ORDINANCE NO. O2015-39

AN ORDINANCE OF THE CITY OF WILDWOOD, FLORIDA; AMENDING SUBSECTION 1.7(B) PLANNING AND ZONING BOARD: DUTIES, IN CONFORMANCE WITH SECTION 1.14 PROJECT APPROVAL PROCESS; AMENDING SECTION 2.2 DEFINITIONS, DEFINING LEGAL DESCRIPTIONS REQUIREMENTS; AMENDING SUBSECTION 5.6(B) REQUIREMENTS FOR FINAL PLAT, IN CONFORMANCE WITH SUBSECTION 6.5(C)(1) DRIVEWAY ACCESS; AMENDING CHAPTER 6 TECHNICAL STANDARDS REGARDING WATER AND SEWER REQUIREMENTS; OF THE LAND DEVELOPMENT REGULATIONS (LDRS) OF THE CITY OF WILDWOOD, FLORIDA; PROVIDING FOR CODIFICATION IN THE LAND DEVELOPMENT REGULATIONS; PROVIDING FOR CONFLICT; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, subsection 1.7(B) of the Land Development Regulations (LDRs) requires updating to conform with the intent of a previous revision; and

WHEREAS, incorrect and outdated legal descriptions provided by applicants for the purposes of annexation or other land development related activities imped the ability of City and County officials to effectively execute their duties; and

WHEREAS, the City wishes to amend Section 2.2 (Definitions) of the LDRs to be consistent with state regulations regarding annexation and to provide clear direction to surveyors and other professionals involved in preparing legal descriptions for applicants of land development related activities; and

WHEREAS, subsection 5.6(B) of the LDRs requires updating to more clearly reference a technical requirement in subsection 6.5(C)(1); and

WHEREAS, in the interest of promoting the public health, safety, and welfare of the community, the City wants to amend Chapter 6, *Technical Standards* concerning Water and Wastewater Design Criteria and Construction Regulations; and

WHEREAS, in the interest of properly regulating technical details beyond the scope of the LDRs, the City has produced a new "City of Wildwood Utility Department Standard Construction Specifications for Water and Wastewater" as referenced in the revisions to Chapter 6 of the LDRs; and

WHEREAS, the City wishes to implement Inspection and As-Built plan review fees for new construction to cover those salary and professional expenses to the City generated by new development; and

WHEREAS, the City wishes to otherwise promulgate the City's new logo, as directed by

the City Commission;

NOW, THEREFORE, BE IT ENACTED AND ORDAINED, by the City Commission of Wildwood, Florida, as follows:

SECTION 1. The amendments of the Land Development Regulations are shown in the attached "Exhibit A" with ~~strikethrough~~ for deletions and underline for additions.

SECTION 2. The City of Wildwood Land Development Fee Schedule is hereby amended as shown in the attached Exhibit B. Revenue from the new Inspection and As-Built plans review fees shall be credited to the appropriate accounts as determined by the City Clerk/Chief Financial Officer.

SECTION 3. All ordinances or parts of ordinances in conflict herewith, be, and the same are hereby repealed.

SECTION 4. If any section, sentence, clause or phrase of this Ordinance is held to be invalid or unconstitutional by a Court or competent jurisdiction, then said holding shall in no way effect the validity of the remaining portions of said Ordinance.

SECTION 5. This Ordinance shall be effective upon adoption during the second and final reading by the City of Wildwood City Commission.

DONE AND ORDAINED this 14th day of September, 2015, by the City Commission of the City of Wildwood, Florida.

CITY COMMISSION
CITY OF WILDWOOD, FLORIDA

S E A L

Ed Wolf, Mayor

ATTEST: Cassandra Lippincott
Cassandra Lippincott, City Clerk

First Reading: August 24, 2015

Second Reading: September 14, 2015

Approved as to form:

Ashley Hunt, City Attorney

City of Wildwood

Land Development Regulations

EST. 1877

WILDWOOD

FLORIDA

Adopted:
July 25, 2011
Proposed Amendment:
August 24, 2015

1.7. Planning and Zoning Board.

(A) *Establishment.* A Planning and Zoning Board is hereby established for the City of Wildwood. The Planning and Zoning Board shall be appointed by the City Commission. No member of the Planning and Zoning Board shall be a paid or elected official or an employee of the City of Wildwood.

(B) *Duties.* The Planning and Zoning Board shall be responsible for the following duties and responsibilities:

(1) Hear and make recommendations to the City Commission on site plans, ~~preliminary and~~ improvement plans, and final plats in accordance with the standards and procedures required by this Code;

(2) Hear and make recommendations to the City Commission on all proposed zoning amendments and conditional use permits;

(3) Make the final determination on requests for variances and special exceptions; and

(4) The City Commission may, by resolution, designate members of the Planning and Zoning Board to perform the functions of the Board of Adjustment. If the City Commission so elects, the term of office of the member of the Planning and Zoning Board shall run concurrently with said member's term of office on the Board of Adjustment.

(C) *Local Planning Agency.* In addition to its other duties listed above, the Planning and Zoning Board shall serve as the Local Planning Agency for comprehensive planning and other land use issues as required by Florida statute.

