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## CHAPTER 177. SUBDIVISION, SITE AND BUILDING DESIGN

### PART 1. SUBDIVISION DESIGN

#### § 177.001. PURPOSE.

These regulations are adopted for the following purposes:

- (A) To protect and provide for the public health, safety and general welfare of the city.
- (B) To responsibly guide the future growth and development of the city, in accordance with the City's Comprehensive Plan.
- (C) To protect the character and the economic stability of all parts of the city and to encourage the orderly and beneficial development of all parts of the city.
- (D) To establish reasonable standards of design for subdivisions and replats that further the orderly layout and use of land; to ensure proper legal descriptions and monumenting of subdivided land.
- (E) To provide for the proper location and widths of streets to facilitate traffic within the subdivision and throughout the city, having particular concern to the avoidance of congestion in the streets and highways, and ensure safe and adequate pedestrian and bicycle traffic movements.
- (F) To ensure that public facilities are available and will have sufficient capacity to serve the proposed subdivision.
- (G) To assure the adequacy of stormwater management facilities; prevent pollution of surface water; safeguard the water table and to encourage the wise and responsible use and management of natural resources throughout the city in order to preserve the integrity, stability and beauty of the community and the value of the land. (Ord. 96-05, passed 2-15-96)

#### § 177.002. JURISDICTION.

These subdivision regulations shall apply to all subdivisions of land, as defined herein, located within the corporate limits of the city.

#### § 177.003. INTERPRETATION AND CONFLICT.

- (A) In their interpretation and application, the provisions of these regulations shall be held to be the minimum requirements for the promotion of the public health, safety and general welfare.
- (B) Where the conditions imposed by any provisions of this chapter are either more restrictive or less restrictive than comparable conditions imposed by any other applicable law, ordinance, rule or regulation of any kind, the regulations which are more restrictive or impose higher standards or requirements, shall govern.

#### § 177.004. DESIGN OF LOTS AND BLOCKS.

- (A) *Lot design.*

- (1) *Lot arrangement and dimensions.*

- (a) The lot size, width, depth, shape, orientation and the minimum building setback lines shall be appropriate for the location of the subdivision and for the type of development and use contemplated.
  - (b) Lot dimensions shall conform to the requirements of the zoning ordinances.
  - (c) Residential lots where not served by public sewers shall be of sufficient size to accommodate a septic tank and leaching field. State and local health regulations and standards, as well as soil conditions, shall control the lot size in these circumstances.
  - (d) The depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for off-street service and parking facilities required by the type of use and development contemplated.
- (2) *Lot access to existing streets.* The subdivision of land shall be such as to provide each lot, by means of a public street, satisfactory access to an existing public street. The use of easements shall not be permitted to provide sole access to public streets.
- (3) *Double frontage lots.*
- (a) Double frontage and reverse frontage lots should be avoided, except where essential to provide separation of residential development from traffic arteries and major collectors or to overcome specific disadvantages of topography and orientation.
  - (b) A six (6) foot high wall, fence and berm (or optical vegetation) combined with landscape material located within a minimum ten (10) foot wide no access easement shall be provided along lot lines abutting arterial and major collector streets or other disadvantageous uses as determined by City Council.
- (4) *Residential flag lots.* Flag lots shall be prohibited unless they meet the district lot and street frontage requirements.
- (B) *Block design.* The lengths, widths and shapes of blocks shall be determined with due regard to the following:
- (1) Zoning requirements as to lot sizes and dimensions;
  - (2) Needs for convenient access, circulation, control and safety of street traffic;

#### **§ 177.005. COMMON OPEN SPACE**

- (A) *Intent.* It is the purpose of this section to promote the development of a well-integrated open space system; to assure adequate maintenance of common open space areas; protect and enhance the natural resources and environment; and to implement the Recreation Element and other applicable elements of the Comprehensive Plan.
- (B) *Applicability.* The standards of this section shall apply to all applications for development. This section, however, shall not apply to Planned Unit Developments (see Chapter 173 for requirements specific to PUDs), individual building permits or individual mobile homes.
- (C) *Requirement for common open space.* Unless specifically stated in other sections of this land development code, a minimum of 20% of a residential development or 10% of a non-residential development shall be

dedicated to common open space. Required common open space shall not include landscaped areas within parking lots, land designated for City neighborhood or community parks, foundation plantings, or stormwater retention areas, unless the retention area is enhanced with LID, native landscaped areas, pathways, or gathering areas. Lakes may be counted as open space if access to water recreation is provided (e.g., boating, swimming, fishing).

- (D) *Location*. Required common open space shall be located within the development site and, to the extent feasible, shall be closely integrated with any adjoining or nearby existing or planned public park land recreational open space.
- (E) *Quality*. Lands designated for common open space shall be suitable for their intended purpose, taking into consideration such factors as topography, vegetation, drainage, size, maintenance access, and relationship to surrounding uses and other factors as determined by the City Manager or designee.
- (F) *Dedication*. Common open space may be held under single ownership and management, such as for rental apartments or the common open space held in common by residents or property owners through a homeowner's association, condominium association, cooperative or other legal entity. Or it may be dedicated to the City of Palm Bay for public park and recreation purposes, if the City Manager or designee determines that the land or water body to be dedicated is of sufficient size and meets a public park need for the City. No waterbody constructed and authorized to provide stormwater management for the site shall on its own be dedicated as open space or public park or for recreation.
- (G) *Phasing*. Required common open space shall be calculated for each phase of a multiphase project. Open space areas shall be located contiguous to each other and in a manner that provides for a harmonious flow from one phase to the next where feasible. Open space must be developed according to a schedule tied to a percentage of building permits to assure completion prior to final build-out. Open space for each phase shall be provided at the same time as or in advance of the phase for which it is required.

#### **§ 177.006. FRONTAGE ON STREET.**

No subdivision or development (including townhomes on fee simple lots) shall be approved unless such subdivision, development site or lot has frontage on and access from a public or private street meeting city standards.

#### **§ 177.007. SUBDIVISION ACCESS.**

All subdivisions shall be designed with at least two public means of ingress and egress to/from arterial or collector streets. An adjustment in the number of required public means of ingress and egress under this paragraph may be authorized pursuant to §172.026.

Each public means of ingress and egress to a subdivision shall intersect an arterial or collector street different from the arterial or collector street intersected by any other required public means of ingress and egress to the subdivision. If it is not possible for the required number of public means of ingress and egress to a subdivision to intersect different arterial or collector streets, the public means of ingress and egress may intersect the same arterial or collector street; however, the points of intersection must be located a minimum of one thousand (1,000) feet apart. If an adjustment is authorized pursuant to §172.026, such that only one public means of ingress and egress is required under this paragraph, the subdivision shall be designed to provide at least one additional means of ingress and egress for emergency vehicles OR street stubs to adjoining undeveloped areas shall be provided when required to give access to such areas or to provide

for proper traffic circulation. Street stubs exceeding two hundred fifty (250) feet in length shall be provided with a temporary cul-de-sac turnaround.

