

Jacksonville Waterways Commission Committee on Derelict Vessels and Floating Structures: Proposed ordinance for floating structures in Jacksonville Ord. Code

Section 1. Amending TITLE XIX – PUBLIC SAFETY to create a new Chapter 686 - BOATS, HARBORS and WATERWAYS.

Chapter 686 - BOATS, HARBORS and WATERWAYS

Part 1. - WATERCRAFT REGULATIONS

Sec. 686.101. – Findings and legislative intent.

- (a) Pursuant to Sec. 237.60, F.S. (2019), the Florida Legislature has expressly authorized local governments to regulate floating structures in two ways: prohibiting or restricting their location; and requiring sewage pump out or connections.
- (b) The Florida Legislature has not preempted local governments from regulating floating structures regarding requiring building permits for the structures; requiring a bond to cover the potential damage that the structure could cause to persons or property if it becomes unfixed to the dock or mooring where it is authorized to locate; and height limitations.
- (c) It is the legislative intent of the City Council in enacting this Chapter to provide additional or supplemental means of obtaining compliance with the requirements stated herein. Nothing contained in this Chapter shall be deemed to prohibit the City from seeking enforcement by any other means provided by law, including, but not limited to, filing an action for declaratory and injunctive relief in a court of competent jurisdiction.
- (d) If any penalty of this Chapter is deemed inconsistent with any Florida Statute, the provisions of the Florida Statute shall prevail.

Sec. 686.102. - Definitions.

For the purpose of this Chapter, the following terms, phrases, words, abbreviations and their derivations shall have the meaning given herein. When not inconsistent with the context, words used in the present tense include the future tense, words in the plural number include the singular number and words in the singular number include the plural number. The word "shall" is always mandatory and not merely directory. Words not

defined shall be given their meaning as provided in Sec. 1.102 (Definitions and rules of construction), Jacksonville Ordinance Code.

Anchoring means the act of securing a vessel or dinghy in navigable Waters of the City by means of an anchor or other device and associated tackle that is carried on board the vessel and cast or dropped overboard.

City means the City of Jacksonville, Florida.

Commercial Marina means a licensed and permitted commercial facility that provides secured public moorings or dry storage for vessels on a leased basis.

Commercial Marina, Authorized means a Commercial Marina that provides to Authorized Floating Structures the utilities of potable water, electricity, and a monitored facility to pump out sewage or a direct line to shore for sewage disposal.

Derelict vessel, pursuant to Sec. 823.11, F.S., means a vessel, as defined in s. 327.02, F.S. that is left, stored, or abandoned:

1. In a wrecked, junked, or substantially dismantled condition upon any public waters of this state.
2. At a port in this state without the consent of the agency having jurisdiction thereof.
3. Docked, grounded, or beached upon the property of another without the consent of the owner of the property.

Dinghy means any vessel not exceeding twelve (12) feet designed for and used primarily to serve a larger vessel by transporting persons and/or property to and from the larger vessel, from or to other vessels, piers, docks, or landing facilities.

Floating Structure means a floating entity, with or without accommodations built thereon, which is not primarily used as a means of transportation on water but which serves purposes or provides services typically associated with a structure or other improvement to real property. The term "Floating Structure" includes, but is not limited to, each entity used as a residence, place of business or office with public access, hotel or motel, restaurant or lounge, clubhouse, meeting facility, storage or parking facility, mining platform, dredge, dragline, or similar facility or entity represented as such. Floating Structures are expressly excluded from the definition of the term "vessel" provided in this section. Incidental movement upon water or resting partially or entirely on the bottom shall not, in and of itself, preclude an entity from classification as a Floating Structure if the movement is in the same area.

Floating Structure, Authorized means a Floating Structure that has been certified as Authorized by the Planning Department pursuant to Sec. 686.107:

1. has been constructed pursuant to the Florida Building Code, and has proof thereof;
2. contains a marine sanitation device that is designed such that discharge of sewage overboard or through-hull is not possible unless the holding tank is pumped out;

3. has a maximum height of twenty (20) feet above water level;
4. maintains records of pump outs if the Floating Structure is not directly connected to the shore for sewage disposal;
5. maintains proof of a bond as required in Sec. XXX; and
6. maintains insurance.