(D) *Comprehensive plan amendments.* The Local Planning Agency shall review all proposed comprehensive plan amendments and make recommendations to the City Commission based on the following being presented at the hearing:

(1) Justification of the proposed amendment has been adequately presented;

(2) The proposed amendment is not inconsistent with the goals, objectives and policies of the comprehensive plan;

(3) The proposed amendment should not be considered urban sprawl or exemplify an energy inefficient land use pattern;

(4) The proposed amendment will not have an adverse effect on environmentally sensitive systems; and

(5) The proposed amendment will not adversely affect transportation, potable water, sewer, schools or other public facilities without providing remedies to correct the system or facility.

(E) *Special Magistrate*. In lieu of a Planning and Zoning Board, the duties of the Planning and Zoning Board may be conferred by the City Commission to a Special Magistrate.

1.8. Board of Adjustment.

(A) *Establishment and purpose.* A Board of Adjustment is hereby established for the City of Wildwood for the purpose of acting as a board to review and decide appeals and Code Enforcement cases. This Board shall be appointed by the City Commission. The Board shall be appointed for three (3) years.

(B) *Powers and duties.* The Board of Adjustment shall have the following duties and responsibilities:

(1) To hear and decide appeals in cases where it is alleged that there is an error in any order, requirement, decision, or determination made by an authorized City official while enforcing the City development codes and standards. Appeals shall be made in accordance with the provisions of this Code. The Board may modify, affirm, or reverse the official's action; and

(2) To hear and take action on Code Enforcement cases.

(C) *Hearing schedule*. Board of Adjustment hearings will be held as needed.

(3) Individually listed on the Florida inventory of historic places, which has been approved by the Secretary of the Interior; or

(4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

(a) By the approved Florida program as determined by the Secretary of the Interior, or

(b) Directly by the Secretary of the Interior.

Home, mobile: See "mobile home."

Home occupation: See "customary home occupation."

Home owner's association or property owner's association (HOA)(POA): An organization in a subdivision, condominium, or other similar development that makes and enforces rules for the properties in its jurisdiction.

Hotel: a commercial establishment providing lodging and, usually, meals and other services for the public, especially for travelers. This definition also includes motels.

Household: One or more persons, not necessarily related by blood, marriage or other legal action, who occupy a single dwelling unit and live as a single non-profit housekeeping unit.

Independent living facility (ILF): A living arrangement in which people with special needs, especially seniors with disabilities, reside in independent living units which contain a private kitchen. The facility may provide help with everyday tasks such as bathing, dressing, and taking medication. This definition does not include assisted living facilities, nursing homes, or community residential homes.

Institution: The structure or land occupied by a group, cooperative, board, agency, or organization created for the purpose of carrying on functions of a public or semi-public nature. Examples of an institution include a hospital, health clinic, school, church, fraternal order, civic club and orphanage.

Intensity: means the maximum amount of building square footage allowed on a project site. This relationship is identified in FAR.

Interior lot: A lot other than a corner lot or double frontage lot.

Junk: Any worn out, cast off, or discarded article or material which is ready for destruction or has been collected or stored for salvage or conversion to some use. Any article or material which, unaltered or unchanged, and without further reconditioning, can be used for its original purpose as readily as when new shall not be considered junk.

Junk yard: Place, structure or tract where junk, waste, discarded, salvaged or similar materials such as old metals, wood, lumber, glass, paper, rags, cloth, bagging, cordage, barrels, containers, etc., are bought, sold, exchanged, baled, packed, disassembled or handled, including auto wrecking yards, used lumber yards, house-wrecking yards and yards or places for storage or handling of salvaged house wrecking and structural steel materials. This definition shall not include pawn shops and establishments for the sale, purchase or storage of usable second-hand cars, stoves, refrigerators or similar household goods and appliances, nor shall it apply to the processing of used, discarded or salvaged materials as part of manufacturing operations.

Karst features: means physical features in limestone such as sinkholes, depressions, and solution tubes that act as conduits reducing the travel time of water through limestone as compared to soil or to limestone lacking karst features.

Landscaping: Living plant material and non-living durable material used in outdoor environmental design that enhances the appearance of land.

Legal Description: A courses and distances legal description, often referred to as a metes and bounds legal description, which maps the desired property when transferred to GIS mapping software.

Level of Service (LOS) standards: The number of units of capacity per unit of demand adopted by the City in the comprehensive plan.

species, and species of special concern. The assessment shall be conducted no later than one (1) year prior to the submittal date. The environmental assessment shall address at a minimum:

(a) Wildlife and listed species populations within the proposed development site;

(b) The feasibility and availability of onsite management and protection of identified wildlife and listed species; and

(c) The appropriateness of mitigating the impacts of development by the relocation of the listed species to an acceptable off-site location, in the event that on-site protection is shown to be ineffective.

(3) *Preliminary concurrency determination.* An application for preliminary concurrency determination pursuant to section 7.2(B)(2).

(4) *Supplemental applications.* The following supplemental applications are also required:

(a) Sign application, if applicable; and

(b) Tree removal permit.

(5) *Stormwater calculations.* The subdivider's engineer shall provide the stormwater calculations for the area to be subdivided.

(6) *Covenants.* A draft copy of any proposed protective covenants or deed restrictions shall be submitted.

(7) *HOA documents and/or maintenance agreement.* An agreement outlining the supervision and maintenance of all common areas within the subdivision.