**§ 177.008. SUBDIVISION STREET DESIGN.**

- (A) *General requirements.* All streets within or adjacent to a proposed subdivision as well as those off-site streets required to be improved as a part of the subdivision, shall be designed, graded, paved, and improved to conform to chapter 176, and the City of Palm Bay Public Works Manual, and shall be approved as to design and specification by the city engineer.
- (B) *Subdivision abuts arterial or major collector street.* Where a subdivision abuts an existing or proposed arterial or major collector street, the City Council may require frontage access streets, reverse frontage with screening consisting of a six-foot wall, fence or berm with landscaping contained in a nonaccess reservation along the rear property line, or such other treatment as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic.
- (C) *Subdivision borders on railroad or limited access highway.* When a subdivision borders on or contains a railroad right-of-way or limited access highway right-of-way, the City Council may require a street or alley approximately parallel to and on each side of such right-of-way.
- (D) *Reserve strips prohibited; exception.* Reserve strips controlling access to streets shall be prohibited except where their control is definitely placed in the city under conditions approved by the City Council.

**§ 177.009. SIDEWALKS/PEDESTRIAN WAYS AND BIKEWAYS.**

- (A) *General requirements.* Sidewalks/pedestrian ways and bikeways are to be provided on all streets in all new subdivisions and shall meet the standards of Chapter 176. Where there are no existing sidewalks adjacent to a proposed subdivision, the developer may post a Sidewalk Bond (or Cash Bond) equal to 125% of the cost of constructing the sidewalk and any necessary ramps and or crosswalk striping. A cost estimate shall be submitted by the Project Engineer during the final subdivision process, for city staff review. The city shall put the bond into escrow until such a time as the city provides sidewalks in the vicinity of the subdivision.
- (B) *Waiver from sidewalk requirement.* The City Council may waive the requirement for sidewalks where it determines and finds that sidewalks may be inappropriate for the subdivision being proposed (for example, large acre rural subdivision that does not connect to an existing or proposed sidewalk system).
- (C) *Sidewalk connections.*
  - (1) Required sidewalks within a subdivision shall connect to the nearby existing sidewalks or sidewalk locations shown on the Sidewalk Master Plan. Such connections must be made if the existing or planned sidewalk is within five hundred (500) feet of the closest subdivision sidewalk. Such connection shall be identified during the preliminary plat process and shall be identified on the construction plans and as-built survey.
  - (2) Safe and direct pedestrian connection shall be provided to nearby educational facilities.

**§ 177.010. UTILITIES AND EASEMENTS.**

- (A) *Utilities.* Except for the main feeder line, service lateral distribution utility lines of all kinds, including electrical power and light, telephone and telegraph, cable television, water, sewer and gas shall be

constructed and installed beneath the surface of the ground unless all lots are one (1) acre or greater in size. The underground installation of incidental appurtenances such as transformer boxes, pedestal mounted terminal boxes, meter boxes for electricity or similar hardware necessary for the provision of electric and communication utilities shall not be required. Below ground level installation shall not be required for major electric and communication feeder lines which serve more than one subdivision or which connect utility substations. If the physical condition of the tract prevents underground installation of utilities, the City Council may waive the requirement for underground installation of utilities in accordance with this code.

(B) *Easements.*

- (1) Utility and stormwater management easements shall be provided where necessary. The location and width of easements shall be drawn on the plat and the easements intended use shall be clearly stated.
- (2) Where a subdivision is traversed by a watercourse, canal, ditch, floodway, channel or stream, there shall be provided a stormwater easement or stormwater management right-of-way conforming substantially with the lines of the watercourse as will be adequate for the purpose.

**§ 177.011. DESIGN OF STORMWATER DRAINAGE SYSTEM.**

A stormwater management system shall be provided for all subdivisions. The system shall be designed and constructed to be in accordance with the City Stormwater Management and Conservation Ordinance (Part 2 of this Chapter), the Public Works Manual, and any other applicable laws of any other governmental agencies such as the St. Johns River Water Management District, the Melbourne Tillman Water Control District, United States Army Corps of Engineers, the Florida Department of Environmental Protection and successors.

**§ 177.012. WATER AND SEWERAGE FACILITIES.**

- (A) *General requirements.* Any new subdivisions shall be served with centralized water and wastewater facilities. extend utilities per Title XX, Chapter 200.11 and The applicant shall extend utilities per Title XX, Chapter 200.11 and design and install the water and sewer facilities in a manner prescribed by the standards and specifications of the Palm Bay Utilities Department.
- (B) *Fire hydrants.* The applicant shall provide fire hydrants that conform to the requirements of Chapter 177, Fire Prevention and Protection. Water supply lines necessary for supplying fire hydrants or other fire suppression facilities, including but not limited to fire sprinkler facilities, shall be separate and distinct line systems. Common use of supply lines for any other purpose is prohibited.

**§ 177.013. PUBLIC USES.**

Where deemed essential by the City Council upon consideration of the particular type of development proposed in the subdivision, and especially in large-scale neighborhood unit developments not anticipated in the Comprehensive Plan, the City Council may require the dedication or reservation of such other areas or sites of a character, extent and location suitable to the needs created by such development for parks and other public purposes. The purpose of all tracts of land shall be designated on the plat.

**§ 177.014. PRESERVATION OF NATURAL AND HISTORIC FEATURES.**

In all subdivisions, the applicant is required to take reasonable measures to preserve all natural, archeological, and historic features which are consistent with the City Comprehensive Plan. Some of these features include large specimen trees, water resources, archeological, historic structures, and similar community assets.

**§ 177.015. NONRESIDENTIAL SUBDIVISIONS – ADDITIONAL PROVISIONS.**

- (A) *General.* If a proposed subdivision includes land that is zoned for commercial or industrial uses, the layout of the subdivision with respect to such land shall make such provision as the City Council may require. In addition to the principles and standards in these regulations, which are appropriate to the planning of all subdivisions, the applicant shall demonstrate to the satisfaction of the City Council that the street, parcel and block pattern proposed is specifically adapted to the uses anticipated and takes into account other uses in the vicinity.
- (B) *Standards.* The following principles and standards shall be observed:
- (1) Special requirements over and above those listed in these regulations may be imposed by the city with respect to public infrastructure, such as streets, stormwater management, water and sewerage, etc., to accommodate the type of commercial and industrial development anticipated.
  - (2) The applicant shall make reasonable efforts to protect contiguous residential areas from the proposed commercial or industrial subdivision. These provisions include a requirement of a permanent landscape buffer easement abutting all residentially zoned properties consistent with the requirements of Chapter 175.
  - (3) Streets which carry nonresidential traffic shall not be built adjacent to the boundaries of residential areas. The commercial and industrial subdivision shall not have direct vehicular access to a local residential street.

