

HARKERS ISLAND SANITARY DISTRICT
AN ORDINANCE AMENDING DESIGN SPECIFICATIONS FOR DEVELOPMENTS

WHEREAS, Harkers Island Sanitary District (the "District") was established under the provisions of N.C.G.S. Section 130A-55; and

WHEREAS, the availability of clean potable water in the district promotes the public health and welfare; and

WHEREAS, fire hydrants, and adequate water flow to the hydrants, within a reasonable distance of improved property, mobile home parks and recreational vehicle parks where people dwell either temporarily or indefinitely, dramatically assists fire fighters in extinguishing fires which promotes the public safety and better protects lives and property; and

WHEREAS, on December 4, 2014 the District's governing board adopted an ordinance captioned "An Ordinance Establishing Design Specifications for Potable Water Systems"; and

WHEREAS, the District's preamble in said ordinance; and governing board incorporates the as findings of fact in this ordinance; and

WHEREAS, the District's governing board now chooses to amend such ordinance according to the terms hereof; and

WHEREAS, N.C.G.S. Sections 130A-55 (1) and (7) authorize sanitary districts to adopt rules necessary for functioning of the district; and

WHEREAS, it remains the goal of the District to install water mains in all currently developed areas of the island in order to provide fire hydrants and fire flow throughout the island, but to make such installations in a manner that is not a financial burden on the District's existing water system customers;

NOW, THEREFORE, BE IT ORDAINED and resolved by the Harkers Island Sanitary District Board of Directors as follows:

Part A.

The December 4, 2014 ordinance captioned "An Ordinance Establishing Design Specifications for Potable Water Systems" is re-written to read as follows:

Section 1. Harkers Island Design Specifications

The "Harkers Island Design Specifications" set forth in Exhibit A (referred to herein as the "Design Specifications") are adopted as the minimum standards for water systems on Harkers Island.

Section 2. Development

a. As used in the ordinance, "Development" shall mean and include a subdivision of land into three or more lots, multiple family housing buildings with three or more individual dwelling units, hotels or motels with three or more rooms for rent, commercial buildings with three or more separate shops or office suites, mobile home parks with three or more spaces for mobile homes, marinas with three or more wet slips, and recreational vehicle parks with three or more spaces.

Section 3. New Developments

a. Each developer of each new Development on Harkers Island is required to install potable water system infrastructure within the Development in accordance with the Design Specifications, when applicable, and the North Carolina Fire Prevention Code, and to either (1) connect said infrastructure to an existing potable water supply system that will provide the Development with the flow of potable water, water storage capacity, and fire flow consistent and compliant with the Design Specifications, when applicable, and the North Carolina Fire Prevention Code or (2) to

provide for wells, storage capacity, flow of potable water and fire flow consistent and compliant with the Design Specifications, when applicable, and the and the North Carolina Fire Prevention Code within the Development. If the developer chooses the second option, he will ensure that the water system, and its operation, is fully compliant with all applicable laws and regulations regarding potable water systems.

b. Every home, dwelling hotel, motel, mobile home, unit, commercial building, marina, and “camp park” recreational vehicle in new Developments is required to be connected to the potable water system installed in the Development and to use the water there from as the sole source of potable water. Developments, and components thereof, however, may use private wells for irrigation and swimming pools when such wells are compliant with state and local laws and regulations.

Section 4. Additions to Existing Developments

a. Each developer of each addition to an existing Development on Harkers Island is required to install potable water system infrastructure within the addition to the Development and to connect such infrastructure to an existing water system, or to a system constructed by the developer, according to the requirements of Section 2 above.

b. Every home, dwelling unit, commercial building, hotel, motel, mobile home, marina, and “camp park” recreational vehicle in an addition to an existing Development is required to be connected to the potable water system installed in the addition and to use the water there from as the sole source of potable water. Developments, and components thereof, however, may use private wells for irrigation and swimming pools when such wells are compliant with state and local laws and regulations.

Section 5. New Developments and Additions to Existing

As referenced in this ordinance Sections 2 and 3 above “new Developments” and “additions to an existing Development” mean Developments and/or additions to existing Developments that receive final plat approval from Carteret County, or are approved for connection to a qualifying potable water system, after the date of adoption of this ordinance.