(8) *Agreements.* Copies of all executed agreements tied to the property being subdivided (i.e. PD, developer's, development, etc).

(9) *Agency permits.* A list and status of all applicable permits from other agencies required for the development. Improvement plan approval and authorization to begin construction activities shall not be granted until the applicant has provided copies of all other applicable permits to the City.

5.6. Final plat submittal requirements.

(A) *Clerk of Court review.* The office of the clerk of the circuit court shall have the opportunity to review the plat for conformity to F.S. Chapter 177 prior to consideration for approval. The draft of the final plat shall be drawn with black drawing ink on regular paper using sheets sized 24 inches by 30 inches (24" x 30") at a scale of sufficient size to show all detail and otherwise meeting the requirements for the final plat in sections B and C below.

(B) *Requirements for final plat.* The required submittals, meeting the legal requirements of platting, of the final plat shall consist of a fully executed correct plat map, meeting all state and City standards, final engineering drawings and auxiliary submittals, and all required legal instruments. The final plat shall be drawn with black drawing ink on mylar, using sheets sized 24 inches by 30 inches (24"x30") at a scale of sufficient size to show all detail. Each sheet shall have a marginal line completely around the sheet placed to leave three-inch (3") binding margin on the left and one-inch (1") margin on the other three sides. Final plats shall meet all the requirements of F.S. Chapter 177 including those requirements mandated by the clerk of the circuit court in section A above, and shall be so certified by the land surveyor. The final plat shall constitute only that portion of the approved improvement plan which the applicant proposes to record and develop at the time; provided, however, that such portion conforms to all requirements of these regulations. Five (5) copies, one (1) of which shall be mylar, of the final plat shall be submitted. Driveway restriction areas shall be graphically shown on final plats for corner lots in compliance with subsection 6.5 (C)(1), *Driveway Access.*

Chapter 6
TECHNICAL STANDARDS

6.1. General.
6.2. Potable water.
6.3. Sanitary sewer and reuse.
6.4. Drainage and stormwater management.
6.5. Roads and sidewalks.
6.6. Parking and loading areas.
6.7. Wetlands protection.
6.8. Flood protection.
6.9. Springs protection.
6.10. Tree protection.
6.11. Archaeological sites.
6.12. Design District Standards.
6.13. Wellhead protection.

6.1. General.

(A) *Purpose and intent*. These standards shall apply to regulate development allowed by this Code. The intent of these technical standards are to promote development that is aesthetically pleasing, compatible with the community character of the City of Wildwood, properly served with necessary public facilities and services, compatible with neighboring uses, and minimizes adverse impacts to natural resources.

(B) *Phased development.* Projects subjected to phasing shall be improved and designed so that each phase of development may function on its own if subsequent phases are not developed.

(C) *Agreements.* It is the intent of the City Commission to encourage a stronger commitment to comprehensive and capital facilities planning, ensure the provision of adequate public facilities for development, encourage the efficient use of resources, and reduce the economic cost of development, all in conformity with and to carry out the purposes of the comprehensive plan and land development regulations. Written agreements are encouraged and may be required by the City Manager prior to, or concurrently with, applying the technical standards contained in this Chapter within a proposed development site. These agreements should determine at a minimum the responsibility and timing for provision of infrastructure and services, maintenance of improvements, payment of applicable City impact fees and other similar development issues. Any such agreements or contracts shall be reviewed by all department heads affected by the agreement and the City Attorney prior to adoption by the City Commission.

6.2. Potable water.

This section covers the requirements for installing water systems which includes the furnishing, installing, laying, jointing, and testing of all water lines, hydrants, fittings, valves and appurtenances, including necessary service connections required for a complete system as shown on the drawings and specified herein. The work shall also include such connections, reconnections, relocations, temporary services, abandonments, and all other provisions in regard to existing water service operations and modifications required to perform the new work.

(A) *General requirements.*

(1) All work shall be proven to be in first class condition and constructed properly in accordance with the drawings and specifications. All defects and leaks disclosed by the tests shall be remedied and re-tested.

(2) The entire potable water system for each project shall be shown on a master plan. The master plan shall indicate the general locations of all easements, mains, valves, hydrants, services and service laterals with respect to the proposed development improvements and the existing water systems. Main sizes shall be indicated on the master plan.

(3) All materials shall be free from defects impairing strength and durability, and be of the best commercial quality for the purpose specified.

(4) All pipe, valves, fire hydrants and fittings shall be clearly marked with the name or trademark of the manufacturer, the batch number, the location of the plant, strength designation and pressure rating.

(5) All pipe shall be laid on an unyielding foundation with uniform bearing under the full length of the barrel of the pipe. Suitable excavations shall be made to receive the bell of each pipe. The spigot end of the pipe shall abut the base of the socket of the adjacent pipe in such a manner that there will be no gaps along the perimeter of the mating halves. Just before jointing the pipe, the mating ends shall be thoroughly cleaned of all dirt, debris, and foreign material. The pipe shall be jointed in accordance with the recommendations of the manufacturer of the pipe and gasket. In all jointing operations, the trench must be dewatered when joints are made, and kept dewatered until sufficient time has elapsed to assure sufficient hardening of the jointing material, or as may be required. The pipe shall not be driven down to grade by striking it with a shovel handle, timber, rammer, or other unyielding object.