§ 177.016 through § 177.019 RESERVED

**PART 2. STORMWATER MANAGEMENT AND CONSERVATION**

**§ 177.020. FINDING OF FACTS.**

The City Council finds that uncontrolled stormwater management and development of land may have a significantly adverse impact upon the quality of the waters of the community, generally:

- (A) Stormwater runoff carries pollutants into receiving water bodies, degrading water quality;
- (B) The increase in nutrients accelerates eutrophication of receiving waters, adversely affecting fauna and flora;
- (C) Improper channeling of water increases the velocity of runoff, thereby increasing erosion;
- (D) Construction requiring the alteration of natural topography and removal of vegetation increases erosion;
- (E) Siltation of water bodies resulting from increased erosion decreases their capacity to hold and transport water, interferes with navigation and harms fauna and flora;



- (F) Impervious surfaces increase the quantity and velocity of stormwater runoff. Less water percolates into the soil and recharge of groundwaters is thereby decreased;
- (G) Uncontrolled stormwater runoff increases the incidence of flooding and the level of floods which occur, possibly destroying property and causing loss of life;
- (H) Uncontrolled stormwater runoff interferes with the maintenance of optimum salinity in estuarine areas.

**§ 177.021. OBJECTIVES.**

In order to protect, maintain, and enhance both the immediate and the long-term health, safety, and general welfare of the citizens of the city, this subchapter has the following objectives:

- (A) To encourage productive and enjoyable harmony between man and nature;
- (B) To provide protection of land, improvements, and natural resources through responsible stormwater management, which includes pollution abatement and flood protection;
- (C) To prevent individuals, business organizations, and governments from causing harm to the community through development activities which adversely affect water resources;
- (D) To encourage the construction of stormwater drainage systems that functionally approximate the natural system;
- (E) To encourage the protection of natural conveyance systems and the use of them in ways which do not impair their beneficial functioning;
- (F) To encourage the use of stormwater management systems which minimize the consumption of electrical energy or petroleum fuels to move water, remove pollutants, or maintain the system;
- (G) To reduce pollution in stormwater runoff that cause adverse impact to the quality of receiving waters;
- (H) To maintain or restore groundwater levels and groundwater quality;
- (I) To protect, restore and maintain natural salinity levels in estuarine areas;
- (J) To minimize erosion and sedimentation;
- (K) To prevent damage to and encourage protection of wetlands;
- (L) To protect, restore, and maintain the physical and biological integrity of groundwater and stormwater to serve their uses as designated by the State;
- (M) To prevent damage from flooding, while recognizing the natural fluctuations in water levels are beneficial;
- (N) To protect, restore, and maintain the habitat of fish and wildlife;
- (O) To provide for stormwater infiltration, settling of suspended solids and removal of pollutants from runoff prior to discharge into surface waters and the groundwater table;
- (P) To prevent damage to hydrological and biological functions of wetlands;
- (Q) To minimize the impact of development on the water resources of the region; and



**§ 177.022. VESTED RIGHTS; PRIOR LAW.**

This subchapter shall not in any way limit or modify the vested rights of any person to complete any development or improvements to land based upon prior law where a previous permit or authorization has been granted or applied for and where such previous permit or authorization remains in effect.

**§ 177.023. DRAINAGE PLAN**

*(A) Approval required; exceptions.*

- (1) Prior to initiating any of the following activities, a drainage plan must be approved by the City Engineer, unless exempted under Florida Statutes or other local ordinance, and such official exemption has been issued by the governmental entity having jurisdiction, such as, the St. Johns River Water Management District, Florida Department of Environmental Protection, or the United States Army Corps of Engineers (if wetlands or other surface waters are impacted).
  - (a) Recording a plat or subdividing land;
  - (b) Altering, rerouting, deepening, widening, obstructing or modifying the configuration of an existing drainage facility or permitted stormwater management system or natural hydrologic system in any way;
  - (c) Commencing development for subdivisions, shopping centers, commercial or industrial facilities; or
  - (d) Commencing any other development which may:
    1. Significantly increase or decrease the rate or quantity of stormwater runoff;
    2. Degrade the quality of surface or ground water;
    3. Adversely affect any wetlands, watercourse, water body, or surface waters.
- (2) For the purpose of this section, development within a subdivision shall not require approval of a stormwater management plan if each of the following conditions have been met:
  - (a) Drainage provisions for the subdivision were previously approved by the City Engineer or designee, and an Environmental Resource Permit has been obtained from the St. John's River Water Management District or State 404 Permit if applicable and the construction phase of the permit has not expired, or the permit is in the operation and maintenance phase and the stormwater drainage system is functioning as designed and authorized;
  - (b) The development is conducted in substantial accordance with the drainage provisions contained in the approved final development plan and construction plans, and as authorized by a valid Environmental Resource Permit or State 404 permit if applicable.
- (3) Normal maintenance activities which do not alter drainage discharge location, peak rate, or elevation, and do not cause or contribute to water quality degradation are exempt. This must be demonstrated through provision of a maintenance activity plan, including stormwater pollution prevention best management practices.

- (4) A single family or duplex residential dwelling to be built and inhabited by the applicant may be excluded from the requirements of this subchapter upon determination by the City Engineer that such construction will not adversely impact the City's MS4 drainage system.
- (5) The City Council, upon consultation with the City Engineer, may grant a written variance from any requirement of this section using the following criteria:
  - (a) Any variance granted under this subsection shall comply with the Water Resource Implementation Rule, and the FDEP and SJRWMD stormwater management goals and plans pursuant to the Surface Water Improvement and Management Act; and
  - (b) The granting of the variance will not:
    - 1. Significantly increase the rate or volume of stormwater runoff to receiving waters;
    - 2. Significantly decrease recharge to adjacent wetlands;
    - 3. Significantly contribute to the degradation of water quality of an impaired waterbody with an established Total Maximum Daily Load (TMDL) and / or Basin Management Action Plan, such as the Indian River Lagoon, St. John's River, or Turkey Creek;
    - 4. Adversely impact adjacent properties;
    - 5. Otherwise impair attainment of the objectives of this subchapter.
- (6) An impervious surface that is not a part of a larger common plan of development or sale, may be excluded if less than five thousand (5,000) total square feet is created or less than four thousand (4,000) square feet subject to vehicular traffic, upon determination by the City Engineer that such construction will not adversely impact the City drainage system (MS4) or natural wetlands or surface waters.
- (7) The applicant shall demonstrate compliance for other land uses with the above drainage plan requirements by providing signed and sealed plans and, if deemed necessary, signed and sealed hydrologic and hydraulic calculations, topographical survey, or geotechnical reports, or best available information as deemed necessary by the City Engineer to demonstrate compliance with the above standards.

