 96-6B are satisfied by the combination of lots served by the existing or relocated joint access driveway.
    - 3. Access to the lot is to be provided from a service drive paralleling that thoroughfare which has been approved and is constructed prior to the issuance of a certificate of occupancy.
  - b. No new single-family or duplex residential lot which is under one net acre in size and has not less than 300 feet of frontage shall front on a thoroughfare unless access to such lot is provided from a street other than that thoroughfare. Such lot shall have access to a local street or service drive. Service drives outside the required public right-of-way may be granted by easements.
  - c. Where a proposed development abuts or contains a right-of-way for a railroad, expressway, drainage canal or waterway, a street may be required, if the need is determined by a traffic impact analysis acceptable to the city traffic engineer, approximately parallel to and on each side of such right-of-way, at a distance suitable for the appropriate use of the intervening land and in compliance with all provisions of this chapter.
  - d. Reserve strips controlling access to streets within a thoroughfare corridor shall be prohibited unless dedicated to the city.
  - e. New half or partial streets shall not be permitted. Whenever a development borders on an existing half or partial street the other part of the street right-of-way shall be dedicated within such tract.
  - f. If lots resulting from an original subdivision are large enough to permit or require resubdivision or development or if a portion of the tract is not subdivided or developed,

adequate street right-of-way to permit future subdivision development shall be provided as necessary.

- (6) *Building setback within thoroughfare corridors.* Any building constructed along a street within a thoroughfare corridor shall have a minimum setback from the right-of-way as required by the zoning ordinance [chapter 110, Code of Ordinances].
- (7) *Obstruction to visibility.* At the intersection of any streets no obstruction of any kind shall block the visibility of motorists between 30 inches and ten feet above the center line grades of those intersecting streets within a triangular area formed by the street right-of-way lines of the abutting corner lot and a straight line joining those right-of-way lines at points 25 feet from the intersection of those right-of-way lines.
- (8) *Bridge embankment requirements.* If a street within a thoroughfare corridor requires a bridge, additional right-of-way will be required to accommodate the width of necessary bridge design features, including, without limitation, grade, fill slopes and drainage requirements.
- (9) *Vehicular ingress and egress easement.* If development abuts a street within a thoroughfare corridor, a vehicular ingress and egress easement shall be granted to the city along the property frontage except at those points of access provided in conformance with the standards of this article.
- (10) *Vehicular access to streets within thoroughfare corridors.* Vehicular access to a street within a thoroughfare corridor shall conform to the following standards:
  - a. General design requirements. The design of driveways shall be regulated as follows:
    1. Any development with access to a street within a thoroughfare corridor shall have either driveway approaches of sufficient width to allow for two-way traffic, or one-way driveways connected to aisles, parking areas or maneuvering areas in such a manner as to permit traffic to both enter and leave the development, facing forward, at the same time. A driveway which is only wide enough for one-way traffic shall not be used for two-way access and shall be signed and marked for one-way operation.
    2. The area within the development to which the driveway provides access shall be of sufficient size to allow all necessary functions for loading, unloading and parking maneuvers to be carried out on private property and completely off the street right-of-way.
  - b. Type of driveway required.
    1. Minor driveway entrance. This driveway type shall be provided for a maximum daily trip end volume of 500 vehicles and/or a maximum average peak hour volume of 50 vehicles. The minimum distance from the street right-of-way line at any ingress or egress minor driveway to the outer edge of any interior service drive or parking space with direct access to such driveway shall be 25 feet, measured perpendicularly from the street. A minor driveway entrance radii shall be 30 feet, and a minimum width shall be 24 feet. The city traffic engineer may require a turn lane of 12 feet in width, with minimum 150 feet storage and 100 feet transition, unless a traffic engineering study acceptable to the city traffic engineer demonstrates that the absence of such a lane will not adversely impact traffic conditions. Increased storage and transition lengths may be required by the traffic engineer to provide for all deceleration outside the through lane.

2. Intermediate driveway entrance. This driveway type shall provide for a maximum average daily trip end volume of 1,500 vehicles and/or a maximum average peak hour volume of 150 vehicles. The minimum distance from the street right-of-way line at any ingress or egress intermediate driveway to the outer edge of an interior service drive or parking space with direct access to such driveway shall be 50 feet, measured perpendicularly from the street. A minimum turn lane 12-foot wide, with minimum 150 feet storage and 100 feet transition shall be provided unless a traffic engineering study acceptable to the city traffic engineer demonstrates that the absence of such a lane will not adversely impact traffic conditions. Increased storage and transition lengths may be required by the city traffic engineer to provide for all deceleration outside the through lane. A minimum of two egress lanes 12 feet in width each with one 14-foot wide ingress lane shall be provided. An intermediate driveway radii shall be 35 feet.
  3. Major driveway entrance. This driveway type shall provide for a maximum average daily trip end volume of 5,000 vehicles and/or maximum average peak hour volume of 500 vehicles. The minimum distance from the street right-of-way line at any ingress or egress major driveway to the outer edge of any interior service drive or parking space with direct access to such driveway shall be 100 feet, measured perpendicularly from the street. A minimum turn lane 12-foot wide, with minimum 200 feet storage and 100 feet transition shall be provided unless a traffic engineering study acceptable to the city traffic engineer demonstrates that the absence of such a lane will not adversely impact traffic conditions. Increased storage and transition lengths may be required by the city traffic engineer to provide for all deceleration outside the through lane. A minimum of two egress lanes 12 feet each in width and one 14-foot wide ingress lane shall be provided. A major driveway radii shall be 40 feet.
  4. Major driveway signalized. Any major drive requiring a traffic signal shall conform to those warrants specified in the "USDOT Manual on Uniform Traffic Control Devices" in addition to the following minimum requirements:
    - (i) The installation of any traffic signal shall be subject to the approval of the city traffic engineer.
    - (ii) A continuous right-turn lane shall be provided at all driveway locations where posted speeds are 35 miles per hour or greater and the total driveway volume of the development meets or exceeds 20 percent of the one-way directional flow on the street within the thoroughfare corridor.
- c. Number and location of driveways. The number and location of driveways shall be determined as follows:
1. Spacing of driveways.
    - (i) To allow for proper corner clearance, the minimum tangent curb length between a minor driveway radius and an intersection shall be 50 feet.
    - (ii) If the closest intersection is or is likely to be signalized, then traffic movements to and from any driveway within 250 feet of an intersection with a collector or an arterial shall be limited to right turns only.
    - (iii) Minimum acceptable spacing between intermediate or major driveways and an intersection shall be similar to the criteria for intersections of local streets with a thoroughfare. Refer to subsection 96-37(3)a.2.