(6) *Assembly of joints.* Assemble all joints in accordance with recommendations of the manufacturer. If a lubricant is required to facilitate assembly, it shall have no detrimental effect on the gasket or on the pipe when subjected to prolonged exposure. Proper jointing may be verified by rotation of the spigot by hand or with a strap wrench. If unusual jointing resistance is encountered, or if the insertion mark does not reach the flush position, disassemble the joint, inspect for damage, re-clean the joint components, and repeat the assembly steps. Note that fitting bells may permit less insertion depth than pipe bells. (NOTE: When mechanical equipment is used to assemble joints, care should be taken to prevent over-insertion).

(7) *Cleaning.* All necessary precautions shall be taken to prevent the entrance of mud, sand or other obstructing material into the pipeline. As the work progresses, the interior of the water main shall be cleaned of all dirt, jointing material, and superfluous materials of every description. Prior to final inspection, the contractor shall flush all water lines constructed under this contract with clean water to assure complete removal of all debris and foreign materials.

(8) *Bedding and backfill.* Immediately after the pipe has been jointed and inspected, sufficient backfill shall be performed to protect the pipe adequately from injury and movement in accordance with the City of Wildwood details and specifications. Pipe bedded in compacted granular backfill shall not be supported on blocking, wedges, bricks, or anything except the bedding material. Where concrete cradle or encasement is required, the pipe shall be supported on solid concrete blocks or pre-cast concrete saddles which shall become part of the completed cradle or encasement. Where no other bedding is indicated, pipe shall be placed on a shaped bed of undisturbed material.

(B) *Potable water system construction.*

(1) The contractor shall install warning tape or stenciled lettering on pipe and early warning tape approximately 12" ~~to 18"~~ above top of pipe.

(2) Water valves two inches (2") through 12 inches shall be Mueller (or approved alternative) resilient seat gate valve, modified wedge disc type, suitable for direct earth burial, suitable for mechanical joint and to comply with AWWA specifications. Water valves 1-1/2" or smaller shall be gate valves, iron ~~bronze~~ body ~~200~~ 150 psi working pressure wedge disc, in full compliance with Fed. Specifications ~~WWV-54, Type 1, Class A. Valves 14" and larger shall be butterfly valves. Valves deeper than five feet (5') will require valve nut extensions which must be welded and one-piece.~~

(3) All valves shall be fitted with a cast iron valve box and cover. Valve boxes shall be long enough to reach from the valve to finished ground level and shall be installed as recommended by the manufacturer. They shall have suitable barrel and shaft extension sections to cover and protect the valve bonnet section. Extension sections fabricated by one piece of ductile iron shall be allowed. No more than one (1) shaft extension shall be used in any one (1) valve installation. Valve box extensions shall be by the same manufacturer as valve box or ductile iron pipe.

(4) Valve boxes shall be installed in vertical alignment and positioned to facilitate the operation of the valve with a standard valve wrench. The box shall be installed as shown on the drawings and shall be set on firmly packed soil and bricks so as to prevent settlement and to prevent bearing on the valve or the main at any point.

(5) Fire hydrants shall be blocked by concrete or mega-lug restraints on the back side of the hydrant to prevent movement due to water pressure thrust. Gravel shall be placed around the base of the hydrant to insure complete drainage of the hydrant when closed. See City of Wildwood Water Details.

(6) Connections to existing water lines shall be where shown on the plans and shall be done as detailed on the plans or as directed by the City Engineer. Connection cannot occur until clearance has been obtained by FDEP. Connection of new to existing mains shall be performed in a normal accepted method for connecting mains and shall be done without unduly disrupting service. All connections regardless of how done are subject to the approval of the City Engineer as to method, time, and location. To ensure adequate backflow prevention and accountability of water use, the contractor shall install a temporary jumper connection until such time as the new line is cleared by FDEP.

(7) After pressure testing has been accomplished, the contractor shall disinfect all potable water lines of all sizes and material.

(8) The contractor shall furnish all equipment and materials necessary to do the work of disinfecting, and shall perform the work in accordance with the procedure outlined in the AWWA Specifications C-651 ~~and C-600~~. The use of chlorine tablets for disinfection purposes shall not be allowed. ~~The dosage shall be such as to produce not less than 10 ppm after a contact period of not less than 24 hours.~~ After treatment, the line shall be flushed with clean water until the residual chlorine content is within the range of 0.2 to 4.0 ppm.

(9) After disinfection has been accomplished, samples of water for bacteriological analysis shall be collected and tested by an independent testing laboratory approved by the State of Florida and the City. Should these samples or subsequent samples prove to be unsatisfactory, the piping shall be disinfected until satisfactory samples are obtained. Official certificates of the tests shall be submitted to the City. Samples shall be taken on two (2) consecutive days.

(10) It is the intent of this section to insure that all parts of the work, including but not being limited to: pipe, fittings, joints, valves, hydrants, and any other appurtenances are subjected to

disinfection as described herein. To achieve this, all methods of disinfection shall be approved by the City and FDEP.

(C) *Potable water system design.*

(1) The design requirements for privately-owned systems shall be the same as for systems that will be City owned.