In the same area means that a vessel is considered to be in the same area if it is within a radius of eight (8) miles of any location where the vessel was previously moored or anchored.

License agreement means any transient dockage agreement, mooring and dockage agreement, commercial dockage agreement, or mooring agreement entered into between the City or a commercial marina, and a vessel owner for dockage at a city dock or mooring facility.

Licensee means the person or entity entering into or possessing a dockage or mooring license agreement with the City.

Live-aboard vessel, pursuant to F.S. § 327.02, means:

1. A vessel used solely as a residence and not for navigation;
2. A vessel for which a declaration of domicile has been filed pursuant to s. 222.17, F.S. (Homestead and Exemptions: Manifesting and evidencing domicile in Florida); or
3. A vessel used as a residence that does not have an effective means of propulsion for safe navigation.

A commercial fishing vessel is expressly excluded from the term "live-aboard vessel."

Mooring means the act of securing a vessel in navigable waters of the City by means of a permanent or semi-permanent mooring system affixed to the bottom.

Mooring field means city-designated areas in and adjacent to city-installed mooring systems, which may include city and state-owned harbor or bayou bottoms but which exclude privately owned harbor or bayou bottoms.

Mooring system means any weight, chain, rope, floating object, structure or appliance used for the purpose of holding a vessel in a particular place and which is not carried on board such vessel as regular equipment when the vessel is underway.

Operator means every person who shall own, physically operate, navigate or control any vessel.

Vessel, pursuant to Sec. 327.02, F.S. is synonymous with "boat" as referenced in s. 1(b), Art. VII of the State Constitution and includes every description of watercraft, barge, and airboat, other than a seaplane on the water, used or capable of being used as a means of transportation on water.

Waters of the City means all portions of those waters, up to and including the mean high water mark, located within the corporate limits of the City, including, but not limited to, all navigable and non-navigable waterways, canals, lagoons, bayous, bays, rivers, lakes, streams, springs, impoundments, and all other bodies of water, including fresh, brackish, saline, tidal surface or underground, but excluding any area preempted by law. This term does not include waters within the jurisdictional boundaries of Atlantic Beach, Neptune Beach or Jacksonville Beach.

Sec. 686.103. - Obstructing channels; unlawful anchoring, mooring or docking.

It shall be unlawful: (1) for any vessel within the City to tie up to any navigational aid within the City; except in an emergency; or (2) to anchor or moor any live-aboard vessel or Floating Structure over bottomland located within the City, or to anchor, moor or dock without permission within the marked boundaries of any mooring field.

Sec. 686.104. - Live-aboard vessels prohibited-generally; exceptions.

Live-aboard vessels are prohibited from mooring or anchoring in all Waters of the City, except in commercial marinas, licensed and permitted commercial marine facilities, or mooring fields as may be constructed by the City and otherwise provided for in this Code, provided that such marina or mooring field is equipped with, or otherwise has access to, a pumpout facility.

OR

Sec. 686.104. – Reserved.

Sec. 686.105. – Authorized Floating Structures moorage locations allowed.

(a) Authorized Floating Structures, as defined and limited in this Chapter, are allowed to locate only in the following:

1. Authorized Commercial Marina by lease or license agreement of the owner of the facility;
2. City marina or mooring facility by license agreement; and
3. Private dock through a Waiver process, as described in Sec. 686.106, if the owner of the Floating Structure is also the riparian upland owner.

(b) Any other Floating Structure, as determined by the Jacksonville Sherriff's Office or the Municipal Code Enforcement officers, is prohibited from anchoring, docking, or mooring in any Waters of the City within the City limits, and is subject to the penalties and enforcement pursuant to this Chapter.

Sec. 686.106. – Waiver process for Authorized Floating Structure to be moored at a private dock.

(a) The upland riparian owner may be allowed to have an Authorized Floating Structure docked at the private dock contained within the owner's riparian waters under the following conditions:

1. The owner of the riparian upland is also the owner of the Authorized Floating Structure.

2. The zoning district density limitations applicable to the real property adjacent to the Authorized Floating Structure shall not be exceeded in residential areas. In this case each Authorized Floating Structure shall be treated as one dwelling unit.