Section 6. Review

a. Each developer of a new Development, or an addition to an existing Development, on Harkers Island shall submit his proposed plans and specifications for the potable water system infrastructure required in this ordinance to the governing board of the District prior to installation thereof. Such plans and specifications can be delivered to the District at the following address: c/o Carteret Craven Electric, 1300 Highway 24, PO Box 1490, Newport, NC 28570.

b. Within 31 days after receipt, the governing board of the District will review such plans and specifications for consistency with the minimum standards established in this Ordinance, and will report its findings to the developer and the Carteret County Planning and Inspections Department.

c. If the governing board determines that the plans and specifications do not meet the minimum standards established in this Ordinance, it will report the deficiencies to the developer and the Carteret County Planning and Inspections Department, and the developer must revise such plans and specifications and resubmit the same to the District governing board for further consideration. This process will continue until the developer has submitted plans and specifications that are compliant with this Ordinance.

Section 7. Severability

If any provision, paragraph, word, section or article of this Ordinance is invalidated by any court of competent jurisdiction, the remaining provisions, paragraphs, words, and sections, shall not be affected and shall continue in full force and effect.

Section 8. Notice of Violation

Any owner of property subject to this Ordinance, including a developer, shall be given notice by the District of his failure to comply with this Ordinance and shall be given thirty (30) days to remedy the non-compliance. If said owner, including a developer, fails to remedy its non-compliance with this Ordinance in the time required by said Notice, then the District shall take enforcement actions in accordance with this Ordinance.

Section 9. Enforcement

- a. The District may take civil action against any violator of this Ordinance to compel compliance herewith, or to enjoin or abate any unlawful activity or condition, or for damages.
- b. Any violation of any provision of this Ordinance which is also a criminal violation under State law may be prosecuted under the State law.
- c. Any violation of this Ordinance which is not a violation of State law shall be a Class 1 misdemeanor. Each day a violation exists is a separate offense.

Part B.

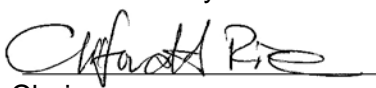
To the extent sanitary districts have the authority to do so, the North Carolina Fire Prevention Code is applicable in the Harkers Island Sanitary District.

Part C.

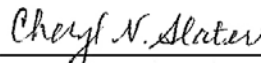
This ordinance is effective upon adoption.

ADOPTED THIS THE 19th DAY OF JULY, 2016

Harkers Island Sanitary District

By: 
Chairman

Attest:



Secretary

EXHIBIT A
HARKERS ISLAND DESIGN SPECIFICATIONS

The purpose of the Harkers Island Design Specifications is to establish the minimum requirements consistent with nationally recognized standards for providing domestic potable water and fire flow. The specifications provide consistency and promote the general welfare for the inhabitants of Harkers Island. All potable water main extensions within the service boundary of the Harkers Island Sanitary District will be required to adhere to these specifications in both design and construction.

100. WATER PIPE MATERIALS

Distribution mains shall be ductile iron, PVC, plastic or other material designed for potable water system service and shall be the appropriate AWWA standards, section C, or NSF Standards No. 14 and No. 15, which is adopted by reference in accordance with G.S. 150B-14(c) or approved equal standards.

The pressure rating class of the pipe shall be in excess of the maximum design pressure within its section of the water distribution system. The quality of pipe to be used shall be stated in the project specifications.

101. SIZE OF THE WATER MAINS

Water distribution mains shall be sized to provide at a minimum, sustained fire hydrant flow of 500 gallons per minute while maintaining 20 psi residual pressure at all locations through the distribution system. Water mains shall not be less than two-inch standard nominal diameter. Fire hydrants shall not be installed on water mains of less than six inches diameter.

102. NUMBER OF RESIDENCES ON A WATER MAIN

No more than 20, or the equivalent of 20, residences shall be connected to a two-inch diameter water line, unless the main is looped or otherwise supplied from two connections with mains of adequate capacities.

A looped two-inch main shall serve no more than 40 residences, or the equivalent water demand of 40 residences. A two-inch diameter main shall not exceed 1000 feet in length.

103. DEAD-END WATER MAINS

Where installation of dead-end water mains cannot be avoided, a hydrant or a valve of adequate size for flushing shall be installed at the terminal end of the line. The flush valves shall have an above-ground discharge and shall be protected from contamination.

104. PIPE LAYING

Trenching, pipe laying, and backfilling shall be accomplished in a manner to prevent damage and misalignment of the pipe. Water mains shall be buried to a depth below the frost line or to a depth sufficient to provide a minimum of 30 inches cover, whichever is greater.