(2) Two inch (2") water mains shall be polyvinylchloride (PVC) or polyethylene (PE). Four inch (4") to twelve inch (12") water mains shall be polyvinylchloride (PVC), HDPE directional bore, or ductile iron pipe (DIP). All PVC pipe shall be potable water blue, have identifying tape and locating wire on top. PVC pipe 4" to 12" ~~8"~~ in diameter shall meet requirements of ANSI/AWWA C-900, DR18 ~~DR25~~. ~~PVC pope 10" to 12" in diameter shall meet requirements of ANSI/AWWA C-900, DR18.~~ HDPE pipe shall meet requirements of ANSI/AWWA C906, DR-9 and DR-11.

(3) 14" to 36" water mains shall be PVC or DIP. PVC pipe shall meet requirements of ANSI/AWWA C905, ~~DR18~~ DR25.

(4) Water mains shall be a minimum of 4 inches in diameter. ~~Two inch (2") water mains shall not be used unless all other methods to serve the customer are unfeasible. When used, two inch (2") water mains shall be limited to the equivalent of four (4) residential customers. Dead end two inch (2") water mains shall not exceed 200' in length nor shall they be used to loop a fire main. Two inch (2") water mains shall not be installed in commercial or industrial sites.~~

(A) All proposed water mains shall be extended across the entire frontage of the property (i.e. from property line to property line.

(B) Large diameter mains (12" and larger) shall be installed on designated roads as per the approved water master plan, latest revision.

~~(B)(C) Properties fronting along State Highways or County Roads shall install a minimum twelve (12") diameter water main along the roadway frontage and connect to the existing system (where applicable).~~

(5) Where fire hydrants or fire systems are to be installed the minimum diameter water main serving the hydrant shall be six inches (6") for looped lines and eight inches (8") for dead end lines. Not more than two (2) fire hydrants shall be allowed on a looped six (6") inch water main nor more than one (1) hydrant on a dead end eight (8") inch water main. All hydrant connections off the water mains shall be six inches (6") in diameter, ductile iron pipe.

(6) Fittings used with PVC mains shall be cast iron conforming to the requirements of ANSI Specification A21.10 with mechanical joints. Fittings shall have a minimum pressure rating of 150 psi and shall be provided with cement linings complying with ANSI Specification A21.4 or latest revision. Fittings shall be tar-coated outside. Where valves are fitted directly to a mainline "tee", the tee is to be a trinity valley (or equal) mechanical joint anchoring tee.

(7) Taps on PVC water mains shall be full bodied tapping sleeves.

(8) Design calculations, prepared by a registered professional engineer, shall be submitted to the City for review concurrent with the plans that demonstrate that the proposed potable water system is capable of providing the required fire hydrant flow (minimum 1,000 gpm) plus maximum daily day ~~peak~~ customer demand flow at all parts of the system while maintaining a minimum residual pressure of 20 psi in all parts of the system. The design calculations shall demonstrate the expected operating pressures for the water system. The working pressures within the system shall not exceed the pressure class of the pipe with a 1.5 safety factor. All pressure connections on the existing system used for calculation purposes shall be based upon a recent fire hydrant flow test, water treatment plant operating data, etc.

(9) All water mains, other than individual service lines shall be looped.
(10) Fire hydrants shall be provided in all new developments, and shall be spaced no greater than 1,000' and no greater than 500' from any building.
(11) A minimum distance shall be maintained of seven and a half feet (7 ½ ') to the left, right and front of the hydrant and four feet (4') to the rear from any obstruction such as fences, buildings, trees, etc. This requirement applies to Fire Department Connections (FDC) as well.
(12) Fire hydrants to be in full compliance with AWWA specification NO. C-502-54 or latest revision thereto. Hydrants to be compression type as manufactured by Kennedy Muller or approved equal, factory painted red, and are to be equipped with one 4 ½ inch steamer nozzle and two 2 ½ inch hose nozzles (nozzle threads to be National Standard). All hydrants to be traffic models with two piece barrels and stems and with breakaway joints, dry top design and 5 ¼ inch main valve opening.

(a) All fire hydrants will be color coded after flow testing to indicate the gallons per minute available from the hydrant. The color coding will be consistent with the color coding described in NFPA 291, "Recommended Practice for Fire Flow Testing and Marking of Hydrants," 2013 edition as reproduced in subsection (b), below.

(b) Specific bonnet color codes based on gallonage

i.	Class AA	1500 gpm or greater	light blue
ii.	Class A	1000 to 1499 gpm	green
iii.	Class B	500 to 999 gpm	orange
iv.	Class C	499 gpm or less	red

(c) Fire hydrants will have the appropriate color for the available gpm applied to the bonnet (top) as described in subsection 6.2(C)(12)(b), above. The barrel of the hydrant will be painted chrome yellow for municipal water systems and red for private hydrants.

(13) Water services shall be installed at property corners and may be either single or double type services for subdivision lots, both residential and commercial.
(14) Minimum size service pipe for three (3) or more meters on one service connection shall be two inches (2").
(15) Meters shall be installed as specified in the City of Wildwood Standard Details. Water meters for commercial, industrial, or other uses shall be sized by a registered professional engineer.
(16) Water meters shall be located at the right-of-way line and on the property owner's side of the right-of-way line.
(17) Service lines to meter from main shall be Polyethelene (Class 200) conforming to AWWA C-901 latest edition, unless otherwise approved by the City. All service lines shall be provided with an approved backflow prevention device.
(18) All water service piping under pavement shall be sleeved with a casing. Where casings or sleeves are called for casing or sleeve material shall be steel, DIP, PVC or HDPE or other material as approved by the City.
(19) Additional design information can be found in the City of Wildwood Utility Department Standard Construction Specifications for Water and Wastewater, latest revision.