3. Parking shall be provided as it would be required for a single family dwelling unit.

4. Provides evidence annually to the Jacksonville Sherriff's Office, the Parks, Recreation and Community Services Department Waterways Coordinator, and the Planning Department, that the Floating Structure meets the requirements of being an Authorized Floating Structure as defined in Sec. 686.102, Ordinance Code.

(b) Waiver application. An application for a waiver with an application fee as listed in www.coj.net/fees shall be filed with the Planning Department and include the following information:

1. The name, address, telephone number and signature of the riparian upland owner.

2. The evidence that the Floating Structure is Authorized, including proof of the following:

A. Bond, pursuant to Sec. 686.108;

B. Insurance, pursuant to Sec. 686.109;

C. That the Floating Structure was constructed in conformance with the Florida Building Code, pursuant to Chapter 328, Ordinance Code;

D. That sewage from the Floating Structure will be disposed of via direct connection to a sewage facility on the upland, or that the Floating Structure contains a marine sanitation device that prohibits through-hull or overboard disposal of sewage but is contained in a tank designed to be pumped out;

E. That the sewage holding tank, if any, is pumped out on a regular basis, and by whom.

Sec. 686.107. – Certification as an Authorized Floating Structure.

The Planning and Development Department shall administer the certification process for Authorized Floating Structures as defined in this Chapter. Administration shall include the application process and procedure, setting of application fees, and inspections.

Sec. 686.108. – Bonds for Floating Structures.

All Floating Structures shall be required to post and maintain bonds, with the City as beneficiary, for the cost that would be incurred for the removal of the Floating Structure from the Waters of the City. Such cost shall be calculated to include the mobilization and removal phases and potential impoundment.

Sec. 686.109. – Insurance for Floating Structures.

All Floating Structures shall be required to obtain and maintain insurance with the City as an additional insured.

Sec. 686.110. - Vessel cleaning.

Cleaning or washing vessels with detergents containing phosphates, chlorine, or petroleum distillates is prohibited within the Waters of the City.

Sec. 686.111. - Misuse of City docking or mooring amenities.

The misuse, vandalism, or destruction of any amenities at City docks or mooring facilities is grounds for ejection. If anyone damages any property or equipment of a City facility or its amenities due to neglect, misuse, failure to follow stated directions, or vandalism, they shall be held responsible for the cost of repair and replacement, as well as any criminal or civil charges for the activity.

Sec. 686.201. - Derelict vessels.

The City shall use all available means to effectuate the prompt removal of derelict vessels through actively pursuing all remedies under statutory law, including, but not limited to: Sec. 376.15, F.S. (Derelict vessels; relocation and removal from public waters) of Ch. 376, F.S. (Pollutant Discharge Prevention and Removal); Ch. 705, F.S. (Lost or Abandoned Property); and Sec. 823.11, F.S. (Derelict vessels; relocation or removal; penalty), of Ch. 823, F.S. (Public Nuisances); and shall endeavor to prevent vessels at risk of becoming derelict from actually becoming derelict by pursuing the provisions of Sec. 327.4107, F.S. (Vessels at risk of becoming derelict on the waters of this State) of Ch. 327, F.S. (Vessel Safety).

Sec. 686.301. - Penalties and Enforcement.

The provisions of this Chapter shall be enforced as provided in Chapter 609 (Code Enforcement Citations), of the Jacksonville Ordinance Code, and by such other means as are specified herein below:

- (a) Code enforcement: The Code enforcement division may enforce the terms of this Chapter by following the procedures of Chapter 609, Ordinance Code (Code Enforcement Citations) or F.S. Ch. 162, Pt. I (Local Government Code Enforcement Boards).
- (b) Civil citation: The code enforcement division, or other duly authorized officer or authority, may enforce the terms of this Chapter through issuance of civil citation as provided in Chapter 609, Ordinance Code, and Ch. 162, Pt. II, F.S. (Supplemental County or Municipal Code or Ordinance Enforcement Procedures). Persons or entities violating the provisions of this Chapter shall be subject to a Class D penalty as provided in Sec. 632.101, Ordinance Code.
- (c) Any alleged violation of this section may be prosecuted and punished as provided in Sec. 327.70, F.S. (Enforcement of this chapter and chapter 328) of Ch. 327, F.S. (Vessel Safety).¹
- (d) Criminal penalties: A violation of this article shall be punishable as a misdemeanor by a fine of up to five hundred dollars (\$500.00) per violation and a definite term of imprisonment of not more than sixty (60) days as provided in

¹ 328.19 Penalty.—Except as otherwise provided in this chapter, any person convicted of violating any of the provisions of this chapter is guilty of a misdemeanor of the second degree, punishable as provided in s. 775.082 or s. 775.083.