(B) *Contents.*

- (1) It is the responsibility of an applicant to include in the stormwater management plan sufficient information for the Planning & Zoning Board and the City Council to evaluate the environmental qualities of the affected area, the potential and predicted impacts of the proposed activity on affected waters, and the effectiveness and acceptability of these measures proposed by the applicant for reducing adverse impacts. The stormwater management plan shall contain maps, charts, graphs, tables, photographs, narrative descriptions and explanations, and citations to supporting references. The stormwater management plans and calculations shall be signed and sealed by a Professional Engineer registered in the State of Florida and comply with accepted engineering standards for site/land development and construction. Substandard work shall not be accepted.
- (2) The stormwater management plan shall be a part of the construction plan and separate from the final plat, shall contain the name, address, and telephone number of the owner/developer. In addition, the

legal description of the property shall be provided, and its location with reference to such landmarks as major water bodies, adjoining roads, railroads, subdivisions, or towns shall be clearly identified by a map.

- (3) The existing environmental hydrologic conditions of the site and of receiving waters and wetlands shall be described and mapped in the construction plans and drainage system report Pre-Development Conditions, including the following:
  - (a) The direction, flow rate, and volume of flow of surface water runoff under predevelopment conditions;
  - (b) The location of areas on the site where surface waters collect and percolate into the ground;
  - (c) A geotechnical survey performed within ten years if there have been no significant site alterations or development and within one year, with significant site alteration or development.
  - (d) A description of all watercourses, water bodies, and wetlands on or adjacent to the site or into which surface waters flow/discharge. Information regarding their water quality and the current water quality classification or impairment status and pollutants of concern, if any, given them by the Florida Department of Environmental Regulations shall be included;
  - (e) Groundwater levels, including seasonal fluctuations, using U.S. Soil Conservation Service (SCS) methodology or other acceptable engineering standards means;
  - (f) A description of the topography, including a signed and sealed topographical survey representative of the current site conditions, soils, vegetation, and location of the floodplain (according to the latest edition of the Flood Insurance Rate Map, FIRM).
- (4) Proposed site development activities shall be described and shown in detail in the construction plans, including:
  - (a) Changes in topography;
  - (b) Areas where vegetation will be cleared or otherwise killed;
  - (c) Areas that will be covered with an impervious surface and description of the surfacing material;
  - (d) Areas that will be subject to vehicular traffic.
  - (e) The size and location of buildings or structures; and
  - (f) Proposed stormwater management facilities.
- (5) Predicted impacts of the proposed development on existing conditions shall be described and mapped, including:
  - (a) Changes in water quality by performing a pre-vs post-development runoff nutrient, or pollutant loading analysis;
  - (b) Changes in groundwater levels as applicable to wetland drawdown;
  - (c) Changes to groundwater quality based upon proposed land use;
  - (d) Changes in the extent of flooding on the site and upstream and downstream from it;

- (e) Changes in water quantity demonstrated by performing a pre- vs post-development peak discharge rate and volume analysis (if deemed appropriate) for the entire basin in which the site is located, including offsite upstream properties that flow to, or over the site and downstream properties that receive runoff;
  - (f) Impact on the health of conserved or mitigated wetlands and wetland habitats; and
  - (g) Impact on natural conserved vegetation.
- (6) All components of the drainage system that the Public Works or Low Impact Development Guidance Manuals require, and all measures to detain, retain, or infiltrate post-development runoff for attenuation of peak flows, reduction of volume, and water quality treatment or pollutant removal shall be described and mapped in the construction plans (Post-Development Conditions), including:
- (a) The channel direction and specifications of best management or integrated management practices that attenuate flow rate, volume and enhance quality of stormwater that will be conveyed from the site, with a comparison to predevelopment conditions;
  - (b) Detention or retention areas, including plans and specifications for the discharge of contained waters, including water quality treatment volumes, peak discharge rates, weir and orifice elevations, normal and seasonal high groundwater elevations, tailwater elevations, soil infiltration rates, and stage-storage volume- discharge tables, with pollutant load reductions calculated based on the latest accepted scientific literature, which should be provided as supporting documentation, and /or accepted water quality treatment modelling programs. In addition, detention or retention areas shall be a separate common areas maintained by a designated operation and maintenance entity with a maintenance plan and Covenants which travel with the land, and shall not be part of front or back yards of single-family residential homes. Therefore, subdivisions shall have separate tracts of land dedicated to stormwater detention/retention;
  - (c) These separate areas of the site shall be used or reserved for percolating water into the ground, with plans to mitigate groundwater quality if necessary;
  - (d) A detailed stormwater pollution prevention plan for the control of erosion and sedimentation, which specifies in detail the type and location of control measures that will remain in place until the site is stabilized by vegetation upon construction completion, the stage/phase of development at which they will be properly installed and provisions for their maintenance;
  - (e) Any other information which the developer, the Planning & Zoning Board and the City Council consider necessary for an evaluation of the proposed development.
- (7) The data required for submittal are considered the minimum in order for the Department of Public Works to properly evaluate the system and ascertain its impact on existing facilities.
- (8) All consultants should review the Public Works Manual for the requirements as it relates to the specific project. A pre-application meeting is strongly recommended in order to avoid delays in the approval process.