6.3. Sanitary sewer and reuse.

This section covers the requirements for installing sanitary sewer systems which includes the furnishing, installing, laying, jointing, and testing of all sewer lines, manholes, fittings and appurtenances, including necessary service connections required for a complete system as shown on the drawings and specified herein. The work shall also include such connections, reconnections, relocations, temporary services, abandonments, and all other provisions in regard to existing sewer operations and modifications as required.

(A) *General requirements.*

(1) All work shall be proven to be in first class condition and constructed properly in accordance with the drawings and specifications. All defects and leaks disclosed by tests shall be remedied and re-tested.

(2) The entire sanitary sewer system for each project shall be shown on a master plan. The master plan shall indicate the general locations of all easements, mains, valves, services and service laterals with respect to the proposed development improvements and the existing sewer systems. All main sizes shall be indicated on the master plan.

(3) Excavation and backfill, seeding and mulching, dewatering, clearing and grubbing, cleanup and other related site work for sanitary sewer construction are specified in FDOT Standard Specifications for Road and Bridge Construction, latest edition.

(4) All materials shall be free from defects impairing strength and durability and be of the best commercial quality for the purpose specified.

(5) All pipe and fittings shall be clearly marked with the name or trademark of the manufacturer, the batch number, the location of the plant, strength designation, and pressure rating. Where ductile iron pipe is to be installed in the system, the words "Epoxy Coated" or "Epoxy Lined" shall be clearly marked on the pipe.

(6) All pipe shall be laid on an unyielding foundation with uniform bearing under the full length of the barrel of the pipe. Suitable excavations shall be made to receive the bell of each pipe. The spigot end of the pipe shall abut the base of the socket of the adjacent pipe in such a manner that there will be no gaps along the perimeter of the mating halves. Just before jointing the pipe, the mating ends shall be thoroughly cleaned of all dirt, debris, and foreign material. The pipe shall be jointed in accordance with the recommendations of the manufacturer of the pipe and gasket. In all jointing operations, the trench must be dewatered when joints are made, and kept dewatered until sufficient time has elapsed to assure sufficient hardening of the jointing material, or as may be required. The pipe shall not be driven down to grade by striking it with a shovel handle, timber, rammer, or other unyielding object.

(7) *Assembly of joints.* Assemble all joints in accordance with recommendations of the manufacturer. If a lubricant is required to facilitate assembly, it shall have no detrimental effect on the gasket or on the pipe when subjected to prolonged exposure. Proper jointing may be verified by rotation of the spigot by hand or with a strap wrench. If unusual jointing resistance is encountered, or if the insertion mark does not reach the flush position, disassemble the joint, inspect for damage, re-clean the joint components, and repeat the assembly steps. Note that fitting bells may permit less insertion depth than pipe bells.

(8) *Cleaning.* All necessary precautions shall be taken to prevent the entrance of mud, sand or other obstructing material into the pipeline. As the work progresses, the interior of the water main shall be cleaned of all dirt, jointing material, and superfluous materials of every description. Prior to final inspection, the contractor shall flush all water lines constructed under this contract with clean water to assure complete removal of all debris and foreign materials.

(9) *Bedding and backfill.* Immediately after the pipe has been jointed and inspected, sufficient backfill shall be performed to protect the pipe adequately from injury and movement in accordance with the City of Wildwood details and specifications. Pipe bedded in compacted granular backfill shall not be supported on blocking, wedges, bricks, or anything except the bedding material. Where concrete cradle or encasement is required, the pipe shall be supported on solid concrete blocks or pre-cast concrete saddles which shall become part of the completed cradle or encasement. Where no other bedding is indicated, pipe shall be placed on a shaped bed of undisturbed material.

(B) *Sanitary sewer system construction.*

(1) Sanitary sewer manholes shall be constructed in accordance with the City of Wildwood Standard Details.

(2) Installation of precast manholes shall comply with the manufacturer's recommendations. Precast concrete sections shall be set so the manhole will be vertical and with sections in true alignment. Joint surfaces of the base or previously set section shall have an O-ring installed in the recess or shall be sealed with pre-molded plastic joint sealer equal to "Ramnek"®. If "Ramnek" is used, joints shall be pre-primed and wrapped on the exterior to provide a sealed manhole.

(3) All holes in sections used for their handling shall be thoroughly plugged with Embeco 167 and 381 Mortar, non-shrinking grout, or approved equal applied and cured in strict conformance with the manufacturer's recommendations so that there will be zero leakage through openings and around pipes. The grout or mortar shall be finished smooth and flush with the adjoining interior and exterior manhole wall surfaces.

(4) Manhole frames and covers shall be set to conform accurately to the finished ground or pavement surface as established by the contract drawings, unless otherwise directed by the City Engineer. Frames shall be set concentric with the manhole base and adjusted to grade.