2. Frontage. Subject to the access limitations as provided in subsection 96-37(5)a.:
- (i) Only one driveway shall be permitted for ingress and egress purposes to a single property or development, provided:
  - (ii) Two driveways entering a particular thoroughfare from a single property or development may be permitted if all other requirements of this section are met and if the minimum distance between the adjacent driveways conforms to the minimum spacing requirements of table 96-9.
  - (iii) Three driveways entering a particular thoroughfare from a single property or development may be permitted if all other requirements of these regulations are met and if the minimum distance between adjacent driveways conforms to the minimum spacing requirements of table 96-9.
  - (iv) A joint access driveway will be considered as adequate access for any two adjacent developments. For a development where additional driveways are being requested and where those driveways do not meet the spacing requirements, the applicant shall be required to submit a brief traffic report justifying the need, describing the internal circulation and parking system, and identifying the impact of the development and its proposed access facilities on the operation of the thoroughfare.

**Table 96-6 Driveway Centerline Spacing Requirements within Thoroughfare Corridor**

The minimum distance between center lines of two-way driveways shall conform to Table 96-9A. For those driveways with left turn movements, median opening spacing requirements shall have precedence.

**Table 96-6A**

<i>Speed Limit (mph)</i>	<i>Minimum Center Line Distance (feet)</i>
20	135
25	155
30	175

If the speed limit of the thoroughfare is 35 miles per hour or greater, or the volume of right-turn movements requires the construction of a right-turn lane(s), the minimum distance between center lines of two-way driveways shall conform to table 96-6B.

**Table 96-6B**

<b>Intersection With</b>	<b>Minor DW</b>	<b>Intermediate DW</b>	<b>Major DW</b>	<b>Major DW, Signalized or Four Lanes or More</b>
Minor DW	335	350	355	370
Intermediate DW	350	360	365	380

Major DW	355	365	370	385
Signalized or Four lanes or more	370	380	385	400

DW = Driveway

Minor DW = Maximum ADT of 500 or a maximum peak hour volume of 50

Intermediate DW = Maximum ADT of 1,500 or maximum peak hour volume of 150

Major DW = Maximum ADT of 5,000 or maximum peak hour volume of 500

Driveway center line spacing may be increased if the required turn lane storage or transition is increased by any governmental agency. Minimum driveway center line spacing may be decreased if one-way driveways are utilized and accepted by the DRC.

3. Special driveway requirements. In the case of a land use with special driveway needs, an applicant may submit a traffic engineering study requesting deviations from the requirements of this section. If deviations from driveway requirements are permitted, substitute requirements which deviate no more than necessary to serve the special land use needs may be applied to the development in order to minimize the impact on the adjacent street.
4. Replacement of abandoned driveways within a thoroughfare corridor. Existing driveway approaches shall not be relocated, altered or reconstructed without first obtaining a use permit. When the use of any driveway approach is changed, making any portion or all of the driveway approach unnecessary the developer of the abutting property shall first obtain a use permit to abandon the driveway approach and shall, at his/her expense, replace all necessary curbs, gutters, and sidewalks.
5. Turning lanes.
  - (i) Left-turn lane requirements immediately adjacent to the development. A left-turn lane with a minimum of 200 feet storage with 100 feet transition shall be provided at each driveway when the average daily trip ends of the driveway is 1,000 vehicles or more and/or the average peak hour inbound left-turn volume is 25 vehicles or more. Increased storage and transition lengths may be required by the city traffic engineer to provide for all deceleration outside the through lane.
  - (ii) Right-turn lane requirements immediately adjacent to the development. A right-turn lane with a minimum of 150 feet of storage and 100 feet of transition shall be required at each driveway when the speed limit equals or exceeds 35 miles per hour or if the development will generate 100 or more right-turn movements during the peak hour. Increased storage and transition lengths may be required by the city traffic engineer to provide for all deceleration outside the through lane.
  - (iii) Intersection improvements immediately adjacent to the development. At intersections within a thoroughfare corridor which abut the development the following improvements shall be provided:
    - 1) A right-turn lane shall be provided if the street's speed limit is 35 miles per hour or greater and if the development will generate 100 or more right turns during the peak hour.

- 2) A left-turn lane shall be provided if the street's speed limit is 35 miles per hour or greater and if the development will generate 25 or more left turns during the peak hour.
  - (iv) Modifications. Required storage and transition lengths may be modified where conditions warrant and such modifications are acceptable to the DRC.
6. Service roads within the public right-of-way. All driveways along designated thoroughfares with existing or planned service roads shall access to such service roads. To gain temporary direct access to the thoroughfare, the developer shall construct the section of the service road adjacent to the development. The service road section shall be located where planned. Any right-of-way not previously dedicated shall be dedicated prior to issuance of a temporary driveway permit providing direct access to the thoroughfare. If driveway access is provided from a service road, driveway spacing and minimum lot width requirements under this section may be reduced by one-third. However, minimum driveway spacing for temporary direct access to the thoroughfare shall be adequate to ensure safe traffic operation at the design speed.
7. Access between divided roadway and private property.
  - (i) Access easement. Easement for, and construction of, access on-site shall be required when property that abuts an existing or proposed roadway does not or will not align with an approved median access or when the location of the property will prohibit adjacent properties of similar land use from gaining access to an approved median opening. The easement shall guarantee the interconnection to and through such properties for access to and from the divided roadway.
  - (ii) Location. The intersection of an access easement with a driveway shall conform to the minimum depth of the appropriate driveway type as required by this section. The minimum separation between the access easement and the street shall be 25 feet.
  - (iii) Design. The minimum pavement width for the two-way access shall be 24 feet.
8. Off-street vehicular circulation. Where a development is located on a street within a thoroughfare corridor the parking facility shall have full internal vehicular circulation and storage. Vehicular circulation must be completely contained within the property and vehicles located within one portion of the development must have access to all other portions without using the adjacent street system.
9. Off-street truck maneuvering. Where a proposed development includes a truck loading operation and has access to a street within a thoroughfare corridor, adequate space shall be provided such that all truck maneuvering is performed off-street.
10. Off-street vehicle reservoir areas. Adequate reservoir capacity shall be required for both inbound and outbound vehicles to facilitate the safe and efficient movement between the street and the development. An inbound reservoir shall be of sufficient size to ensure that vehicles will not obstruct the adjacent street, sidewalk and circulation within the facility. An outbound reservoir shall be required to eliminate backup and delay of vehicles within the development.

(Ord. No. 96-25, § 1(411), 3-4-1996)

**Sec. 96-38. Design standards and requirements for local streets.**

(a) *General requirements applicable to all local streets.*

(1) Improvements required. An applicant shall construct or escrow funds for the construction, prior to issuance of any development order, all roadway and drainage improvements for those rights-of-way lying within or adjacent to the proposed development and necessary to accommodate the traffic generated by the development. Such improvements shall be in accordance with the applicable portions of the following: the "FDOT Minimum Standards for Streets and Highways," the "USDOT Manual on Uniform Traffic Control Devices," and all applicable provisions of this chapter.