History.—s. 4, ch. 67-586; s. 305, ch. 71-136; s. 8, ch. 80-266; s. 50, ch. 91-224.
Note.—Former s. 371.82.

Sec. 162.22. F.S. (Designation of enforcement methods and penalties for violation of municipal ordinances)².

² 162.22 Designation of enforcement methods and penalties for violation of municipal ordinances.—The governing body of a municipality may designate the enforcement methods and penalties to be imposed for the violation of ordinances adopted by the municipality. These enforcement methods may include, but are not limited to, the issuance of a citation, a summons, or a notice to appear in county court or arrest for violation of municipal ordinances as provided for in chapter 901. Unless otherwise specifically authorized and provided for by law, a person convicted of violating a municipal ordinance may be sentenced to pay a fine, not to exceed \$500, and may be sentenced to a definite term of imprisonment, not to exceed 60 days, in a municipal detention facility or other facility as authorized by law.

History.—s. 1, ch. 94-255.

Section 2. Amending TITLE VIII – CONSTRUCTION REGULATION AND BUILDING CODES to create a new Chapter 328 – AUTHORIZED FLOATING STRUCTURES

Chapter 328 – AUTHORIZED FLOATING STRUCTURES

Part 1. – GENERALLY.

Sec. 328.101 – Findings and Legislative Intent. The intent of this Chapter is to bring Floating Structures within the scope of the regulatory scheme applicable to land-based occupied structures, making modifications necessary to accommodate the unique feature of Floating Structures. Conformance with this Chapter is a requirement for certification of a Floating Structure as an Authorized Floating Structure pursuant to Ch. 686, Ordinance Code. Floating Structures that are not certified as Authorized pursuant to all regulations of the City of Jacksonville are prohibited from occupying space within the Waters of the City. See Chapter 686, Ordinance Code.

Sec. 328.102. – Application. This Chapter shall apply to all Floating Structures in the City from and after July 1, 2020.

Sec. 328.103. – Certification.

(a) No Floating Structure shall be occupied unless a certificate of occupancy has been issued by the chief building official. Cooking, sleeping and restroom facilities within a Floating Structure shall be prima facie evidence that it is occupied. The chief building official shall issue a certificate of occupancy for a Floating Structure when the following conditions are fulfilled:

1. Compliance with structural requirements;
2. Compliance with minimum housing standards, if used as a dwelling;
3. Compliance with minimum commercial standards, if used as other than a dwelling;
4. Compliance with moorage requirements;
5. Payment of the certificate fee;
6. Certification by the Director of the Planning and Development Department that all other requirements of an Authorized Floating Structure have been met.

Provided, however, that no Floating Structure shall be used for multiple dwelling occupancy.

(b) The initial fee for certification and for recertification of a Floating Structure shall be as shown on www.coj.net/fees.

(c) Certification shall be valid until revoked and may be revoked by the chief building official for violation of the terms of this Chapter.

(d) The occupation of a Floating Structure not certified for occupancy is unlawful and punishable according to Chapter 632 of this Code as a Class D offense.

(e) Decisions of the chief building official denying or revoking certification of a Floating Structure may be appealed to the Building Codes Adjustment Board.

Part 2. – STRUCTURAL REQUIREMENTS

Sec. 328.201. - Scope.

This Part provides structural requirements for Floating Structures.

Sec. 328.202. - Overall stability.

A Floating Structure shall be stable under the action of dead and live loads and consideration shall be given to the effect of off-center loading and wind loading in determining overall stability. The design of a Floating Structure shall be based upon accepted basic engineering principles for Floating Structures and to the following standards:

- (1) *Metacentric height.* The metacentric height (MG) shall be at least one (1) foot or greater.
- (2) *Freeboard; immersion.* The freeboard, as measured from the waterline to the top of the first floor or deck of the completed Floating Structure, including dead load but not live load, shall be at least one (1) foot, four (4) inches (with list angles equal to zero (0) degree). The allowable immersion under the action of off-center loading or wind loading shall not exceed two-thirds of the original freeboard with a list angle of four (4) degrees. Freeboard shall be measured from the waterline to the top of the first floor or deck at the side of the Floating Structure at a point where such freeboard has its least dimension.
- (3) *List angle.* The maximum angle of list shall not exceed four (4) degrees under the action of either off-center or wind loading.