(5) Unless a drop connection is installed, pipes shall match crown to crown at all manholes to maintain hydraulic gradiant. A drop manhole connection shall be required for all inverts over 24" above the floor of the manhole. ~~All inverts shall follow the grades of the pipe entering the manholes. Changes in direction of the sewer and entering branch or branches shall be laid out in smooth curves of the longest possible radius which is targeted to the centerlines of adjoining pipelines. Regardless of differences in entrance and exit elevations, flow channels for all pipes are to be formed to present a smooth transition of flow and shall be subject to the approval of the City. Flow channels shall be constructed in accordance with the City of Wildwood Standard Details.~~

(6) Unless otherwise approved by the City, service lines from the property line to the collection sewer shall be at a minimum depth of three feet (3') at the property line and shall be laid to straight alignment and uniform slope compliant with FDEP regulations. All service lines shall be at least six inches (6") in diameter. Cleanouts shall be provided as determined by the engineer of record, but shall not be spaced greater than 75' ~~125'~~.

(7) All caps and plugs shall be braced, staked, anchored, wired on, or otherwise secured to the pipe to prevent leakage under the maximum anticipated thrust conditions from internal abnormal operating conditions or pressures from water or air.

(8) Ductile iron pipe may be used in lieu of concrete encasement where water line crosses sewer lines with less than six inches (6") vertical clearance, with a length of pipe centered at the point of crossing, so as to locate joints at a maximum distance from the water line.

(9) Unless otherwise specified, force mains shall be installed in accordance with AWWA C-600, latest. 492.2.7. All installed force mains constructed of PVC shall be installed with a solid copper locating wire as specified on the City of Wildwood Standard Details.

(10) Where force mains are cresting a hill and air release valves are to be installed, install force main at minimum 48" cover to facilitate proper ARV installation.

(11) The contractor shall install early warning tape approximately 12" ~~to 18"~~ above all force mains.

(12) Provide air release valves in high spots of force mains as shown on the drawings or as directed. If obstructions are encountered during construction that cause a dip and a consequent sharp rise in the force main, then an air release valve shall be installed at the newly created high point upstream from the dip. ~~Payment therefore will be in accordance with the unit price set forth in the proposal.~~

(13) All valves shall be fitted with a cast iron valve box and cover. Valve boxes shall be long enough to reach from the valve to finished ground level and shall be installed as recommended by the manufacturer. They shall have suitable barrel and shaft extension sections to cover and protect the valve bonnet section. Extension sections fabricated by cutting pieces of pipe shall be allowed. No more than one (1) shaft extension shall be used in any one (1) valve installation.

(14) Valve boxes shall be in vertical alignment and so positioned as to facilitate operation of the valve with a standard valve wrench. The box shall be installed as shown on the drawings and shall be set on firmly packed soil or bricks so as to prevent settlement and to prevent bearing on the valve or the main at any point. Valves shall be set vertically so that the stem forms a vertical line. Care shall be taken to keep out dirt and sand, and no valve shall be operated until it has been cleaned of sand, grit, or other foreign material.

(15) The contractor shall furnish and install all supports necessary to hold the piping and appurtenances in a firm, substantial manner at the lines and grades indicated on the drawings or specified.

(16) All bends, tees, and other fittings in forcemains buried in the ground shall be mechanically restrained.

(17) All force main piping shall be subjected to hydrostatic testing in accordance with the City of Wildwood Construction Specifications for Water and Wastewater, latest revision. ~~Section 481.5.2.6 - "Hydrostatic Testing" of C-600 latest. Pressure tests shall be at 150 psi minimum for a minimum of two (2) hours duration. No pipe installation will be accepted if leakage is greater than the formula or five (5) psi.~~

(C) *Sanitary sewer system design*.

(1) The design requirements for privately-owned systems shall be the same as for systems that will be City owned.

(2) Sewer main pipe diameters shall be a minimum of 8" in diameter. The engineer shall submit calculations demonstrating that an 8" sewer main is sufficient for the expected flows. If a larger sewer main is needed, the engineer shall specify the required diameter. Sewer service laterals shall be a minimum of 6" in diameter.

(3) Sewer mains and laterals shall be designed and constructed to give mean velocities, when flowing full, of not less than 2.0 feet per second based on Mannings formula using an "n" value of 0.013.~~so they conform to the following minimum pipe slopes:~~

TABLE 6-1: MINIMUM PIPE SLOPES

Pipe Diameter	Minimum Slope
4" (Building Sewer or Sewer Lateral)	2.08%

6" (Building Sewer or Sewer Lateral)	1.04%
8" (Gravity Sewer Main)	0.40%
10" (Gravity Sewer Main)	0.28%
12" (Gravity Sewer Main)	0.22%

(4) Sewer mains shall be constructed of PVC except where vertical or horizontal separation between water mains is less than 10' horizontal and/or 18" vertical. DIP shall be used in these cases. PVC sewer mains shall be SDR-35, except in cases where the depth of the sewer main will exceed 15 ~~12~~ feet, in which case they shall be SDR-26.

(5) Sewer mains, forcemains and manholes constructed in easements shall meet minimum easement widths as set forth in the City of Wildwood Construction Specifications for Water and Wastewater, lastest revision.~~shall be installed in a 20' minimum utility easement.~~

(6) Sewer mains shall maintain a minimum cover of forty-eight inches (48"). The depth of cover shall be measured from the top of sewer main to the finished grade directly above the pipe.