- a. On-site improvements. A developer shall be required to construct or escrow for the construction of those on-site improvements required by the provisions of this section and any additional improvements necessary for traffic safety, including but not limited to the following: pavement, rock base, fill, curbs, gutters, sidewalks, bikeways, guardrail, shoulder areas, swales, roadside recovery areas, bridges, drainage outlets, catch basins, drainage pipes, culverts, drainage ditches, head walls, end-walls, riprap, traffic signals and interconnecting facilities, traffic control signs and roadway markings, street name signs, identification signs, left-and right-turn lanes, median openings, bus turnouts, and traffic separators.
- b. Off-site improvements. A developer shall be required to construct or escrow for the construction those roadway and drainage improvements on property adjacent to the proposed development necessary to connect the new development to an existing adequately paved adjacent street system.

(2) Access to development.

- a. Every lot or parcel shall have access from a publicly dedicated street.
- b. Where development borders on or contains a right-of-way for a railroad, expressway, drainage canal or waterway, a street may be required approximately parallel to and on each side of such right-of-way, at a distance suitable for the appropriate use of the intervening land and in compliance with all provisions of this chapter.
- c. Reserve strips controlling access to streets shall be prohibited unless dedicated to the public.
- d. New half or partial streets shall not be permitted. Whenever a tract borders on an existing half or partial street, the other part of the street shall be dedicated within such tract.

(3) Arrangement of streets.

- a. The pattern of streets in new subdivisions shall provide for the continuation of existing streets properly aligned from adjoining areas, or for their proper projection where adjoining land is not subdivided. Where street extensions into adjacent undeveloped land are necessary to ensure a coordinated street system, provisions for such future street or streets shall be made.
- b. The arrangements of streets in new subdivisions or developments shall facilitate and coordinate with the desirable future platting of adjoining unplatted property of a similar character, and provide for local circulation and convenient access to neighborhood facilities.

- c. Local residential streets shall be arranged so as to discourage their use by through traffic. Residential streets shall not connect with industrial areas except in cases where it is unavoidable.
- (4) Right-of-way required. An applicant will be required to dedicate right-of-way in addition to the right-of-way requirements of tables 96-7, 96-8 and 96-9 below in the following situations:
- a. If proposed access from the development to an existing dedicated and accepted street does not meet the total right-of-way requirement for a complete road.
  - b. If a development has a greater impact on an existing road than that for which the roadway width had previously been designed.
  - c. If a development abuts or contains an existing street of inadequate right-of-way width.
- (5) Alleys.
- a. Private alleys may be provided to serve residential, business, commercial and industrial areas and shall be a minimum of 30 feet in width.
  - b. Changes in direction of the alignment of an alley shall be made on a center line radius of not less than 50 feet.
  - c. Dead-end alleys shall be prohibited where possible, but if unavoidable, shall be provided with adequate turnaround and facilities for service trucks at the dead end, with a minimum external diameter of 100 feet of right-of-way, or as determined to be adequate by the city engineer.
  - d. At intersections with streets or other alleys, a corner chord right-of-way based on not less than a 20-foot radius shall be provided by dedication or, if acceptable to the city engineer, grant of easement.
- (b) *Design criteria for local streets by development type.*
- (1) The design of local streets shall comply with the provisions and tables below depending on the type of development proposed. Deviations from only the numerical standards of those tables 96-7, 96-8 and 96-9 may be allowed but only where approved by the city engineer upon a finding that substantially equivalent protection of the public safety can be achieved by alternative standards; provided, however, that no alternative standard having more than a ten percent deviation from the numerical standard stated below shall be permitted. If a proposed development includes more than one type of use, the highest criteria shall apply.
- a. Residential development. Residential streets shall be adequate to permit neighborhood traffic circulation to flow from the highest element of the hierarchical classification, the arterial or collector; to the lowest element, the local residential street. Circulation within a residential development shall be adequate when the criteria of the tables below are met and when collectors and local streets are provided which meet the standards below.
    - 1. Design criteria. If all lots in a development are one acre or larger, the development shall conform to the minimum design standards of table 96-7. If all lots in a development are less than one acre, development shall conform to the minimum design standards of table 96-8.
    - 2. Residential collector street. The residential collector street serves as the principal circulation facility within the residential neighborhood unit. Its function is to collect traffic from the interior and deliver it to the closest perimeter intraneighborhood

transportation facility between the residential units and the local centers of attraction such as neighborhood shopping centers, schools, and neighborhood parks.

- (i) Collectors shall penetrate residential development without forming a continuous network, thus discouraging through traffic. When discontinuity of collectors is obtained by offsetting the intersections with the arterials or other collector streets, such offsetting shall comply with the requirements of 96-37(4).
- (ii) Single-family and duplex residential lots smaller than one acre and 200 feet of width shall have no direct access to four-lane collector streets. If the sides of adjoining residential lots abut the collector street, with the house and driveway facing the local street, the spacing between intersections shall be not less than 250 feet, and a nonvehicular ingress and egress line shall be provided along the collector street. When the back of residential lots abut a collector street, a nonvehicular ingress and egress line shall be provided along the collector street. Group parking facilities, as for multifamily use, when located along a collector residential street, shall be served by driveways having a minimum spacing of 250 feet.

**Table 96-7 Rural Residential Development**  
(Minimum Lot Size: 1.0 Acre and Above)

		<b>Collector (Non-Thoroughfare)</b>		<b>Local Streets</b>	
		<b>Four-Lane Collector</b>	<b>Two-Lane Collector</b>	<b>Local</b>	<b>Local/Cul-de-Sac</b>
<i>Volume</i>		5,000--10,000 VPD	2,000--5,000 VPD	300 (a) -- 2,000 VPD	0-- 300 (a) VPD
<i>Residential Access</i>		Yes	Yes	Yes	Yes
<i>Minimum Design Speed</i>		45 mph	40 mph	30 mph (g)	30 mph (g)
	Parallel space between streets	1/2 mile	1/4 mile	660 ft.	330 ft.
	Intersection space maximum	No max.	2 miles	N/A	N/A
	Intersection space minimum	660 ft. (b)	330 ft. (b)	250 ft. (b)	250 ft. (b)
<i>Lanes</i>		4	2	2	2
	Minimum pavement	48 ft.	24 ft.	24 ft.	24 ft.

	Pavement mark/signing	Yes (d)	Yes (d)	Yes (d)	Yes (d)
	<i>Driveway Design</i>	Ramp-type (c)	Ramp-type (c)	Swale-dr. (e)	Swale-dr. (e)
	<i>Parking on Street</i>	Prohibited	Prohibited	Prohibited	Prohibited
	<i>Median</i>	Yes	No	No	No
	<i>*Turn Lanes</i>	Yes (f)	Yes (f)	No	No
	<i>Traffic Signal</i>	As warranted	As warranted	No	No
	<i>Pedestrian Crossing</i>	At signalized crossings	Intersection only	Yes (d)	Yes (d)
	<i>*Approach Widening (Expand Intersection)</i>	Yes	Yes	No	No
	<i>*ROW</i>	200 ft.	100 ft.	70 ft.	70 ft.
	<i>Design Vehicle (Geom)</i>	WB 60 & SU	WB 60 & SU	WB 40 & SU	WB 40 & SU
	<i>Corners</i>	30-ft. chord	30--25-ft. chord	25-ft. radius	25-ft. radius
	<i>*Bikeways</i>	No	No	No	No
	<i>*Walkways</i>	No	No	No	No

\*Further Explanation in Provisions of this Section.