(4) *Off-center loading.* The off-center loading shall be considered as applicable to the completed Floating Structure, including dead load, and shall consist of a line load of one hundred (100) pounds or five (5) pounds per foot of width, whichever is greater, per lineal foot (first floor) and fifty (50) pounds, or two and one-half (2.5) pounds per foot of width, whichever is greater, per lineal foot (second floor, habitable attic or loft). The uniform line load is to be applied halfway between the center of gravity and the outside edge of deck, to one (1) side of the Floating Structure at a time. The dividing line is the longitudinal axis of the Floating Structure, and the overturning moment resulting from the off-center loading shall be taken about the computed center of gravity. Stability with off-center loading shall be tested on both sides of the longitudinal axis. The ratio, MR/MO , MO being the overturning moment due to off-center loading, and MR being the resisting moment due to buoyancy, shall be equal to one (1) applied with a list equal to four (4) degrees. Overturning moments and resisting moments are to be taken about a longitudinal line passing through the computed center of gravity.

(5) *Wind loading.* Wind loading shall be applied to the completed Floating Structure, including dead load and live load, but not off-center loading. The ratio, MR/MN , MN being the wind heeling moment, and MR being the resisting moment due to buoyancy, shall be equal to one (1) applied with a list equal to four (4) degrees.

(6) *Calculations by qualified engineer.* Calculations shall be submitted by a qualified engineer showing that the Floating Structure conforms to the requirements of this article.

Sec. 328.203. - Compartmentation and flotation devices.

Watertight pontoons, floats, hulls or other devices used to keep the Floating Structure afloat shall be fitted with transverse or longitudinal watertight bulkheads which provide compartmentation sufficient to keep the fully loaded Floating Structure afloat with positive stability with any one (1) compartment flooded. This requirement may be waived by the building official upon certification by a competent architect or engineer familiar with such devices that design, materials and construction of the hull or other flotation device is such that the possibility of rupture is extremely remote.

(1) *Construction (general).* Flotation devices shall be structurally sound and securely fastened to the Floating Structure superstructure. Flotation devices shall be constructed so that access to each compartment is readily available from the first floor level of the completed Floating Structure. The external surfaces of all flotation devices shall be watertight and thoroughly protected from corrosion from salt water, solvents and weather.

- (2) *Bilge pump.* Where permanent-type flotation such as styrofoam or plastic foam is not provided, an adequate portable bilge pump shall be maintained in proper working order.
- (3) *Holding tank.* Flotation and decking shall provide access to and protection for the holding tank and sewage pump.
- (4) *Material.* All material, such as decking, siding and subflooring, which is subjected to moisture or water splash shall be of a type not adversely affected by moisture or shall be treated.
- (5) *Framing.* Floors, walls, roofs, partitions and all structural framing members shall be designed and constructed by use of diaphragm walls in such manner that the superstructure will act as a unit independent of the flotation or hull structure and will not be adversely affected by point reactions under such flotation or hull.

Sec. 328.204. - Electrical wiring and service.

- (a) *General.* The provisions of this section cover the electric conductors and equipment installed within or on the Floating Structures and the conductors that connect Floating Structures to the supply of electricity.
- (b) *Branch circuits, feeders and calculations.* Branch circuits, feeders and calculations shall correspond to requirements for a single unit of a multifamily dwelling and comply with the Florida Building Code.
- (c) *Services.* Service equipment shall be placed ashore and shall comply with the National Electrical Code and the Florida Building Code in all applicable respects. Power supply from the dock or shore to Floating Structures shall be cord Type S-SO or ST, installed in compliance with the National Electrical Code Article No. 400 with one (1) conductor in the cord for grounding only, in addition to the neutral conductor. Individual cord overcurrent protection shall not exceed fifty (50) amperes. Not more than two (2) cords may be installed to supply one (1) vessel. Cords shall be fitted with an approved separable connector at the shore end and direct connected at the vessel distribution panel. The cord shall be supported with a corrosion resistant mesh-type strain relief device at the vessel end.
- (d) *Grounding.* The neutral terminal block of the vessel's distribution panel shall not be grounded to the metal parts of the vessel. The grounding conductor of the supply cord shall be terminated on a grounding bus in the distribution panel. The hull, if metal, and electrical equipment metallic piping, exposed metal structural members, metal railing, ladders, etc., shall be effectively bonded to the ground bus. If the hull is built of material other than metal, a ground electrode of corrosion-resistant metal shall be so