(7) Maximum spacing between sewer manholes shall not exceed four hundred feet. A manhole shall be required for all changes in slope or alignment.

(8) Manhole depths from 0' to 12' shall be constructed using 22" ring min. (USF 170E) ~~and hinged covers~~. Manholes in excess of 12' shall use 32" diameter ring with hinged covers (USF 324).~~and hinged covers.~~

(9) Where the depth of manhole from the top of ring to the invert of effluent main is less than 48", a flat top manhole shall be used.

(10) Drop connections shall be provided where the difference in elevation between the incoming sewer invert and the exiting manhole invert is equal to or greater than 24".

(11) The minimum diameter of manholes shall be 48".

(12) Pipes entering manholes in line with flow channel shall be 0.1' minimum above the effluent invert. ~~, not to exceed 24" without a drop connection.~~

(13) Total depth of manholes shall not exceed 18' in depth unless approved by the City Engineer.

(14) Reserved. ~~Non-hinged manhole covers on existing manhole tops requiring shall be replaced with hinged and lockable manhole covers.~~

(15) All laterals shall be installed perpendicular to the sewer main except for dead end manhole connections where lateral length shall be limited to a maximum of one hundred twenty five feet (125'). Cleanouts shall be provided every seventy-five feet (75') minimum. A cleanout shall be provided at the right of way line or between the sidewalk and the curb. City shall only be responsible for the lateral from the approved cleanout location within the right of way to the main.

(16) Four inch (4") to twenty four inch (24") sewer force mains shall be polyvinylchloride (PVC) or ductile iron pipe (DIP) based on pressure. All PVC pipe shall be sewer green with identifying tape and locating wire. PVC force main pipe shall meet requirements of ANSI/AWWA C-900, ~~DR 14 and~~ DR ~~18~~ 25 for sizes four inch (4") through ~~twelve inch (12")~~ twenty-four (24"); ~~C-905, DR18 for sizes 14" through 36".~~

(17) Sizing of sewer force mains shall be in accordance with sound engineering practices and the City's master distribution plans. Force mains shall be designed to maintain a minimum velocity of two feet per second. Provide design calculations showing the pressures designed for the forcemain system. The working pressures within the system shall not exceed the pressure class of the pipe with a 2.0 ~~1.5~~ safety factor.

(18) Fittings shall be DIP fittings for DIP and PVC pipe installations.

(19) Sanitary sewer pumping stations shall be provided with emergency backup generators for all stations serving more than twenty (20) ~~three (3)~~ Equivalent Residential Units (ERUs).

(20) All sanitary sewer pumping stations shall be designed to the City of Wildwood Standards.

(21) Unless otherwise requested by the City of Wildwood, all utility easements shall be a minimum of twenty feet (20') wide for a single utility pipe and thirty feet (30') wide when serving more than one utility pipe (i.e. sewer and water).

(22) Hospitals, Assisted Living Facilities (A.L.F.), nursing homes, and any other facilities that may regenerate large rags or other solid objects in the effluent flow, shall provide an in-line sewerage ~~grinder pump or a~~ bar screen ~~with a grinder pumping station~~ prior to the effluent discharge entering the City of Wildwood's sanitary sewer system. This screen ~~pump~~ shall be owned and maintained by the property owner. Additionally, the facility shall implement best practices and have an approved on-site plan to minimize rags into the system.

(23) Additional design information can be found in the City of Wildwood Utility Department Standard Construction Specifications for Water and Wastewater, latest revision.

(D) *Reuse*. Reuse water mains shall be constructed to the same specification and requirements as potable water mains, with the exception that all reuse water mains shall be colored purple.

6.4. Drainage and stormwater management.

(A) *General.*

(1) No person shall conduct a development or redevelopment activity, subdivide, make any change in the use of land, construct any stormwater management system or structure, or change the size of an existing structure without obtaining approval from the City as provided herein.

(2) Authorization of construction shall be contingent on approval of any required permit from the Southwest Florida Water Management District (SWFWMD), FDEP, FDOT, or any other agency with regulatory jurisdiction over the project; however, approval by another government agency will not result in automatic approval of the stormwater management plans by the City.

(3) The stormwater management system is required to be designed by a registered professional licensed by and in the state of Florida and practicing under Chapter 471, 472, 481, or 492.

(4) The system shall provide for drainage of lots, streets, roads, and other public areas as well as handling any runoff from adjacent areas that naturally flows into the subject area.

(5) The drainage system shall be designed for long life, low maintenance cost, and ease of maintenance.

(6) *Peak rate and volume attenuation.* Peak discharge rate and volume attenuation shall be as required in the SWFWMD regulations and in these regulations.

(7) *Development within flood prone areas (100-year flood).* All development within flood prone areas, as delineated on the official national flood insurance program, flood insurance rate maps, or the latest and best information available, shall comply with the requirements of SWFWMD and the criteria in the flood hazard regulations section of this Code.

(8) Where a permit is not required under Chapter 62-330 F.A.C., or where a lesser permit threshold is applicable under FDEP or SWFMWD rules, the stormwater management system must meet a minimum, the applicable criteria. Applicants are strongly encouraged to conduct a pre-application meeting with City staff in these instances.

(B) *Water quality.*

(1) All stormwater water management systems are required to provide stormwater quality treatment in compliance with applicable SWFWMD rules and criteria.