- (a) Over 300 VPD may be allowed if an alternate emergency access is provided.
- (b) Or alternate approved by the development review committee based upon land planning and traffic analysis.
- (c) See subsection 96-37(4).
- (d) As delineated in the "USDOT Manual on Uniform Traffic Control Devices."
- (e) Or approved alternate by the city.
- (f) On collectors; for collector/collector intersections or local/collector intersections with more than 1,000 VPD.
- (g) Design speeds lower than 30 mph may be used for local, subdivision type roads and streets. Streets with a design speed less than 30 mph shall be posted with appropriate legal speed limit signs.

N/A = Not Applicable

**Table 96-8 Design Criteria and Characteristics of Streets not within a Thoroughfare Corridor**  
 Urban/Suburban Residential Development  
 Minimum Lot Size: Less Than 1.0 Acre

		<b>Collector (Non-Thoroughfare)</b>		<b>Local Streets</b>	
		Four-Lane Collector	Two-Lane Collector	Local	Local/Cul-de-Sac
<i>Volume</i>		5,000--10,000 VPD	2,000--5,000 VPD	300 (a) -- 2,000 VPD	0-- 300 (a) VPD
<i>Residential Access</i>		Prohibited (b)	Prohibited (b)	Yes	Yes
<i>Design Speed</i>		45 mph	40 mph	20 mph (g)	20 mph (g)
	Typical parallel space between streets	1/2 mile	1/4 mile	330 ft.	330 ft.
	Intersection space maximum	No max.	2 miles	1/4 mile	N/A
	Intersection space minimum	660 ft. (c)	330 ft. (c)	250 ft. (h)	N/A
<i>Lanes</i>		4	2	2	2
	Minimum pavement	48 ft.	24 ft.	20 ft.	20 ft.
	Pavement mark/signing	Yes (e)	Yes (e)	Yes (e)	Yes (e)
<i>Driveway Design</i>		Street-type	Street-type	Swale-dr.	Swale-dr.
<i>Parking on Street</i>		Prohibited	Prohibited	Prohibited	Prohibited
<i>Median</i>		Yes	No	No	No
<i>Turn Lanes</i>		Yes (i)	Yes (i)	No	No
<i>Traffic Signal</i>		As warranted	As warranted	No	No
<i>Pedestrian Crossing Markings</i>		At signalized crossings	Intersections only	As required by city traffic engineer	

<i>Approach Widening (Expand Intersection)</i>	Yes (j)	Yes (j)	No	No
<i>ROW</i>	100 ft.	80 ft.	50 ft.	50 ft.
<i>Design Vehicle (Geom)</i>	WB 60 & SU	WB 60 & SU	WB 40 & SU	WB 40 & SU
<i>Corners</i>	30-ft. chord	30--25-ft. chord	25-ft. radius	25-ft. radius
<i>Bikeways</i>	Yes (k)	Yes (k)	Yes (k)	Yes (k)
<i>Walkways</i>	Yes (m)	Yes (m)	Yes (m)	Yes (m)

- (a) Over 300 VPD may be allowed if an alternate emergency access is provided.
  - (b) See section 96-38(b)(1)b.2.
  - (c) Or approved alternate by the development review committee based upon land planning and traffic analysis.
  - (d) See section 96-37(4).
  - (e) As delineated in the "USDOT Manual on Uniform Traffic Control Devices" and as required by the city traffic engineer.
  - (f) On collectors; for collector/collector intersections or local/collector intersections with more than 1,000 VPD.
  - (g) Design speeds lower than 30 mph may be used for local, subdivision type roads and streets. Streets with a design speed less than 30 mph shall be posted with appropriate legal speed limit signs.
  - (h) See section 96-38(b)(1)a.(3)(i).
  - (i) See section 96-28(g)(3).
  - (j) See section 96-37(3)b.2.
  - (k) See section 96-41(b).
3. Local residential street. The primary function of the local street is to provide the access of vehicles to residential development fronting on the street. Local streets shall provide access to residential development and connect local traffic from private driveways to collector streets. Local streets are required when connections of driveways to the collector would otherwise be closer than 250 feet.
- (i) There shall be a minimum distance of 250 feet between the intersection of any two local streets with a single collector, except that there may be a minimum distance of 125 feet between T intersections.
  - (ii) Local streets shall be patterned in such a way that continuous traffic from one collector to another collector is not possible.
  - (iii) A loop street, a local street which usually begins and ends at the same collector, may begin at a collector and end at a local street provided that the system does not exceed the maximum number of trips permitted.

- b. Commercial development. Commercial development shall be designed to satisfy the needs generated by residential development.
1. Commercial streets. Commercial streets shall be designed to facilitate the efficient and safe movement of vehicles from the thoroughfares to regional commercial facilities, and from collectors and local residential streets to community and neighborhood commercial development. The design of commercial streets shall comply with the standards of table 96-13 below.
  2. Pedestrian access. Neighborhood and community commercial facilities shall have an efficient and direct pedestrian way connection to the residential areas the facilities are intended to serve. The design of local commercial facilities shall allow pedestrians and bike riders direct access from adjacent neighborhood areas, with due consideration to the elimination of points of conflict between pedestrians and vehicles.
- c. Industrial development. Industrial development shall be designed to provide easy and safe access for incoming raw materials, and for the personnel operating the industrial facilities. Adequate location and size shall ensure that noise levels, smells and odors, vibration, radiation and other sources of nuisance will not affect residential development. Industrial streets shall be designed to provide direct access from thoroughfares to industrial local streets. Local residential streets shall not be used to provide access to immediately adjacent industrial development. Industrial streets shall comply with the standards of table 96-12.