**§ 177.024. PERFORMANCE STANDARDS.**

Stormwater management plans shall be approved by the City Engineer when it can be demonstrated that the proposed development activity has been planned and designed and will be constructed and maintained to meet each of the following standards:

- (A) To maintain the natural flow regime and hydrologic characteristics of existing basins each plan must include, at a minimum, the calculations for both pre-development and post-development conditions and the following standard engineering parameters:
- (1) Storm water runoff characteristic calculated factors (e.g., curve number or runoff coefficient, time of concentration).
  - (2) Seasonal high and normal groundwater table elevations.
  - (3) Curve number or runoff coefficient selection and infiltration potential shall be based on a recommendation from an on-site analysis of site soils by a Florida registered professional geotechnical engineer, and in rare cases based on the most current Brevard County Soil Survey. Infiltration potential and the extent of each soil type found on the site must be included.
  - (4) Time of concentration calculations. A minimum time of concentration of fifteen (10) minutes shall be used for all developments.
  - (5) Design storm, including duration, frequency, precipitation, and type of distribution, and shall be selected as follows:
    - (a) Ten (10) year, twenty-four (24) hour storm event for commencing development for subdivisions, shopping centers, commercial or industrial facilities.
    - (b) Twenty-five (25) year, twenty-four (24) hour storm event for any arterial, collector or major road projects; and subdivisions, industrial or commercial development of forty (40) acres or more.
  - (6) Stage-storage computations of any storage areas such as retention/detention facilities used, including the computations showing the effect of the design storm event.
  - (7) Stage-storage-discharge computations for any retention/detention facilities at the control point or any other point as required, (e.g., weir), including the computations showing the effect of the design storm event.
  - (8) Drawdown calculations for retention/ detention facilities to substantiate design. The drawdown calculation shall be based on a complete soils study by a Florida registered professional geotechnical engineer.
  - (9) Post-development peak rate of discharge shall not exceed predevelopment peak rate of discharge for the ten (10) year, twenty-four (24) hour or twenty-five (25) year, twenty-four (24) hour storm, whichever is the appropriate design storm.
  - (10) A description of the methodology, assumptions, parameters, and a copy of all such computations used to analyze the system shall be included with the submittal. If a computer program is used for the analysis, a copy of the entire basin, node pipe, link input, design storm and discharge rate output for a

single hydrologic routing analysis shall be submitted to the city. The applicant must obtain approval from the City Engineer for any software used in the development of application materials.

- (11) For nutrient/ pollutant removal analyses, which are required on all City development pond drainage plan designs, the existing condition land use shall be determined from a verifiable source such as FDEP or SJRWMD, and the source provided. All data on the drainage plan calculations for the nutrient removal analysis shall be consistent with accepted SJRWMD and FDEP design requirements. The analysis shall include in the plan and calculation of the system the volume required to reduce nutrient loading to the same of less than pre-development.
- (12) Complete description of measures to be implemented during the construction period to mitigate adverse quantity and quality impacts off-site, in the form of a National Pollution Discharge Elimination System (NPDES)compliant Stormwater Pollution Prevention Plan.
- (13) Any temporary construction which may affect the on-site or off-site storm water management system prior to completion of the project.
- (14) Wet detention storm water management systems shall:
  - (a) Provide the greatest treatment volume from the following calculations:
    - 1. One (1) inch of runoff from the entire site, or
    - 2. Two and one-half (2½) inches of runoff from the proposed impervious area. Plus, an additional 50% for direct discharge to the Indian River, an impaired, and Class II waterbody.
  - (b) Be designed so that the outfall structures shall bleed down one-half (½) the volume of storm water specified above, within forty- eight (48) to sixty (60) hours following a storm event, but no more than one-half (½) of this volume will be discharged within the first forty-eight (48) hours This treatment volume recovery requirement will be reduced if an integrated management treatment train is used and surface retention basins recover their volume within 72 hours..
  - (c) Contain a permanent pool of water sized to provide an average residence time of at least fourteen (14) days with an additional 50 % for discharge to Class II Impaired Waters.
  - (d) The treatment volume should not cause the pond level to rise more than eighteen (18) inches above the control elevation, unless an integrated management system is designed with dry retention, if surficial, recovering within 72 hours. Underground recovery will be modelled, and recovery time determined on a case-by-case basis.
  - (e) The option of utilizing a fifty percent (50%) increase in permanent pool volume in lieu of littoral zone. The littoral zone shall be gently sloped (six to one (6:1) or flatter). At least thirty percent (30%) of the wet detention system surface area shall consist of a littoral zone. The percentage of littoral zone is based on the ratio of vegetated littoral zone to surface area of the pond at the control elevation.
- (15) Development with no outfall available (landlocked) shall detain and treat its stormwater runoff on the site from a one hundred (100) year, twenty-four (24) hour design storm or according to State of Florida Administrative Code Ch. 62-330, whichever is more stringent. For the purposes of this section land-locked may be defined as a parcel of land which is a lower elevation than all surrounding property.

- (16) Computations showing that the spacing of inlets is in conformity with the maximum allowable water spread on pavement as defined in the City Public Works Manual.
- (17) If an open channel or swale is used for conveyance, the side slopes shall be one (1) foot vertical drop for each three (3) feet or more of horizontal distance.
- (18) The side slope on dry retention ponds shall be sodded and whenever possible the bottom should be sodded also or seed and mulched as minimum.
- (19) The bottom of dry retention ponds must never be compacted by heavy equipment. Prior to Certificate of Completion or Occupancy a geotechnical boring shall be provided confirming the design infiltration rate.
- (20) A certification signed by the engineer, licensed in the state, responsible for the design which shall read as follows:

“I hereby certify that the design of the Stormwater Management System for the project known as (Project Name) meets all of the requirements and has been designed substantially in accordance with the requirements of the City of Palm Bay's Stormwater Management Ordinance and the Public Works Manual.”
- (B) To protect or improve the quality of groundwaters and surface waters;
- (C) To ensure that there is not more erosion after development than there was under natural or predevelopment conditions;
- (D) To maintain groundwater levels;
- (E) To protect the beneficial functioning of wetlands such as swamps, bogs, marshes, estuaries, sloughs, floodplains, water basins and salt meadows for the natural storage of surface waters and the biological reduction and assimilation of pollutants;
- (F) To protect against damage by building in an area, the whole or part of which is subject to flooding, until the area is filled to the base flood elevation after settlement, as shown on the flood insurance rate map or the flood hazard boundary map with amendments; or elevate the structures such that the finished habitable floors are built to or above the applicable base flood elevation as shown on the flood insurance rate map or the flood hazard boundary map with amendments and have met the requirements of this chapter.
- (G) To prevent saltwater intrusion by adhering to applicable best management practices;
- (H) To minimize injury to vegetation, fish and wildlife habitat and otherwise help to attain the objectives of this subchapter.