located as to be in contact with the water and be connected with #6 AWG copper wire to the ground bus. The electrode shall be of bronze or brass and not smaller than one-quarter-inch diameter and eighteen (18) inches in length.

(e) *Wiring methods.* Installation in wood frame construction may be in accordance with the National Electrical Code and the Florida Building Code.

Sec. 328.205. - Plumbing.

The plumbing of all Floating Structures shall comply with the requirements of the Plumbing Code of the City, except as follows:

(1) *Building drain.* The building drain shall be deemed to be that part of the lowest piping of a drainage system which receives the discharge from all soil, waste and other drainage pipes inside the walls of the Floating Structure or other structure and conveys it to a sewage device conforming to law and ordinance.

(2) *Plastic piping.* A.B.C. drainage, waste and vent piping and P.V.C. drainage, waste and vent piping conforming to the product and installation standards of the International Association of Plumbing and Mechanical Officials will be permitted as an alternate method of construction when first approved by the building official. Plastic pipe in Floating Structures or other structures shall be limited to that part within the walls of the Floating Structure or other structure.

Sec. 328.206. - Inboard sewage device.

An approved sewage receiving tank and ejection device shall be installed aboard every Floating Structure. Such devices shall consist of an approved tank with a liquid capacity of not less than thirty (30) gallons nor more than forty (40) gallons and shall be equipped with a two (2) inch discharge line and one-half-horsepower pump. The inboard sewage device shall be connected to an approved moorage sewage collection system.

Sec. 328.207. - Fuel gas piping.

All gas piping installed in a Floating Structure shall be installed in accordance with the Florida Building Code, except that all gas piping installed in a Floating Structure which is exposed to corrosion shall be provided with an approved protective coating or shall be galvanized and painted.

Sec. 328.208. - Ceiling heights.

The height of all ceilings shall comply with the requirements for dwellings as set forth in the building code, except that habitable rooms or spaces shall have an average ceiling height of seven (7) feet, six (6) inches, and no portion of any room having a ceiling height of less than five (5) feet shall be included in computing the minimum areas

specified elsewhere in this article. All ceilings may be furred down to seven (7) feet if the required ceiling is maintained in at least two-thirds of the room or space. Attic spaces shall not be used for habitable purposes unless the ceiling heights meet this requirement.

Sec. 328.209. - Building heights.

The building height of a Floating Structure shall not exceed two (2) stories and the total height measured from the first deck to the highest point of the roof ridge or gable shall not exceed twenty-two (22) feet.

Sec. 328.210. - Framing, superstructure.

The general framing of superstructures shall comply with the requirements for dwellings as set forth in the Florida Building Code.

Sec. 328.211. - Exit facilities.

The facilities of all exits shall comply with the requirements for dwellings as set forth in the building code except as follows:

- (1) *Exterior exits.* Stairways or ramps from the Floating Structure to the mooring dock or float shall be at least thirty-six (36) inches in width and shall be provided with guardrails on both sides.
- (2) *Interior exits.* Ingress and egress to second floor dwelling quarters shall be by means of stairways at least thirty (30) inches in width provided with at least one (1) handrail. The use of ladders will not be permitted.
- (3) *Roof and attic access.* Access to roof and uninhabitable attic areas by means of ladders may be permitted if approved by the building official.

Sec. 328.212. - Guard rails.

(a) Guard rails at least thirty-six (36) inches in height shall be provided in the following locations:

- (1) Both sides of all exterior stairways and ramps.
- (2) All edges of occupied roof areas.
- (3) Edges of all decks not encompassed by the exterior walls of the Floating Structure superstructure.