**Table 96-9 Business, Industrial, Institutional and Multifamily Residential Development**

		Collector (Non-Thoroughfare)		Local Streets	
		Four-Lane Collector	Two-Lane Collector	Local	Local/Cul-de-Sac
<i>Volume</i>		5,000--10,000 VPD	2,000--5,000 VPD	1,000 (a) -- 2,000 VPD	0--1,000 VPD
<i>Residential Access</i>		Restricted (b)	Restricted (b)	Restricted (b)	Restricted (b)
<i>Minimum Design Speed</i>		45 mph	40 mph	30 mph	30 mph
	*Parallel space between streets	1/2 mile	1/4 mile	660 ft.	330 ft.
	Intersection space maximum	1 mile	1/2 mile	1/2 mile	660 ft.
	Intersection space minimum	660 ft. (e)	330 ft. (e)	250 ft. (c)	250 ft. (c)
<i>Lanes</i>		4	2	2	2
	Minimum	48 ft.	24 ft.	24 ft.	24 ft.

	pavement				
	Pavement mark/signing	Yes (d)	Yes (d)	Yes (d)	Yes (d)
	<i>Driveway Design</i>	Street	Street	Street	Street
	<i>Parking on Street</i>	Prohibited	Prohibited	Prohibited	Prohibited
	<i>Median</i>	Yes	No	No	No
	<i>*Turn Lanes</i>	Yes	Yes	No	No
	<i>Traffic Signal</i>	As warranted	As warranted	As warranted	No
	<i>Pedestrian Crossing</i>	<i>At signalized crossings</i>	Intersection only	Yes	Yes
	<i>*Approach Widening (Expand Intersection)</i>	Yes	Yes	No	No
	<i>*ROW</i>	100 ft.	80 ft.	50 ft.	50 ft.
	<i>Design Vehicle (Geom)</i>	WB 60 & SU	WB 60 & SU	WB 60 & SU	WB 60 & SU
	<i>Corners</i>	30-ft. chord	30--25-ft. chord	25-ft. chord	25-ft. chord
	<i>*Bikeways</i>	No	No	No	No
	<i>*Walkways</i>	Yes (e)	Yes (e)	Yes (e)	Yes (e)

\*Further Explanation in Provisions of This Section

(a) Culs-de-sac may be approved for traffic volumes more than 1,000 VPD if an alternate is approved by the development review committee.

(b) Or 125 feet for opposing offset T intersections.

(c) As delineated in the "USDOT Manual on Uniform Traffic Control Devices."

(d) Or alternate approved by the development review committee based upon land planning and traffic analysis.

(Ord. No. 96-25, § 1(412), 3-4-1996)

**Sec. 96-39. Curbs and gutters.**

- (a) *General.* Except for rural developments all streets shall be drained utilizing curb-and-gutter construction. For rural development with minimum lot widths of at least 150 feet, roadside drainage swales may be utilized.
- (b) *Width and permitted types.* The width of curb and gutter shall be a minimum of 24 inches and shall be either Florida State DOT type or Miami curb and gutter, depending upon the flow to be handled. Environmental curb may be permitted by the DRC in developments where soil types and/or topography indicate this method to be preferable. Approved surmountable median curb may be used around median dividers on the high side of pavement. All curb designed to handle water shall incorporate an approved gutter design. There shall be a stabilized subgrade beneath all curbs and one foot beyond the back of curb. No water valve boxes, meters, portions of manholes, or other appurtenances of any kind relating to any underground utilities shall be located in any portion of a curb and gutter section.
- (c) *Minimum grades.* The minimum allowable flow line grade of curbs and gutters shall be two-tenths of one percent, except in intersections where flatter grades shall be allowable. The tolerance for ponded water in curb construction is one-fourth inch maximum.
- (d) *Other requirements.* Plastering shall not be permitted on the face of the curb. Joints shall be provided at intervals of ten feet, except where shorter intervals are required for closures, but in no case less than four feet.

No raised portion of any type of curb shall be constructed closer than 12 feet from the pavement edge of an intersecting road without curbs. After concrete has set sufficiently, but in no case later than three days after construction, the curbs shall be backfilled.

All cross-street valley gutters shall be constructed of concrete.

(Ord. No. 96-25, § 1(413), 3-4-1996)

**Sec. 96-40. Streets.**

- (a) *Clearing and grubbing of rights-of-way.* The developer shall clear all traveled ways and recovery areas according to the "FDOT Standard Specifications for Road and Bridge Construction." Trees may be selectively cleared outside of the recovery area to accommodate the installation of the drainage, water and sewer systems, or any other utilities. Any such tree removal shall be in accordance with the requirements of chapter 98, article II. All debris shall be removed by the developer from rights-of-way after construction.
- (b) *Paving.* All paving shall be done in accordance with "FDOT Standard Specifications for Road and Bridge Construction" and "FDOT Roadway and Traffic Design Standards."

All unstable materials such as muck, peat, plastic clays or marls shall be removed from roadbed areas. The areas then shall be backfilled with suitable material, and the subgrade stabilized to a depth below the base as shown in table 96-10. Stabilization shall be to 75 pounds per square inch, Florida Bearing Value, for soils stabilized with clay, marl or other plastic type materials and to 40 percent Limerock Bearing Ratio for soils stabilized with shell, concrete screenings or other granular materials. The materials to be added for stabilization, if needed, shall be either high-bearing soil, sand clay, ground lime rock, or any other suitable material. (Muck shall not be used.) For rural sections, subgrade shall be stabilized to include the entire width of both shoulders to a depth of six inches. Where curb and gutter is utilized, subgrade shall be stabilized underneath curb to a depth of six inches and for a

distance of four feet beyond the back edge of curbs where Miami or Environmental curbs are used. For raised curbs, refer to stabilization requirements as used in "FDOT Standard Specifications for Road and Bridge Construction" and "FDOT Roadway and Traffic Design Standards."

Written test results, provided by a competent testing laboratory, shall be submitted giving Florida Bearing Value sufficient to obtain uniform results for each and every type of soil appearing in the roadbed at or random locations designated by the city.

After the subgrade is mixed, brought to grade, and ready for base course construction, it shall be showing not less than 98 percent modified maximum density for samples taken not more than every 250 feet apart, alternating from side to center, thence to opposite side and back to center, etc., or, in addition, whenever the city may require, prior to commencing. Separate test results will be required if stabilization is performed under curb areas separately from stabilization of the roadbed, showing not less than 98 percent modified maximum density for samples taken not more than every 250 feet apart, alternating from side to center, thence to opposite side and back to center, etc., or, in addition, whenever the city may require, prior to commencing. Separate test results will be required if stabilization is performed under curb areas separately from stabilization of the roadbed.

(c) *Base courses.*

- (1) Base course type and thickness shall be determined from table 96-10. All base courses shall be constructed in accordance with "FDOT Standard Specifications for Road and Bridge Construction" and "FDOT Roadway and Traffic Design Standards."

**Table 96-10 Road Design Standards**

			<b>Arterial or over 10,000 ADT</b>	<b>Collector or 2,000 to 10,000 ADT</b>	<b>Local 1,000 to 2,000 ADT</b>	<b>Local 0 to 1,000 ADT</b>
I.	<i>Asphalt:</i>					
	A.	Surface:				
		1. Friction course 1	1"	1"	--	--
		2. Structural course 2	2"	1 1/2"	1 1/2"	1"
	B.	Base:				
		Limerock	10"	8"	6" 3	6" 3
		or				
		Soil Cement	10"	8"	6" 3	6" 3
		or				
		Asphalt	8"	6"	5" 3	5" 3
	C.	Subbase Stabilizing	12"	10"	8"	6"

II.	<i>Concrete:</i>					
	A.	Pavement	9"	6"	6"	5"
	B.	Subbase	Standard Florida Department of Transportation Embankment Standards to be used for all concrete road construction. Top 12" layer shall be A-1, A-3 or A-2-4 AASHTO Classification, stabilized to LBR 40 or FBV 75, as recommended by the DED.			