#### **§ 177.025. DESIGN STANDARDS.**

To ensure attainment of the objectives of this subchapter and that performance standards will be met, the design, construction, and maintenance of stormwater management systems shall be consistent with the following standards:



- (A) Channeling stormwater runoff directly into water bodies shall be prohibited. Instead, runoff should be routed over a longer distance, through swales and other works designed to increase infiltration, allow suspended solids to settle, and remove pollutants.
- (B) Natural watercourses shall not be dredged, cleared of vegetation, deepened, widened, straightened, stabilized, or otherwise altered unless a clear water quality and quantity benefit is demonstrated. Water shall be retained or detained before it enters any natural watercourse in order to preserve the natural hydrodynamics of the watercourse and to prevent siltation or other pollution.
- (C) The area of land disturbed by development shall be as small as practicable. Those areas which are not to be disturbed shall be protected by an adequate barrier from construction activity. Whenever possible, natural vegetation shall be retained and protected (see the Low Impact Development Guidance Manual for Development Incentives associated with wetland and natural vegetation preservation).
- (D) No grading, cutting or filling shall be commenced until erosion and sedimentation control structures have been installed between the disturbed area and the City's MS4, surface waters and wetlands and a sitework permit has been issued by the City.
- (E) Land which has been cleared for development and upon which construction has not commenced within two calendar weeks shall be protected from erosion by seeding or sodding or appropriate techniques designed to revegetate the area.
- (F) Sediment shall be retained on the site of the development.
- (G) Discharge from a construction site must be treated by any best management practice outlined in the current edition of the Florida Stormwater Erosion and Sedimentation Control Inspectors Certification Manual Volume I.
- (H) Wetlands and other water bodies shall be protected during construction/development (unless approved to be impacted) and shall not be used as primary sediment traps during development.
- (I) Erosion and sedimentation facilities shall receive regular maintenance to ensure that they continue to function properly. Contractors are required to maintain erosion and sedimentation control best management practices throughout construction and retain an NPDES certified monitor to inspect erosion and sedimentation control best management practices and create/retain reports during the construction and for discharge from the site during every ½ inch of rain or greater and maintain copies of discharge reports on site.
- (J) No turbid discharge from the site is authorized to leave a construction site. Turbid discharge will be stopped immediately, and greater control measures installed.
- (K) Artificial watercourses shall be designed, considering soil type, so that the velocity of flow is low enough to prevent erosion.
- (L) City and MTWCD maintained facilities are subject to the level of service and standards the city and MTWCD respectively have the ability to provide.
- (M) Vegetated buffer strips shall be created or, where practicable, retained in their natural state along the banks of all watercourses, water bodies or wetlands. The width of the buffer shall be sufficient to prevent

erosion, trap the sediment in overland runoff, provide access to the water body and allow for periodic flooding without damage to structures.

- (N) Intermittent watercourses, such as swales, shall be vegetated.
- (O) Retention and detention ponds shall be used to retain and detain the increased and accelerated runoff which the development generates. Water shall be released from detention ponds into watercourses or wetlands at a rate and in a manner approximating the natural flow which would have occurred before development.
- (P) Although the use of wetlands for storing and purifying water is encouraged, care must be taken not to overload their capacity, thereby harming the wetlands and transitional vegetation.
- (Q) Dry retention facilities, a volume sufficient to retain the runoff from one-half ( $\frac{1}{2}$ ) inch of rainfall of entire site (or one and one-half ( $1\frac{1}{2}$ ) inches of runoff of impervious surfaces if greater) shall be provided, including the volume required to reduce nutrient loading to the same or less than pre-development.
- (R) Wet detention facilities, no more than one-half ( $\frac{1}{2}$ ) of this volume may be discharged in the first seventy-two (72) hours following a storm event; the total volume recovery occurring in fourteen (14) days.
- (S) Volume in the permanent pool (below maintained water level) in wet detention facilities must be sufficient to provide a residence time of at least fourteen (14) days. This volume may be determined as one and one-half ( $1\frac{1}{2}$ ) inches over the impervious portion of the drainage basin, plus one-half ( $\frac{1}{2}$ ) inch over the pervious portion of the basin.
- (T) The inlet structure and outlet structure in wet detention facilities shall be located so that contact between stormwater and littoral plantings is maximized and short-circuiting is minimized. The inlet to the wet detention pond should be baffled to reduce turbulence, and the outlet from the wet detention pond shall be located as far as practicable from the inlet to provide the longest flow path to allow for pollutant or sediment settling, and should be constructed with skimmers to prevent the transmission of oils, grease, and floating debris.
- (U) Runoff from parking lots shall be treated to remove oil and sediment before it enters receiving waters. Inlets shall be retrofitted with absorbent material and skimmers must be installed on outfall structures.
- (V) Detention and retention areas shall be designed when possible so that shorelines are sinuous rather than straight and so that the length of shoreline is increased, thus offering more space for the growth of littoral vegetation and increased space for treatment.
- (W) The use of vegetated buffer zones as open space, recreation and conservation areas shall be encouraged.
- (X) Disturbed areas shall be stabilized and protected from erosion as soon as possible.
- (Y) Retention areas shall be designed as dry- bottom ponds, with the seasonal high groundwater table demonstrated to be at least two (2) feet below the finished pond bottom. Wet bottom ponds may be used provided that the entity responsible for maintenance shall not be the city.
- (Z) Detention reservoirs may be designed as wet-bottom or dry-bottom ponds. If designed as dry- bottom ponds, the seasonal high groundwater table shall be demonstrated to be at least one (1) foot below the finished pond bottom. If designed as a wet- bottomed pond, the depth shall be sufficient to limit growth of emergent plants to designated peripheral littoral zones.

- (AA) Surficial dry retention systems shall be designed to recover one-half (½) of their volume in twenty-four (24) hours and the entire volume in seventy-two (72) hours. Wet detention systems shall recover their volumes in less than fourteen (14) days if used as the sole stormwater management facility.
- (BB) A developer may elect to implement voluntary low impact development design standards for new development or redevelopment and may receive a development bonus in accordance with Part 5 of Chapter 173.

**§ 177.026. DEDICATION OF STORMWATER MANAGEMENT FACILITIES.**

The City Council may require, as a condition for obtaining approval for a stormwater management plan, that the applicant contract to dedicate stormwater management facilities to the city.

**§ 177.027. PERMIT FEES.**

- (A) A variable permit fee shall be collected at the time the required application package is submitted and will include the total cost of administration, management, engineering, and inspection charges of the permitting process. Permit fees are as established by resolution pursuant to §172.011.
- (B) Fees collected shall be used to offset the cost of the Stormwater Management and Conservation, site plan, and subdivision review service and shall be allocated to provide recovery of cost to the department.
- (C) The fees set forth in this section shall be increased by four percent (4%) (rounded to the nearest dollar) each fiscal year. Should any decrease in such fees be warranted in any given year, they shall also be decreased annually by that percentage that accurately reflects the reduction of permits requested and the specific and ascertainable resulting reduction in funds needed to pay the city costs to manage all services and time needed to issue and monitor the permits required by this section.