(b) Guard rails shall be designed to withstand a twenty-pound-per-foot load applied at the top of the rail. In open type railings, intermediate members shall not be spaced more than nine (9) inches apart.

Part 3. - MOORAGE REQUIREMENTS

Sec. 328.301. - Compliance.

Floating Structures occupied as dwellings shall be moored only at moorage berths equipped with public water, electricity, and sewer connections, installed according to this division.

Sec. 328.302. - Water distribution.

Plans shall be submitted by the owner of a moorage to the building official showing complete details of the water service and piping system; all shall be accompanied by calculations to verify the adequacy of such system to meet demands of the moorage. The design of such system shall comply with the other applicable sections of this chapter and shall meet the requirements of the following:

- (1) *Plans.* Plans shall show the size and location of each water meter and the type, size and location of all required water service backflow prevention devices.
- (2) *Materials.* The use of nonmetallic or exposed steel piping on docks, floats, ramps or similar moorage facilities will not be permitted. Exposed copper tubing placed on these facilities shall be joined by brazing or by other equivalent methods. Flexible water supply connections to or located on such facilities shall be approved heavy-duty type and each hose bib serving such facilities shall be an approved type incorporating a spring loaded check valve.
- (3) *Flexible water supply connections.* Flexible water supply connections shall be approved heavy-duty type and shall be installed and supported so that at all times they will be above the moorage basin water level.
- (4) *Backflow prevention devices.* Each hose bib serving a dock, float, ramp or similar moorage facility shall be equipped with an approved spring loaded check valve. Each Floating Structure or vessel which uses a pump or equipment which could cause a cross connection potential shall have a separate approved backflow prevention device over and above the protection provided in the moorage piping.
- (5) *Temperature and pressure relief valves.* A combination temperature and pressure relief valve shall be provided on all water heaters.

(6) *Wet standpipes (fire lines).* Water lines supplying wet standpipes must be capable of supplying fifty (50) gallons per minute and maintain a residual pressure of thirty (30) pounds per square inch at the hose connection based on the minimum water supply. No fire pump inlet connection will be permitted on any wet standpipe system which is connected to a potable water system.

Sec. 328.303. - Electrical service and wiring.

Electrical service and wiring in all moorages shall comply with the requirements of Article 555, "Boat Harbors and Marinas" of the National Electrical Code in force in the city.

Sec. 328.304. - Sewage disposal.

(a) A sewer connection shall be provided for every Floating Structure or other structure berthed in a Floating Structure moorage. Sewer connections shall also be provided for all shoreside moorage facilities. Each such connection shall terminate in an approved collection system connected to and discharging into a public sewer.

(b) All collection and disposal systems shall be constructed in accordance with the applicable chapter of the Florida Building Code and all pumping systems shall meet the design and construction requirements of the applicable sections of the Florida Building Code.

(c) Fuel gas connections, when provided, must comply with the Florida Building Code.

Sec. 328.305. - Fuel gas piping.

All gas piping installed within a Floating Structure moorage, including such piping intended to serve Floating Structures and such piping as may be required to serve dockside facilities, shall be installed in accordance with the Florida Building Code and with the following special requirements:

(1) *Cathodic protection.* All gas piping shall have approved cathodic protection designed, inspected and certified by an approved engineering firm specializing in this field.

(2) *Connections, valves.* Where gas is permitted by the administrative authority to be distributed from shoreside facilities, connections to Floating Structures and other moorage structures shall be made by the use of approved high pressure flexible hose and such connections shall terminate in a positive disconnect coupling. A separate shut-off valve shall be installed ahead of such connection. Connections shall not be immersed in water or run exposed on docks, piers, floats, Floating Structures. The

length of the flexible connection shall not be excessive nor shall it be used as a substitute for gas piping.

Sec. 328.306. - Connection to public street; lighting; parking; density.

(a) Moorage berths shall be connected to a public street by land or by walkway not less than four (4) feet wide. Walkways and berths shall be illuminated at an average intensity of two (2) foot candles. One (1) off-street parking space shall be available for the exclusive use of the occupants of each filled moorage berth.

(b) Floating Structure moorages shall not cause the density limitation applicable to the land site to which the moorage is connected to be exceeded.

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