- 1 DOT Type FC1 or FC4 only shall be used for friction course.
- 2 Type I asphaltic concrete or any current DOT structural course may be used.
- 3 Minimum thickness. Standard DOT tolerance below dimension not acceptable.

Following compaction, for limerock base courses, written test results shall be submitted showing not less than 98 percent modified maximum density for samples taken not more than every 250 feet apart, alternating from side to center, etc., or wherever the county may require.

Tests shall be required for each layer if construction is in two layers. The contractor shall make borings in areas designated by the county inspector to enable measurement of thickness.

Finished lime rock base courses shall be primed without delay and continuously maintained free of damage until the wearing surface is applied. The wearing surface shall be applied immediately upon completion, but, in no case, later than 15 days.

(d) *Wearing surface.*

- (1) The material used for the wearing surface shall be a Florida DOT asphaltic concrete mix of type I, II or III, or Florida DOT modifications. The surface shall have a compacted nominal thickness in accordance with table 96-10.
- (2) On all streets in commercial or industrial subdivisions, the wearing surface shall be constructed no less than one and three-fourths inches thick in any place, with a tolerance of one-fourth inch. Pooled water due to paving inaccuracies shall be limited to a water depth of no greater than one-fourth inch. Ponding in excess of this depth shall require correction.
- (3) A certified copy of the design mix shall be filed with the city stating the type and design stability of the product used. Any deviation from this stability requirement will be considered only after review and documentation of the special circumstances by the city. The maintenance of the completed road system shall be guaranteed for a period of one year.

(e) *Concrete streets.* Concrete streets may be permitted. Refer to table 96-10 for specifications. Construction shall be in accordance with "FDOT Standard Specifications for Road and Bridge Construction" and "FDOT Roadway and Traffic Design Standards."

(Ord. No. 96-25, § 1(414), 3-4-1996)

**Sec. 96-41. Walkways and bicycle facilities.**

(a) *Sidewalks.*

- (1) Paved sidewalks, a minimum of four feet in width shall be installed on both sides of all local streets within a new development, and within the city when any new building or residence is built. Alternative path systems within a new development may be approved by the DRC in addition to sidewalks. Specifications for materials and design of sidewalks or alternative path systems shall be approved by the city engineer or his or her designee, and shall be designed and constructed in accordance with such standards as may from time to time be published by the city engineer. Construction of sidewalks or alternative path systems shall be the responsibility of the developer or the abutting property owner, as appropriate, at their sole cost and expense. However, the city commission may from time to time approve sidewalk or alternative path construction at city expense in a sidewalk construction program prepared by the city engineer under the direction of the city manager. The sidewalk construction program shall be consistent with the city's capital improvements plan and comprehensive plan. Funding of sidewalk construction shall be from the sources adopted by the commission as a part of the program, and may include assessments of abutting property owners. Maintenance and replacement of the sidewalks or alternative path systems within a development and within the city shall be the responsibility of the abutting property owner. Sidewalks shall be located in the right-of-way or adjacent easements of said street(s) but not closer than one foot to the abutting property line. Sufficient distance from obstacles such as fire hydrants, drainage inlets, manholes, utility structures and trees shall be maintained for the safety of the walkway users. No sidewalk shall be located within the appropriate recovery area of the traveled way of said street. Where the sidewalk is curved there shall be no unsafe curves or sudden elevation changes in the sidewalk which would present a hazard to the users.
- (2) Walkways along thoroughfares, arterial streets, and collector streets. Paved walkways a minimum of five feet in width shall be installed along the abutting side of all existing and proposed thoroughfares, arterial streets, and collector streets which abut a new development., or which abut the site of any new building or residence at the time it is built, and along both sides of all thoroughfares, arterial streets, and collector streets which are required to be constructed within a new development.
- (3) Pedestrian barriers. The DRC, for new developments, or the city engineer, for existing developments and lots, may require fences, hedges, berms, other landscaping, or other barriers in order to discourage pedestrians from crossing hazardous streets at unsafe points or at numerous points. When possible, developments shall be designed so as to promote pedestrian street crossings only at traffic-control signals, crosswalks or intersections.
- (4) Escrow deposit. In lieu of installing sidewalks, a developer may elect to pay a sidewalk escrow deposit to the city. The city may also elect to require an escrow deposit as a substitute for sidewalk construction as a condition of the development order or development permit. The amount of the escrow deposit will be determined by the city engineer based upon the standards published by the city engineer for sidewalk construction, the width and length of the required sidewalk, and current estimated costs of construction to city standards. No certificate of occupancy shall be issued until sidewalks are either built and accepted by the city engineer or his or her representative, or an escrow deposit is provided in accordance with this ordinance.

(b) *Bicycle facilities.*

- (1) Bikeway plan. The city shall prepare a bikeway plan that will show the planned routes of bicycle facilities in the city, the types of bicycle facilities planned by the city, typical construction standards for each type of bicycle facility, and the type of facility to be built to service each planned bicycle facility route.
- (2) Escrow deposits. Until the city approves a bikeway plan, developers of property adjacent to thoroughfare streets shall pay a bikeway construction escrow deposit to the city. The bikeway construction escrow deposit shall be equal in amount to the estimated cost of construction of an eight-foot wide sidewalk along the length of each property line abutting a thoroughfare street and each property line abutting a street that intersects with an adjacent thoroughfare street, less the cost of construction or escrow deposit for a five-foot wide sidewalk. Bikeway escrow deposits shall be returned to the original depositor or his or her heirs, successors, or assigns in the event a bikeway directly serving the development is not included in the city's bikeway plan.

(Ord. No. 96-25, § 1(415), 3-4-1996; Ord. No. 01-00, § 4, 2-21-2000)

**Sec. 96-42. Erosion control.**

Seeding, mulching, sodding and/or other acceptable methods shall be performed as required to prevent undue erosion during all construction activities. During construction and through the developer maintenance period, the developer shall be required to keep accumulations of sand and earth out of the curb and gutter. Temporary siltation basins may be required during construction. Maintenance shall be provided by the developer for the one-year period of the road guarantee and for each lot until final inspection is passed.

(Ord. No. 96-25, § 1(416), 3-4-1996)

**Sec. 96-43. Reserved.**

**Sec. 96-44. Bridges.**

Bridges shall be constructed to the width of the connecting roadway pavement, or such additional width as required by the city engineer, with an additional allowance on each side for a pedestrian walk. Bridges extending over waterways shall have a center span and a vertical clearance as required by the city engineer. Bridges shall be designed by a professional engineer and conform to AASHTO and ASTM specifications which are incorporated herein by reference and made a part hereof, and any applicable federal and state requirements.