**§ 177.028. OUTSIDE AGENCY AND GOVERNMENTAL ENTITIES COORDINATION.**

While this subchapter is intended to be the minimum standards and criteria for the design of stormwater management systems in the city, other regulatory agencies or governmental entities by state statutes or by political boundaries have equal jurisdiction. Most of these agencies or governmental entities have established and refined design criteria for stormwater management. In some cases, established design parameters of those agencies contain conflicting standards or criteria. In the case of conflicting criteria, it is the intent of this subchapter to have the most stringent regulations govern. The following is a synopsis of those agencies and governmental entities which have overlapping jurisdiction:

- (A) United States Army Corps of Engineers (USACE)
- (B) St. Johns River Water Management District (SJRWMD);
- (C) Florida Department of Transportation (FDOT);
- (D) Florida Department of Environmental Protection (FDEP);
- (E) Melbourne-Tillman Water Control District (MTWCD);
- (F) Brevard County.

**§ 177.029. SINGLE-FAMILY RESIDENTIAL CONSTRUCTION.**

(A) *Drainage requirements for single family residential construction.* All single-family residential development shall meet the following requirements:

- (1) The finished floor elevation of the proposed dwelling may not be above the finished floor elevation of any existing side adjacent dwelling that is adjacent to the side of the proposed dwelling by more than one (1) foot for each four (4) feet of setback from the common property line.
- (2) Side slopes on any area within the lot cannot exceed one (1) foot vertical for each four (4) feet horizontal.
- (3) In areas with municipal sanitary sewer service, the maximum height of the finished floor elevation of a proposed dwelling cannot exceed one (1) foot above the finished floor elevation of any existing dwelling that is adjacent to the side of the proposed dwelling. If the proposed dwelling is not adjacent to any existing dwellings, the maximum finished floor elevation may also not be more than three (3) feet above the crown of the road that the subject property abuts. Where no municipal sanitary sewer service exists, the maximum height of the finished floor elevation of a proposed dwelling cannot exceed six (6) inches above the finished floor elevation established by the septic tank permit.
- (4) The development of the proposed dwelling shall not adversely impact the historical drainage or surrounding properties or structures of the block in which the proposed dwelling is to be located. The developer of the proposed dwelling unit must accommodate historical drainage by redirecting it to a legal positive outfall.
- (5) The drainage from the development of the proposed dwelling must be directed to a legal positive outfall, without adversely impacting any adjacent properties.
- (6) To facilitate the above requirements, alternate measures other than fill material may be utilized, including but not limited to, stem walls, extended footers, pilings, pumped on-site sewage systems with elevated drainfields, yard piping and inlets, or other approved methods.

(B) *Adjacent drainage conveyance facilities.* Where the proposed dwelling lot is adjacent to an existing drainage conveyance ditch or drainage infrastructure, the property owner will be required to maintain a maximum side slope of three (3) feet horizontal to one (1) foot vertical from the centerline of the facility to the lowest finished floor elevation, with a five (5) foot wide buffer zone adjacent to the dwelling structure at the lowest finished floor elevation.

Any modifications to the drainage facility required to meet this section will be at the property owner's expense.

Should the applicant propose modifications to the drainage facility to accommodate the proposed dwelling structure, the applicant shall be required to maintain sufficient capacity in the drainage facility.

The applicant shall provide to the lot drainage permit reviewer an environmental resource permit or exemption from the FDEP prior to modification of any open conveyance facility, ditch, or canal.

(C) *Residential lot drainage permit.*

- (1) All proposed single-family residential building permit applications must be accompanied by a residential drainage permit application. The application must include:

- (a) The finished floor elevation of the proposed dwelling unit;
  - (b) The finished floor elevation of any adjacent dwelling unit;
  - (c) Existing and proposed topographic survey data sufficient to determine historical and proposed drainage patterns;
  - (d) The location and elevation of the septic tank and drainfield (if applicable) with ties to the property lines;
  - (e) The location, elevation and cross- sections (minimum twenty-five (25) foot intervals) of any adjacent stormwater management conveyance facility;
  - (f) Any other information as may be deemed necessary by the Public Works Director, or designee, to determine compliance with divisions (A) and (B) above, including certification by a professional engineer, licensed in the state of Florida, as to the design of any drainage system components;
  - (g) A notarized statement by the property owner acknowledging responsibility to maintain the lot drainage system and holding the city and the permit holder harmless from any liability regarding the lot stormwater management system is to be provided on forms approved by the City Attorney. The city will record this document;
  - (h) Fees as established by resolution pursuant to §172.011.
- (2) The fees as set forth in this section shall be increased by four percent (4%) (rounded to the nearest dollar) each fiscal year. Should any decrease in such fees be warranted in any given year, they shall also be decreased annually by that percentage that accurately reflects the reduction of permits requested and the specific and ascertainable resulting reduction in funds needed to pay the City of Palm Bay costs to manage all services and time needed to issue and monitor the permits required by this section.
- (3) Residential drainage permits expire in ninety (90) days, unless associated with an active building permit, in which case the residential drainage permit expires concurrently with the building permit. One or more extensions of time for periods of not more than 90 days each may be allowed by the Public Works Director or designee for the application, provided the extension is requested in writing and justifiable cause is demonstrated.
- (4) Any additional engineering, surveying or inspection services provided by the city will be charged to the applicant as established by resolution pursuant to §172.011.
- (5) The Chief Building Official shall withhold issuance of the certificate of occupancy until compliance with this ordinance has been determined. An as-built boundary and topographic survey, prepared and sealed by a professional land surveyor and mapper, licensed in the state of Florida, with sufficient vertical elevations to establish finished floor elevations, slopes and drainage patterns shall be submitted and approved prior to the issuance of the certificate of occupancy.
- (6) The inspection and issuance of a certificate of occupancy shall not be construed as a warranty of the drainage system. After issuance of a certificate of occupancy, it shall be the responsibility of the property owner to maintain the drainage system. The property owner will be liable for the costs incurred by the city of Palm Bay to correct any deficiency in the drainage system. Modification of the

system after issuance of the certificate of occupancy is not permitted without a new residential lot drainage permit.

- (7) Any person(s), firm, business entity, or corporation that damages property located on, under, across or along a right-of-way or easement or any city road or other city improvement shall be required to either restore the damaged property to its condition prior to the damage or shall pay to the city the sum of money determined by the Public Works Department to be necessary to restore the damaged area to its condition prior to the damage. Any such restoration shall meet all construction and engineering standards of the city. Additionally, any permittee who has previously failed to restore the damage(s) as required by this subchapter shall not be issued further permits from the city until such damage is either restored and accepted by the Public Works Department, or the entire cost plus overhead, of restoration incurred by the city to make such restorations has been paid in full by the permittee. In the event discrepancies arise as to the responsibility for damage, the burden of proof shall be on the permittee.
- (8) A performance bond or other financial surety, acceptable to the City Attorney, may be provided to ensure compliance with this section.
- (9) Such surety will be in the amount 110% of the value of the proposed work and accompanied by a non-refundable processing fee as established by resolution pursuant to §172.011. Upon satisfactory completion of the improvement in accordance with the permit requirements or repair of any damage to city facilities, as determined by the Public Works Director, said surety shall be released.