105. TESTING NEW WATER MAINS

New water mains shall be tested for leakage and any necessary repairs and re-testing shall be accomplished as specified in AWWA standards.

106. FIRE FLOW AND HYDRANTS

The capacity of the water supply must be capable of providing at a minimum, sustained fire hydrant flow of 500 gallons per minute while maintaining 20 psi residual pressure at all locations through the distribution system. Accessible fire hydrants for the purpose of fire suppression shall be required on extensions of water distribution mains. The location of the fire hydrants shall meet the following requirements:

1. The average spacing between hydrants shall be 500 feet (Exception: on dead-end streets where average spacing shall be reduced by 100 feet).
2. Minimum distance from any point on street or road frontage to a hydrant shall be 250 feet (Exception: on dead-end streets distance shall be reduced by 50 feet).
3. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.
4. Where streets are provided with median dividers which cannot be crossed by fire fighters pulling hose lines, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis.
5. The fire chief is authorized to increase the required number of hydrants and decrease spacing requirements where conditions indicate an unusual susceptibility to group fires.

Fire hydrants shall conform to AWWA C502 and to the following requirements:

1. Nozzles: Two (2) 2-1/2-inch hose and One (1) 4-1/2-inch pumper connections.
2. Nozzle threads: National Fire Protection Association (NFPA) for National (American) Standard Fire Hose Coupling Screw Threads.
3. Main valve diameter: For an 8" pipe and larger use 5-1/4- and for 6" pipe and smaller use 4-1/2 inch.
4. Minimum depth of bury: 42-inches.
5. Open counterclockwise.
6. Close with water pressure.
7. O-ring seals
8. Traffic model with frangible sections near the ground line designed to break on impact.
9. Provide extension for hydrant standpipe as required to set centerline of hydrant nozzle a minimum of 15-inches and a maximum of 24.-inches.

107. WATER STORAGE

The water supply shall have sufficient storage to provide for one-half average days supply plus 75,000 gallons of reserve for fire protection. The storage shall be enough to fight a fire for two and a half hours at 500 gallons per minute.

108. RELATION OF WATER MAINS TO SEWERS

Lateral Separation of Sewers and Water Mains. Water mains shall be laid at least 10 feet laterally from existing or proposed sewers, unless local conditions or barriers prevent a 10-foot lateral separation--in which case:

1. The water main is laid in a separate trench, with the elevation of the bottom of the water main at least 18 inches above the top of the sewer; or
2. The water main is laid in the same trench as the sewer with the water main located at one side on a bench of undisturbed earth, and with the elevation of the bottom of the water main at least 18 inches above the top of the sewer.
3. Crossing a Water Main over a Sewer. Whenever it is necessary for a water main to cross over a sewer, the water main shall be laid at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer, unless local conditions or barriers prevent an 18 inch vertical separation--in which case both the water main and sewer shall be constructed of ferrous materials and with joints that are equivalent to water main standards for a distance of 10 feet on each side of the point of crossing.
4. Crossing a Water Main under a Sewer. Whenever it is necessary for a water main to cross under a sewer, both the water main and the sewer shall be constructed of ferrous materials

and with joints equivalent to water main standards for a distance of 10 feet on each side of the point of crossing. A section of water main pipe shall be centered at the point of crossing.

108. VALVES

Valves should be installed on all branches from feeder mains and between mains and hydrants according to the following schedule:

1. three valves at x (crosses),
2. two valves at T's (tees), and
3. one valve on single hydrant branch.

All valves installed in water distribution systems should meet the appropriate AWWA Standards C 500-71 (adopted in 1971) C 504-74 (adopted in 1974) and C 507-73 (adopted in 1973) of the American Water Works Association, Inc., or approved equal standards.

109. THRUST BLOCKING

Thrust blocks are required on all unrestrained pressure pipelines at locations where thrust forces caused by internal pressures act upon the sides or ends of pipelines. This includes all unrestrained tees, wyes, reducers, horizontal bends, ascending vertical bends and dead-ends. Thrust blocks may be eliminated in locations where thrust-restraining fittings are utilized along with thrust-restraining pipe joints, provided that thrust restraint systems are designed by the Engineer of Work in accordance with the manufactures' instructions. Thrust blocks shall be formed from concrete poured against wetted, undisturbed soil and shall be of sufficient strength to resist the resulting force due to pressure and flow.