(Ord. No. 96-25, § 1(418), 3-4-1996)

**Sec. 96-45. Fire protection systems.**

- (a) The fire protection system of the proposed development shall be based upon the following requirements:
  - (1) *Water supply.* The fire protection water supply for the proposed development shall meet the following fire flow requirements:
    - a. In the case of a single-family or duplex residential development of less than ten dwelling units with lot sizes of less than one acre, or in the case of a single-family or duplex residential development of ten or more dwelling units, but less than 200 dwelling units with lot sizes of one acre or more, fire wells may be utilized.

- b. In the case of a single-family or duplex residential development with lot sizes of one acre or more totaling 200 or more units, a central water system shall be utilized for fire protection water supply which meets the water flow requirements of table 96-11.
- c. In the case of a single-family or duplex residential development with lot sizes of less than one acre, the fire protection water supply shall be provided by a central potable or nonpotable water supply or a combination of central water supply, auxiliary supply of fire wells which will produce the water flows contained in table 96-11. In no case shall the central water supply for fire protection be less than 50 percent of the minimum required by table I. Auxiliary water supply may be provided by a combination of tank trucks, ground tanks, cisterns, elevated storage, drafting stations on canals or reservoirs, or other methods subject to approval by the department of fire services.
- d. In the case of a multifamily residential development; a business or industrial development; or a place of assembly; the fire protection water supply shall be as defined in the most current edition of National Fire Protection Association (NFPA) 1142 Standard on Water Supplies for Suburban and Rural Fire Fighting. In all cases the minimum fire flows shall not be less than required for dwellings in table 96-11.
- e. A single water supply system may be used for both potable and fire protection supply provided the requirements of table 96-11 and/or National Fire Protection Association (NFPA) 1142 are maintained, as applicable.
- f. The minimum time duration for required fire flows shall be in accordance with table 96-12.

**Table 96-11 Fire Flows for Groups of Dwellings**

<b>Exposure Distances (feet)</b>	<b>Required Fire Flow* (gallons per minute)</b>
Over 100	500
31 to 100	750--1,000
11 to 30	1,000--1,500
10 or less	1,500--2,000†

\*Add 500 GPM where wood shingles would contribute to fire spread.

†Use 2,500 GPM minimum if buildings are continuous.

**Table 96-12 Minimum Time Duration for Required Fire Flows**

<b>Minimum Flow at Source of Supply (GPM)</b>	<b>Minimum Duration (hours)</b>
1,000 or less	2
1,250	2
1,500	2

1,750	2
2,000	2
2,250	2
2,500	2
3,000	3
3,500	3
4,000	4
4,500	4
5,000	5
5,500	5
6,000	6
7,000	7
8,000	8
9,000	9
10,000	10
11,000	10
13,000	10

The calculations of required fire flows in gallons per minute (GPM) considers the construction, occupancy, exposure and communication as outlined in the NFPA Fire Protection Handbook (latest edition).

- (2) *Fire hydrants.* Fire hydrants shall be installed according to the following requirements, with distances measured along street rights-of-way or private access roads. No distance shall be measured across thoroughfares.
- a. In the case of a single-family or duplex residential development; one- or two-story motels, hotels, or multifamily dwellings; or mobile home parks, hydrants shall be installed at intervals not to exceed 500 feet with a minimum main size of six inches.
  - b. In the case of a business or industrial development, excluding developments in a. above, hydrants shall be installed at intervals not to exceed 300 feet with a minimum main size of eight inches.
  - c. In the case of a building which will provide standpipe and/or sprinkler systems, a fire hydrant shall be installed within 150 feet of the exterior fire department connection with a minimum main size of eight inches.

- d. In the case of the development of a high-hazard area including, without limitations, a large shopping center, a storage facility for flammable chemical or compressed gases or a manufacturing plant, the spacing and main sizes of hydrants shall be determined after computing the required fire flow, subject to review and approval by the department of fire services.
- e. All fire hydrants shall deliver the required gallonage with a residual pressure of 20 p.s.i.
- f. Uniform marking of fire hydrants. Color coding of fire hydrants is of substantial value to water and fire departments and is based on water flow available from them. Fire hydrant bonnets and nozzle caps shall be painted according to the following chart which shall be used to classify fire hydrants according to flow:

**Table 96-13 Colors of Fire Hydrant Bonnets and Nozzle Caps**

Class	Flow	Color of Bonnets and Nozzle Caps
A	1,001 GPM or greater	Green
B	500 GPM to 1,000 GPM	Orange
C	Less than 500 GPM	Red

Barrels of fire hydrants shall be painted chrome yellow.

(3) *Fire wells.*

- a. Fire wells may be utilized where permitted by subsection (1), providing they have a separate power source and meet one of the following criteria:
  - 1. The minimum size of a designated fire well shall not be less than four inches in diameter. A pump shall be attached capable of providing a minimum fire flow of 250 GPM; or
  - 2. A fire well less than four inches in diameter may be utilized provided that it has been tested and certified by an engineer that the fire well can produce a minimum fire flow of 250 GPM.
- b. Fire wells shall be located adjacent to rights-of-way, unless otherwise approved by the department of fire services and the DRC.
- c. Fire wells of sufficient capacity to serve adjacent development may be provided and, when so provided, may be included in a public services and facilities agreement pursuant to section 74-2(f).
- d. Fire wells shall be considered as public improvements subject to all provisions of chapter 96, article III of this Code.

(Ord. No. 96-25, § 1(419), 3-4-1996)

**Secs. 96-46--96-48. Reserved.**

**Editor's note:** Ord. No. 02-2010, § 1, adopted February 15, 2010, repealed §§ 96-46--96-48, which pertained to exterior lighting; activity center development stormwater management; Deltona Activity

Center Areawide Development of Regional Impact Transportation System Development Standards. See also the Code Comparative Table.

Secs. 96-49--96-75. Reserved.

### **ARTICLE III. INSTALLATION, GUARANTEE AND INSPECTION OF REQUIRED IMPROVEMENTS**

#### **Sec. 96-76. Developer's guarantee.**

- (a) *Required or guaranteed improvements.* Neither a final plat development order nor a certificate of occupancy for building development shall be issued until the developer has installed the improvements required by this chapter or has guaranteed that such improvements will be installed.
- (1) The developer's guarantee, in lieu of installation of improvements, shall be in an amount that is 115 percent of the construction costs of all improvements, including landfill, as estimated by the developer's professional engineer or architect and verified by the city engineer or code administration manager as appropriate. Such guarantee shall be in the form of one or more of the following: certified check; cash deposited in an escrow account; a first mortgage on his/her property; letter of credit; or such other guarantee approved by the city attorney.  
  