(D) *Erosion sediment control.*

- (1) No clearing, grading, cutting or filling of an undeveloped site shall be commenced until an assessment is performed by a certified biologist or environmental scientist to determine whether threatened or endangered species are located on site, including Gopher Tortoises or Indigo Snakes;
- (2) It is a federal violation to clear or disturb land upon which endangered or threatened species, nests or eggs exist without applying for a permit from the FWC at least 90 days prior to clearing;
- (3) In the event that threatened or endangered species dwell on site, no clearing shall occur until the appropriate permit has been obtained from the FWC and the erosion and sedimentation control structures have been installed;
- (4) Owners, builders, or contractors must provide to the city prior to any land clearing, a stormwater pollution prevention plan; and an NPDES construction generic permit prior to clearing any lot, or contiguous lots, or parcels regardless of land use or zoning, that is/are one acre or greater in size.
- (5) Land which has been cleared for development and upon which construction has not commenced shall be protected from erosion by appropriate techniques designed to revegetate the area. Land stabilization activity must occur within one week of land clearing if construction will continue within one week or more.
- (6) Sediment shall be retained on the site of the development;
- (7) Erosion and sedimentation facilities shall receive regular maintenance to ensure that they will continue to function properly.

(E) *Appeals.*

- (1) A property owner may appeal the application of the criteria defined in divisions (A) and (B) above to the City Engineer, the Public Works Director, or designee. The City Engineer, the Public Works Director, or designee may override the application of the above criteria due extenuating circumstances that would result in an undue hardship upon the applicant. The City Engineer, the Public Works Director, or designee must provide in writing the relief approved and retain the approval and all records associated thereto within the master permit file of the dwelling. No relief may be given that would result in an unsafe design. Adjacent property owners shall be notified in writing by the City Engineer, the Public Works Director, or designee at least fourteen (14) days prior to a decision which grants relief to this section. Should the property owner or an adjacent property owner(s) object to the decision of the City Engineer, they may appeal the decision to City Council within thirty (30) days by filing a notice of appeal with the City Clerk, specifying the grounds therefore.
- (2) Upon receipt of an appeal of the administrative decision by the City Engineer, the Public Works Director, or designee, all records constituting the basis of the administrative decision shall be given to the City Clerk within twenty (20) days. The City Council shall hear the appeal at a regularly scheduled or at a special City Council meeting within sixty (60) days of the notice of appeal to City Council. Notice shall be given at least fifteen (15) days in advance of the public hearing to the property owner and any adjacent property owners. At the hearing, the property owner or adjacent objector(s) shall have a right to be heard.

#### **§ 177.030. VIOLATIONS.**

- (A) *Violations.* Any person who does any of the following shall be subject to the penalty set forth below.:
- (1) Commences or conducts an activity described in §177.024(A) without prior approval of stormwater management plan;
  - (2) Deviates from an approved stormwater management plan; or
  - (3) Fails to maintain stormwater management facilities under his ownership or control;
- (B) *Notice.* Any activity undertaken in violation of this subchapter shall be halted immediately after written notice by the City Engineer. The violator may be required to restore any altered land to its prior condition. In the event that restoration is not undertaken within a reasonable time as specified by the City Engineer, the City Council may act to restore the property. The cost of this restoration shall then become a lien upon the property where such illegal activity occurred.
- (C) *Penalty.* Any person who commits any of the violations listed above shall be subject to penalties or fines consistent with those found in Ch. 162, F.S.

§ 177.031 through § 177.039 RESERVED

### **PART 3. LIGHTING STANDARDS**

#### **§ 177.040. LIGHTING STANDARDS.**

It is the intent of this section to define practical and effective measures by which outdoor light usage can be reduced, while preserving safety, security, and the nighttime use and enjoyment of property. These measures are intended to curtail the degradation of the nighttime visual environment, reduce light trespass, glare,



energy consumption and resource waste by encouraging lighting practices that direct appropriate amounts of light where and when it is needed, increasing the use of energy-efficient sources, and decreasing the use of poorly shielded or inappropriately directed lighting fixtures.

- (A) *Conformance standards.* All outdoor lighting shall be installed in conformance with the provisions of this Code, the Florida Building Code, the National Electrical Code, the Energy Code, and the Sign Code of Palm Bay and under appropriate permit and inspection.
- (B) *Applicability.* Proposed new land uses, developments, buildings, and structures that require a permit shall meet the requirements of this section. All building additions or modifications comprising fifty percent (50%) or more dwelling units, gross floor area, or parking spaces compared to existing on the site, either with a single addition or with cumulative additions subsequent to the effective date of this provision, shall meet the requirements of this Code for the entire site, including previously installed and any new outdoor lighting. Cumulative modification or replacement of outdoor lighting constituting fifty (50) percent or more of the permitted lumens for the parcel, no matter the actual amount of lighting already on a non-conforming site, shall constitute a major addition for purposes of this section.
- (C) *General outdoor lighting standards.*
- (1) All nonexempt outdoor lighting fixtures shall have shielding so that the total lumen output falls to zero (0.00) at the property line. (Exception: seasonal decorative lighting (i.e., Christmas Lights) using typical low-wattage incandescent or LED lamps shall be permitted in all zoning districts from the Thanksgiving holiday through the 15th of January.
  - (2) The use of Metal Halide (MH), Light Emitting Diode (LED), Quartz Light (OL), and High Intensity Discharge (HID), when properly shielded is permitted for all exterior site lighting. Other types of lamps not listed shall be considered as a part of the permitting process.
  - (3) High Pressure Sodium (HPS) lighting is prohibited for building and security lighting.
  - (4) The use of Low Pressure Sodium (LPS) lighting is prohibited in all zoning districts.
  - (5) The undue lighting of the night sky by means of searchlights and similar devices without prior approval from the City Manager or their designee is prohibited.
  - (6) Neon Lighting, LED strip and tracer lighting and other types of lighting used to illuminate the outline of a structure or storefront window system is prohibited.
  - (7) No lighting fixture shall produce a lumen output exceeding one thousand (1000) lumens in any given area.
  - (8) Poles and support structures used for outdoor lighting shall not exceed thirty feet (30') in height. The exception shall permit for required lighting of all communication towers or tall structures as mandated by the FAA and FCC.