Such guarantee may be reduced from the original guarantee on a pro rata basis according to the value of any improvements installed as verified by the city engineer or code administration manager, as appropriate.
  - (2) In the case of building development pursuant to a granted development order, only landscaping and/or tree replacement improvements may be guaranteed by the developer prior to the issuance of a certificate of occupancy. All other required improvements shall be installed and approved prior to the issuance of a certificate of occupancy.
  - (3) Prior to any improvements being dedicated or conveyed to the city or a property owner's association, the developer shall have responsibility for maintaining all phases of construction until the entire project has met all requirements of the NPDES construction permit for the entire project including but not limited to maintaining the stormwater pollution prevention plan, documentation, reporting, monitoring, and the filing of the notice of termination for coverage under the permit. This requirement is also for improvements to be dedicated to the city or a property owner's association for maintenance purposes. In no instance will the city assume any responsibility for the NPDES construction permit or activity by assuming maintenance or ownership of developments within the city.
- (b) *Installation of improvements.* A Florida registered professional engineer or architect, as appropriate, shall be employed by the developer to design all required improvements and to inspect and certify that the installation of all required improvements is in conformity with the requirements and standards set forth in this chapter and all other specifications or requirements of the city.
- (c) *Required improvements.* The following improvements are considered required for the purposes of this article:
- (1) Survey reference markers and monuments;
  - (2) Streets, driveways and off-street parking and loading areas;
  - (3) Storm drainage system;

- (4) Sidewalks, walkways and bicycle facilities;
- (5) Sanitary sewage disposal system;
- (6) Water supply systems;
- (7) Street name signs, pavement markings, regulatory signs, and other traffic-control devices;
- (8) Bridges;
- (9) Bulkheads;
- (10) Erosion control;
- (11) Utility lines;
- (12) Curb and gutter;
- (13) Landscaping, screening, buffers;
- (14) Tree removal, relocation and replanting;
- (15) Any other required improvements.

(Ord. No. 96-25, § 1(501), 3-4-1996; Ord. No. 43-2005, § 4, 1-3-2006)

**Sec. 96-77. Inspections and tests.**

- (a) *General.* Appropriately staged inspections during construction shall be called for. It shall be the responsibility of the developer or the developer's contractor to notify the city engineer or code administration manager and arrange for these inspections. Tests called for under this section shall be performed by the city or by a competent engineering testing firm, employed by the city and paid by the developer, which shall have an engineer registered in Florida as one of the responsible officials of the firm.
- (b) *Inspections.* The developer shall provide written authorization which will enable city staff personnel to enter upon the property to be developed and make periodic inspections at each stage of construction. During construction the developer shall notify the city engineer or code administration manager, where appropriate, that a city inspector can be sent to make an inspection. The city shall furnish an inspector at the site within a reasonable length of time, during normal working days and hours.

The purpose of these inspections is to ensure that construction is in compliance with the granted development order and all other applicable permits including but not limited to the Florida Department of Environmental Protection Agency (FDEP) National Pollutant Discharge Elimination System (NPDES) construction permit. The city accepts no responsibility or liability for the work, or for any contractual conditions involving acceptance, payment or guarantees between any contractor and the developer, by virtue of these inspections. The city assumes no responsibility or commitment guaranteeing acceptance of the work, or for subsequent failure, by virtue of these inspections.

However, if any aspect of the work being performed does not comply with acceptable standards, corrections shall be required by the city inspector as a condition for city acceptance. All improvements shall be installed, and have the approval of the city engineer and/or other city agencies prior to acceptance by the city commission, where required, or issuance of a certificate of occupancy.

- (c) *Completion of installation of required improvements.*

- (1) Upon completion of the above inspections or prior thereto, the following, where required, shall be provided to the city engineer and/or other appropriate city agencies:
  - a. Test results;
  - b. Maintenance guarantees, in accordance with provisions of this chapter, for facilities to be dedicated or conveyed to the city or a property owner's association;
  - c. As-built drawings for utilities and drainage systems, both on and off-site;
  - d. Certification by the developer's engineers that all improvements were installed in accordance with the granted development order.
- (d) *Responsibility during maintenance period for improvements to be dedicated or conveyed to city or to a property owners association.*
  - (1) Following approval by the city of the construction of improvements to be dedicated or conveyed to the city or a property owners association, the developer shall be required to maintain the improvements within the development in first-class condition until the city commission accepts the improvements for city maintenance, or they are turned over to a property owners association for maintenance. Such association shall have all duties and powers necessary to provide for the perpetual maintenance of the improvements. The developer's maintenance period shall be a minimum of one year. During that maintenance period, the developer will be expected to provide any maintenance required, including, but not limited to:
    - a. Repair and replacement of any system component, or failed section of pavement, etc.;
    - b. Correct design faults;
    - c. Control of erosion, replacement of sod, removal of soil washed onto pavement or into drainage system.
  - (2) The developer may request the city commission to accept the improvements for maintenance at the time of or after the acceptance of the construction, or during the developer's one-year maintenance period.

When this occurs, it shall be the responsibility of the developer to sod all areas of the constructed improvements, where the potential for erosion exists. Such areas which may require sodding shall include but not be limited to shoulders, swales, drainage systems and retention areas. When such sodding is completed in a manner which is satisfactory to the city engineer, the city commission may accept the improvements for city maintenance, provided that all other improvements are in a first-class condition. However, the cash guarantee required by 96-77(d)(3) will be retained for the balance of the developer's one-year maintenance period to guarantee all improvements against defects in design, materials and workmanship.

The city commission shall not accept the improvements for city maintenance nor release the cash guarantee until it has determined that all improvements are in a first-class and acceptable condition.

- (3) All improvements to be dedicated or conveyed to the city or a property owners association shall be covered by a cash maintenance guarantee which shall be provided by the developer, and shall be in the amount of 15 percent of the construction costs of all improvements, including landfill. The form of guarantee shall be as prescribed in section 96-76(a)(1) and approved by the city attorney. The developer shall guarantee all improvements against defects in design, material and workmanship, in addition to guaranteeing maintenance for the required period of time.

- (4) Approximately 60 days prior to the expiration of the maintenance period, the developer shall request the city engineer and/or other appropriate city personnel to schedule a final inspection. All deficiencies of design, materials, workmanship and/or maintenance identified during the final inspection shall be corrected by the developer.
  - (5) Upon correction of all deficiencies the city engineer shall recommend, and the city commission shall accept those improvements dedicated or conveyed to the city for city maintenance. Those improvements to be conveyed to a property owners association may be accepted by the property owners association pursuant to agreements between the developer and the property owners association.
  - (6) Upon acceptance of the improvements by the city commission or property owners association, the maintenance guarantee shall be released to the developer, less any charges for maintenance or corrections incurred by the city during the maintenance period.
- (e) *Responsibility for maintenance of privately owned improvements.* Any improvements made to private property pursuant to a development permit issued under this chapter shall thereafter be maintained by the private property owner and/or lessee or renter to the minimum standards of this chapter and the improved plans at his/her expense. Failure to maintain such improvements shall constitute a violation of this chapter.

(Ord. No. 96-25, § 1(502), 3-4-1996; Ord. No. 43-2005, § 5, 1-3-2006)